FAIRHURST

Whiteness Head Stability Assessment

Haventus, Ardersier Port

September 2025

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1.0 INTRODUCTION

Haventus are currently undertaking significant redevelopment works including construction of a new heavy lift quayside and associated dredging pocket to facilitate operations principally targeted at the offshore renewables sector. The navigation channel within the port is sheltered by Whiteness Head which is comprised principally from wind blown sands, and forms a natural breakwater from the outer Moray Firth, providing a high degree of protection from prevailing environmental actions.

The current proposals for Ardersier Port involve further extension of the previously widened and deepened navigation channel and berthing pocket created within Phase 1, into Phase 2 of the quayside works, thereby creating additional berths with a dredge level of -12.4mCD (+500mm overdredge allowance) and hence enabling vessels with a draft of up to 12.0metres to access the site.

This report has been compiled to summarise the initial assessment of the proposed dredging works and vessel operations within the site, utilising existing ground investigation information to create site-specific ground model to facilitate a stability assessment of the dredge pocket and proposed side slopes to Whiteness Head. These slopes have been compared against existing side slopes formed within Phase 1, to provide an onsite comparison, acknowledging there is considered to be a relatively low risk of significant variation in ground conditions within the Phase 2 area of the spit. The dredge slope profiles have been developed with particular consideration of the long-term stability of Whiteness Head.

The head of the spit is considered to present a lower risk to the overall stability of the spit due to the ongoing long-shore sediment transport from the East of the site, currently resulting in ongoing material deposition. It should be noted, this does present a challenge to maintain navigation from the Outer Moray Firth into the site, due to the significant deepening of the bathymetric from the end of the spit towards the port navigation channel. This is likely to result in material deposition as the short, steep waves are broken, resulting in transient material being deposited at this location, by this acting as a sediment sink. The impact of this deposition may result in localised instability to the head of the spit, which will require monitoring through a regular inspection, management and reinstatement (where necessary) regime.

In addition to the natural spit deposits, additional reinstatement works have been undertaken under the direction of Haventus, by DEME Offshore utilising material arising from the Phase 1 dredging works. This reinstatement extends over approximately 1100metres on the landward side of the spit, over both Phase 1 & Phase 2, and comprises the deposition of 120,000m^3 of material. It is understood these works have been undertaken in line with NewWaves Solutions (DEME Group) Document No: 6240-NWS-EXE-MST-0001 (Rev 01), Dated: 11th February 2025. It should be noted that as part of these works, no construction issue drawings showing the preparation, staging or benching of the deposited material have been provided, however a coordinated survey showing the finalised levels has been provided.

Addendum 1:

An addendum to this document has been enclosed which reviews the factual ground investigation works undertaken upon Whiteness Head as well as within the navigation channel, as well as propeller wash from vessels. This report should be read in conjunction with this addendum, as well as Fairhurst Document: APP2-FHT-DD-CHA-RP-C-000002, Navigation Channel – Scour Assessment Report.

2.0 BASIS OF DESIGN ASSESSMENT

2.1 BACKGROUND

The findings of the design assessment presented within this report are based upon information available at the time of writing, when assessing the spit stability over the extent of the Phase 2 boundary. The proposed Marine Ground Investigation works extending over the Phase 2 footprint have not been undertaken to date, however boreholes undertaken on the spit, as part of previous phases of ground investigation, have been used in developing the ground model utilised within this assessment. This report is referenced below:

Solmek Ltd:

Ardersier Port (Scotland) Ltd, Ardersier Port, Inverness – Factual Site Investigation Report, Issue 4, Dated: March 2024, Status: Final;

Following completion of the proposed investigation works within Phase 2, encompassing works on the spit, the conclusions of this assessment will be reviewed in the context of the associated borehole logs and laboratory testing results.

This report presents the findings of the geotechnical stability assessment of the spit, in line with the proposed dredging works as part of the Phase 2 redevelopment, which encompassed the proposed dredge level of -12.4mCD (+500mm overdredge allowance).

This assessment has been undertaken to reflect the varied impacts of prevailing tidal level, throughout the tidal range noted below, as detailed within UK Hydrographic Office NP201B, Volume 1B, 2025:

- HAT: +4.80mCD (+2.70mOD)
- MHWS: +4.20mCD (+2.65mOD)
- MHWN: +3.30mCD (+1.20mOD)
- MSL: +2.50mCD (+0.40mOD)
- OD: +2.10mCD (+0.00mOD)
- MLWN: +1.70mCD (-0.40mOD)
- MLWS: +0.90mCD (-1.20mOD)
- LAT: +0.20mCD (-1.90mCD)

In addition, this assessment has been undertaken in accordance with the following recognised standards and guidance associated with dredging, land reclamation and vessel induced scour;

- BS6349 1-1 2013 - Code of practice for Planning and design of Operations;
- BS6349 1-3 2021 - Code of practice for Geotechnical Design;
- BS6349 5 2016 - Code of practice for Dredging & Land Reclamation;
- Eurocode 7 - Geotechnical Design - Part 1, General Rules *(and National Annex)*;
- PIANC WG180 (2015) - Guidelines for protecting berthing structures from scour caused by ships;

2.2 DREDGE PROFILE

The dredge profile within this analysis has been developed to provide an initial base, at which it is anticipated the spit will remain stable, with cognisance of the following documentation:

- Existing ground investigation undertaken on the spit *(as here-in referenced)*. This highlights the existing superficial deposits are almost entirely sands, albeit with coarser granular material within the shallower deposits, with occasional pockets of silts at depth;
- Bathymetric and topographic data from the spit. From the available data within the footprint of Phase 2, the current profile is located at a broadly comparable (1:6) gradient;
- Guidance detailed within BS6349-1-3:2012 with reference to the range of dredge pocket slopes;
- Previous Phase 1 stability assessment undertaken by Arup;
- In addition to the above documentation, it is understood anecdotally that dredging works undertaken within Phase 1 have typically resulted in the dredge slopes forming a repose at around 1:6;

In line with the above previous findings, for the purposes of this initial assessment the dredge slopes through the natural sands have been considered at a slope of 1:6.

With consideration of the spit reinstatement method statement: NewWaves Solutions (DEME Group) Document No: 6240-NWS-EXE-MST-0001 (Rev 01), Dated: 11th February 2025, it is considered that owing to this material being newly placed with compaction induced through self-surcharging, the reinstated sands will perform as 'loose sands'. As no investigation has been undertaken through the reinstatement since completion, conservative estimates as to the likely insitu and laboratory properties of the material, have been adopted. Furthermore, whilst it is known the spit reinstatement materials were from dredge arisings within Phase 1, their precise location and level have not been clarified, therefore the PSDs from prior site investigation targets in the vicinity of their origin have not been reviewed.

Furthermore, the reinstatement works present a number of risks which can be mitigated and quantified to an extent by further site investigation, however may remain as inherent risks until the dredging works within Phase 2 are completed:

- In lieu of construction or as-built drawings of the spit reinstatement works, it is envisaged that in order to prevent planar failure(s) of the dredge slopes, preparatory works would have entailed benching of the existing natural sands prior to placement of the reinstatement material. In preparing this report, there has been no constructional evidence provided to clarify where these works have been undertaken. As such, there remains an outstanding risk of dredge slope failure as it cannot be determined if the material has been placed upon a flat or inclined slope. Placement upon an inclined slope would significantly increase the likelihood of planar failures as the spit material would not appropriately interlock with the reinstated material;
- Similarly, there is an inherent risk that owing to variations in the moisture content, from that of its origin location, which may occur through the dredging and placement process, there is an inherent risk that under self-surcharge and settlement, the reinstatement material may fail by piping as the moisture content is pushed to the surface of the slope. Evidently this action is highly subjective to the permeability of the sands, however the shallower deposits of sands are most vulnerable to this form of failure as a result of their lesser magnitude of self-surcharge;

- In addition, there is also a further risk that shallow piping failure of the dredge slope may occur due to the lack of practicable methods by which to compact the material when placed. As a result, there is potential by which cohesion of the sands (particularly with a higher silt content) may result in the arching of deposited material, which may subsequently be disturbed by variation in tidal levels, passing vessels or prevailing waves within the channel;

As a result of the risks associated with these potential mechanisms of failure within the spit reinstatement material, for the purposes of initial assessment, a considerably shallower dredge slope graded at 1:8 has been analysed. It is recognised this slope is particularly conservative, however this is modelled in lieu of any ground investigation reporting and with cognisance of the previously outlined risks.

3.0 GROUND CONDITIONS

The following subsections to this report detail the scope of spit investigation works in conjunction with a summary of the ground model developed, and upon which this initial stability assessment is based.

3.1 GROUND INVESTIGATION WORKS

An intrusive ground investigation was undertaken by Solmek within the Phase 1 area of the spit between May and July 2023. These works were undertaken to determine the ground conditions, by undertaking insitu and laboratory testing to enable derivation of material properties of the stratification, and hence enable initial assessment of the spit footprint within Phase 2.

The scope of the investigation works comprised 5No. boreholes drilled up to 40m below ground level, with associated sampling, insitu and laboratory testing. This report is referenced below:

Solmek Ltd:

Ardersier Port (Scotland) Ltd, Ardersier Port, Inverness – Factual Site Investigation Report, Issue 4, Dated: March 2024, Status: Final;

Following review of the previously reported ground conditions, it is considered the stratification throughout the extent of the spit is relatively consistent. As a result of this, for initial assessment purposes, the stratification layering reported within borehole BH-SP05 has been utilised. In lieu of the surveyed level of the borehole at the time of drilling, it has been inferred the ground level on the spit was approximately MHWS (+4.20mCD).

It is understood that owing to statutory protections which apply to Whiteness Head, investigation works can only be undertaken at or below the level of MHWS. As a result, the properties of material above this level have been considered to be of comparable nature to that encountered immediately below the surface at MHWS.

3.2 GROUND MODEL

Whiteness Head is a shingle spit formed by ongoing westerly longshore sediment transport, resulting in the surface of the spit being comprised from resultant coastal erosion deposits.

From the available site investigation data, the uppermost stratification is comprised from Dense Sandy Gravel overlying fine sands of Holocene age. Within these sands, the strata is typically described as medium-dense, varying locally from silty to gravelly Medium-Dense Sand, becoming finer with depth. The solid geology located below the site has not been confirmed during the previous phases of ground investigation however this is understood to be located at significant depth on the site, and therefore does not provide any meaningful influence upon the stability of the spit.

In summary of the preceding ground investigation works, the ground conditions and stratification detailed within Table 3.1, have been utilised within this initial assessment:

Stratification Description	Stratification Level		Unit Weight (kN/m^3)	Friction Angle (°)	Cohesion (kPa)	Youngs' Modulus ($kN/m^2/m$)
	From (mCD)	To (mCD)				
Dense Sandy Gravel	+6.400	+1.500	20	36	0	40,000
Medium-Dense Sand (Silty)	+1.500	-0.800	20	34	0	30,000
Medium-Dense Sand (Gravelly)	-0.800	-7.800	20	34	1	30,000
Medium-Dense Sand	-7.800	-10.800	20	35	0	35,000
Dense Sand	-10.800	-30.300	20	35	0	35,000
Fine-Medium Grain Sand (Reinstatement)	*N / A*	*N / A*	17	28	0	15,000

Table 3.1: Summary of material properties derived/assumed for stratification on site

In deriving the above material properties, the Standard Penetration Tests (SPT n) values obtained from the tests within the respective stratification were reviewed and correlated throughout the extent of the ground investigation works. Subsequent to their review, correction of the SPT results was undertaken in order to reflect the overburden pressures and rod length under testing, utilising the methods detailed within BS EN ISO 22476-3:2005 + A1:2011. Following this, a characteristic friction angle for the respective layers was derived based upon Mayne (2011).

The laboratory testing data from the shear box and triaxial (consolidated-drained) tests were shown to be in line with those derived from insitu testing therefore allowing derivation of the friction angle. Throughout the insitu and laboratory testing data, it can be demonstrated the uppermost layers containing a higher gravel content, have an elevated friction angle when compared to the increasingly fine grain sands at depth. It should be noted that as a result of the particularly narrow grading of the sands, the interlocking of particles is particularly poor hence the friction angles considered within this analysis.

With consideration of the spit reinstatement method statement from DEME Group, it is noted these materials are likely to perform in a less favourable manner than that of the sands encountered within the ground investigation of the spit. As a result of this, it is envisaged the reinstatement material is likely to perform comparable to 'Loose Sands' and hence a reduced friction angle and Youngs' Modulus has been considered for this material. Similarly, as the placed density of the material is unknown in lieu of ground investigation information from the material now insitu, this has been conservatively considered as $17kN/m^3$. These assumptions on the reinstatement material also recognise that their precise location and level have not been clarified, therefore the PSDs from prior site investigation targets in the vicinity of their origin could not be reviewed. On receipt of the Phase 2 ground investigation report from the spit, these parameters will be reviewed in the context of insitu findings.

4.0 SLOPE STABILITY ASSESSMENT

4.1 MODELLING INPUTS

The geometry utilised within initial assessment has been taken from bathymetric and topographical data provided by Haventus surveyed prior to, and shortly after the reinstatement works. In line with this survey data, this assessment utilises the geometry surveyed at both Chainage 700 & 1100 from model: 'ACAD-NAV-CHAN-Model', provided by Haventus. This chainage has been selected for this assessment, owing to these reflecting the largest cross section of material utilised within the reinstatement (Chainage 700) and that envisaged to be the general profile throughout Phase 2 (Chainage 1100), hence are considered likely to be reflective of the long-term spit stability.

In undertaking this assessment, a gradient of 1:6 has been considered throughout the depth of natural sands, whilst a gradient of 1:8 has been considered through the depth of the reinstatement material, encountered at Chainage 700. It is recognised that under operation and prevailing environmental conditions, this material is likely to form a continuous gradient from the toe level (-12.9mCD incorporating overdredge allowance) of the dredge slope, up to the head of the reinstatement works, with the slope ravelling back to an alignment struck between the dredged toe and existing crest alignments, from that analysed. In light of the slope angle, this process is considered unlikely to result in destabilisation of the existing spit.

In addition, analysis has been undertaken in order to demonstrate the impacts of both Lowest and Highest Astronomical Tide upon the proposed dredge slopes. For the purposes of this initial assessment, allowance for scour from vessel thrusters has not been considered; the impacts of this upon the dredge side slopes will be reviewed once the Phase 2 ground investigation works on the spit have been completed.

4.2 MODELLING METHOD

This analysis has been undertaken utilising Plaxis 2D finite element analysis software, to verify the proposed dredge slope stability and review the slip failure mechanisms which may impact the spit. The Plaxis model was initialised as a flat profile, with the dredge profiles of the existing spit reviewed at the respective LAT & HAT levels, before a comparable analysis incorporating the reinstatement works, utilising both EC7 SLS & EC7 DA1 C2. EC7 DA1 C1 was not considered relevant as no surcharge loading has been considered upon the spit.

A plane strain model type has been utilised with boundary conditions defined to simulate insitu behaviour of the materials as far as possible. Mesh discretisation has been undertaken utilising the medium coarseness option, however this has been adjusted to finer grading within the finalised slope.

The factors of safety calculated within the various scenarios were computed utilising the strength reduction (phi/c reduction) method in which the material strength is continually reduced until failure occurs.

The following scenarios have been considered within this analysis; these are shown graphically within Figures 4.1-4.6:

Condition 1: Pre-existing profile at Chainage 700 (without reinstatement works) with LAT tidal level;

Condition 2: Pre-existing profile at Chainage 700 (without reinstatement works) with HAT tidal level;

Condition 3: Current profile at Chainage 700, with consideration of reinstatement works at LAT tidal level;

Condition 4: Current profile at Chainage 700, with consideration of reinstatement works at HAT tidal level;

Condition 5: Current profile at Chainage 1100 with LAT tidal level;

Condition 6: Current profile at Chainage 1100 with HAT tidal level;

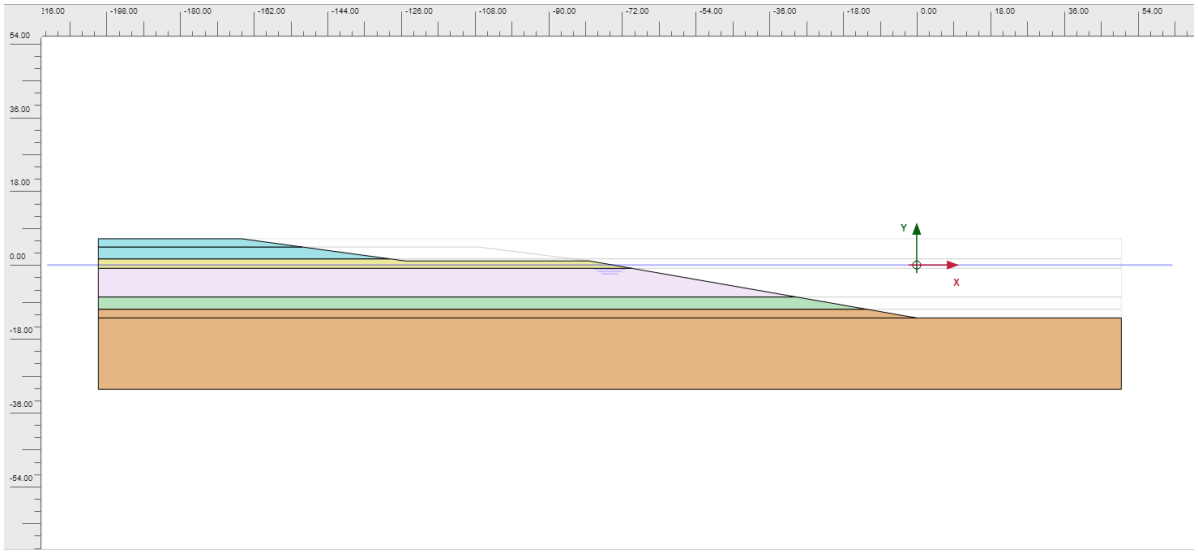


Figure 4.1: Pre-existing profile at Chainage 700 with LAT tidal level (Condition 1)

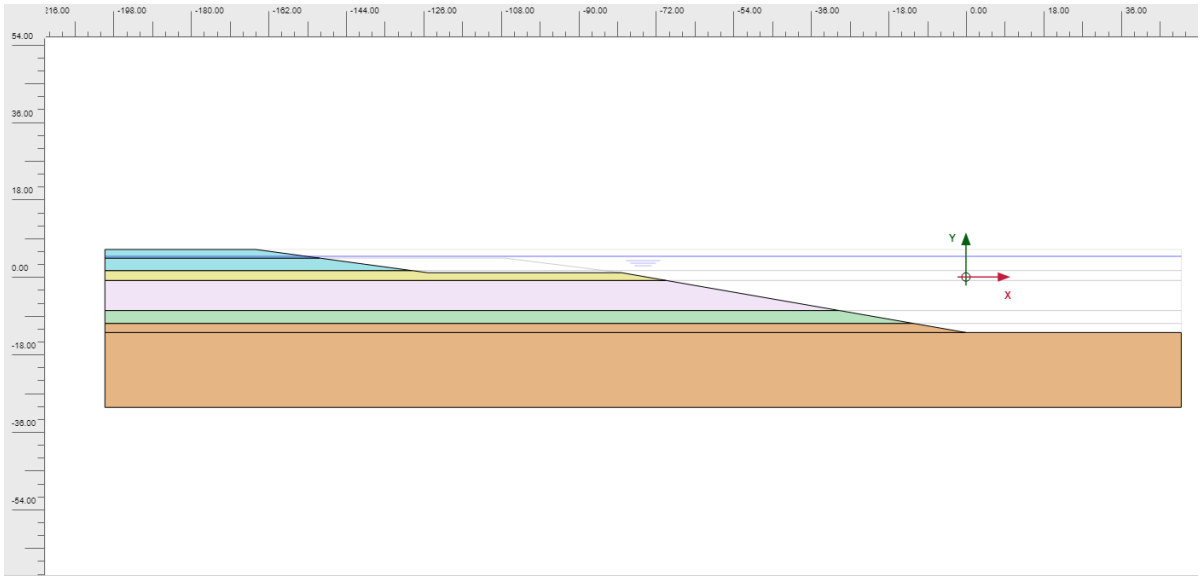


Figure 4.2: Pre-existing profile at Chainage 700 with HAT tidal level (Condition 2)

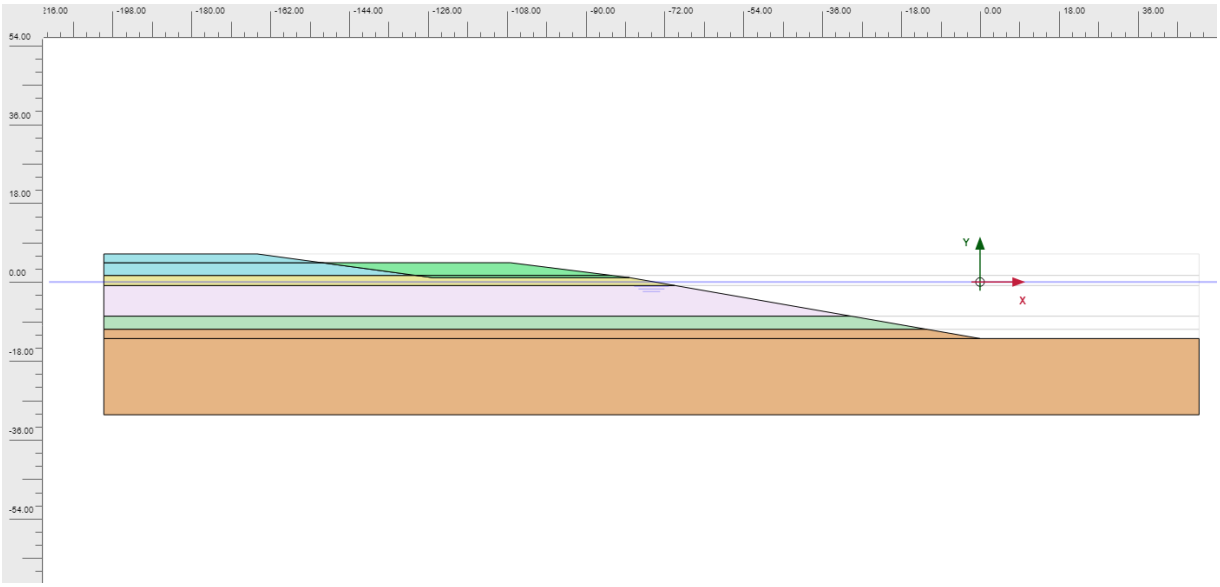


Figure 4.3: Current profile at Chainage 700, with consideration of reinstatement works at LAT tidal level (Condition 3)

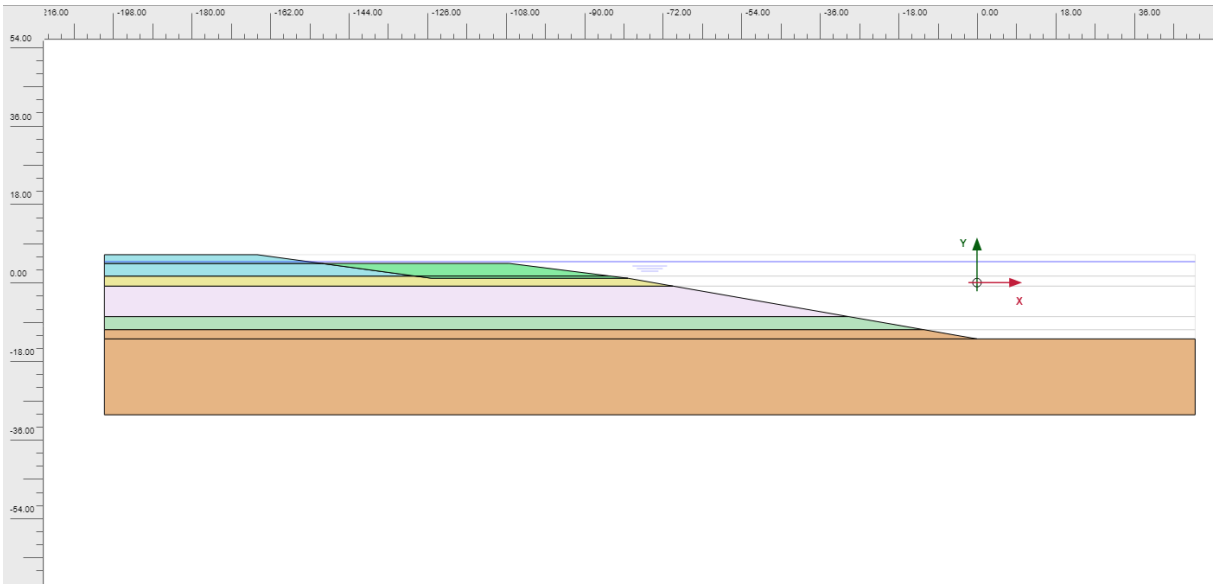


Figure 4.4: Current profile at Chainage 700, with consideration of reinstatement works at HAT tidal level (Condition 4)

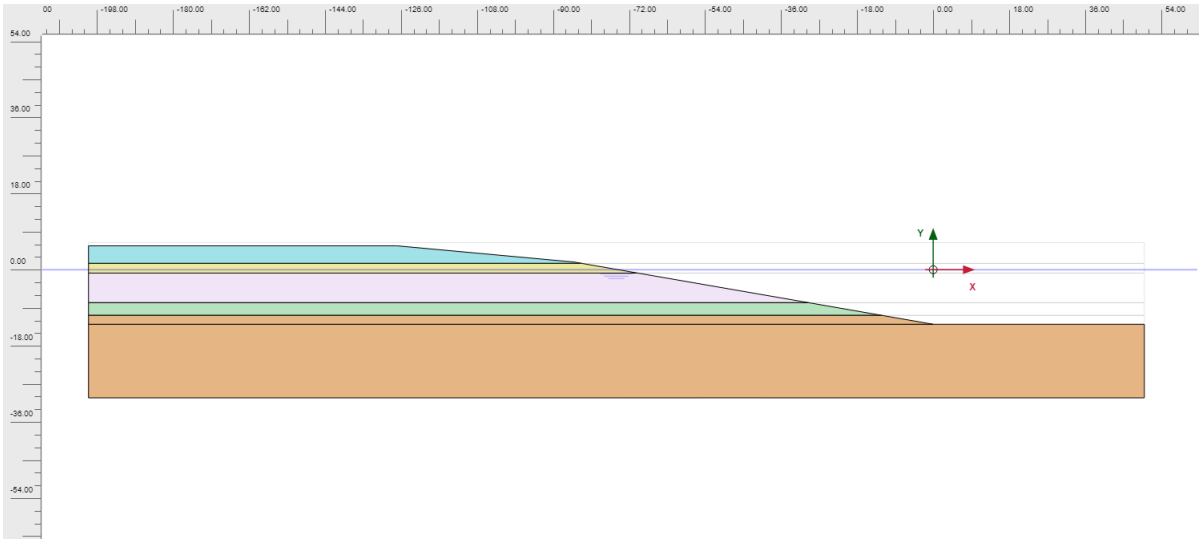


Figure 4.5: Current profile at Chainage 1100 with LAT tidal level (Condition 5)

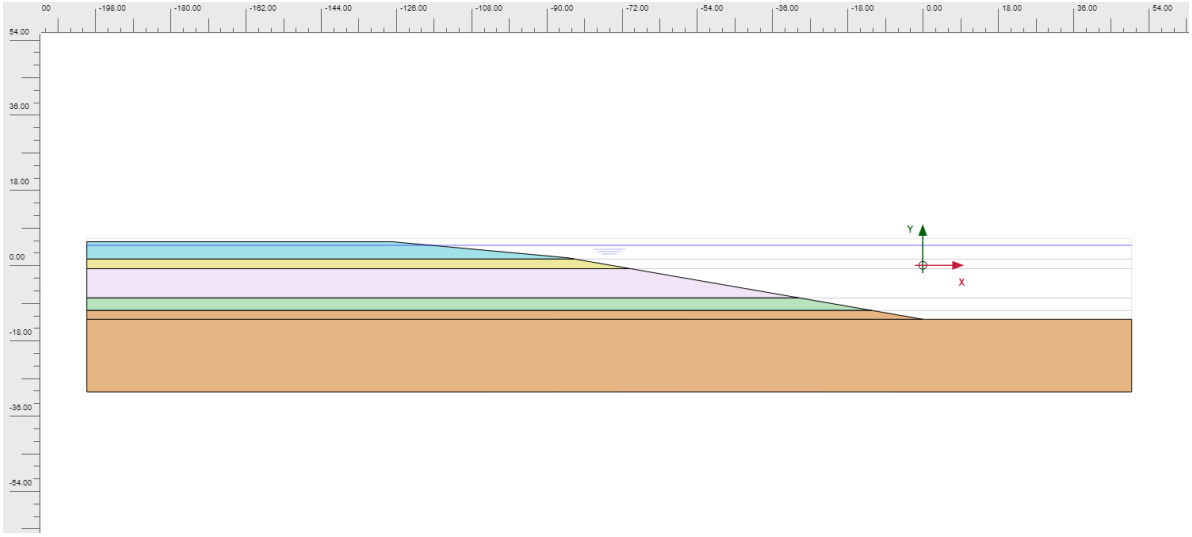


Figure 4.6: Current profile at Chainage 1100 with LAT tidal level (Condition 6)

4.3 ASSESSMENT FINDINGS

In line with the existing ground investigation information as well as both bathymetric and topographic surveys of the spit, as well as the assumptions here-in stated in relation to the reinstatement works, Table 4.1 details presents the analysed factors of safety (FoS) / over-design factor (ODF) in the context of both EC7 SLS and EC7 DA1 C2.

Condition	EC7 SLS (FoS / ODF)	EC7 DA1 C2 (FoS / ODF)
1	3.237	2.590
2	4.103	2.587
3	3.235	3.247
4	4.069	3.132
5	3.253	2.599
6	3.956	3.173

Table 4.1: Summary of Plaxis 2D, SLS & DA1 C2 results from Chainage 700 & 1100

The factor of safety calculated within Condition 1 was of a lesser magnitude than calculated in Condition 2, due to the LAT level being located in very close proximity to the crest of the lower dredge side slope, based upon the pre-existing profile. Within Condition 1 the failure mechanism was observed to propagate from within the Medium-Dense Sand (Silty) as shown within Figure 4.5 & 4.5a. With consideration of the phi/c reduction method, factoring down the tangent of the friction angle, utilising the FoS within this condition equates to a friction angle of 11.8°.

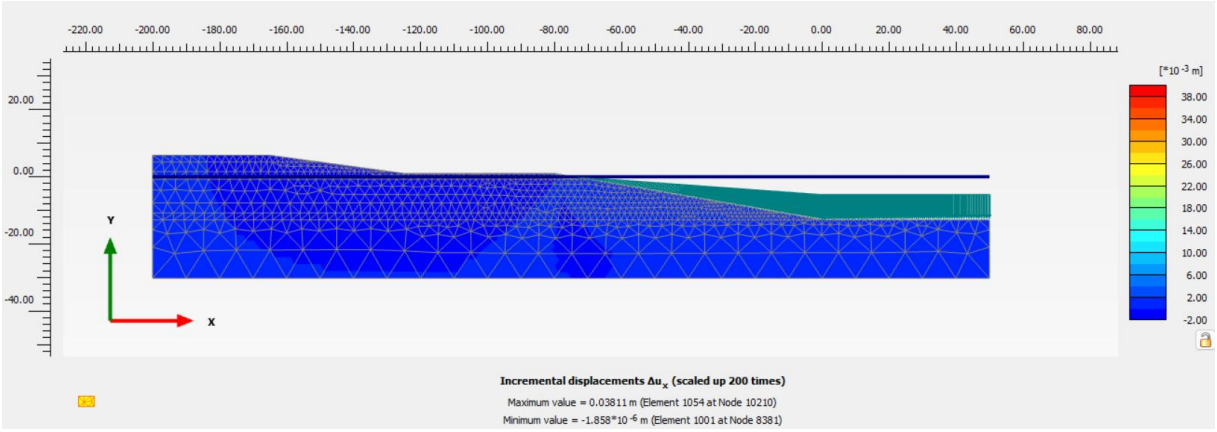


Figure 4.5: EC7 SLS FoS Incremental Displacement Plot (x-direction) – Condition 1

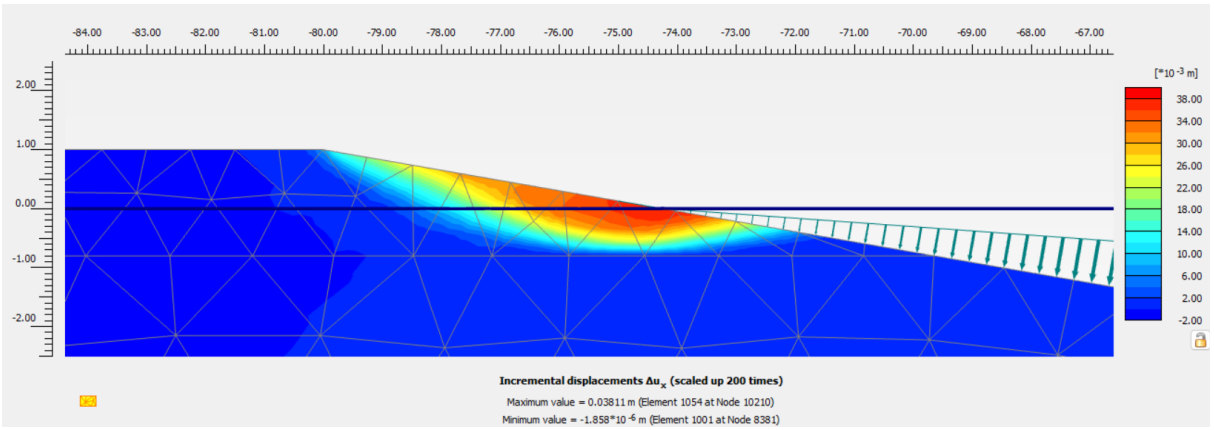


Figure 4.5a: Enlarged EC7 SLS FoS Incremental Displacement Plot (x-direction) – Condition 1

With consideration of Condition 2, the factor of safety at a HAT tidal level was calculated to be of a greater magnitude than that of LAT. This is principally due to the consistent gradient of the dredge slope throughout the upper intertidal zone, as well as the increased friction angle of the shallower deposits. From review of the modelling outputs, the failure mechanism was observed to propagate from the lower section of the dredge side slopes, based upon the pre-existing profile. Within this condition, the failure mechanism was observed to propagate through the Medium-Dense Sands as shown within Figure 4.6. With consideration of the phi/c reduction method, factoring down the tangent of the friction angle, utilising the FoS within this condition equates to a friction angle of 9.3°.

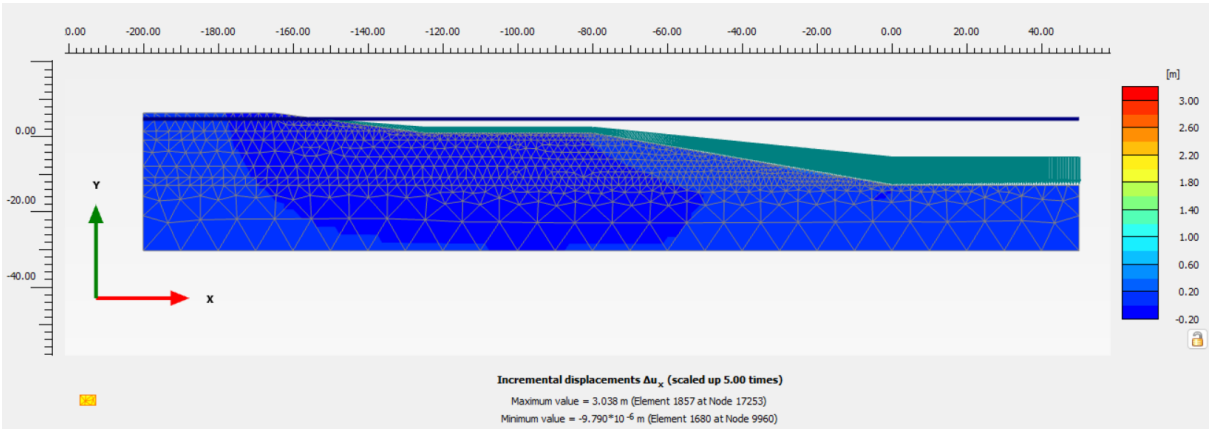


Figure 4.6: EC7 SLS FoS Incremental Displacement Plot (x-direction) – Condition 2

The factor of safety calculated within Condition 3 was of a comparable magnitude to that of Condition 1, due to the LAT level being located close to the transition of the gradient between the pre-existing material (graded at 1:6) and the reinstatement material (graded at 1:8). The highlighted failure mechanism propagates from the Medium-Dense Sand (Silty) as shown within Figure 4.7 & 4.7a. As a result of the phi/c reduction method, factoring down the tangent of the friction angle, utilising the FoS within this condition equates to the same friction angle of 11.8°.

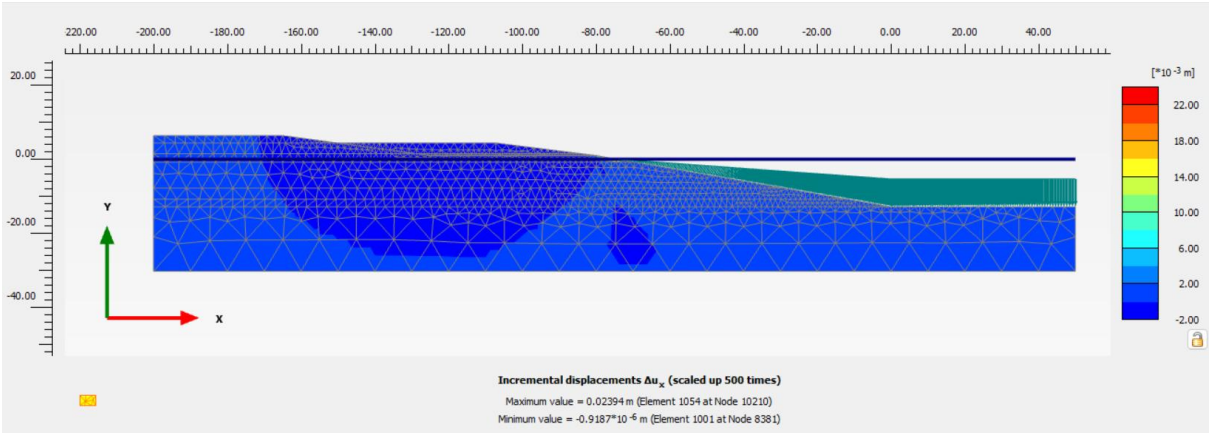


Figure 4.7: EC7 SLS FoS Incremental Displacement Plot (x-direction) – Condition 3

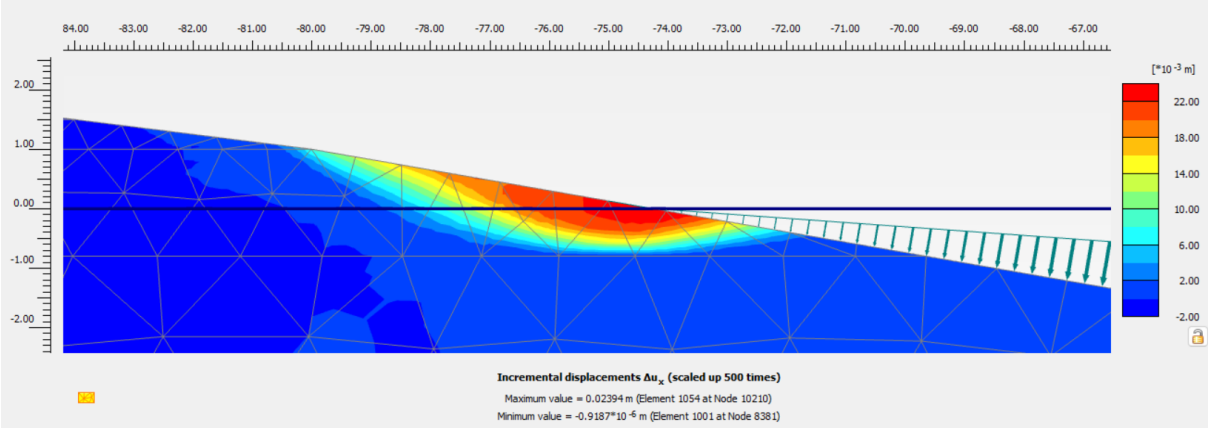


Figure 4.7a: Enlarged EC7 SLS FoS Incremental Displacement Plot (x-direction) – Condition 3

The factor of safety calculated within Condition 4 was of a comparable magnitude to that of Condition 2, due to the HAT level being located in close proximity to the finished level of the reinstated material. From review of the modelling outputs, the failure mechanism was observed to propagate from the transition in gradient between the pre-existing material (graded at 1:6) and the reinstatement material (graded at 1:8). From review of the modelling outputs, the failure mechanism within this condition was observed to propagate from the lower Medium-Dense Sands of the dredge side slope, based upon the profile following the reinstatement works, as shown within Figure 4.8 & 4.8a. With consideration of the phi/c reduction method, factoring down the tangent of the friction angle, utilising the FoS within this condition equates to a friction angle of 9.3°, as calculated from the results of Condition 2.

In line with the obtained results, it is envisaged that under operational and prevailing active water conditions, the slope would likely form an evenly graded slope between the toe and crest of the side slope alignments.

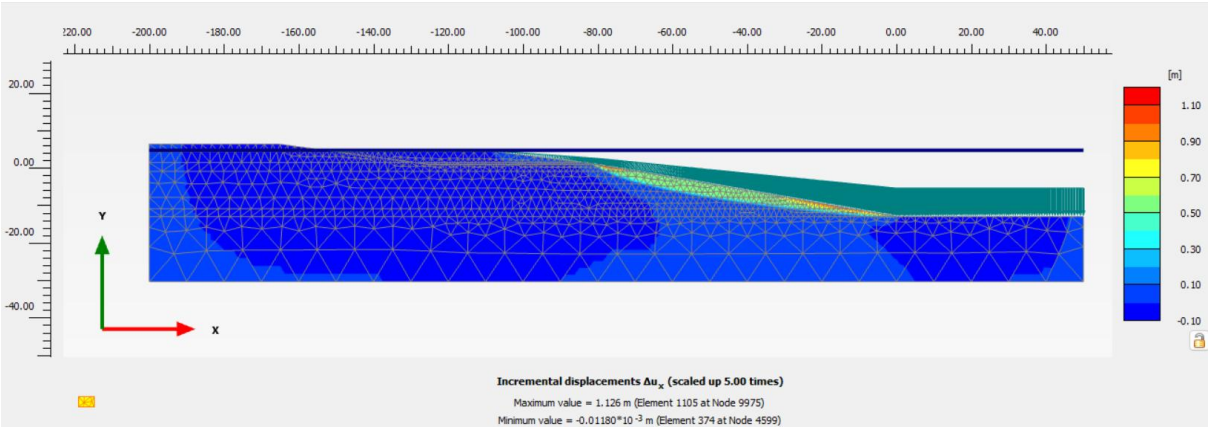


Figure 4.8: EC7 SLS FoS Incremental Displacement Plot (x-direction) – Condition 4

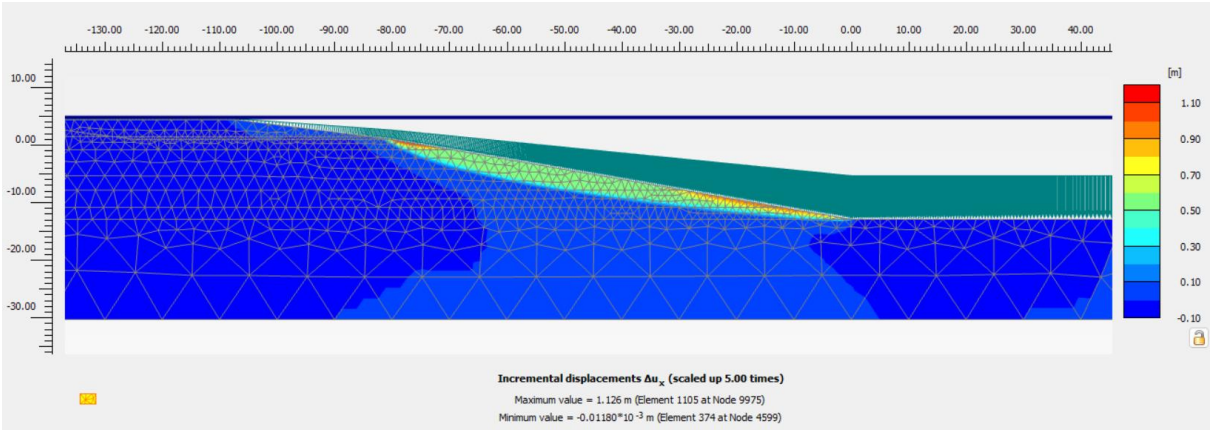


Figure 4.8a: Enlarged EC7 SLS FoS Incremental Displacement Plot (x-direction) – Condition 4

The factor of safety calculated within Condition 5 was of a lesser magnitude than calculated in Condition 6, due to the LAT level being located in very close proximity to the crest of the lower dredge side slope, based upon the pre-existing profile. Within Condition 5 the failure mechanism was observed to propagate from within the Medium-Dense Sand (Silty) as shown within Figure 4.9 & 4.9a. With consideration of the phi/c reduction method, factoring down the tangent of the friction angle, utilising the FoS within this condition equates to a friction angle of 11.7°.

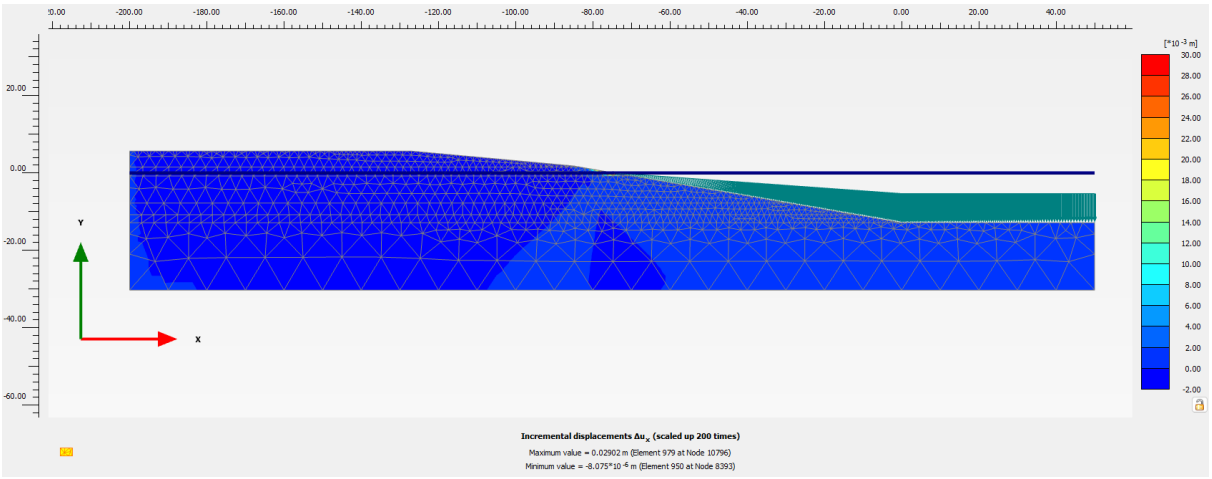


Figure 4.9: EC7 SLS FoS Incremental Displacement Plot (x-direction) – Condition 5

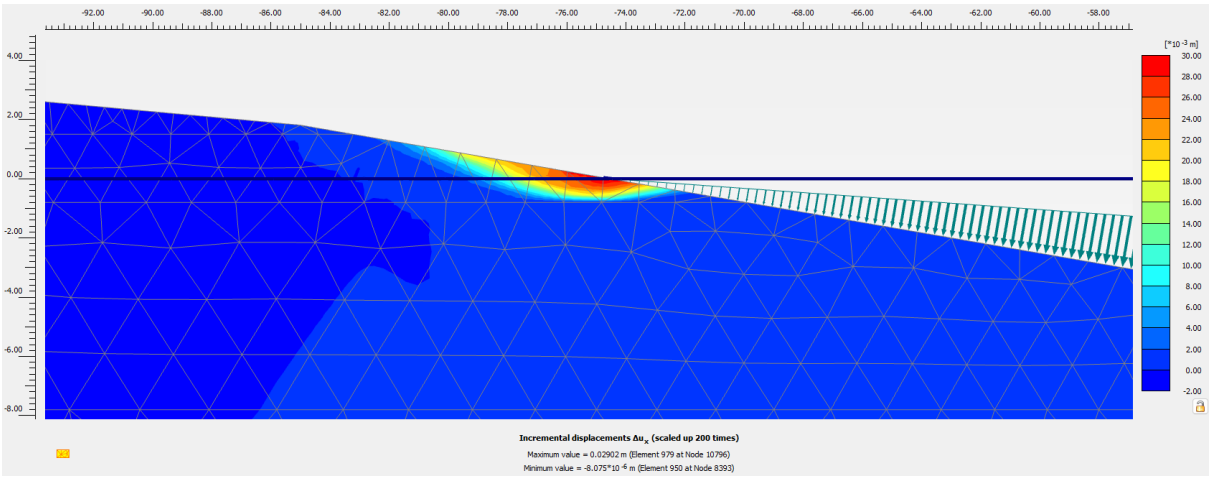


Figure 4.9a: Enlarged EC7 SLS FoS Incremental Displacement Plot (x-direction) – Condition 5

With consideration of Condition 6, the factor of safety at a HAT tidal level was calculated to be of a greater magnitude than that of LAT. This is principally due to the increased friction angle of the shallower deposits. From review of the modelling outputs, the failure mechanism was observed to propagate from the upper section of the dredge side slopes, where the proposed dredging aligns with the existing spit, based upon the pre-existing profile. Within this condition, the failure mechanism was observed to propagate through the Medium-Dense Sand (Silty) as shown within Figure 4.10 & 4.10a. With consideration of the phi/c reduction method, factoring down the tangent of the friction angle, utilising the FoS within this condition equates to a friction angle of 9.7°.

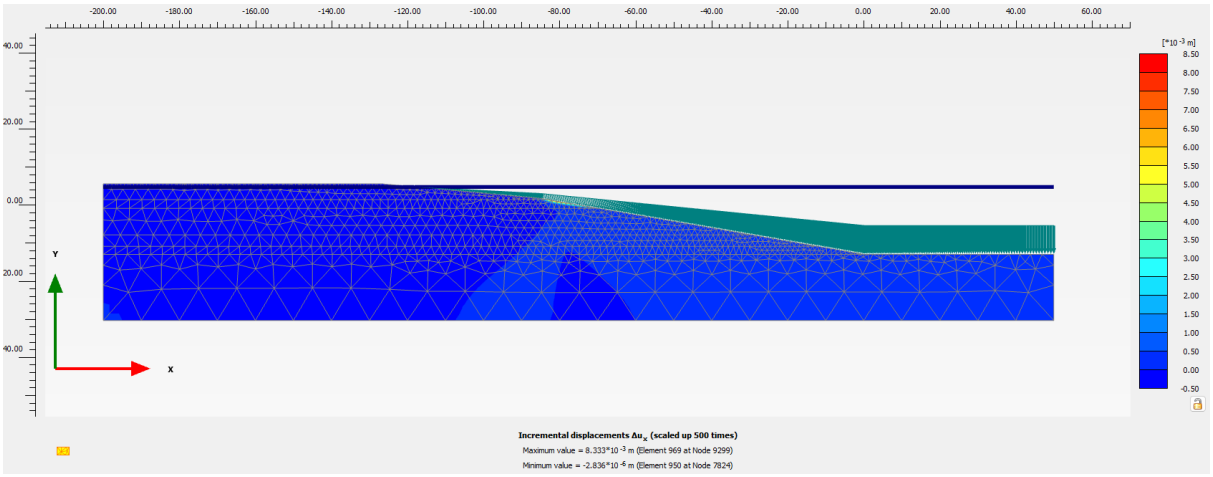


Figure 4.10: EC7 SLS FoS Incremental Displacement Plot (x-direction) – Condition 6

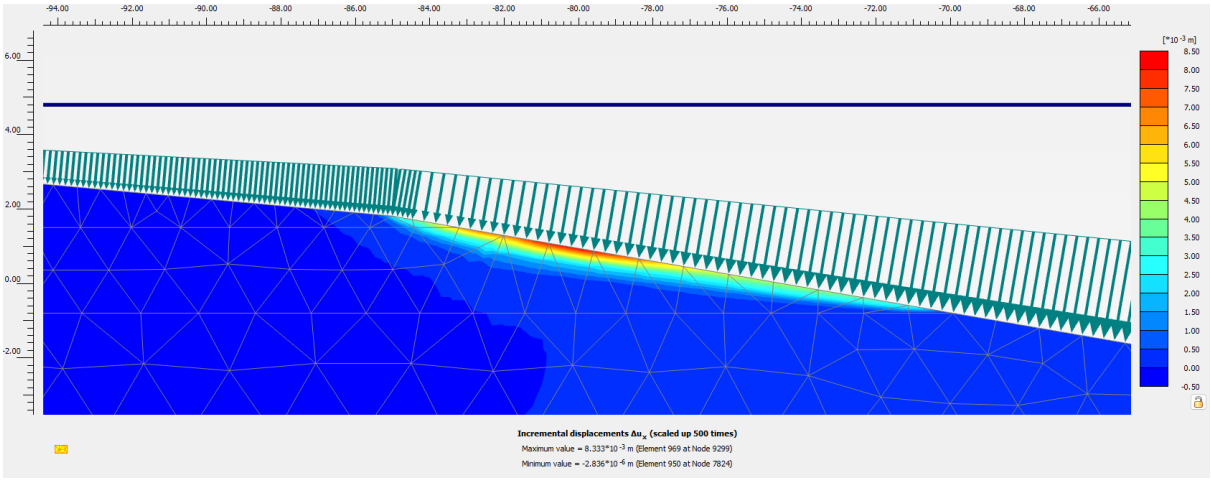


Figure 4.10a: Enlarged EC7 SLS FoS Incremental Displacement Plot (x-direction) – Condition 6

4.4 ASSESSMENT FINDINGS DISCUSSION

The enclosed analysis has been undertaken utilising still water conditions, however these findings will require contextualisation in active water conditions. BS6349-1-3:2012 details typical side slopes for Coarse Sands & Fine Sands in both still and active water conditions. These gradients are reproduced within Table 4.2.

Material Type	Typical Side Slope		Ratio of Typical Side Slope
	Still Water	Active Water	
Coarse Sands	20° (1 : 2.75)	10° (1 : 5.67)	2.06 : 1
Fine Sands	15° (1 : 3.73)	5° (1 : 11.43)	3.06 : 1

Table 4.2: Typical side slopes for selected stratification reproduced from BS6349-1.3:2012 (Table 1)

A further variation to the analysis was undertaken to derive the slope angles at which the FoS/ODF of 1.0 are achieved in still water conditions. In line with the particle size distributions from the previous ground investigation undertaken on the spit, a comparison has been made to the slope angles of Fine Sands due to the failure mechanism propagating from the fine grain sands close to the toe of the slope. This has utilised a gradient of 1:2 through the depth of the pre-existing sands whilst a gradient of 1:2.5 was adopted through the depth of reinstated material.

Condition	EC7 DA1 C2 (FoS / ODF)	Required Slope Gradients for Fine Sand in Active Water Conditions (factor = 3.06)
3	1.068	1 : 5.73– Natural Superficials 1 : 7.16 – Reinstatement Material
4	1.166	1 : 5.25 – Natural Superficials 1 : 6.56 – Reinstatement Material
5	1.030	1 : 5.94 – Natural Superficials
6	1.150	1 : 5.32 – Natural Superficials

Table 4.3: Derived side slopes for active water conditions

From review of the derived side slopes in active water conditions in comparison with the inputted dredge side slopes to the modelling completed, there is a high degree of agreement. The dredge slopes within the natural superficial deposits were modelled at a marginally steeper angle than required based upon BS6349-1-3:2012. Through the depth of reinstatement material, the modelled angle of side slope was marginally shallower than that derived from this standard.

5.0 CONCLUSIONS

In conclusion of this initial assessment, it is considered the dredge side slopes within the footprint of Phase 2 may be graded at 1:6 through the depth of natural superficial deposits, whilst the reinstatement material imported to the spit may be graded at 1:8 through their prevailing depth. From review of the existing ground investigation findings from within Phase 1, in conjunction with the surveyed profiles provided by Haventus, it can be demonstrated the spit will remain stable when subject to active water conditions at these gradients.

It should be expressly noted the initial assessment findings are undertaken with reference to Chainage 700 & Chainage 1100 within the spit, and further chainages will require analysis in order to review the factor of safety from these locations, whilst reflecting the varying bathymetry and topography throughout the extent of the spit, in conjunction with prevailing tidal levels. Furthermore, in the context of this initial assessment, the impacts of vessel thruster induced scour have not been reviewed, however it is recognised that owing to the typically fine grain granular nature of the natural superficial and reinstatement material within the side slopes, these are highly susceptible to becoming suspended within the channel. These will be reviewed once vessel data has been confirmed.

The findings of this assessment should be read in the context of the following engineering judgements made in preparing this document:

- The ground conditions within the footprint of the Phase 2 are assumed to be broadly comparable to those encountered within Phase 1, with little variation in the material properties, layering and grading of the superficial deposits, including those above MHWS which cannot be investigated due to prevailing protections on the spit;
- The performance of the reinstatement material has been considered to be as stated within Table 3.1. These parameters will require refinement (as necessary), based upon the findings of the Phase 2 Marine Ground Investigation works;
- The bathymetric and topographic data provided by Haventus, survey: 'ACAD-NAV-CHAN-Model' are assumed to be an accurate reflection of the existing profile of the spit prior to the reinstatement works. The levels of the reinstatement works are assumed to be reflective of that currently onsite;

In lieu of construction drawings explicitly showing the intent of the reinstatement works, the following risks are highlighted; whilst these can be partially mitigated from ground investigation works, these may remain inherent to the dredged side slopes, where construction drawings of the reinstatement works cannot be provided:

- It is envisaged that in order to prevent planar failure(s) of the dredge slopes, preparatory works entailed benching of the existing natural sands prior to placement of the reinstatement material, thereby mitigating the risk of planar failure which may be induced from a slope inclined towards the proposed channel. Placement upon an inclined slope would significantly increase the likelihood of planar failures as the spit material would not appropriately interlock with the reinstated material;
- Similarly, there is scope for variation in the moisture content of the reinstatement material, from that of its origin location, which may occur through the dredging and placement process. There is an inherent risk that under self-surcharge and settlement, the reinstatement material may fail by piping as the moisture content is pushed to the surface of the slope. From modelling undertaken within this assessment, there is noted to be a marginal degree of settlement which should be anticipated within the reinstatement material. This action is highly subjective to the permeability of the sands (testing to be undertaken as part of the Phase 2 Marine GI), however

the shallower deposits of sands are most vulnerable to this form of failure as a result of the lesser magnitude of self-surcharge;

- In addition, there is also a further risk that shallow piping failure of the dredge slope may occur due to the lack of practicable methods by which to compact the material when placed. As a result, there is potential by which cohesion of the sands (particularly with a higher silt content) may result in the arching of deposited material, which may subsequently be disturbed by variation in tidal levels, passing vessels or prevailing waves within the channel;

6.0 REFERENCES

BS6349-1-1:2013 – Maritime Works – General – Code of practice for Planning and design of Operations;

BS6349-1-3:2021 – Maritime Works – General – Code of practice for Geotechnical Design;

BS6349-5:2016 – Maritime Works – Code of practice for Dredging & Land Reclamation;

Eurocode 7 - Geotechnical Design - Part 1, General Rules (and National Annex);

PIANC WG180 (2015) - Guidelines for protecting berthing structures from scour caused by ships;

Mayne, P.W. 2001. Stress-strain-strength-flow parameters from enhanced in-situ tests. Proceedings, International Conference on In-Situ Measurement of Soil Properties & Case Histories [In-Situ 2001], Bali, Indonesia, May 21-24, 2001, pp. 27-48;

ADDENDUM 1 – WHITENESS HEAD STABILITY ASSESSMENT

A.1 REVIEW OF MARINE GROUND INVESTIGATION

Following review of the marine ground investigation works undertaken by Solmek within the Phase 2 area of the spit between August and October 2025, it has been concluded that no significant material variations in the ground conditions and stratification performance have been logged, hence the parameters as detailed within Table 3.1 are considered to accurately reflect the characteristics of the material insitu.

These factual ground investigation reports are referenced below, and enclosed within Appendix A for reference:

Solmek Ltd:

Haventus Ardersier Port, Inverness, Phase 2 Spit Ground Investigation – Factual Site Investigation Report, Issue 1, Dated: March 2026, Status: Final;

Haventus Ardersier Port, Inverness, Phase 2 Marine & Landside Ground Investigation – Factual Site Investigation Report, Issue 1, Dated: March 2026, Status: Final;

In conclusion, with reference to the reinstatement material located within the area adjoining the Phase 1 developments, as described within Section 1.0, the performance of these replaced medium-dense sands within Whiteness Head were logged performing in a manner akin to the natural stratification, and therefore this area will perform in a comparable manner to that of the wider spit. In line with the findings of the marine ground investigation it is considered this section can be dredged to achieve a navigation channel side slope of 1:6, throughout its' extent.

Following consultation with Marine Scotland, in order to provide a further degree of protection to Whiteness Head an additional buffer of 10metres will be accommodated within the side slopes of the navigational channel, thereby providing a margin for safety from the effects of diverging waves propagating from the bow of vessels within the channel at approximately 19°28' to the keel line, as well as the effects of scour as reviewed within Fairhurst Document: APP2-FHT-DD-CHA-RP-C-000002, Navigation Channel – Scour Assessment Report. It should be noted these vessel generated waves are highly likely to break in shallow water (approximately 0.3m) and therefore present relatively nominal risk to the stability of Whiteness Head.

A.2 REVIEW OF PROPELLER WASH FROM VESSELS

The rotating propeller from vessels within the channel will generate a turbulent continuous stream of fast-moving water flow, which will result in significantly elevated bed flows over that of tidal currents and wind induced waves.

Owing to the effects of dispersion proportionate to the distance from the propeller axis to the bed level, the turbulent stream of water flow will intersect the bed level at a distance of four times this measurement, with high bed flow as calculated within the scour assessment report, extending up to a distance of ten times this distance. Beyond this range to the rear of the vessel, the bed velocities will rapidly diminish to that which would have negligible impact upon the channel bathymetric, hence would not present a significant risk to the ongoing stability of Whiteness Head.

The risk of propeller wash from vessel movements within the navigation channel impacting upon the stability of Whiteness Head is considered relatively low for vessels moving longitudinally within the

channel, owing to the effects of dispersion due to the beams of vessels, as well as depth of water required to maintain sufficient under keel clearance to the bed of the channel. The risk of propeller wash impacting upon the spit from vessels manoeuvring to the berths will decrease with linear distance from the spit, owing to the effects of dispersion and as the position of influence from fast-moving water flow moves away from the spit, however ongoing monitoring will be required to ensure this does not impact the stability of Whiteness Head.

It has been assessed that, owing to the varying hydrodynamic characteristics of vessels operating within the area—particularly the calculated bed velocities and the depth of each vessel's propeller axis relative to the keel—a series of operational constraints will be implemented to minimise the risk of prop-wash-induced seabed scour. These measures include limiting high-powered astern movements, restricting rapid acceleration in shallow sections of the channel, and prohibiting tight manoeuvres or turning circles by vessels with large propeller diameters or high thrust outputs. Such vessels will instead be manoeuvred by tugboats to avoid the need for high engine loads during berthing, unberthing, and alignment operations.

In addition to these operational controls, a watching brief will be established across Whiteness Head. Routine bathymetric surveys will support early identification of any developing scour features and allow vessel movements within the channel to be reviewed on a case-by-case basis, helping to refine understanding of areas most affected by hydrodynamic forces.

In conclusion, with the implementation of these operational constraints, the influence of propeller-induced flows on Whiteness Head will be effectively controlled; therefore, it is considered that the spit will remain stable under the expected ongoing vessel movements. The combined approach of controlled vessel operations and continual monitoring will ensure that any changes in seabed morphology are identified at an early stage, enabling timely remedial action, thereby safeguarding the long-term integrity of Whiteness Head.

APPENDIX A – SITE INVESTIGATION WORKS

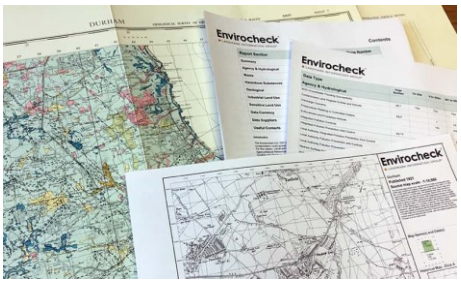
Solmek Ltd:

Ardersier Port (Scotland) Ltd, Ardersier Port, Inverness – Factual Site Investigation Report, Issue 4, Dated: March 2024, Status: Final;

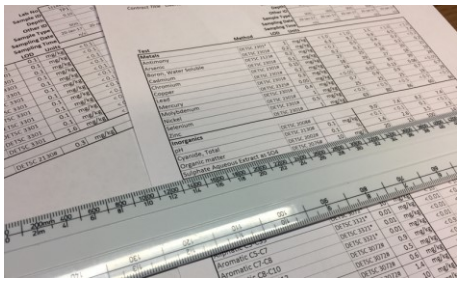
Haventus Ardersier Port, Inverness, Phase 2 Spit Ground Investigation – Factual Site Investigation Report, Issue 1, Dated: March 2026, Status: Final;

Haventus Ardersier Port, Inverness, Phase 2 Marine & Landside Ground Investigation – Factual Site Investigation Report, Issue 1, Dated: March 2026, Status: Final;

SOLMEK







Phase 2: Site Investigation

Ardersier Port, Spit Boreholes, Inverness

Ardersier Port (Scotland) Ltd

S230503

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bsi. ISO 14001:2015 Environmental Management
bsi. ISO 45001 Occupational Health and Safety Management
CHAS Accredited Contractor CHAS.co.uk

PHASE 2 SITE INVESTIGATION REPORT

ARDERSIER PORT, SPIT BOREHOLES INVERNESS

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Appendix E: Groundwater Data Log Summary
Appendix F: Notes on Limitations

Revision	Date	Prepared by	Signed
Final	March 2024	A Cutts *Senior Engineering Geologist* Checked by R Woods *Principal Geotechnical Engineer* Approved by R Woods *Principal Geotechnical Engineer*	[Redacted]

1 INTRODUCTION

1.1 Authorisation

The site investigation described in this report was carried out by Solmek to the instructions of ARUP on behalf of Haventus, Ardersier Port (Scotland) Ltd, on the spit area of land located at Ardersier Port to the east of Inverness.

A site location plan is presented in Appendix A, Figure 1.

1.2 Background & Scope of Works

The port is to become an Energy Transition Facility involving the recycling of old oil rigs to be used as foundations for floating offshore wind farms. The proposed development will also include a concrete production plant using dredged sand from the port inlet.

This phase of works concerns investigating the spit extending into the Moray Firth. A series of boreholes were required along the spit to determine its composition at depth and to provide geotechnical parameters to determine its integrity as a natural breakwater following dredging works in the main channel.

The following steps may be required in the investigation and remediation of potentially contaminated land:

- Phase 1: Desk Study
- Phase 2: Intrusive Investigation
- Phase 3: Remediation Statement
- Phase 4: Validation Reports

Phases 1 and 2 are generally required in the redevelopment of most sites. Phases 3 and 4 are subject to the findings of the initial stages.

A factual geotechnical report (Phase 2) was requested. The fieldwork and testing was generally carried out according to:

- BS 5930:2015+A1:2020 Code of Practice for Ground Investigations
- Rock and soil descriptions shall be in accordance with BS EN ISO 14689-1:2003, BS EN ISO 14688-1:2002 and BS EN ISO 14688-2:2004

This report forms part of a Stage 1 Risk Assessment (Generic Quantitative Risk Assessment) with respect to the Environment Agency's guidance document Environment Agency *Land Contamination Risk Management*, which replaced the now-withdrawn *Contaminated Land Report 11 – Model Procedures for the Management of Land Contamination (2004)*.

The information provided in this report is based on the investigation fieldwork and is subject to the comments and approval of the various regulatory authorities. There may be other conditions prevailing on the site which have not been disclosed by this investigation and which have not been taken into account by this report. Solmek reserve the right to alter conclusions and recommendations should further information be available or provided.

Any schematic representation or opinion of the possible configuration of ground conditions between exploratory holes is conjectural and given for guidance only and confirmation of intermediate ground conditions should be considered if deemed necessary.

2 SITE DESCRIPTION AND FIELDWORK

A initial site inspection, as recommended in BS 5930 and BS 10175, was undertaken on 23rd May 2023.

The site is centred at Ordnance Survey Co-ordinates 280420E, 858666N and lies immediately north east of Ardersier Port dock area. The spit is of generally sand and gravel construction which lies parallel to the dock side extending into the mouth of the Moray Firth.

2.1 Fieldwork

The drilling fieldwork was carried out between 23rd May and 6th July 2023. The extent of the investigation was:

- 5no. cable percussive boreholes (BHSP05 to BHSP09 inclusive) drilled to a maximum depth of 40.00m below ground level (bgl).
  - The boreholes were positioned by the client to target areas along the length of the spit in order to assess the deep ground conditions.
- Groundwater monitoring wells were installed in 2no. boreholes (BHSP07 & BHSP08).
  - Groundwater data logging was undertaken between October 2023 and February 2024 (Appendix E).
  - Falling head testing in BHSP07 & BHSP08 (Appendix D).
- In-situ testing in the boreholes as Standard Penetration Tests (SPTs).
- Retrieval of disturbed and undisturbed samples (attempted) for geotechnical testing.

The boreholes were backfilled with bentonite grout and monitoring installations upon completion.

Descriptions of the strata encountered in the boreholes together with details of sampling and groundwater are presented in Appendix B of this report.

A plan showing all exploratory locations can be found in Appendix A, Figure 2. It should be noted that these are indicative locations and have not, as yet, been surveyed.

3 GROUND CONDITIONS

A summary of the ground conditions encountered is given below.

3.1 Made Ground Deposits

Not proven.

3.2 Superficial Deposits

The superficial deposits generally comprised the following stratum units.

TABLE 1: NATURAL SUPERFICIAL GEOLOGY

Stratum	Base Depth (mbgl)	Details
Sandy GRAVEL	2.40-2.70mbgl	Noted from surface level in SPBH05 & SPBH08. Medium dense to dense light brown to dark grey slightly sandy to very sandy gravel with occasional inferred cobbles. The gravel and cobble fractions consisted of mixed lithologies including sandstone, limestone and mudstone.
Gravelly SAND	5.00-9.00mbgl	Noted in SPBH09. Dense brown and grey slightly gravelly to gravelly sand. The gravel fractions consisted of mixed lithologies including sandstone, limestone and mudstone.
Silty sandy GRAVEL	5.00-27.00mbgl	Medium dense to dense light brown to dark grey slightly silty very sandy gravel. The gravel fractions consisted of mixed lithologies including sandstone, limestone and mudstone.
Silty gravelly SAND	1.50-35.00mbgl	One of the main stratum units, this comprised very loose to very dense light brown to dark grey locally black slightly silty to silty slightly gravelly to very gravelly sand. The gravel fractions consisted of mixed lithologies including sandstone, limestone, mudstone and shell fragments.
Silty SAND	2.40-40.00mbgl	One of the main stratum units, this comprised medium dense to very dense light brown to dark grey slightly silty to silty sand.

3.3 Bedrock

Not proven.

3.4 Groundwater

Groundwater strikes are shown in Table 2 below.

TABLE 2: GROUNDWATER RECORDS FROM BOREHOLES DURING FIELDWORK

Location	Depth of Strike (mbgl)	Stratum
BHSP05	3.60	Silty SAND
BHSP06	4.50	Silty gravelly SAND
BHSP07	6.40	Silty gravelly SAND
BHSP08	3.10	Silty gravelly SAND
BHSP09	3.20	Silty sandy GRAVEL

The rapid rate of advancement of the exploratory holes may mask minor seepages and it should be borne in mind that water levels fluctuate with a number of influences including tides, season, rainfall, dewatering and pumping activities.

Therefore, water levels significantly higher than those found during this investigation may be encountered.

4 GEOTECHNICAL TESTING

Samples taken from the boreholes underwent a series of geotechnical tests to aid design and soil description.

In addition, insitu Standard Penetration Tests (SPTs) were undertaken at regular intervals during drilling.

4.1 Laboratory Testing

The full scope of the laboratory testing (requested by ARUP) is presented below along with the respective testing laboratories.

The results are presented in Appendix D with a summary of selected geotechnical properties by depth range presented in Table 3.

G2M Testing Ltd, 12-16 Yarm Rd, Stockton on Tees, TS18 3NA

- 77no. Moisture Contents
- 77no. Particle Size Distribution

Geolabs, Bucknalls Lane, Watford, Hertfordshire, WD25 9XX

- 20no. Min/Max Relative Density
- 11no. Shear Box Tests (set of three specimens per test)
- 9no. Consolidated Drained Multistage Triaxial Compression Tests

TABLE 3: SUMMARY OF GEOTECHNICAL TEST DATA BY DEPTH

General Stratigraphy	Depth Range (mbgl)		Test Type	Parameters Range
	From	To		
Sandy GRAVEL Gravelly SAND Silty sandy GRAVEL Silty gravelly SAND Silty SAND	0.00	10.00	SPT N Value	11-45
			Moisture Content	1.80-23%
			(Min) Max Dry Density	(1.20-1.30g/cm^3) 1.58-1.65g/cm^3
			Small Shear Box Φ (Ap Cohesion)	33.5-39° (1-6kPa)
			Sand Con Drained Tx Φ (Cohesion)	36-39.5° (3.30kPa)
Silty sandy GRAVEL Silty gravelly SAND Silty SAND	10.00	20.00	SPT N Value	2-50
			Moisture Content	18-32%
			(Min) Max Dry Density	(1.13-1.22g/cm^3) 1.54-1.65g/cm^3
			Small Shear Box Φ (Ap Cohesion)	32.5-35° (1-9kPa)
			Sand Con Drained Tx Φ (Cohesion)	35-37° (0-3.60kPa)
Silty sandy GRAVEL Silty gravelly SAND Silty SAND	20.00	30.00	SPT N Value	20-50
			Moisture Content	9.30-25%
			(Min) Max Dry Density	(1.13-1.24g/cm^3) 1.60-1.71g/cm^3
			Small Shear Box Φ (Ap Cohesion)	33-37.5° (1-9kPa)
			Sand Con Drained Tx Φ (Cohesion)	34° (0kPa)
Silty sandy GRAVEL Silty gravelly SAND Silty SAND	30.00	40.00	SPT N Value	29-50
			Moisture Content	14-26%

4.2 Percolation Tests

A series of falling head tests were undertaken in BHSP07 & BHSP08 across the site. The boreholes were filled with water and the time for the water to fall back to natural groundwater level was recorded.

Table 4 summarises the range of soil infiltration rates.

TABLE 4 : SUMMARY OF FALLING HEAD TESTS

Borehole (Depth)	Soil Infiltration Rate (x 10^{-6}ms)
BHSP07 (10.00mbgl)	0.0103
BHSP07 (20.00mbgl)	0.00795
BHSP07 (35.00mbgl)	0.000895
BHSP08 (10.00mbgl)	0.000935
BHSP08 (21.00mbgl)	0.000120

The full results are presented in Appendix D.

5 GROUNDWATER MONITORING

During the site investigation works, groundwater monitoring wells were installed within SPBH07 & SPBH08, at the request of ARUP. Data loggers were placed into the wells and were monitored over a four month period between October 2023 and February 2024 with readings taken every 15 minutes.

A summary of the results is presented in Appendix E.

APPENDIX A



SOLMEK
12-16 Yarm Road, Stockton on Tees, TS18 3NA
Tel: 01642 607083 Email: info@solmek.com

Figure Title

Site Location Plan

Project Number

S230503

Project Name

Spit Boreholes - Ardersier Port, Inverness

Client

Ardersier Port

Date

March 2024

DRG Number

Figure 1

Scale

1:51500 @ A4 [DO NOT SCALE]

Legend Key

Project Bounds - Project Bounds



SOLMEK
12-16 Yarm Road, Stockton on Tees, TS18 3NA
Tel: 01642 607083 Email: info@solmek.com

Figure Title

BH Location Plan

Project Number

S230503

Project Name

Spit Boreholes - Ardersier Port, Inverness

Client

Ardersier Port

Date

March 2024

DRG Number

Figure 2

Scale

1:6000 @ A4 [DO NOT SCALE]

Legend Key

- Locations By Type - BH
- Project Bounds - Project Bounds

APPENDIX B

SOLMEK
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Stockton on Tees
TS18 3NA
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info@solmek.com

Borehole Log

Scale 1:100 Sheet 1 of 2

BH-SP05

Contract no:	S230503	**Site:**	Spit Boreholes - Ardersier Port, Inverness	**Driller:**	Bainbridge Brothers Ltd
				Plant used:	Dando 2000
				Started:	23/06/2023
Client:	Ardersier Port			**Ended:**	06/07/2023
Method:	Cable Percussive			**Backfilled:**	06/07/2023

GL (AOD):	
Easting:	280799
Northing:	858470
Logged:	SM
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Dense dark grey to greyish brown slightly sandy GRAVEL with an inferred low cobble content. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Cobbles are subrounded to rounded of mixed lithologies including sandstone, mudstone, limestone.	0.30	B	
					0.80	B	
					1.20 - 1.65	SPT (S)	N=30 (3,6/7,7,8,8)
					1.20	B + D	
					2.00 - 2.45	SPT (S)	N=39 (4,9/9,9,10,11)
					2.00	B + D	
		2.70		Medium dense brown slightly silty SAND. Sand is fine to coarse.	3.00 - 3.45	SPT (S)	N=13 (1,1/2,2,4,5)
					3.00	B + D	
					4.00 - 4.45	SPT (S)	N=17 (2,2/3,3,4,7)
					4.00	B + D	
		5.00		Medium dense brown slightly silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone.	5.00 - 5.45	SPT (S)	N=22 (1,2/4,5,5,8)
					5.00	B + D	
					6.00 - 6.45	SPT (S)	N=12 (2,3/3,2,3,4)
					6.00	B + D	
					7.00 - 7.45	SPT (S)	N=19 (2,3/3,5,6,5)
					7.00	B + D	
					8.00 - 8.45	SPT (S)	N=21 (3,5/5,5,6,5)
					8.00	B + D	
					9.00 - 9.45	SPT (S)	N=25 (3,4/5,7,7,6)
					9.00	B + D	
					10.00 - 10.45	SPT (S)	N=19 (2,3/3,4,6,6)
					10.00	B + D	
					10.50 - 10.95	SPT (S)	N=28 (2,4/7,7,7,7)
					10.50	B + D	
		12.00		Medium dense to dense dark grey to brown slightly silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone.	12.00 - 12.45	SPT (S)	N=37 (3,5/8,8,9,12)
					12.00	B + D	
					13.50 - 13.95	SPT (S)	N=29 (4,7/7,6,7,9)
					13.50	B + D	
		15.00		Dense dark grey slightly silty SAND. Sand is fine to coarse.	15.00 - 15.45	SPT (S)	N=30 (2,2/5,7,7,11)
					15.00	B + D	
					16.50 - 16.95	SPT (S)	N=38 (3,8/8,9,9,12)
					16.50	B + D	
					18.00 - 18.45	SPT (S)	N=42 (7,9/9,11,10,12)
					18.00	B + D	
					19.50 - 19.95	SPT (S)	N=32 (6,6/7,8,8,9)
					19.50	B + D	

Hole Diameter

Depth Base (m)	Diameter (mm)
10.00	250
22.50	200
40.00	150

Casing Depths

Depth Base (m)	Diameter (mm)
10.00	250
22.50	200
40.00	150

General Remarks

1.2m Hand excavated inspection pit dug.
Groundwater encountered at 3.60m.
Borehole backfilled on completion.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
3.60	3.60		20	3.55

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Borehole Log

Scale 1:100 Sheet 2 of 2

BH-SP05

Contract no:	S230503	**Site:**	Spit Boreholes - Ardersier Port, Inverness	**Driller:**	Bainbridge Brothers Ltd
				Plant used:	Dando 2000
				Started:	23/06/2023
Client:	Ardersier Port			**Ended:**	06/07/2023
Method:	Cable Percussive			**Backfilled:**	06/07/2023

GL (AOD):	
Easting:	280799
Northing:	858470
Logged:	SM
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Dense dark grey slightly silty SAND. Sand is fine to coarse.	21.00 - 21.45 21.00	SPT (S) B + D	N=36 (7,7/7,9,9,11)
					22.50 - 22.95 22.50	SPT (S) B + D	N=35 (4,6/8,9,9,9)
					24.00 - 24.45 24.00	SPT (S) B + D	N=39 (7,9/10,9,10,10)
					25.50 - 25.95 25.50	SPT (S) B + D	N=32 (3,6/7,8,7,10)
					27.00 - 27.45 27.00	SPT (S) B + D	N=41 (5,7/9,10,10,12)
					28.50 - 28.95 28.50	SPT (S) B + D	N=41 (8,8/9,11,11,10)
					30.00 - 30.45 30.00	SPT (S) B + D	N=44 (2,4/7,9,13,15)
					31.50 - 31.95 31.50	SPT (S) B + D	N=37 (5,9/9,9,9,10)
					33.00 - 33.45 33.00	SPT (S) B + D	N=36 (10,9/9,8,9,10)
		34.50		Dense to very dense grey slightly silty SAND. Sand is fine to coarse.	34.50 - 34.94 34.50	SPT (S) B + D	N=50+ (4,13/13,14,16,7 for 70mm)
					36.00 - 36.45 36.00	SPT (S) B + D	N=31 (5,5/5,8,8,10)
					37.50 - 37.95 37.50	SPT (S) B + D	N=43 (4,6/8,11,11,13)
					39.00 - 39.44 39.00	SPT (S) B + D	N=50+ (7,8/9,10,15,16 for 65mm)
		40.00		End of Borehole at 40.000m			

Hole Diameter

Depth Base (m)	Diameter (mm)
10.00	250
22.50	200
40.00	150

Casing Depths

Depth Base (m)	Diameter (mm)
10.00	250
22.50	200
40.00	150

General Remarks

1.2m Hand excavated inspection pit dug.
Groundwater encountered at 3.60m.
Borehole backfilled on completion.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
3.60	3.60		20	3.55

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Borehole Log

Scale 1:100 Sheet 1 of 2

BH-SP06

Contract no:	S230503	**Site:**	Spit Boreholes - Ardersier Port, Inverness	**Driller:**	Bainbridge Brothers Ltd
				Plant used:	Damdo 2000
				Started:	12/06/2023
Client:	Ardersier Port			**Ended:**	23/06/2023
Method:	Cable Percussive			**Backfilled:**	23/06/2023

GL (AOD):	
Easting:	280604
Northing:	858567
Logged:	SM
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense light brown to brown slightly silty gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone.	0.30	B	
					0.80	B	
					1.20 - 1.65	SPT (S)	N=18 (3,3/3,4,5,6)
		1.50		Medium dense brown slightly silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone.	1.20	B+D	
					2.00 - 2.45	SPT (S)	N=27 (3,4/6,7,7,7)
					2.00	B+D	
					3.00 - 3.45	SPT (S)	N=21 (4,4/4,4,6,7)
					3.00	B+D	
					4.00 - 4.45	SPT (S)	N=24 (4,5/5,4,7,8)
					4.00	B+D	
		5.00		Dense brown slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone.	5.00 - 5.45	SPT (S)	N=30 (5,4/5,8,8,9)
					5.00	B+D	
					6.00 - 6.45	SPT (S)	N=32 (4,4/6,7,9,10)
					6.00	B+D	
					7.00 - 7.45	SPT (S)	N=39 (6,6/9,9,9,12)
					7.00	B+D	
					8.00 - 8.45	SPT (S)	N=36 (5,7/7,9,9,11)
					8.00	B+D	
		9.00		Dense to very dense brown slightly silty SAND. Sand is fine to coarse.	9.00 - 9.45	SPT (S)	N=33 (4,5/7,6,10,10)
					9.00	B+D	
					10.00 - 10.44	SPT (S)	N=50+
					10.00	B+D	(7,11/13,12,12,13 for
					10.50 - 10.95	SPT (S)	70mm)
					10.50	B+D	N=36 (6,8/8,9,9,10)
		12.10		Medium dense to dense dark grey silty SAND. Sand is fine to coarse.	12.00 - 12.45	SPT (S)	N=40 (3,7/10,9,10,11)
					12.00	B+D	
					13.50 - 13.95	SPT (S)	N=24 (4,4/5,6,6,7)
					13.50	B+D	
					15.00 - 15.45	SPT (S)	N=27 (3,6/5,7,7,8)
					15.00	B+D	
					16.50 - 16.95	SPT (S)	N=32 (4,6/6,8,9,9)
					16.50	B+D	
		18.00		Dense dark grey silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone.	18.00 - 18.45	SPT (S)	N=39 (6,7/9,9,9,12)
					18.00	B+D	
					19.50 - 19.95	SPT (S)	N=41 (5,7/8,11,11,11)
					19.50	B+D	

Hole Diameter

Depth Base (m)	Diameter (mm)
10.00	250
24.00	200
40.00	150

Casing Depths

Depth Base (m)	Diameter (mm)
10.00	250
24.00	200
40.00	150

General Remarks

1.2m Hand excavated inspection pit dug,
Groundwater encountered at 4.50m.
Borehole backfilled on completion.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
4.50	4.50		20	4.34

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Borehole Log

Scale 1:100 Sheet 2 of 2

BH-SP06

Contract no:	S230503	**Site:**	Spit Boreholes - Ardersier Port, Inverness	**Driller:**	Bainbridge Brothers Ltd
				Plant used:	Damdo 2000
				Started:	12/06/2023
Client:	Ardersier Port			**Ended:**	23/06/2023
Method:	Cable Percussive			**Backfilled:**	23/06/2023

GL (AOD):	
Easting:	280604
Northing:	858567
Logged:	SM
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Dense dark grey silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone.	21.00 - 21.45 21.00	SPT (S) B+D	N=36 (7,6/8,9,9,10)
					22.50 - 22.95 22.50	SPT (S) B+D	N=42 (8,9/9,10,10,13)
		23.20		Dense dark grey slightly silty very sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse subrounded to rounded of sandstone.	24.00 - 24.45 24.00	SPT (S) B+D	N=41 (5,7/7,12,12,10)
		24.70		Dense dark grey silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone.	25.50 - 25.95 25.50	SPT (S) B+D	N=40 (6,9/10,10,10,10)
		27.00		Dense to very dense dark grey slightly silty SAND.	27.00 - 27.45 27.00	SPT (S) B+D	N=43 (9,9/11,10,11,11)
					28.50 - 28.94 28.50	SPT (S) B+D	N=50+ (7,10/10,11,17,12 for 60mm)
					30.00 - 30.44 30.00	SPT (S) B+D	N=50+ (6,7/7,13,15,15 for 65mm)
					31.50 - 31.95 31.50	SPT (S) B+D	N=38 (7,8/8,9,10,11)
					33.00 - 33.44 33.00	SPT (S) B+D	N=50+ (9,10/9,17,17,7 for 70mm)
					34.50 - 34.78 34.50	SPT (S) B+D	N=50+ (4,11/27,23 for 50mm)
					36.00 - 36.37 36.00	SPT (S) B+D	N=50+ (5,8/19,24,7 for 70mm)
					37.50 - 37.77 37.50	SPT (S) B+D	N=50+ (11,13/26,24 for 45mm)
					39.00 - 39.44 39.00	SPT (S) B+D	N=50+ (2,5/8,15,16,11 for 70mm)
		40.00		End of Borehole at 40.000m			

Hole Diameter

Depth Base (m)	Diameter (mm)
10.00	250
24.00	200
40.00	150

Casing Depths

Depth Base (m)	Diameter (mm)
10.00	250
24.00	200
40.00	150

General Remarks

1.2m Hand excavated inspection pit dug,
Groundwater encountered at 4.50m.
Borehole backfilled on completion.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
4.50	4.50		20	4.34

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Borehole Log

Scale 1:100 Sheet 1 of 2

BH-SP07

Contract no:	S230503	**Site:**	Spit Boreholes - Ardersier Port, Inverness	**Driller:**	Bainbridge Brothers Ltd
				Plant used:	Dando 2000
				Started:	20/06/2023
Client:	Ardersier Port			**Ended:**	29/06/2023
Method:	Cable Percussive			**Backfilled:**	29/06/2023

GL (AOD):	
Easting:	280420
Northing:	858666
Logged:	SM
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense light brown slightly silty SAND. Sand is fine to coarse.	0.20 - 0.30	B	
					0.70 - 0.80	B	
					1.20 - 1.65	SPT (S)	N=11 (2,3/3,3,2,3)
					1.20 - 1.65	B + D	
					2.00 - 2.45	SPT (S)	N=16 (2,3/3,4,5,4)
					2.00 - 2.45	B + D	
		2.40		Medium dense light brown slightly silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Occasional shell fragments noted, frequent fine to coarse coal gravels noted.	3.00 - 3.45	SPT (S)	N=18 (3,4/5,4,5,4)
					3.00 - 3.45	B + D	
					4.00 - 4.45	SPT (S)	N=20 (4,5/4,5,6,5)
					4.00 - 4.45	B + D	
					5.00 - 5.45	SPT (S)	N=20 (4,6/4,5,5,6)
					5.00 - 5.45	B + D	
G					6.00 - 6.45	SPT (S)	N=26 (4,6/7,6,7,6)
					6.00 - 6.45	B + D	
					7.00 - 7.45	SPT (S)	N=27 (6,7/6,6,7,8)
					7.00 - 7.45	B + D	
		8.00		Medium dense light brown slightly silty gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Occasional shell fragments noted, frequent fine to coarse coal gravels noted.	8.00 - 8.45	SPT (S)	N=24 (4,5/5,6,6,7)
					8.00 - 8.45	B + D	
					9.00 - 9.45	SPT (S)	N=29 (6,7/9,8,7,5)
					9.00 - 9.45	B + D	
		10.10		Medium dense grey and locally light brown slightly silty SAND. Sand is fine to coarse. Occasional shell fragments noted.	10.10 - 10.20	B	
					10.50 - 10.95	SPT (S)	N=15 (1,1/0,5,5,5)
					10.50 - 10.95	B + D	
		12.00		Very dense grey slightly silty SAND. Sand is fine to coarse.	12.00 - 12.36	SPT (S)	N=50+ (5,8/14,16,20 for 60mm)
					12.00 - 12.45	B + D	
		13.50		Very dense grey and locally light brown silty gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Occasional shell fragments noted.	13.50 - 13.88	SPT (S)	N=50+ (6,8/10,15,23,2 for 2mm)
					13.50 - 13.95	B + D	
		14.40		Dense to very dense dark grey slightly silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to rounded of mixed lithologies including sandstone, mudstone and limestone.	15.00 - 15.36	SPT (S)	N=50+ (6,7/13,17,20 for 55mm)
					15.00 - 15.45	B + D	
					16.50 - 16.95	SPT (S)	N=37 (4,7/8,10,9,10)
					16.50 - 16.95	B + D	
		18.00		Very loose dark grey locally grey slightly silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Rare shell fragments noted. Frequent fine to coarse coal gravels noted.	18.00 - 18.45	SPT (S)	N=2 (1,1/0,1,0,1)
					18.00 - 18.45	B + D	
		19.50		Medium dense dark grey locally grey slightly silty slightly gravelly SAND. Sand is fine to coarse.	19.50 - 19.95	SPT (S)	N=19 (2,3/5,5,4,5)
					19.50 - 19.95	B + D	

Hole Diameter

Depth Base (m)	Diameter (mm)
10.00	250
20.00	200
35.00	150

Casing Depths

Depth Base (m)	Diameter (mm)
10.00	250
19.50	200
34.50	150

General Remarks

1.2m Hand excavated inspection pit dug.
Groundwater encountered at 6.40m.
Soakaway in borehole.
Standpipe installed on completion.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
6.40	6.40			

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Borehole Log

Scale 1:100 Sheet 2 of 2

BH-SP07

Contract no:	S230503	**Site:**	Spit Boreholes - Ardersier Port, Inverness	**Driller:**	Bainbridge Brothers Ltd
				Plant used:	Dando 2000
				Started:	20/06/2023
Client:	Ardersier Port			**Ended:**	29/06/2023
Method:	Cable Percussive			**Backfilled:**	29/06/2023

GL (AOD):	
Easting:	280420
Northing:	858666
Logged:	SM
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense dark grey locally grey slightly silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Rare shell fragments noted. Frequent fine to coarse coal gravels noted.	21.00 - 21.45 21.00 - 21.45	SPT (S) B + D	N=20 (3,4/4,5,6,5)
					22.50 - 22.95 22.50 - 22.95	SPT (S) B + D	N=24 (5,4/5,6,6,7)
					24.00 - 24.45	U	82 blows [NR]
					24.50 - 24.95 24.50 - 24.95	SPT (S) B + D	N=25 (4,5/6,6,7,6)
		25.50		Medium dense dark grey locally grey silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Rare shell fragments noted. Frequent fine to coarse coal gravels noted.	25.50 - 25.95 25.50 - 25.95	SPT (S) B + D	N=22 (4,5/5,6,5,6)
					27.00 - 27.45 27.00 - 27.45	SPT (S) B + D	N=24 (5,6/6,6,5,7)
					28.50 - 28.95 28.50 - 28.95	SPT (S) B + D	N=28 (6,5/7,6,7,8)
		30.00		Dense dark grey locally grey slightly silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Rare shell fragments noted. Frequent fine to coarse coal gravels noted.	30.00 - 30.45 30.00 - 30.45	SPT (S) B + D	N=30 (6,4/7,6,7,10)
					31.50 - 31.95 31.50 - 31.95	SPT (S) B + D	N=42 (6,7/9,10,12,11)
					33.00 - 33.45 33.00 - 33.45	SPT (S) B + D	N=41 (5,6/8,9,11,13)
					34.50 - 34.95 34.50 - 34.95	SPT (S) B + D	N=38 (5,7/7,8,11,12)
		35.00		End of Borehole at 35.000m			

Hole Diameter		Casing Depths	
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)
10.00	250	10.00	250
20.00	200	19.50	200
35.00	150	34.50	150

General Remarks

1.2m Hand excavated inspection pit dug.
Groundwater encountered at 6.40m.
Soakaway in borehole.
Standpipe installed on completion.

Chiselling		
From (m)	To (m)	Time (hr)

Ground Water				
Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
6.40	6.40			

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Borehole Log

Scale 1:100 Sheet 1 of 2

BH-SP08

Contract no:	S230503	**Site:**	Spit Boreholes - Ardersier Port, Inverness	**Driller:**	Bainbridge Brothers Ltd
				Plant used:	Dando 2000
				Started:	06/06/2023
Client:	Ardersier Port			**Ended:**	15/06/2023
Method:	Cable Percussive			**Backfilled:**	15/06/2023

GL (AOD):	
Easting:	280219
Northing:	858743
Logged:	SM
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense light brown very sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Becoming silty below 2.00m.	0.30 - 0.40	B	
					0.80 - 0.90	B	
					1.20 - 1.65	SPT (S)	N=20 (4,9/6,5,5,4)
					1.20 - 1.65	B+D	
					2.00 - 2.45	SPT (S)	N=16 (2,3/2,5,4,5)
		2.40			2.00 - 2.45	B+D	
				Medium dense light brown slightly silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Dense at 10.00m.	3.00 - 3.45	SPT (S)	N=15 (1,1/1,2,5,7)
					3.00 - 3.45	B+D	
					4.00 - 4.45	SPT (S)	N=22 (3,4/5,5,5,7)
					4.00 - 4.45	B+D	
					5.00 - 5.45	SPT (S)	N=27 (3,5/6,6,7,8)
					5.00 - 5.45	B+D	
					6.00 - 6.45	SPT (S)	N=29 (1,4/7,7,6,9)
					6.00 - 6.45	B+D	
					7.00 - 7.45	SPT (S)	N=18 (1,3/2,5,5,6)
					7.00 - 7.45	B+D	
					8.00 - 8.45	SPT (S)	N=29 (4,5/6,5,9,9)
					8.00 - 8.45	B+D	
					9.00 - 9.45	SPT (S)	N=29 (2,4/4,7,8,10)
					9.00 - 9.45	B+D	
					10.00 - 10.45	SPT (S)	N=36 (5,5/8,9,10,9)
					10.00 - 10.45	B+D	
					10.50 - 10.95	SPT (S)	N=18 (3,4/4,5,4,5)
					10.50 - 10.95	B+D	
		11.80		Medium dense light grey locally brown slightly silty SAND. Sand is fine to coarse. Gravelly at 13.50m.	11.80 - 11.90	B	
					12.00 - 12.45	SPT (S)	N=20 (4,3/4,5,5,6)
					12.00 - 12.45	B + D	
					13.50 - 13.95	SPT (S)	N=22 (4,4/5,6,5,6)
					13.50 - 13.95	B + D	
					15.00 - 15.45	SPT (S)	N=20 (5,4/5,5,4,6)
					15.00 - 15.45	B + D	
					16.50 - 16.95	SPT (S)	N=25 (4,5/6,6,6,7)
					16.50 - 16.95	B + D	
					18.00 - 18.45	SPT (S)	N=21 (5,6/4,5,6,6)
					18.00 - 18.45	B + D	
		19.50		Medium dense grey slightly silty slightly to very gravelly SAND. Sand is fine to coarse. Gravel is	19.50 - 19.95	SPT (S)	N=21 (6,7/4,6,5,6)
					19.50	B + D	

Hole Diameter		Casing Depths	
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)
10.00	250	10.00	250
21.00	200	21.00	200
40.00	150	40.00	150

General Remarks

1.2m Hand Excavated inspection pit dug..
Groundwater encountered at 3.10m.
Soakaway in borehole.
Standpipe installed on completion.

Chiselling		
From (m)	To (m)	Time (hr)

Ground Water				
Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
3.10	3.00			

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Borehole Log

Scale 1:100 Sheet 2 of 2

BH-SP08

Contract no:	S230503	**Site:**	Spit Boreholes - Ardersier Port, Inverness	**Driller:**	Bainbridge Brothers Ltd
				Plant used:	Dando 2000
				Started:	06/06/2023
Client:	Ardersier Port			**Ended:**	15/06/2023
Method:	Cable Percussive			**Backfilled:**	15/06/2023

GL (AOD):	
Easting:	280219
Northing:	858743
Logged:	SM
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense grey slightly silty slightly to very gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subrounded to rounded of sandstone.	21.00 - 21.45	SPT (S)	N=27 (6,6/7,6,7,7)
					21.00 - 21.45	B + D	
					22.50 - 22.95	SPT (S)	N=26 (6,6/7,5,7,7)
					22.50 - 22.95	B + D	
		23.50		Medium dense to dense light grey slightly silty very sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse subrounded to rounded of sandstone.	24.00 - 24.45	SPT (S)	N=29 (5,6/6,7,8,8)
					24.00 - 24.45	B + D	
					25.50 - 25.95	SPT (S)	N=32 (6,7/8,7,8,9)
					25.50 - 25.95	B + D	
		27.00		Dense light grey locally brown slightly silty to silty SAND. Sand is fine to coarse.	27.00 - 27.45	SPT (S)	N=35 (6,7/8,9,10,8)
					27.00 - 27.45	B + D	
					28.50 - 28.95	SPT (S)	N=32 (6,7/8,7,8,9)
					28.50 - 28.95	B + D	
					30.00 - 30.45	SPT (S)	N=33 (3,6/8,8,8,9)
					30.00 - 30.45	B+D	
					31.50 - 31.95	SPT (S)	N=39 (7,8/9,9,10,11)
					31.50 - 31.95	B + D	
					33.00 - 33.45	SPT (S)	N=36 (7,8/8,8,9,11)
					33.00 - 33.45	B + D	
					34.50 - 34.95	SPT (S)	N=37 (7,6/7,8,10,12)
					34.50 - 34.95	B + D	
					36.00 - 36.45	SPT (S)	N=38 (7,6/8,8,11,11)
					36.00 - 36.45	B + D	
					37.50 - 37.95	SPT (S)	N=35 (9,6/7,8,9,11)
					37.50 - 37.95	B + D	
					39.00 - 39.45	SPT (S)	N=45
					39.00 - 39.45	B + D	(6,7/10,11,11,13)
		40.00		End of Borehole at 40.000m			

Hole Diameter

Depth Base (m)	Diameter (mm)
10.00	250
21.00	200
40.00	150

Casing Depths

Depth Base (m)	Diameter (mm)
10.00	250
21.00	200
40.00	150

General Remarks

1.2m Hand Excavated inspection pit dug..
Groundwater encountered at 3.10m.
Soakaway in borehole.
Standpipe installed on completion.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
3.10	3.00			

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Borehole Log

Scale 1:100 Sheet 1 of 2

BH-SP09

Contract no:	S230503	**Site:**	Spit Boreholes - Ardersier Port, Inverness	**Driller:**	Bainbridge Brothers Ltd
Client:	Ardersier Port			**Plant used:**	Dando 2000
Method:	Cable Percussive			**Started:**	23/05/2023
				Ended:	26/05/2023
				Backfilled:	26/05/2023

GL (AOD):	
Easting:	280060
Northing:	858762
Logged:	SM
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to dense light brown to grey slightly silty very sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse subangular to very well rounded of mixed lithologies including sandstone, mudstone and limestone.	0.50 - 0.60	B	
					1.00 - 1.45	SPT (S)	N=25 (9,8/7,6,6,6)
					1.00 - 1.45	B + D	
					2.00 - 2.45	SPT (S)	N=23 (4,6/7,5,5,6)
					2.00 - 2.45	B + D	
					3.00 - 3.45	SPT (S)	N=45 (3,5/6,7,20,12)
					3.00 - 3.45	B + D	
					4.00 - 4.45	SPT (S)	N=14 (4,4/3,3,4,4)
					4.00 - 4.45	B + D	
				Becoming gravelly SAND.			
		5.00		Medium dense to dense light brown slightly silty very gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to very well rounded of mixed lithologies including sandstone, mudstone and limestone. Gravel at 8.00m.	5.00 - 5.45	SPT (S)	N=23 (2,2/3,4,6,10)
					5.00 - 5.45	B + D	
					6.00 - 6.45	SPT (S)	N=24 (1,3/2,6,8,8)
					6.00 - 6.45	B + D	
					7.00 - 7.45	SPT (S)	N=24 (6,6/5,7,6,6)
					7.00 - 7.45	B + D	
					8.00 - 8.45	SPT (S)	N=29 (6,7/7,7,8,7)
					8.00 - 8.45	B + D	
					9.00 - 9.45	SPT (S)	N=33 (6,8/8,9,9,7)
					9.00 - 9.45	B + D	
		10.50		Medium dense dark grey and locally black slightly silty to silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Occasional fine to coarse shell fragments noted throughout.	10.50 - 10.95	SPT (S)	N=15 (2,4/4,4,4,3)
					10.50 - 10.95	B + D	
					12.00 - 12.45	SPT (S)	N=12 (2,2/3,3,2,4)
					12.00 - 12.45	B + D	
					13.50 - 13.95	SPT (S)	N=12 (3,3/3,2,3,4)
					13.50 - 13.95	B + D	
					15.00 - 15.45	SPT (S)	N=18 (4,4/4,5,4,5)
					15.00 - 15.45	B + D	
					16.50 - 16.95	SPT (S)	N=21 (4,5/5,5,6,5)
					16.50 - 16.95	B + D	
					18.00 - 18.45	SPT (S)	N=22 (5,5/5,6,6,5)
					18.00 - 18.45	B + D	
					19.50 - 19.95	SPT (S)	N=22 (6,6/6,5,6,5)
					19.50 - 19.95	B + D	

Hole Diameter

Depth Base (m)	Diameter (mm)
10.00	250
21.00	200
35.00	150

Casing Depths

Depth Base (m)	Diameter (mm)
10.00	250
21.00	200
35.00	150

General Remarks

1.2m Hand Excavated inspection pit dug.
Groundwater encountered at 3.20m.
Borehole backfilled on completion.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
3.20	3.00			

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Borehole Log

Scale 1:100 Sheet 2 of 2

BH-SP09

Contract no:	S230503	**Site:**	Spit Boreholes - Ardersier Port, Inverness	**Driller:**	Bainbridge Brothers Ltd
				Plant used:	Dando 2000
				Started:	23/05/2023
Client:	Ardersier Port			**Ended:**	26/05/2023
Method:	Cable Percussive			**Backfilled:**	26/05/2023

GL (AOD):	
Easting:	280060
Northing:	858762
Logged:	SM
Status:	FINAL

Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense dark grey and locally black slightly silty to silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Occasional fine to coarse shell fragments noted throughout.	21.00 - 21.45	SPT (S)	N=23 (6,6/5,6,6,6)
					21.00 - 21.45	B + D	
					22.50 - 22.95	SPT (S)	N=25 (7,6/6,6,7,6)
					22.50 - 22.95	B + D	
					23.00 - 23.45	SPT (S)	N=25 (6,6/5,6,7,7)
					23.00 - 23.45	B + D	
					24.00 - 24.45	SPT (S)	N=29 (7,6/7,7,8,7)
					24.00 - 24.45	B + D	
					25.50 - 25.95	SPT (S)	N=25 (5,6/5,5,7,8)
					25.50 - 25.95	B + D	
					27.00 - 27.45	SPT (S)	N=27 (5,5/6,7,7,7)
					27.00 - 27.45	B + D	
		28.50		Medium dense to dense dark grey and locally black slightly silty to silty slightly gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse subangular to well rounded of mixed lithologies including sandstone, mudstone and limestone. Occasional fine to coarse shell fragments noted throughout.	28.50 - 28.95	SPT (S)	N=33 (6,7/7,8,8,10)
					28.50 - 28.95	B + D	
					30.00 - 30.45	SPT (S)	N=34 (6,7/7,8,8,11)
					30.00 - 30.45	B + D	
					31.50 - 31.95	SPT (S)	N=29 (4,5/5,7,8,9)
					31.50 - 31.95	B + D	
					33.00 - 33.45	SPT (S)	N=38 (5,5/7,8,12,11)
					33.00 - 33.45	B + D	
					34.50 - 34.95	SPT (S)	N=39 (6,5/7,8,11,13)
					34.50 - 34.95	B + D	
		35.00		End of Borehole at 35.000m			

Hole Diameter

Depth Base (m)	Diameter (mm)
10.00	250
21.00	200
35.00	150

Casing Depths

Depth Base (m)	Diameter (mm)
10.00	250
21.00	200
35.00	150

General Remarks

1.2m Hand Excavated inspection pit dug.
Groundwater encountered at 3.20m.
Borehole backfilled on completion.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
3.20	3.00			

APPENDIX C

Laboratory Report Front Sheet

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Client details:

Reference:	S230503
Name:	Solmek
Address:	12 Yarm Road, Stockton-on-tees, TS18 3NA
Telephone:	01642 607083
Email:	acutts@solmek.com
FAO:	Adrian Cutts

Samples received:

Date commenced: 14/07/2023

Date reported: 21/07/2023

Observations and interpretations are outside of the UKAS Accreditiation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Samples will be held at the laboratory for a period of 4 weeks after the report date. After the above reporting date the samples will be disposed of. Should further testing be required then the office should be informed before the above date.

Signature:	Approved Signitories:
[Redacted]	☐ D.Anderson (Managing Director) ☑ J. Brischuk (Laboratory Manager) ☐

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
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info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Ardersier Port	S230503

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BHSP05	0.30		B	2.3	105									
BHSP05	1.20		B	1.8	105									
BHSP05	3.00		B	19	105									
BHSP05	5.00		B	21	105									
BHSP05	7.00		B	20	105									
BHSP05	9.00		B	23	105									
BHSP05	12.00		B	25	105									
BHSP05	15.00		B	26	105									
BHSP05	18.00		B	31	105									
BHSP05	21.00		B	22	105									
BHSP05	24.00		B	21	105									
BHSP05	27.00		B	20	105									
BHSP05	30.00		B	20	105									
BHSP05	33.00		B	21	105									
BHSP05	36.00		B	25	105									
BHSP05	39.00		B	22	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicated

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	JBrischuk
Approval date	20/07/2023 15:28
Date report generated	
Report Number	

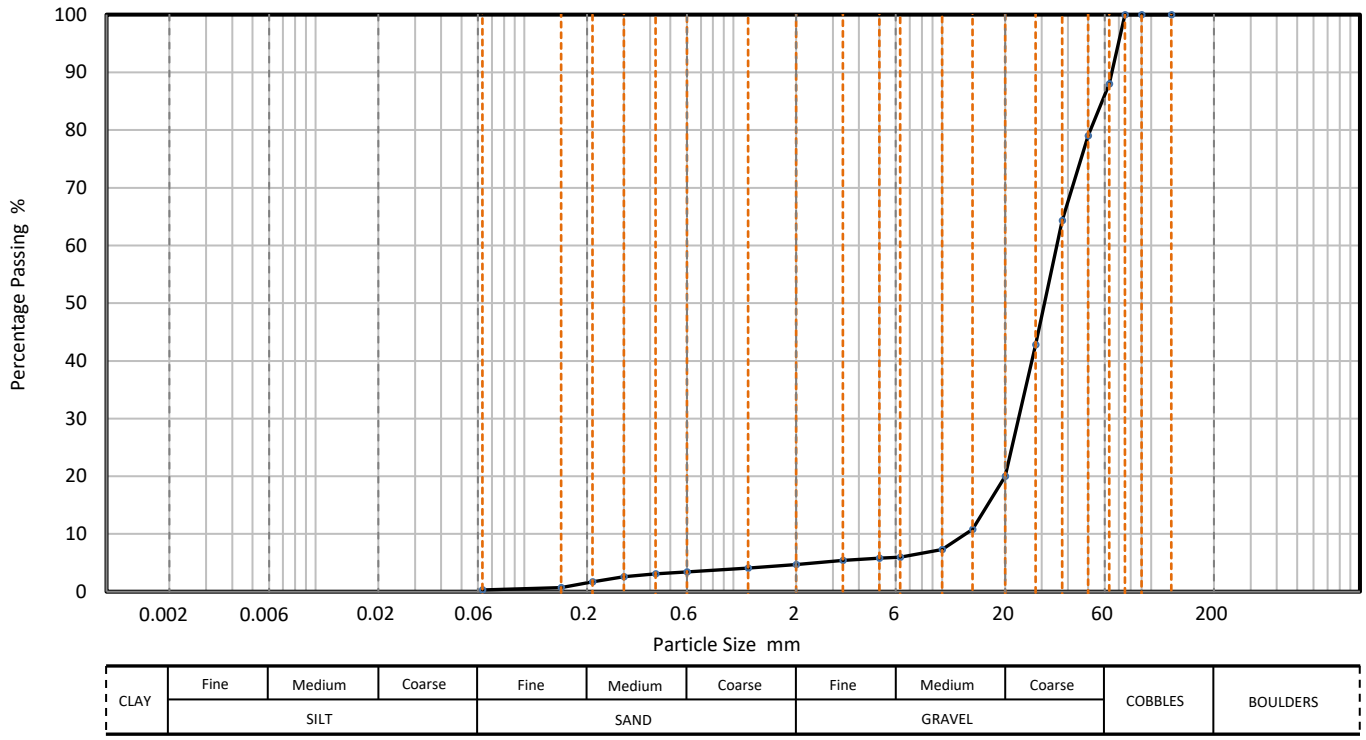
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
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UKAS TESTING
10258

Hole	BHSP05	Lab sample ID	G2MT20230714106
Depth (Top) m	0.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Sandy, Very Gravelly (with Cobbles)
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	88		
50	79		
37.5	64		
28	43		
20	20		
14	11		
10	7		
6.3	6		
5	6		
3.35	5		
2	5		
1.18	4		
0.6	3		
0.425	3		
0.3	3		
0.212	2		
0.15	1		
0.063	0		

Dry Mass of sample, g: 8207

Sample Proportions	% dry mass
Very coarse	12.0
Gravel	83.3
Sand	4.4
Fines <0.063mm	0.0

Grading Analysis		
D100	mm	
D60	mm	35.4
D30	mm	23.2
D10	mm	13
Uniformity Coefficient		2.7
Curvature Coefficient		1.2

Remarks

Preparation and testing in accordance with test method unless noted below

Sample tested was deviating in accordance with BS1377 test standard

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	20/07/2023 16:24

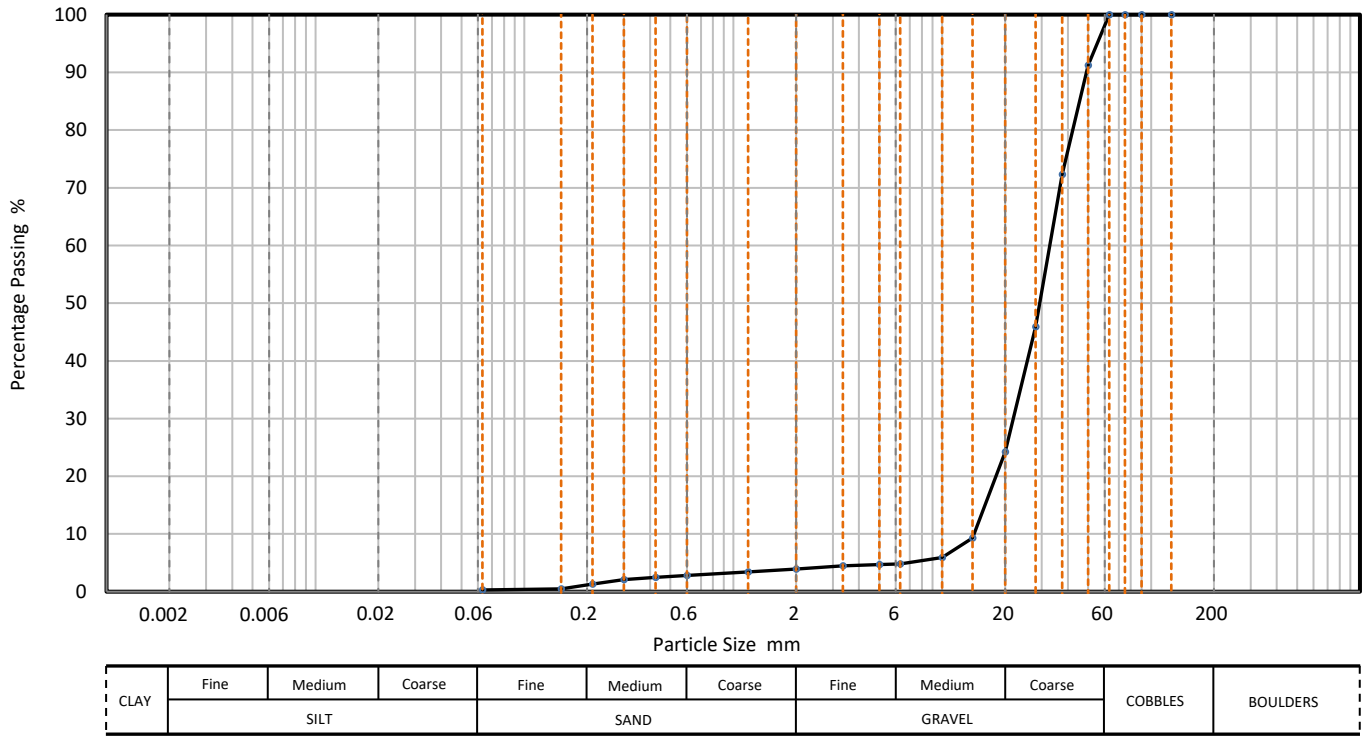
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP05	Lab sample ID	G2MT20230714107
Depth (Top) m	1.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slighlty Sandy GRAVEL
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	91		
37.5	72		
28	46		
20	24		
14	9		
10	6		
6.3	5		
5	5		
3.35	5		
2	4		
1.18	3		
0.6	3		
0.425	3		
0.3	2		
0.212	1		
0.15	1		
0.063	0		

Dry Mass of sample, g: 11484

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	96.1
Sand	3.7
Fines <0.063mm	0.0

Grading Analysis		
D100	mm	
D60	mm	32.7
D30	mm	21.9
D10	mm	14.2
Uniformity Coefficient		2.3
Curvature Coefficient		1

Remarks

Preparation and testing in accordance with test method unless noted below

Sample tested was deviating in accordance with BS1377 test standard

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	20/07/2023 16:24

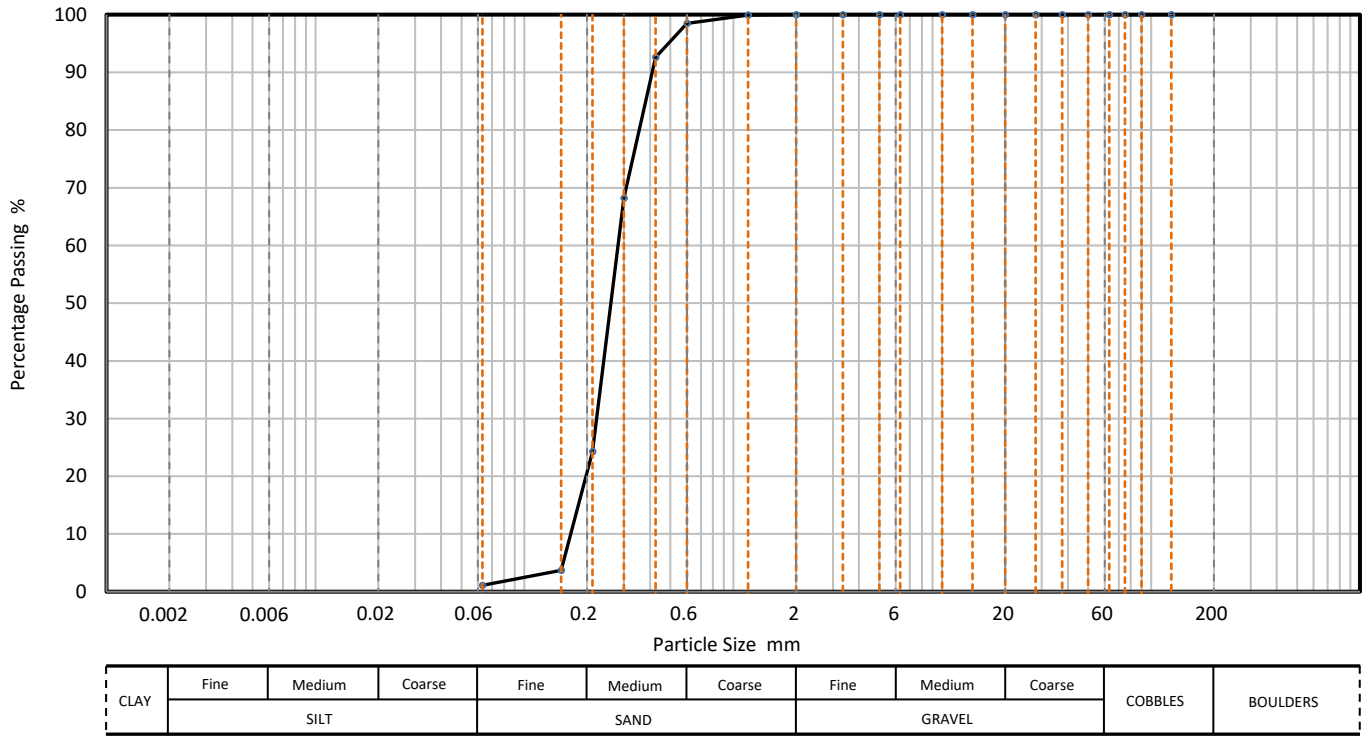
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP05	Lab sample ID	G2MT20230714108
Depth (Top) m	3.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	93		
0.3	68		
0.212	24		
0.15	4		
0.063	1		

Dry Mass of sample, g: 466

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	98.9
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.281
D30	mm	0.222
D10	mm	0.167
Uniformity Coefficient		1.7
Curvature Coefficient		1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	20/07/2023 16:24

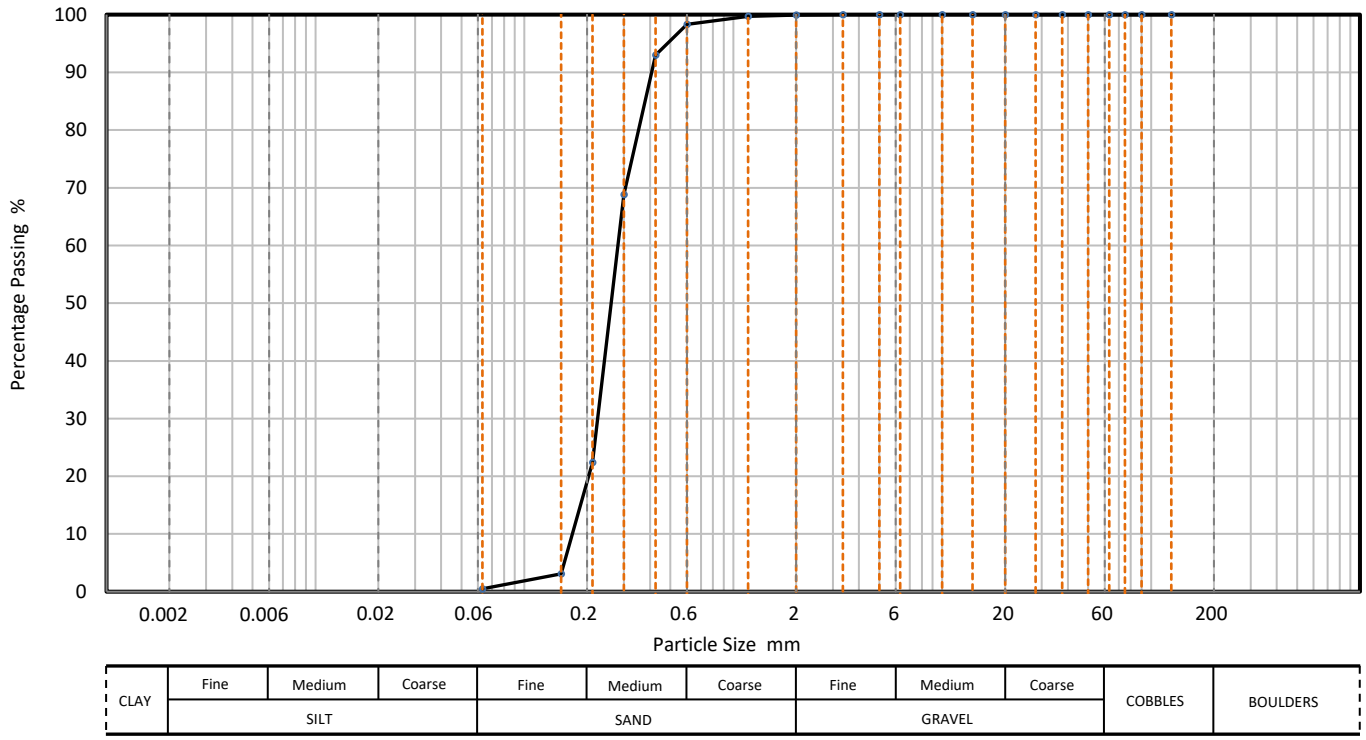
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
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UKAS TESTING
10258

Hole	BHSP05	Lab sample ID	G2MT20230714109
Depth (Top) m	5.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Slightly Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	98		
0.425	93		
0.3	69		
0.212	22		
0.15	3		
0.063	1		

Dry Mass of sample, g	521

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	99.4
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.281
D30	mm	0.224
D10	mm	0.17
Uniformity Coefficient		1.7
Curvature Coefficient		1.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 16:24

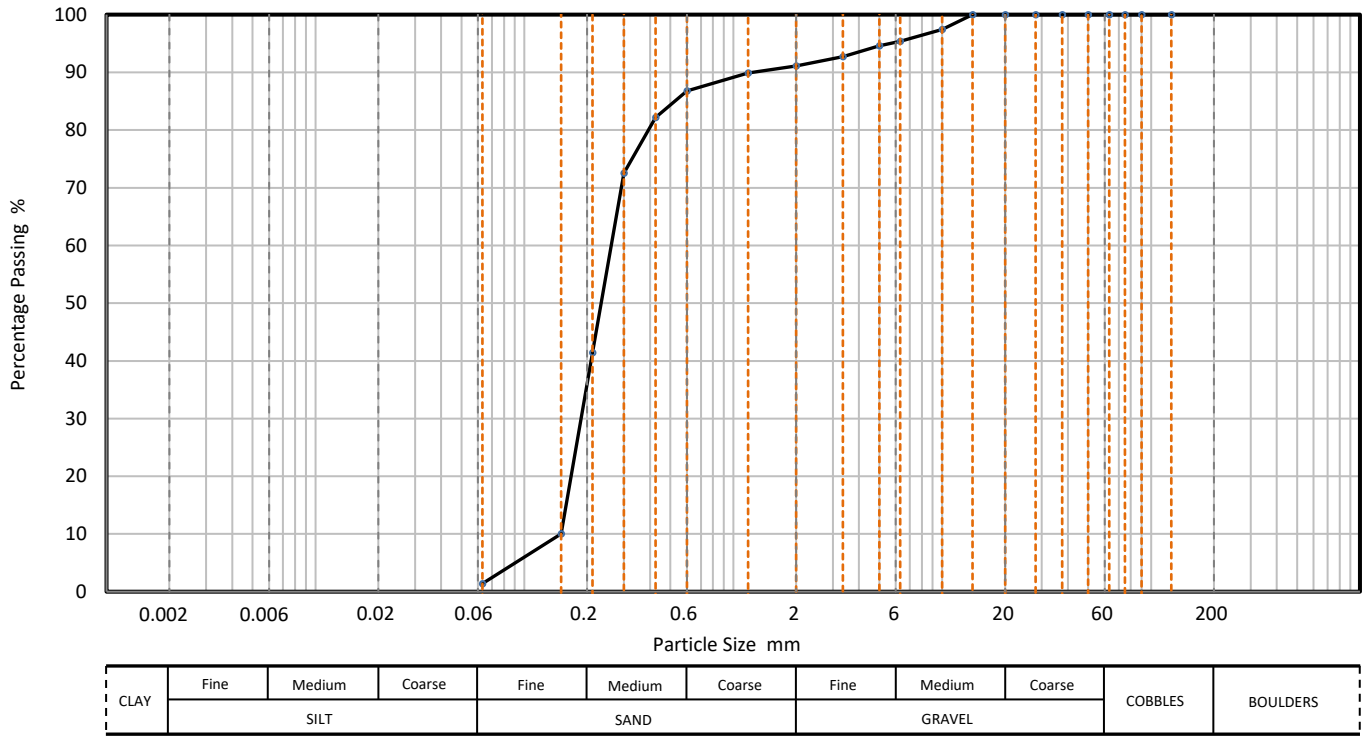
PARTICLE SIZE DISTRIBUTION

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UKAS TESTING
10258

Hole	BHSP05	Lab sample ID	G2MT20230714110
Depth (Top) m	7.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey, Gravelly SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	97		
6.3	95		
5	95		
3.35	93		
2	91		
1.18	90		
0.6	87		
0.425	82		
0.3	73		
0.212	41		
0.15	10		
0.063	1		

Dry Mass of sample, g: 925

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	8.9
Sand	89.7
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.261
D30	mm	0.187
D10	mm	0.15
Uniformity Coefficient		1.7
Curvature Coefficient		0.89

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 16:24

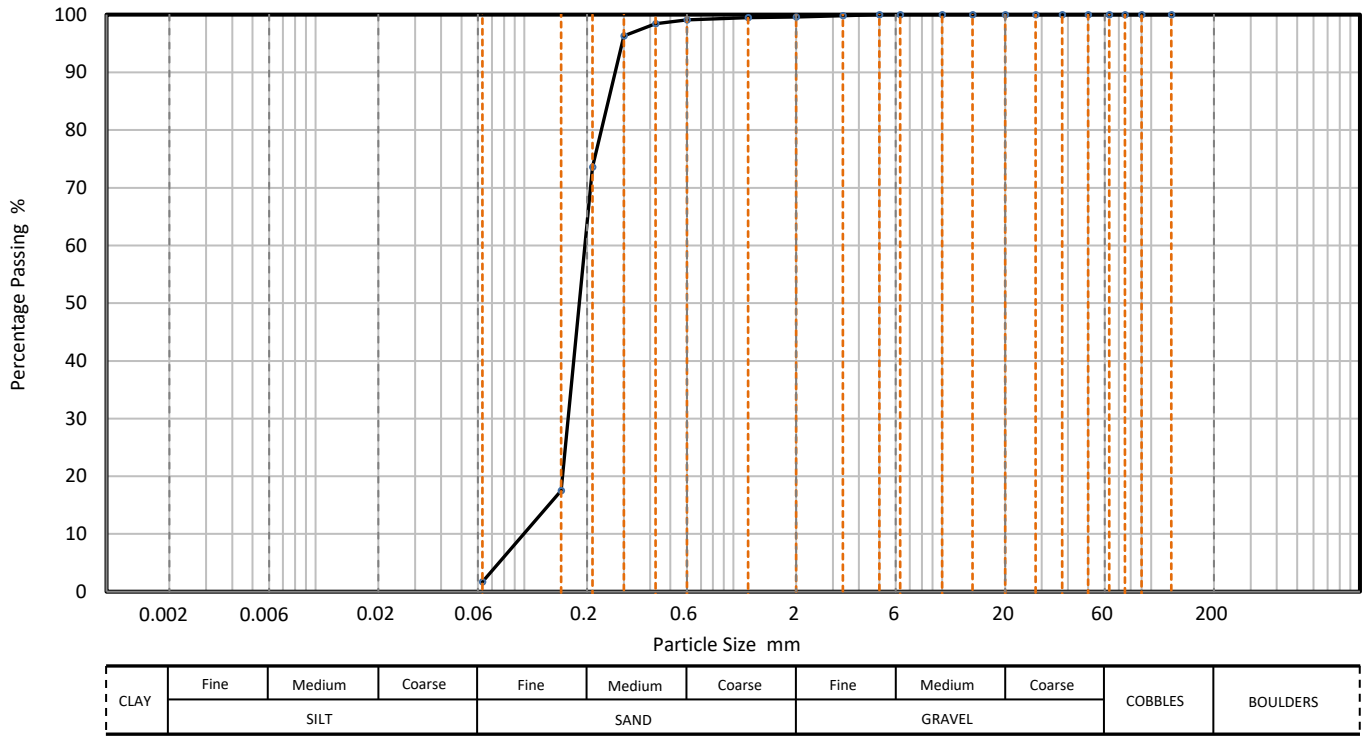
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Hole	BHSP05	Lab sample ID	G2MT20230714111
Depth (Top) m	9.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Slightly Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	96		
0.212	74		
0.15	18		
0.063	2		

Dry Mass of sample, g	952

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.4
Sand	98.0
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.195
D30	mm	0.162
D10	mm	0.0995
Uniformity Coefficient		2
Curvature Coefficient		1.4

Remarks
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Accreditation status
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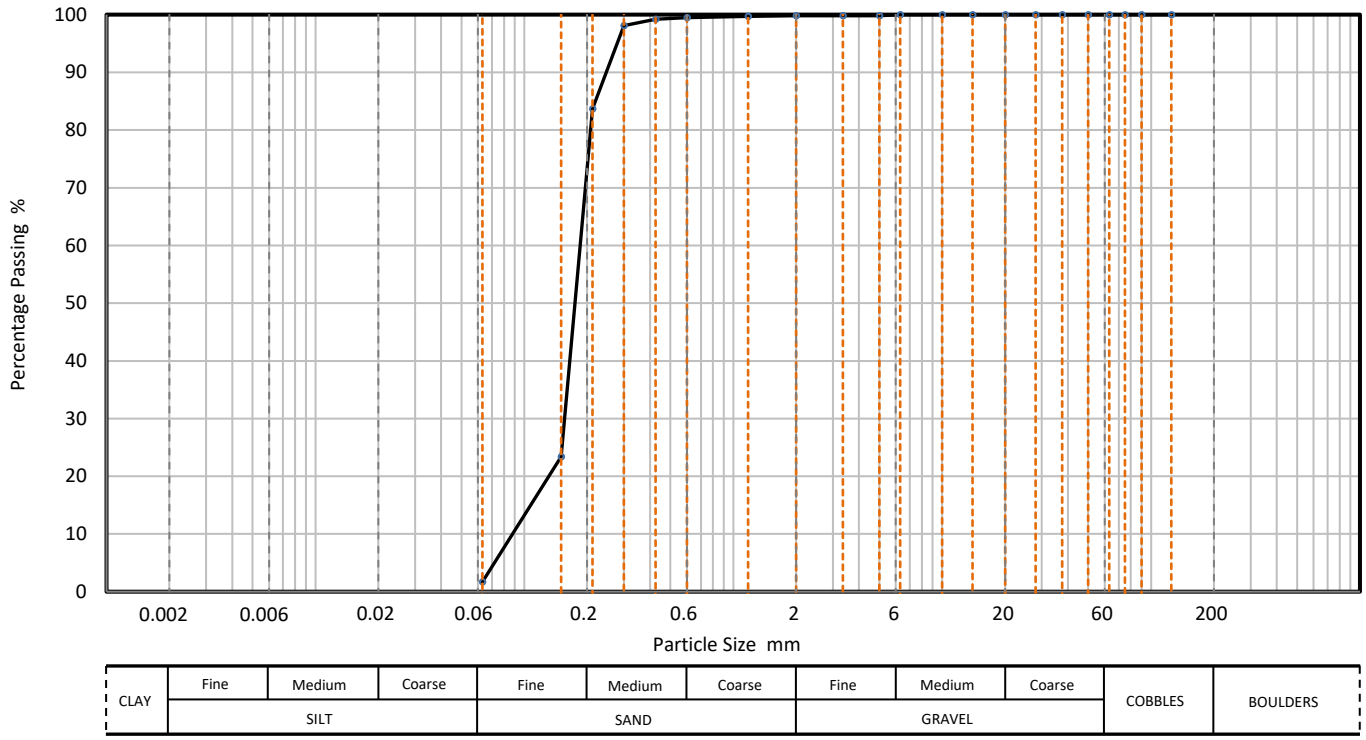
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10258

Hole	BHSP05	Lab sample ID	G2MT20230714112
Depth (Top) m	12.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Slightly Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	84		
0.15	23		
0.063	2		

Dry Mass of sample, g: 446

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	98.0
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.185
D30	mm	0.156
D10	mm	0.0877
Uniformity Coefficient		2.1
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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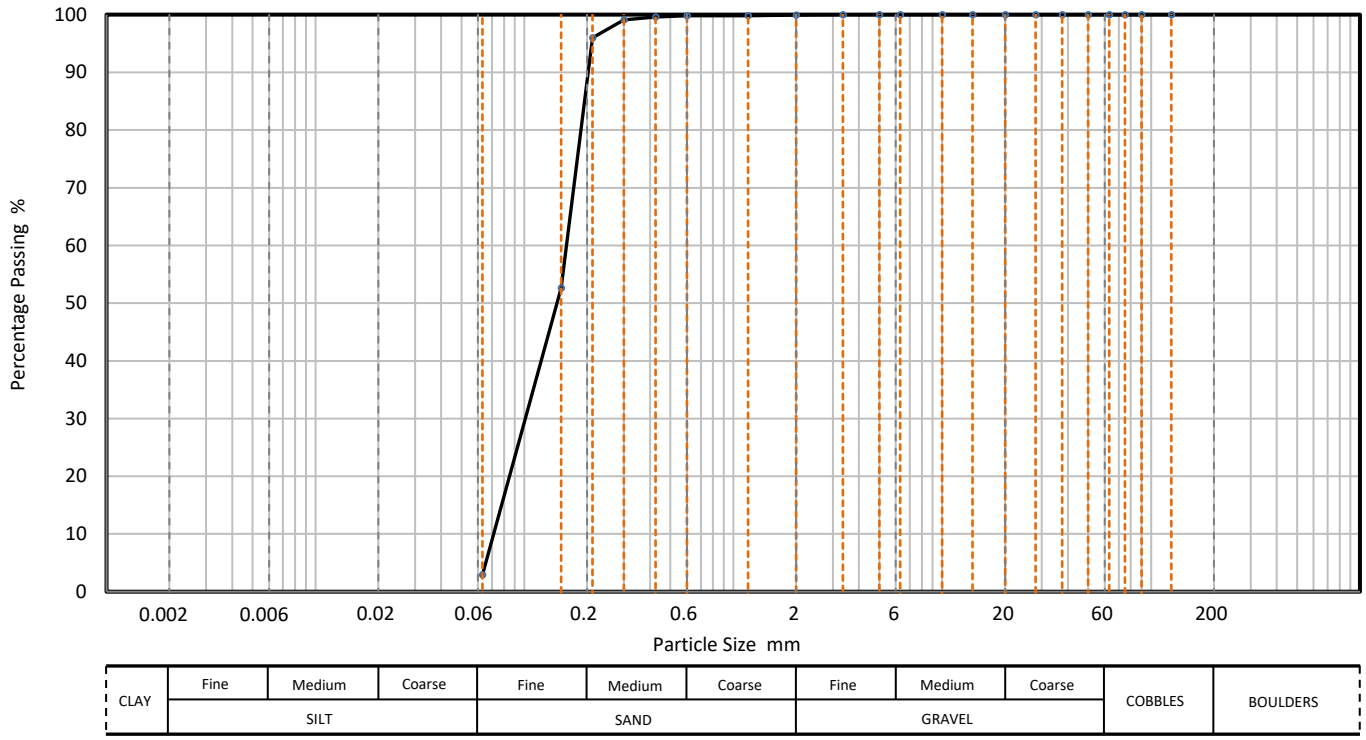
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UKAS TESTING
10258

Site name	Job number
Ardersier Port	S230503

Hole		BHSP05	Lab sample ID	G2MT20230714113
Depth (Top)	m	15.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Gravelly, Slightly Clayey, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	96		
0.15	53		
0.063	3		

Dry Mass of sample, g	440

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	97.0
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.159
D30	mm	0.101
D10	mm	0.0713
Uniformity Coefficient		2.2
Curvature Coefficient		0.9

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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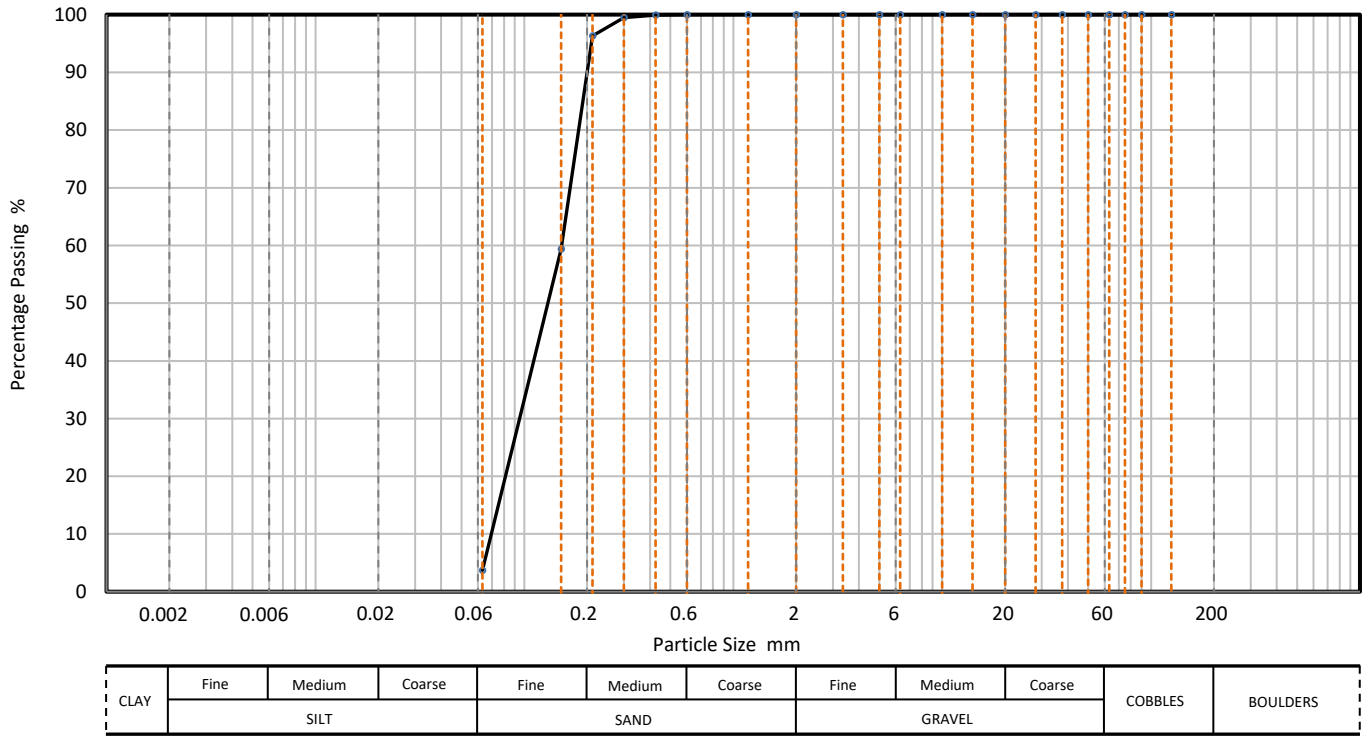
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10258

Hole	BHSP05	Lab sample ID	G2MT20230714114
Depth (Top) m	18.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	96		
0.15	59		
0.063	4		

Dry Mass of sample, g	516

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	96.3
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.151
D30	mm	0.0949
D10	mm	0.0695
Uniformity Coefficient		2.2
Curvature Coefficient		0.86

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 16:24

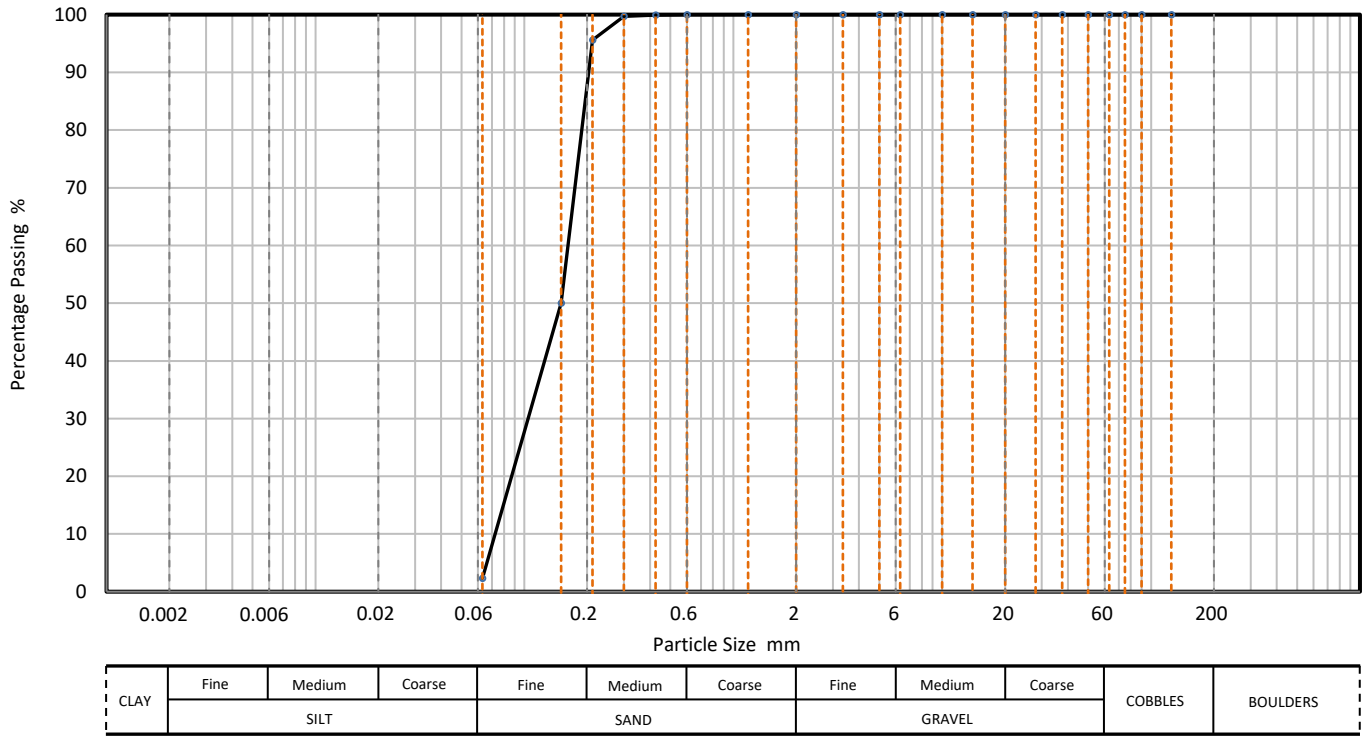
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10258

Hole	BHSP05	Lab sample ID	G2MT20230714115
Depth (Top) m	21.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	96		
0.15	50		
0.063	2		

Dry Mass of sample, g	477

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.7
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.162
D30	mm	0.104
D10	mm	0.0725
Uniformity Coefficient		2.2
Curvature Coefficient		0.93

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 16:24

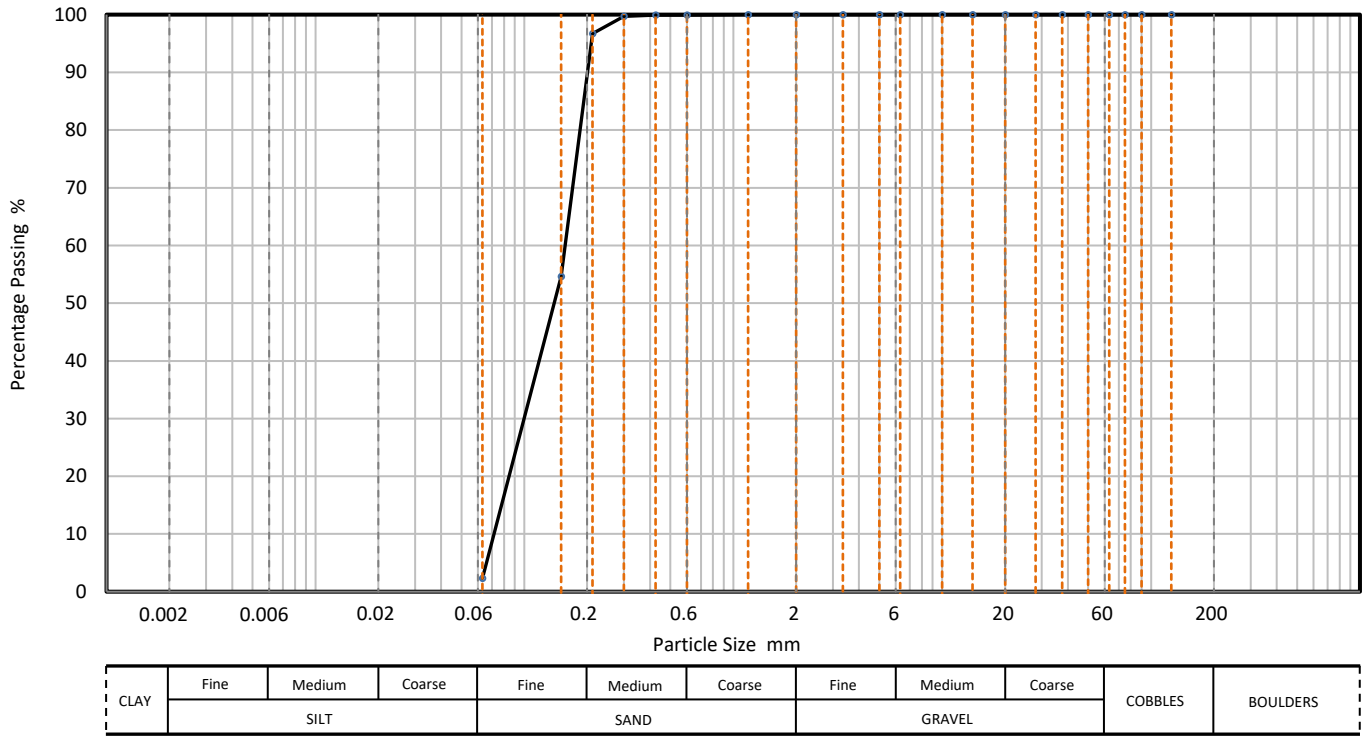
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10258

Hole	BHSP05	Lab sample ID	G2MT20230714116
Depth (Top) m	24.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	97		
0.15	55		
0.063	2		

Dry Mass of sample, g	461

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.7
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.157
D30	mm	0.0997
D10	mm	0.0716
Uniformity Coefficient		2.2
Curvature Coefficient		0.89

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 16:24

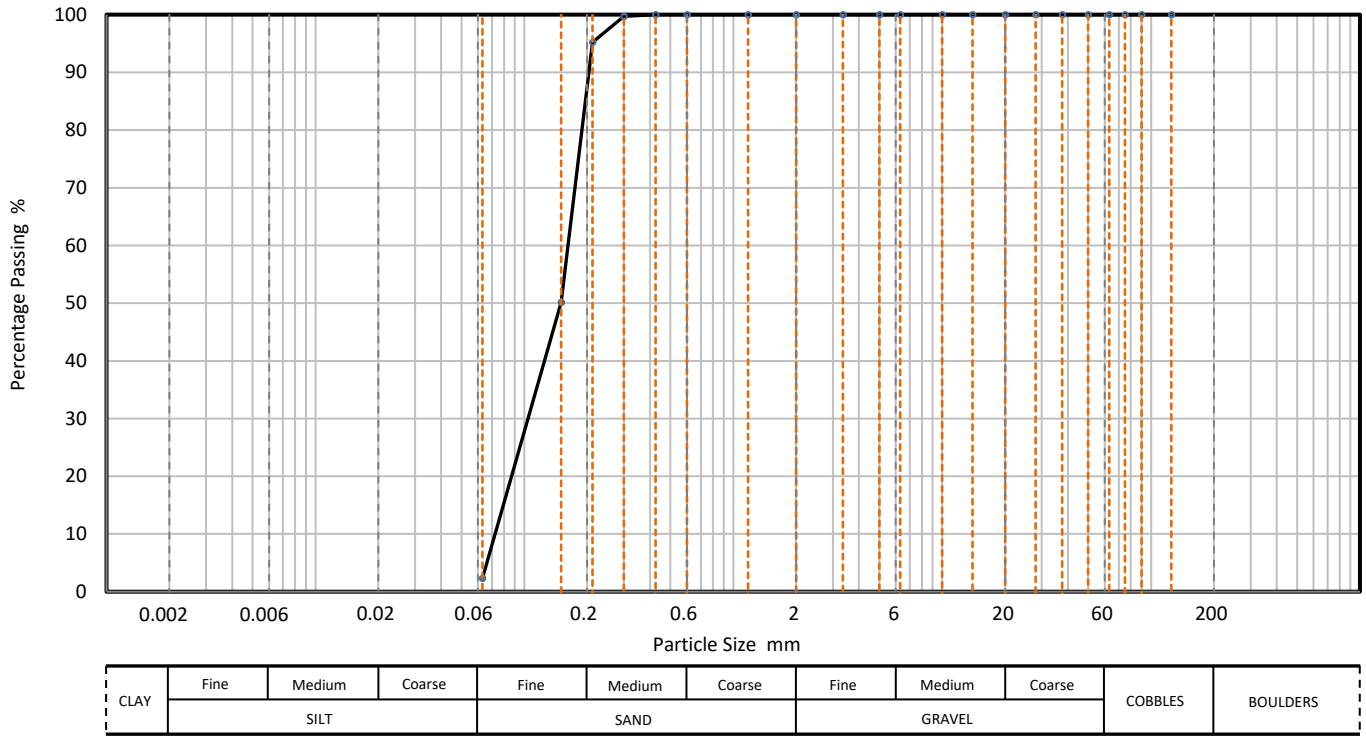
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Hole	BHSP05	Lab sample ID	G2MT20230714117
Depth (Top) m	27.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	95		
0.15	50		
0.063	2		

Dry Mass of sample, g	472

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.7
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.162
D30	mm	0.104
D10	mm	0.0724
Uniformity Coefficient		2.2
Curvature Coefficient		0.92

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 16:24

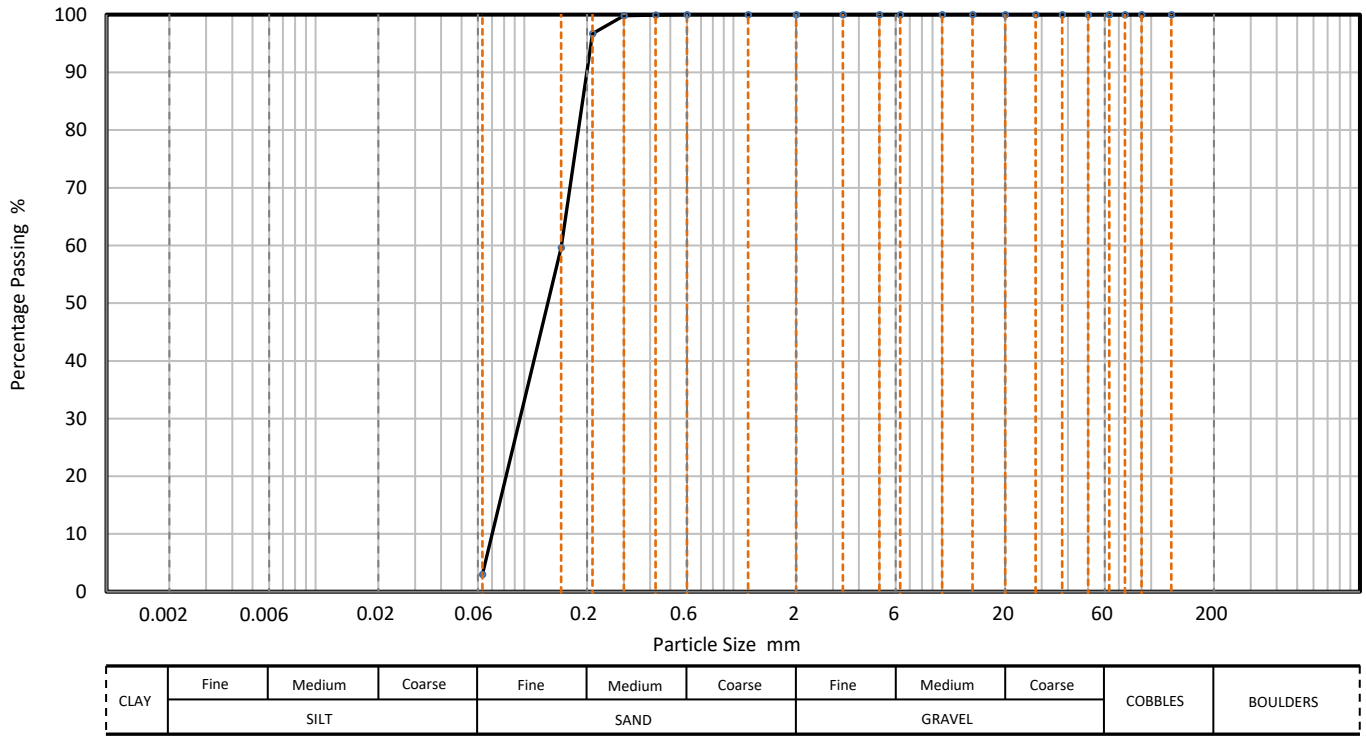
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Hole	BHSP05	Lab sample ID	G2MT20230714118
Depth (Top) m	30.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	97		
0.15	60		
0.063	3		

Dry Mass of sample, g	435

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.0
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.151
D30	mm	0.0953
D10	mm	0.0701
Uniformity Coefficient		2.1
Curvature Coefficient		0.86

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 16:24

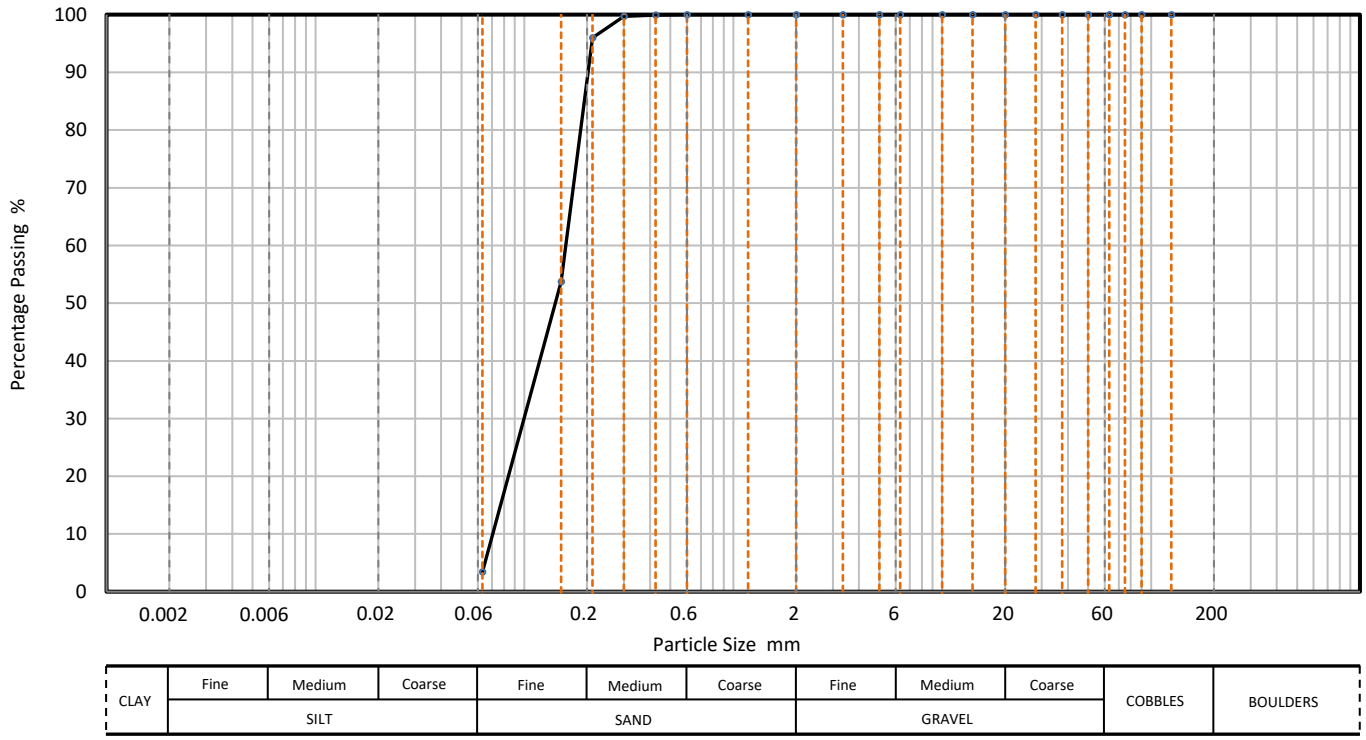
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Hole	BHSP05	Lab sample ID	G2MT20230714119
Depth (Top) m	33.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	96		
0.15	54		
0.063	3		

Dry Mass of sample, g	462

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	96.6
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.158
D30	mm	0.0997
D10	mm	0.0706
Uniformity Coefficient		2.2
Curvature Coefficient		0.89

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 16:24

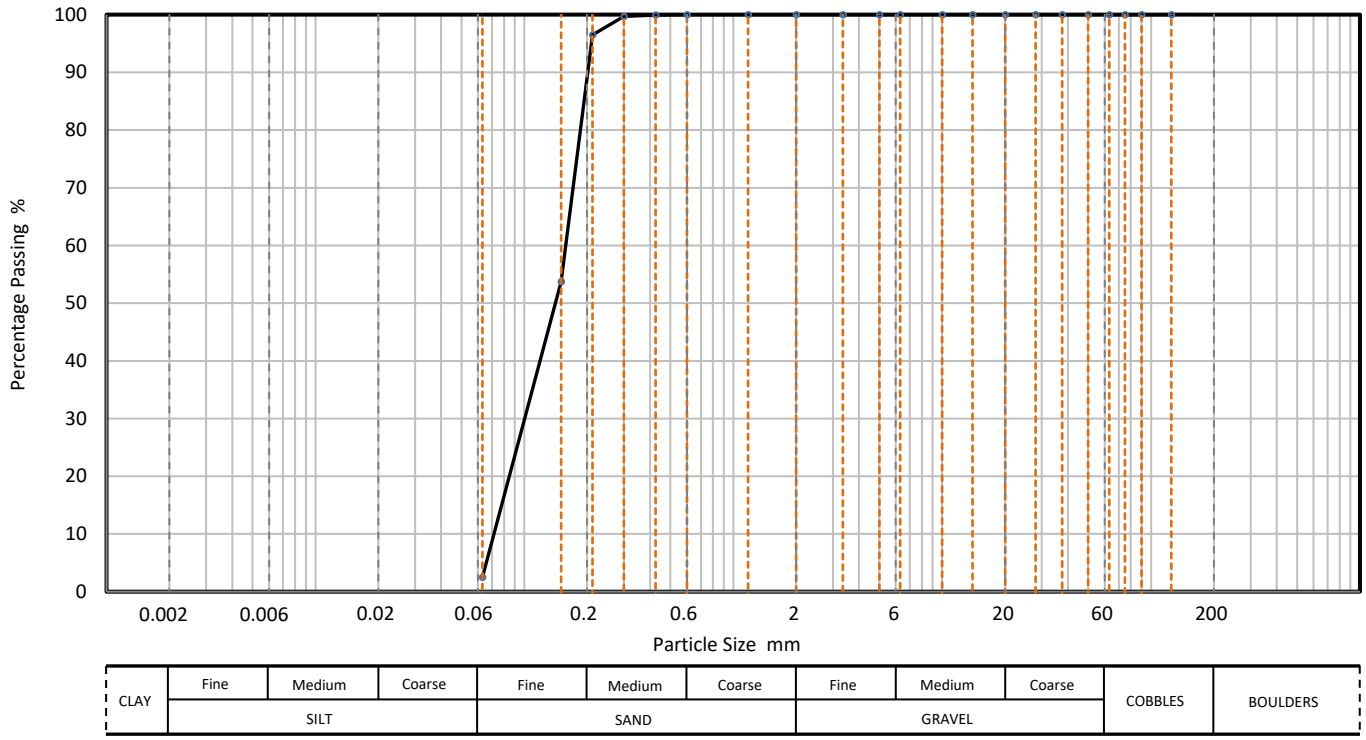
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10258

Hole	BHSP05	Lab sample ID	G2MT20230714120
Depth (Top) m	36.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	97		
0.15	54		
0.063	3		

Dry Mass of sample, g: 464

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.4
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.158
D30	mm	0.1
D10	mm	0.0715
Uniformity Coefficient		2.2
Curvature Coefficient		0.89

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 16:24

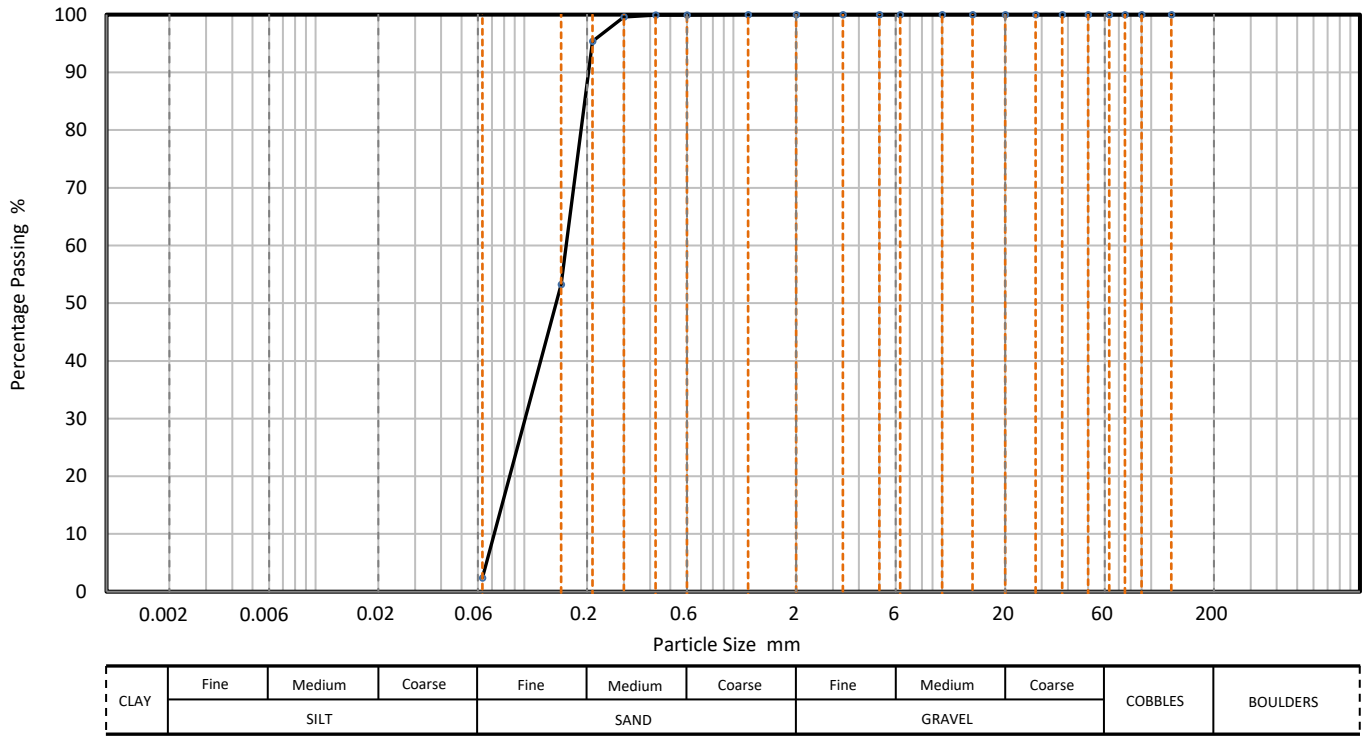
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Site name	Job number
Ardersier Port	S230503

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10258

Hole	BHSP05	Lab sample ID	G2MT20230714121
Depth (Top) m	39.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	95		
0.15	53		
0.063	2		

Dry Mass of sample, g	453

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.6
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.159
D30	mm	0.101
D10	mm	0.0718
Uniformity Coefficient		2.2
Curvature Coefficient		0.9

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	20/07/2023 16:24

Laboratory Report Front Sheet

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Client details:

Reference:	S230503
Name:	Solmek
Address:	12 Yarm Road, Stockton-on-tees, TS18 3NA
Telephone:	01642 607083
Email:	acutts@solmek.com
FAO:	Adrian Cutts

Samples received:

Date commenced: 27/06/2023

Date reported: 30/06/2023

Observations and interpretations are outside of the UKAS Accreditiation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Samples will be held at the laboratory for a period of 4 weeks after the report date. After the above reporting date the samples will be disposed of. Should further testing be required then the office should be informed before the above date.

Signature:	Approved Signitories:
[Redacted]	☑ D.Anderson (Managing Director) ☐ J. Brischuk (Laboratory Manager) ☐

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
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UKAS TESTING

10258

Site name	Job number
Ardersier Port	S230503

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BHSP06	0.30		B	5.2	105									
BHSP06	1.20		B	22	105									
BHSP06	3.00		B	22	105									
BHSP06	5.00		B	20	105									
BHSP06	7.00		B	18	105									
BHSP06	9.00		B	20	105									
BHSP06	12.00		B	32	105									
BHSP06	15.00		B	22	105									
BHSP06	18.00		B	20	105									
BHSP06	21.00		B	21	105									
BHSP06	24.00		B	9.3	105									
BHSP06	27.00		B	23	105									
BHSP06	30.00		B	20	105									
BHSP06	31.50		B	20	105									
BHSP06	34.50		B	20	105									
BHSP06	36.00		B	20	105									
BHSP06	39.00		D	14	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicated

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	30/06/2023 11:50
Date report generated	
Report Number	

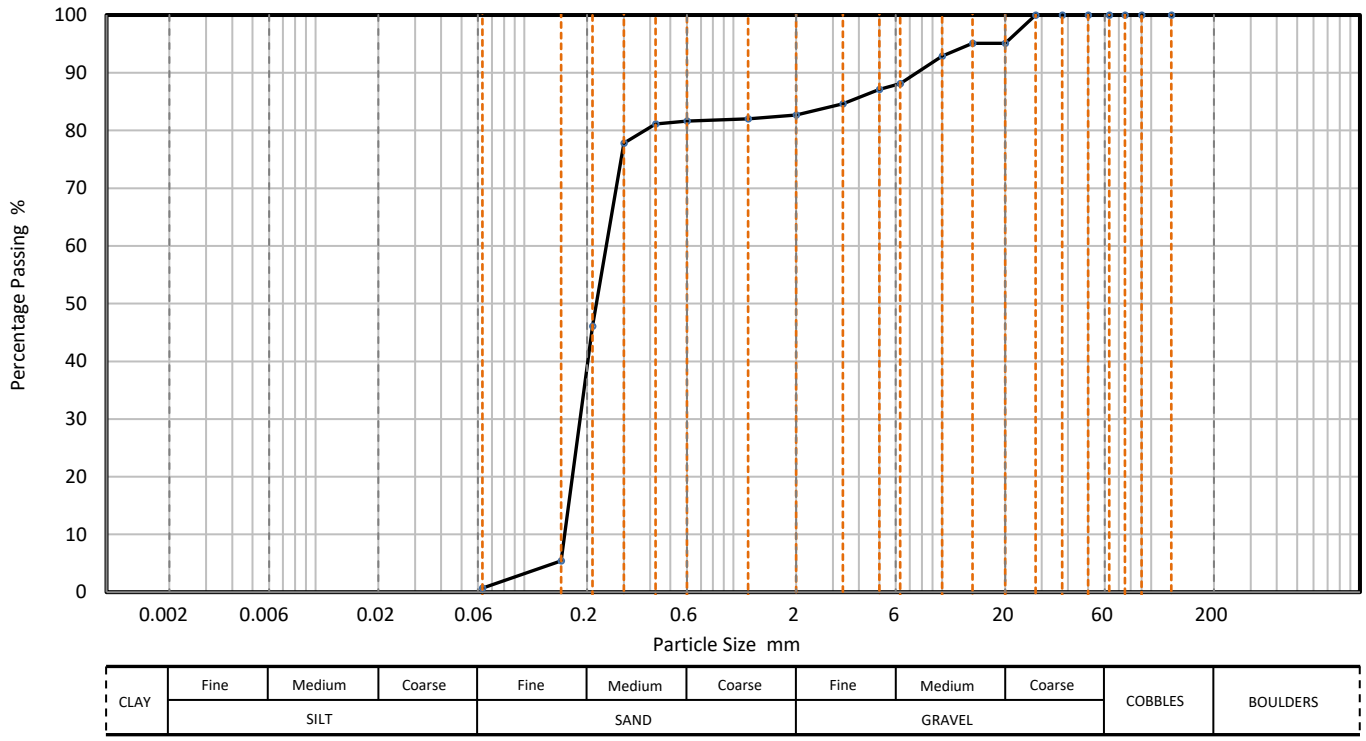
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
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UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062722
Depth (Top) m	0.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Silty, Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	95		
14	95		
10	93		
6.3	88		
5	87		
3.35	85		
2	83		
1.18	82		
0.6	82		
0.425	81		
0.3	78		
0.212	46		
0.15	5		
0.063	1		

Dry Mass of sample, g: 1167

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	17.3
Sand	82.0
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.247
D30	mm	0.185
D10	mm	0.156
Uniformity Coefficient		1.6
Curvature Coefficient		0.89

Remarks

Preparation and testing in accordance with test method unless noted below

Sample tested was deviating in accordance with BS1377 test standard

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 12:41

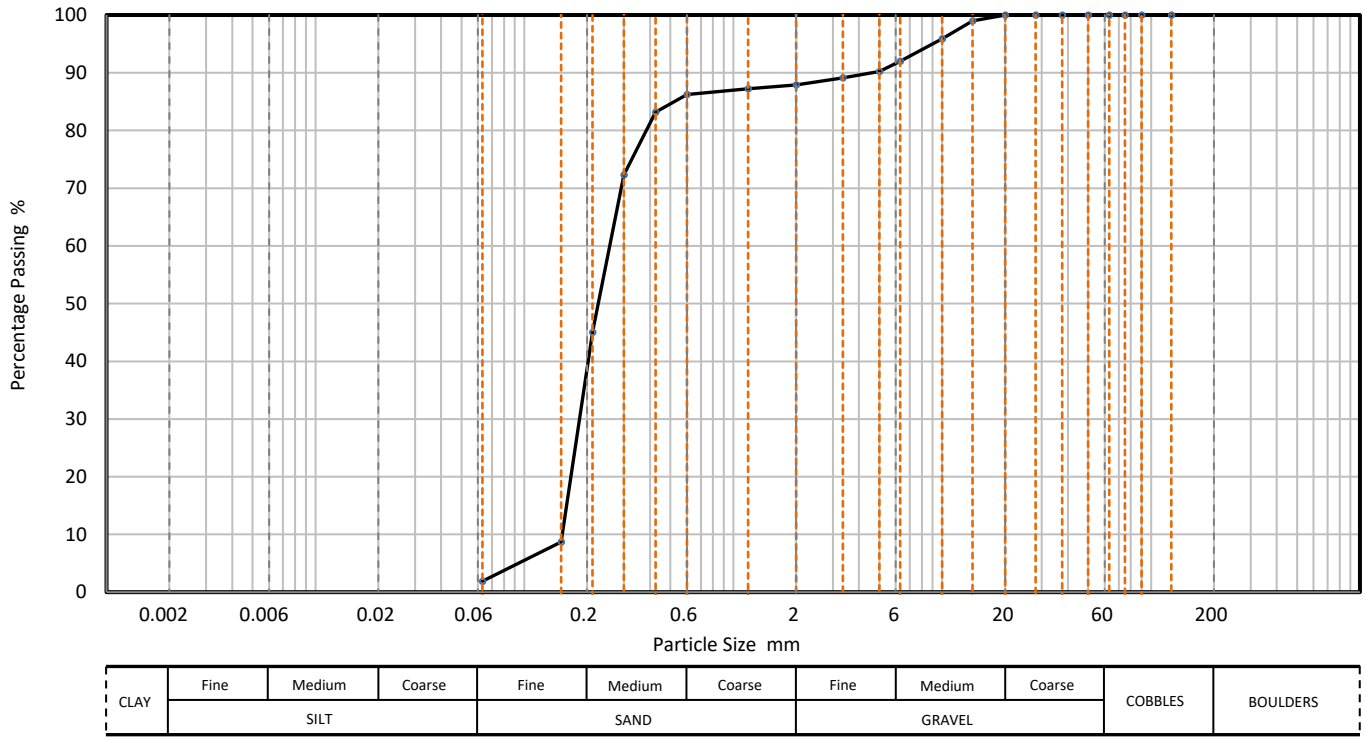
PARTICLE SIZE DISTRIBUTION

Site name	Job number
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UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062723
Depth (Top) m	1.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	99		
10	96		
6.3	92		
5	90		
3.35	89		
2	88		
1.18	87		
0.6	86		
0.425	83		
0.3	72		
0.212	45		
0.15	9		
0.063	2		

Dry Mass of sample, g: 1041

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	12.1
Sand	86.0
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.257
D30	mm	0.184
D10	mm	0.152
Uniformity Coefficient		1.7
Curvature Coefficient		0.87

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 12:44

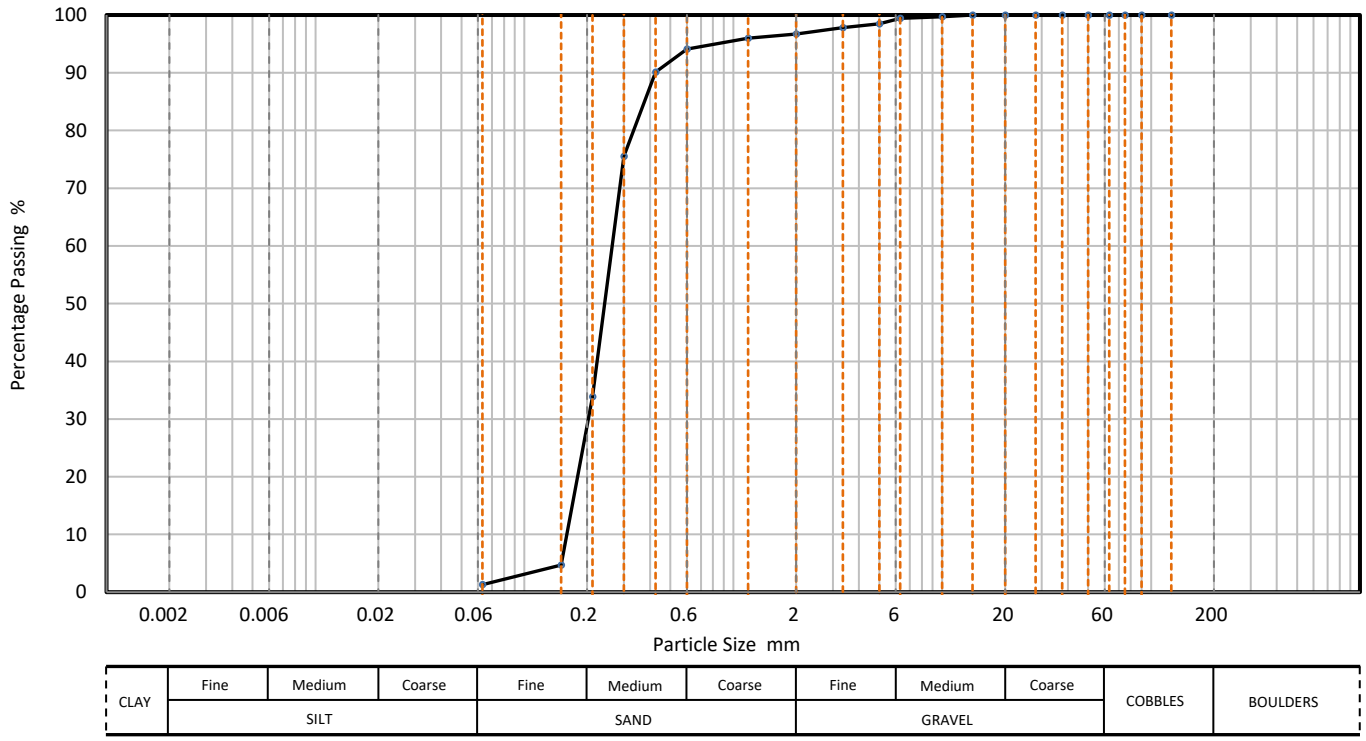
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
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UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062724
Depth (Top) m	3.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Silty, slightly Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	98		
2	97		
1.18	96		
0.6	94		
0.425	90		
0.3	76		
0.212	34		
0.15	5		
0.063	1		

Dry Mass of sample, g	1158

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	3.3
Sand	95.4
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.264
D30	mm	0.202
D10	mm	0.16
Uniformity Coefficient		1.7
Curvature Coefficient		0.97

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 12:48

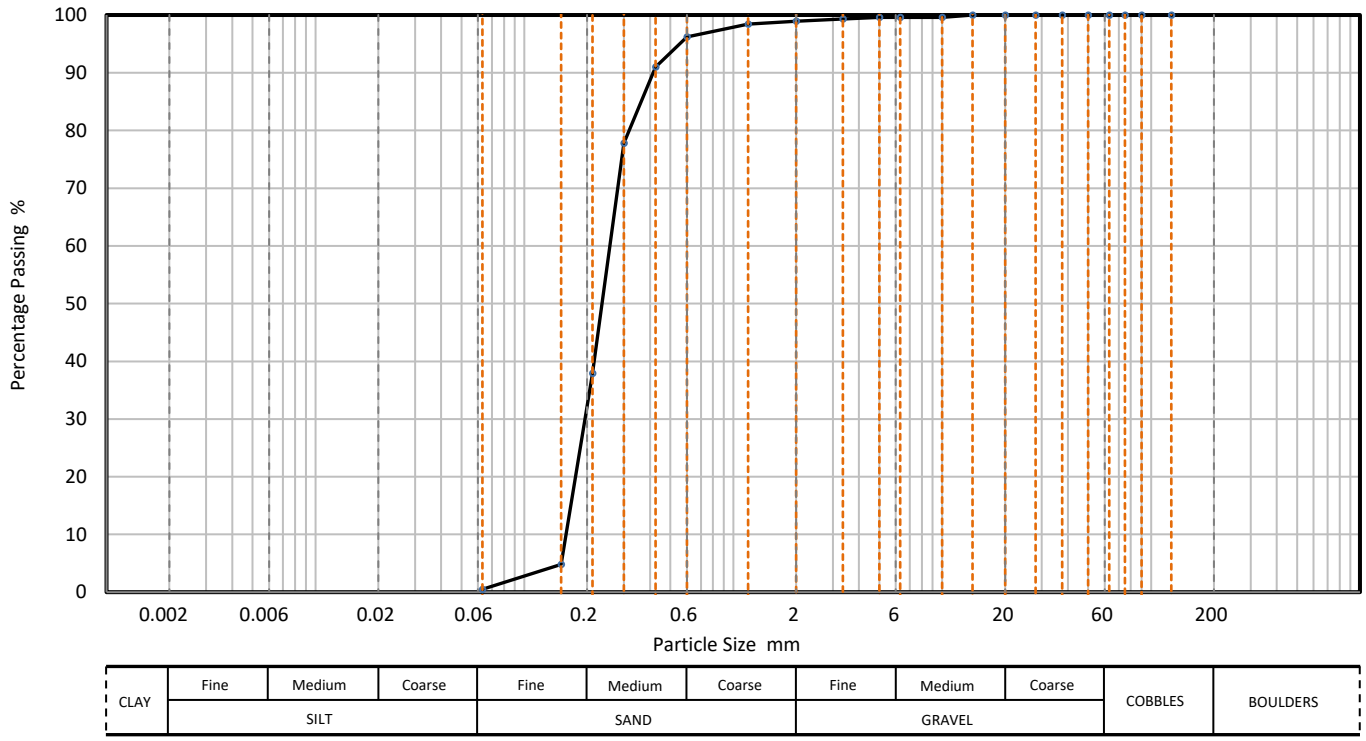
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

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UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062725
Depth (Top) m	5.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Silty, very slightly Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	99		
1.18	98		
0.6	96		
0.425	91		
0.3	78		
0.212	38		
0.15	5		
0.063	1		

Dry Mass of sample, g	959

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.1
Sand	98.4
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.257
D30	mm	0.195
D10	mm	0.158
Uniformity Coefficient		1.6
Curvature Coefficient		0.94

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 10:06

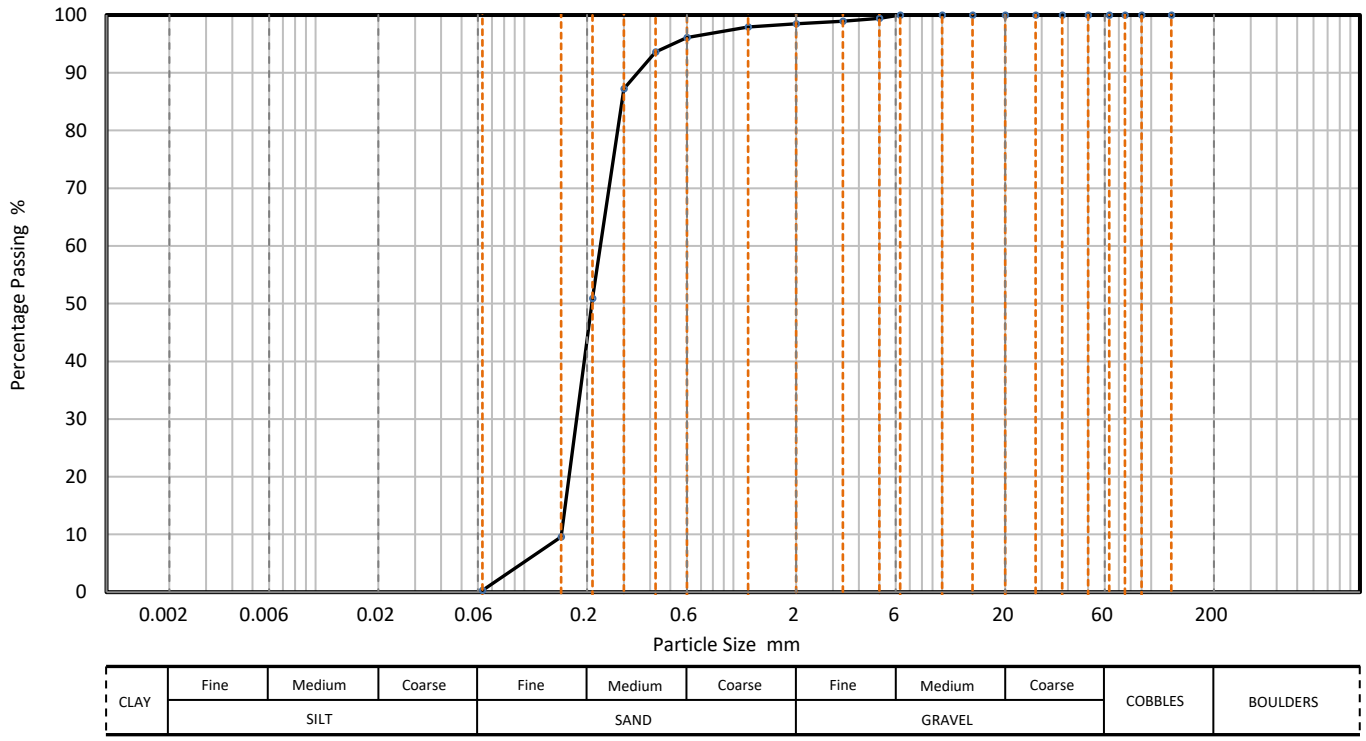
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

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UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062726
Depth (Top) m	7.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	99		
2	99		
1.18	98		
0.6	96		
0.425	94		
0.3	87		
0.212	51		
0.15	10		
0.063	0		

Dry Mass of sample, g	994

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.5
Sand	98.2
Fines <0.063mm	0.0

Grading Analysis		
D100	mm	
D60	mm	0.231
D30	mm	0.178
D10	mm	0.151
Uniformity Coefficient		1.5
Curvature Coefficient		0.91

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 10:09

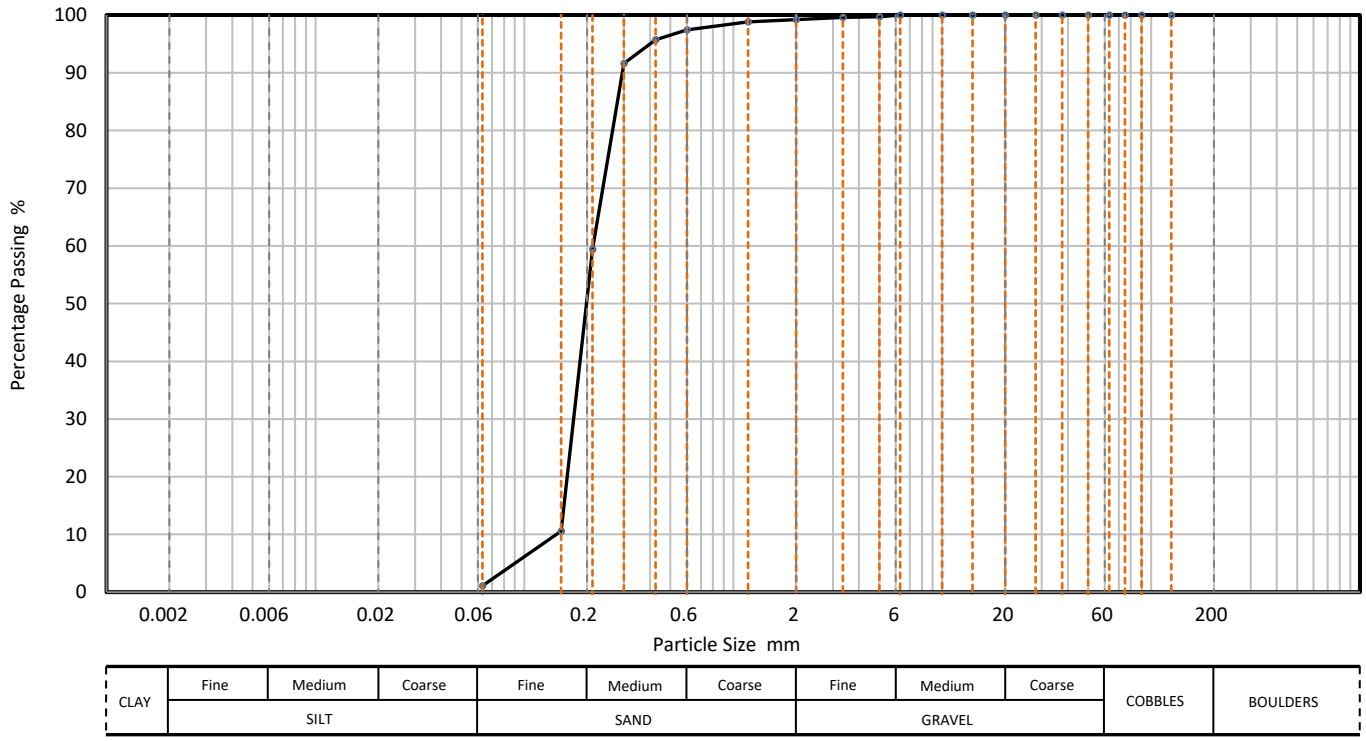
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
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UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062727
Depth (Top) m	9.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Silty, very slightly Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	97		
0.425	96		
0.3	92		
0.212	59		
0.15	11		
0.063	1		

Dry Mass of sample, g: 845

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	98.1
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.213
D30	mm	0.172
D10	mm	0.143
Uniformity Coefficient		1.5
Curvature Coefficient		0.97

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 12:52

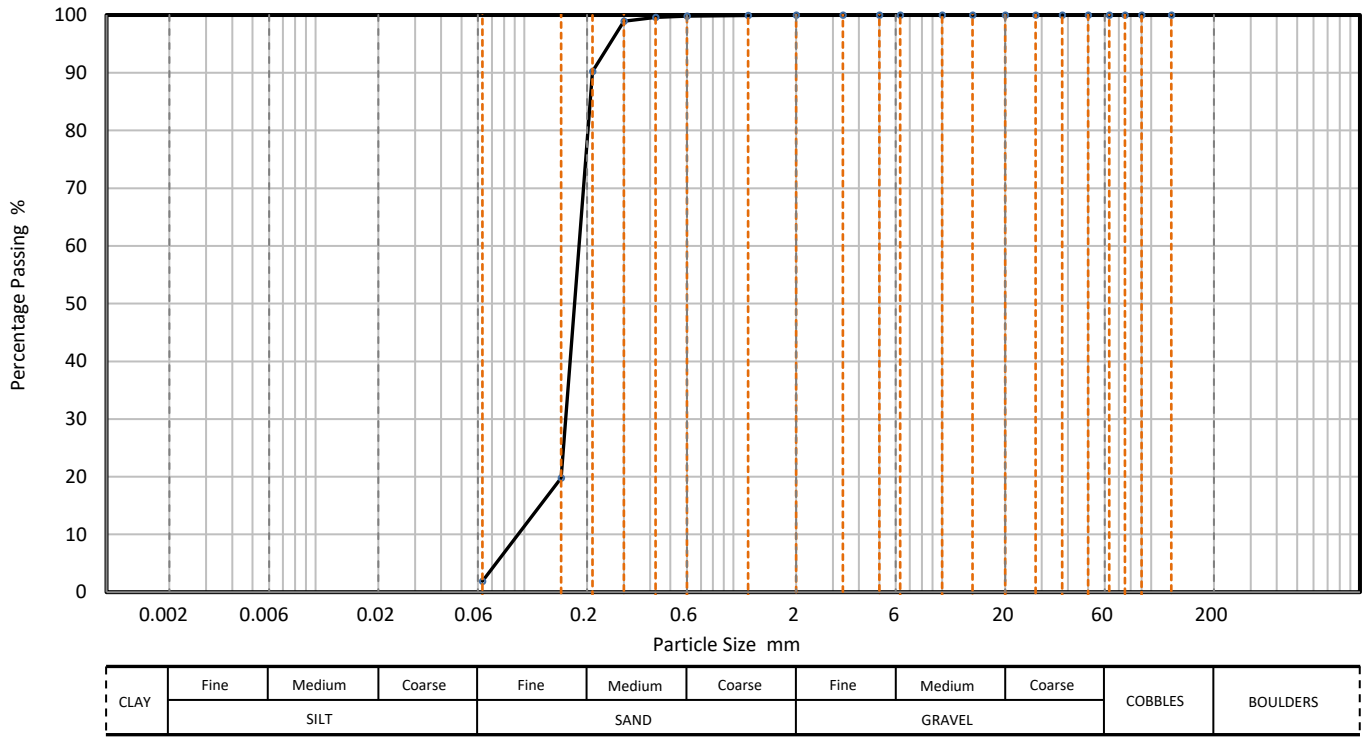
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
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UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062728
Depth (Top) m	12.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	90		
0.15	20		
0.063	2		

Dry Mass of sample, g: 731

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	98.1
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.183
D30	mm	0.158
D10	mm	0.0934
Uniformity Coefficient		2
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 12:54

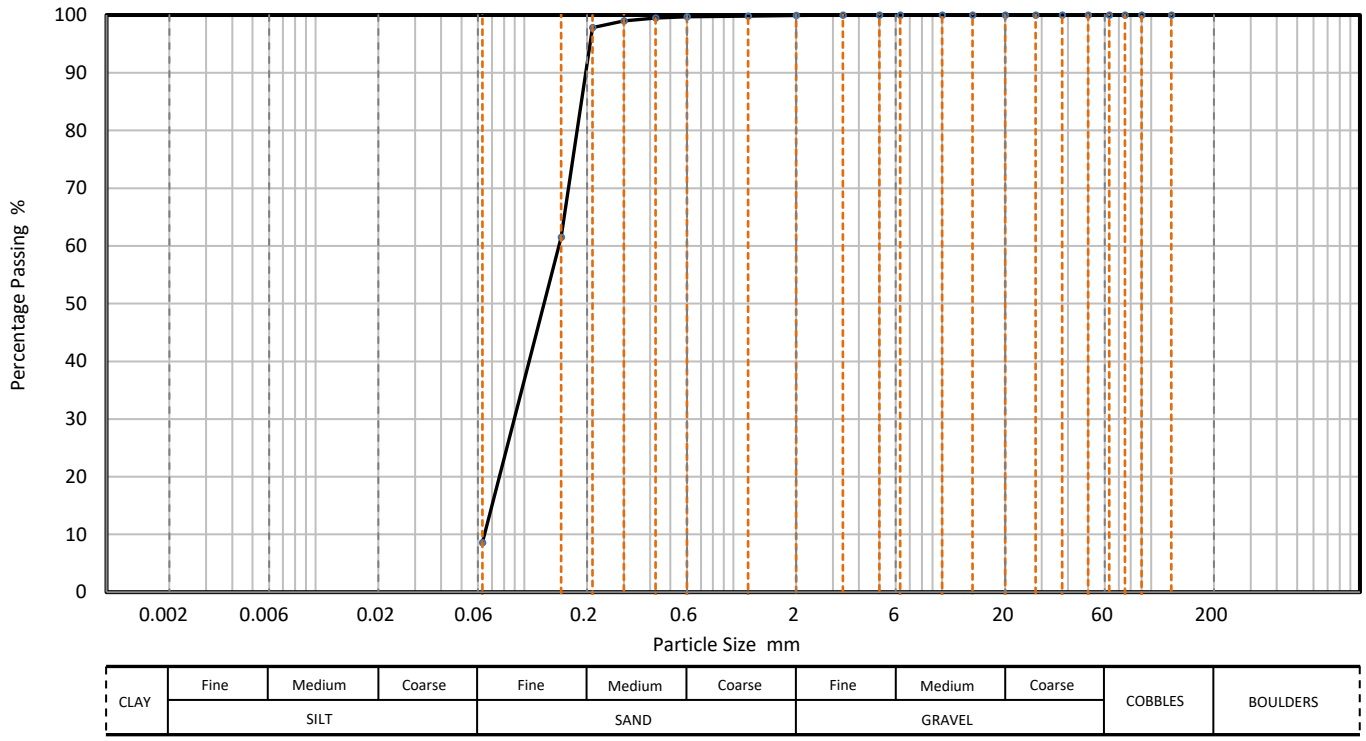
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
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UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062729
Depth (Top) m	15.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	98		
0.15	62		
0.063	9		

Dry Mass of sample, g	698

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	91.3
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.146
D30	mm	0.0895
D10	mm	0.0644
Uniformity Coefficient		2.3
Curvature Coefficient		0.85

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 10:12

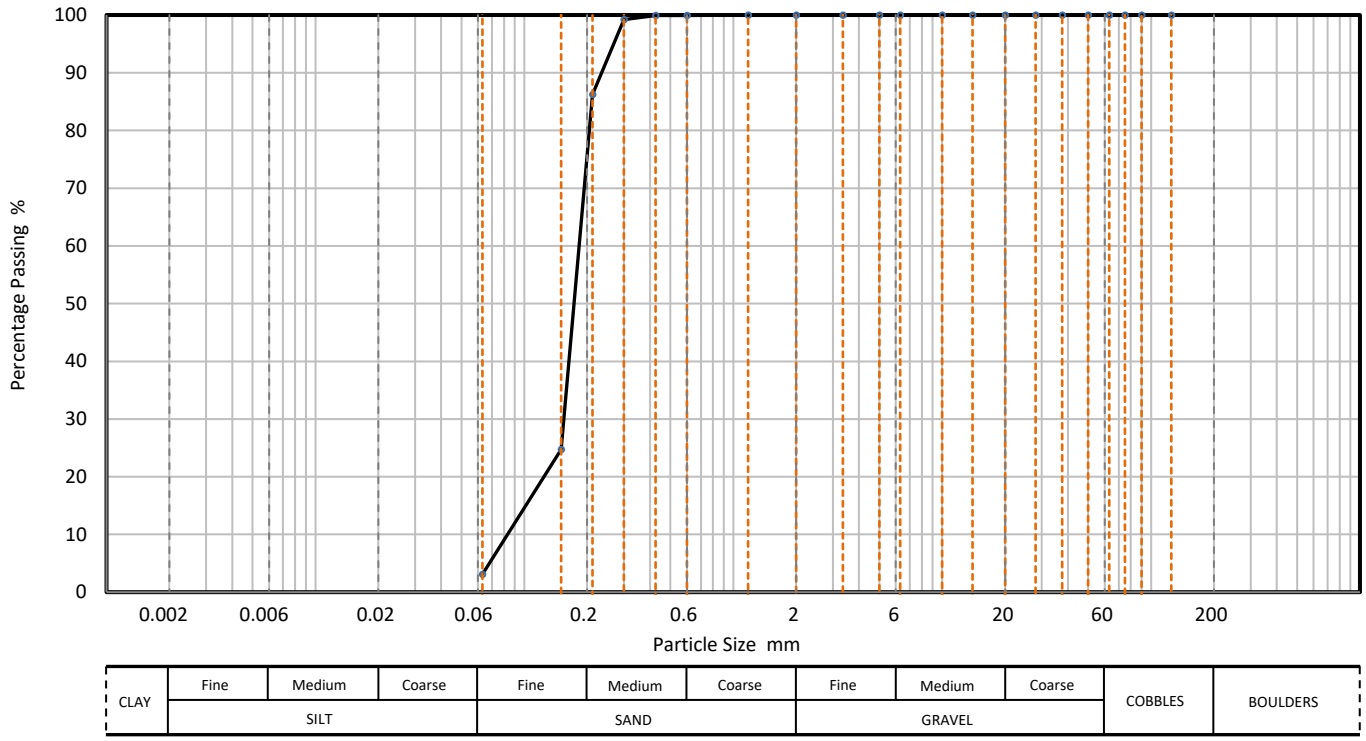
PARTICLE SIZE DISTRIBUTION

Site name	Job number
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UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062730
Depth (Top) m	18.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	86		
0.15	25		
0.063	3		

Dry Mass of sample, g: 865

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	96.9
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.183
D30	mm	0.155
D10	mm	0.0831
Uniformity Coefficient		2.2
Curvature Coefficient		1.6

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 10:19

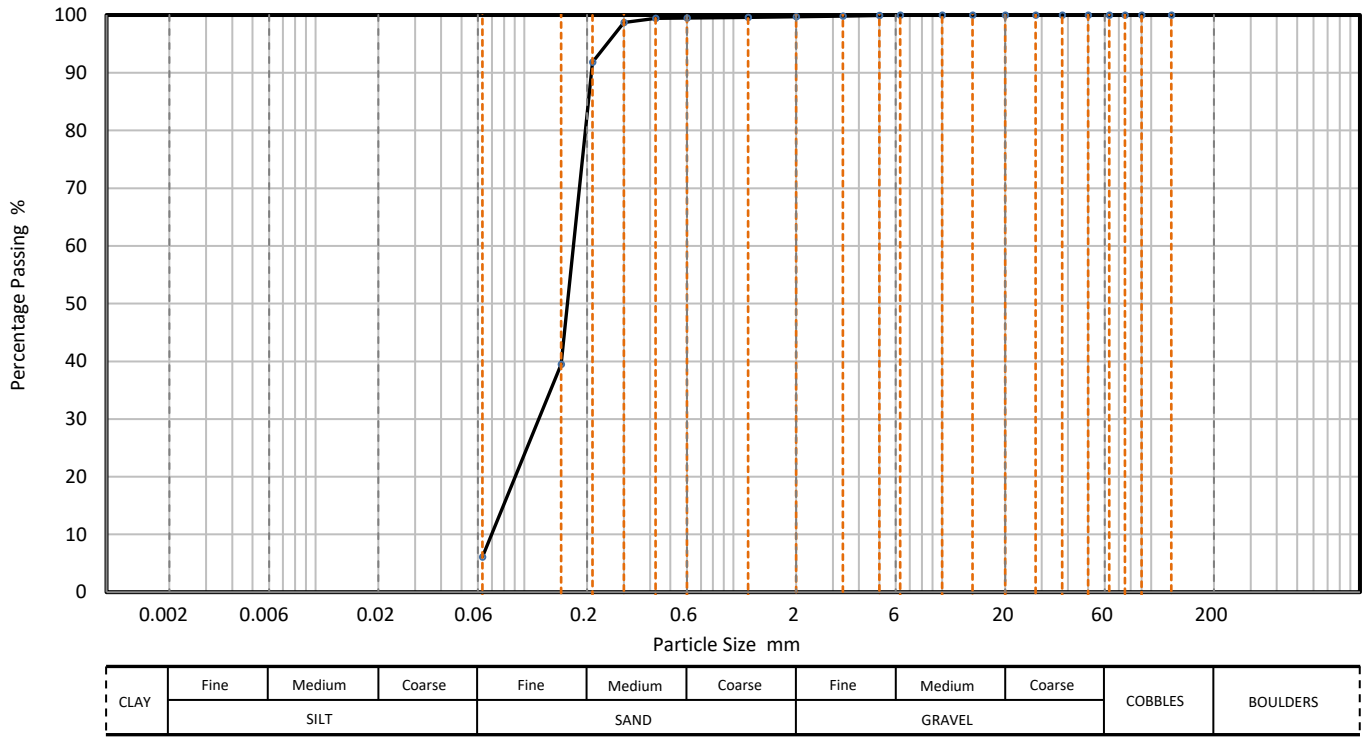
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
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UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062731
Depth (Top) m	21.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	92		
0.15	40		
0.063	6		

Dry Mass of sample, g: 896

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	93.7
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.172
D30	mm	0.117
D10	mm	0.0698
Uniformity Coefficient		2.5
Curvature Coefficient		1.1

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 12:56

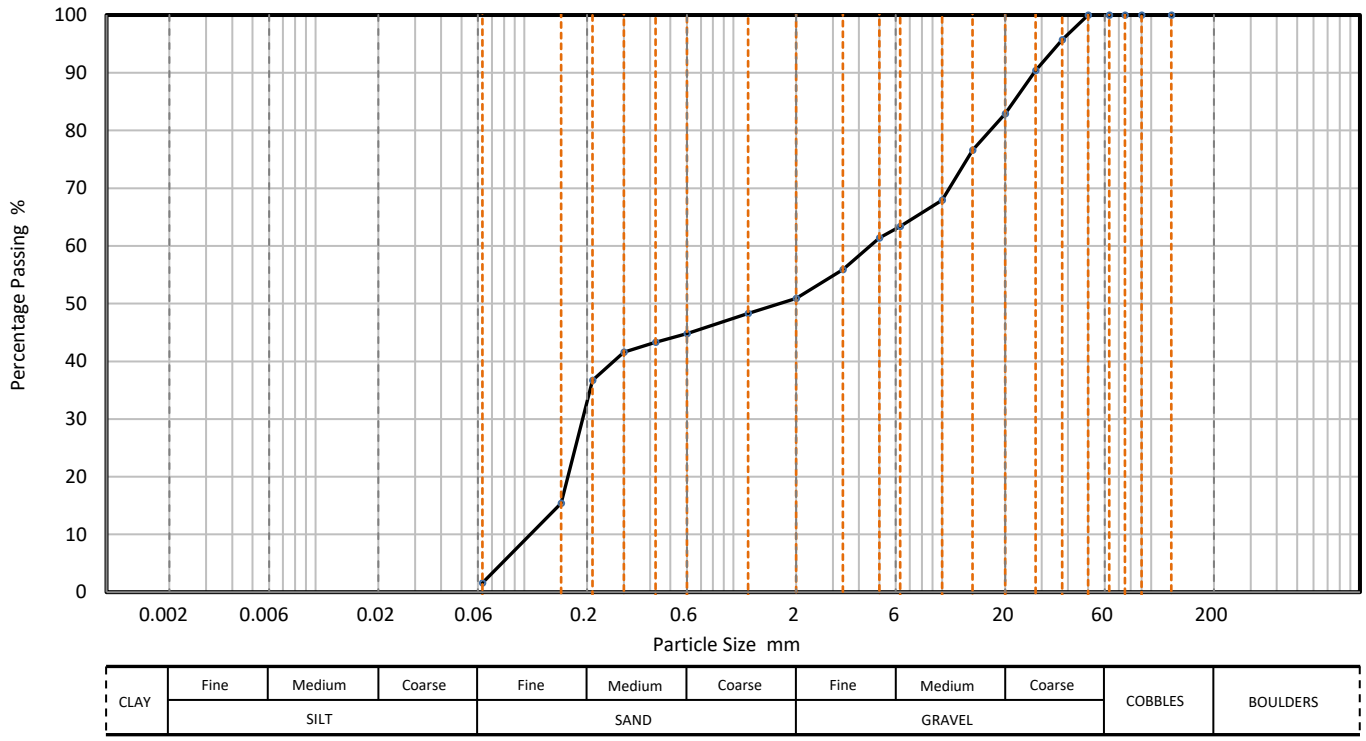
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062732
Depth (Top) m	24.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, very Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	96		
28	90		
20	83		
14	77		
10	68		
6.3	63		
5	61		
3.35	56		
2	51		
1.18	48		
0.6	45		
0.425	43		
0.3	42		
0.212	37		
0.15	15		
0.063	2		

Dry Mass of sample, g: 2081

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	49.1
Sand	49.3
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	4.52
D30	mm	0.19
D10	mm	0.107
Uniformity Coefficient		42
Curvature Coefficient		0.075

Remarks

Preparation and testing in accordance with test method unless noted below

Sample tested was deviating in accordance with BS1377 test standard

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 10:16

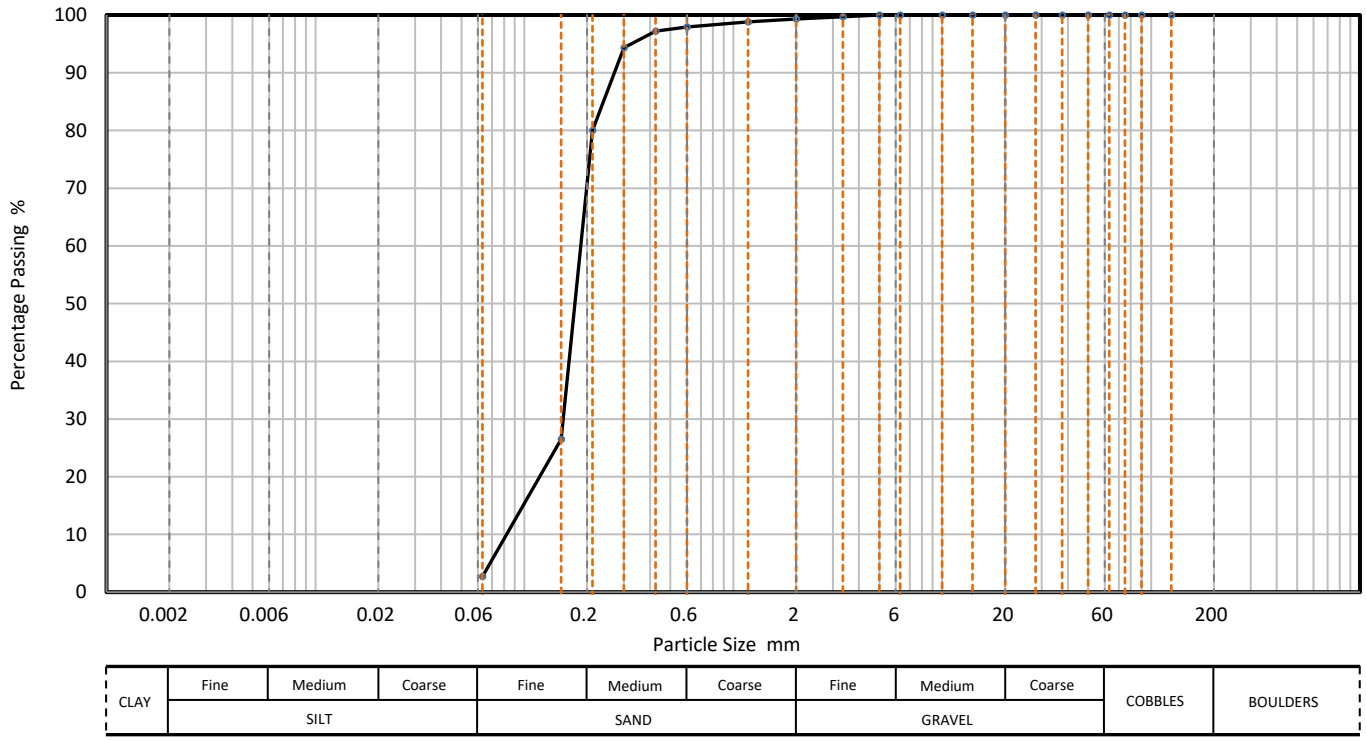
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062733
Depth (Top) m	27.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	98		
0.425	97		
0.3	94		
0.212	80		
0.15	27		
0.063	3		

Dry Mass of sample, g: 972

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.7
Sand	96.6
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.186
D30	mm	0.153
D10	mm	0.0821
Uniformity Coefficient		2.3
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 12:59

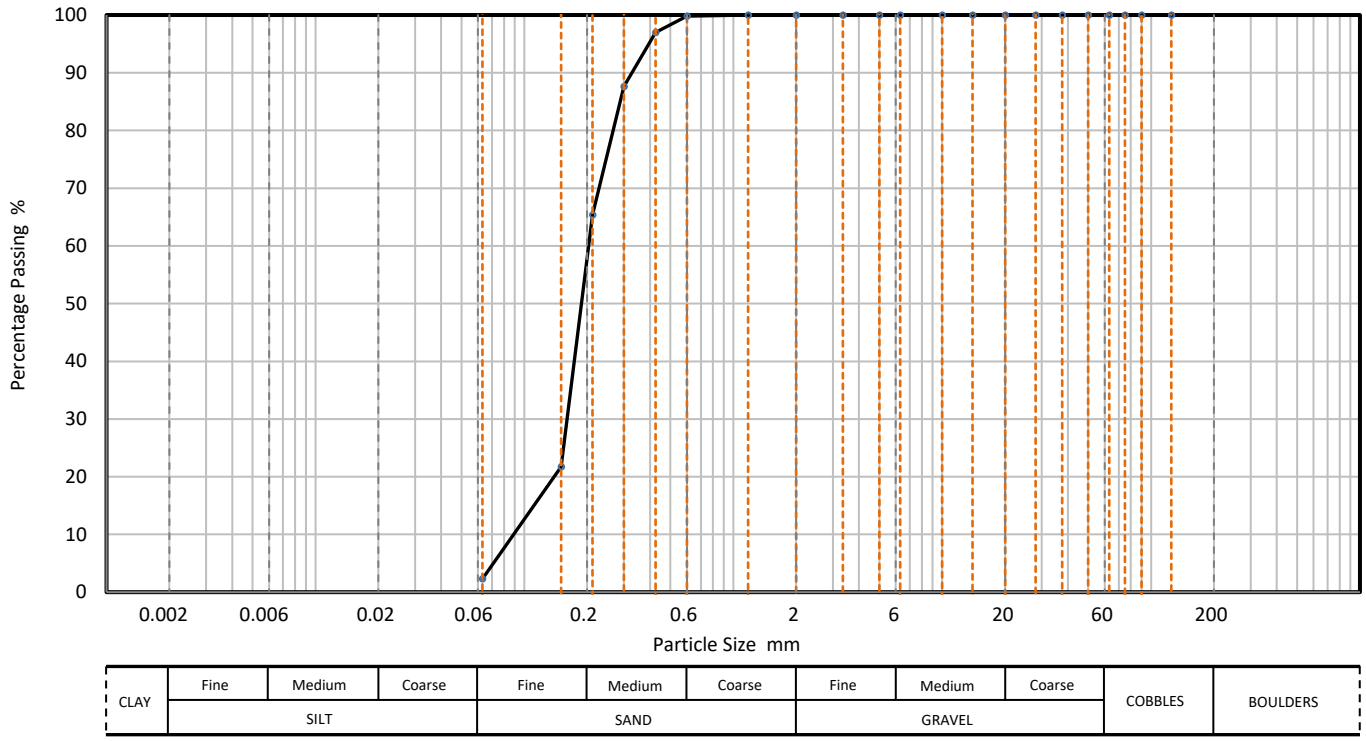
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062734
Depth (Top) m	30.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	97		
0.3	88		
0.212	65		
0.15	22		
0.063	2		

Dry Mass of sample, g: 1095

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.7
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.203
D30	mm	0.16
D10	mm	0.089
Uniformity Coefficient		2.3
Curvature Coefficient		1.4

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 13:02

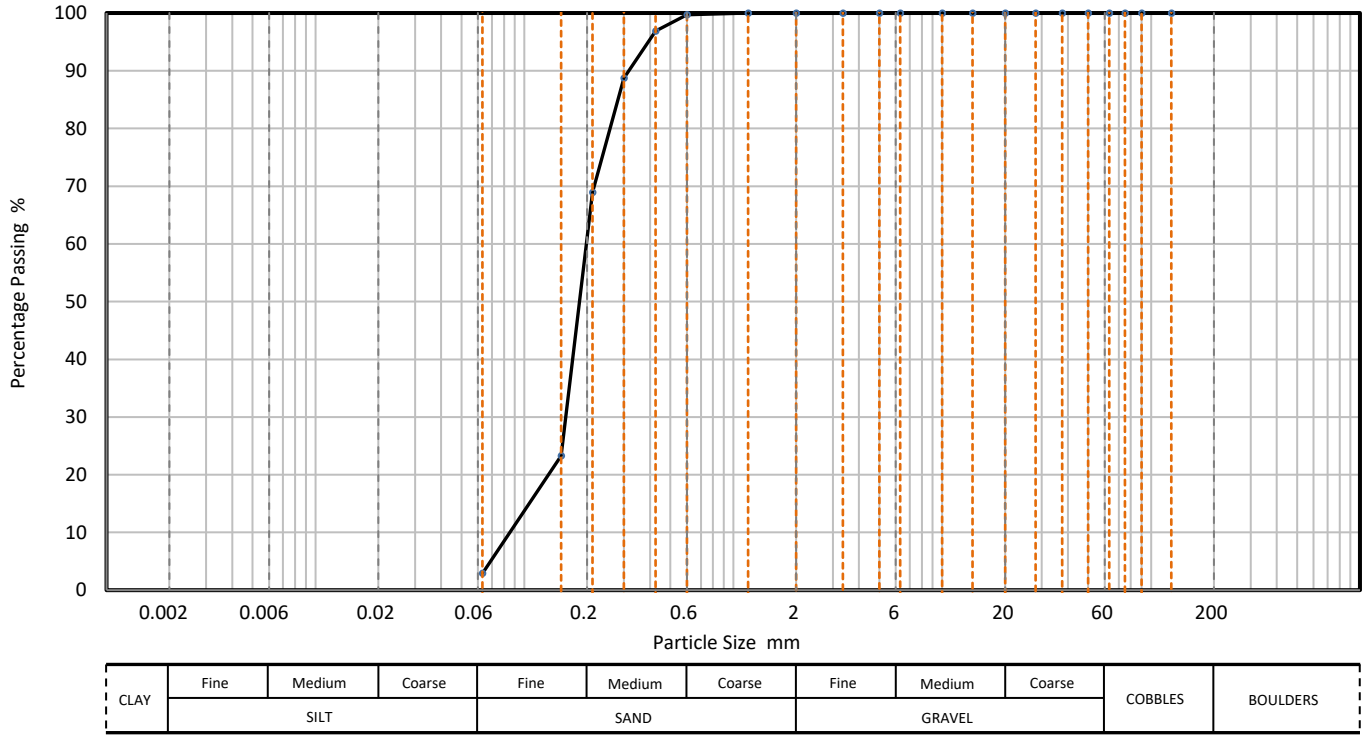
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062735
Depth (Top) m	31.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	97		
0.3	89		
0.212	69		
0.15	23		
0.063	3		

Dry Mass of sample, g: 1158

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.1
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.198
D30	mm	0.158
D10	mm	0.0851
Uniformity Coefficient		2.3
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 13:04

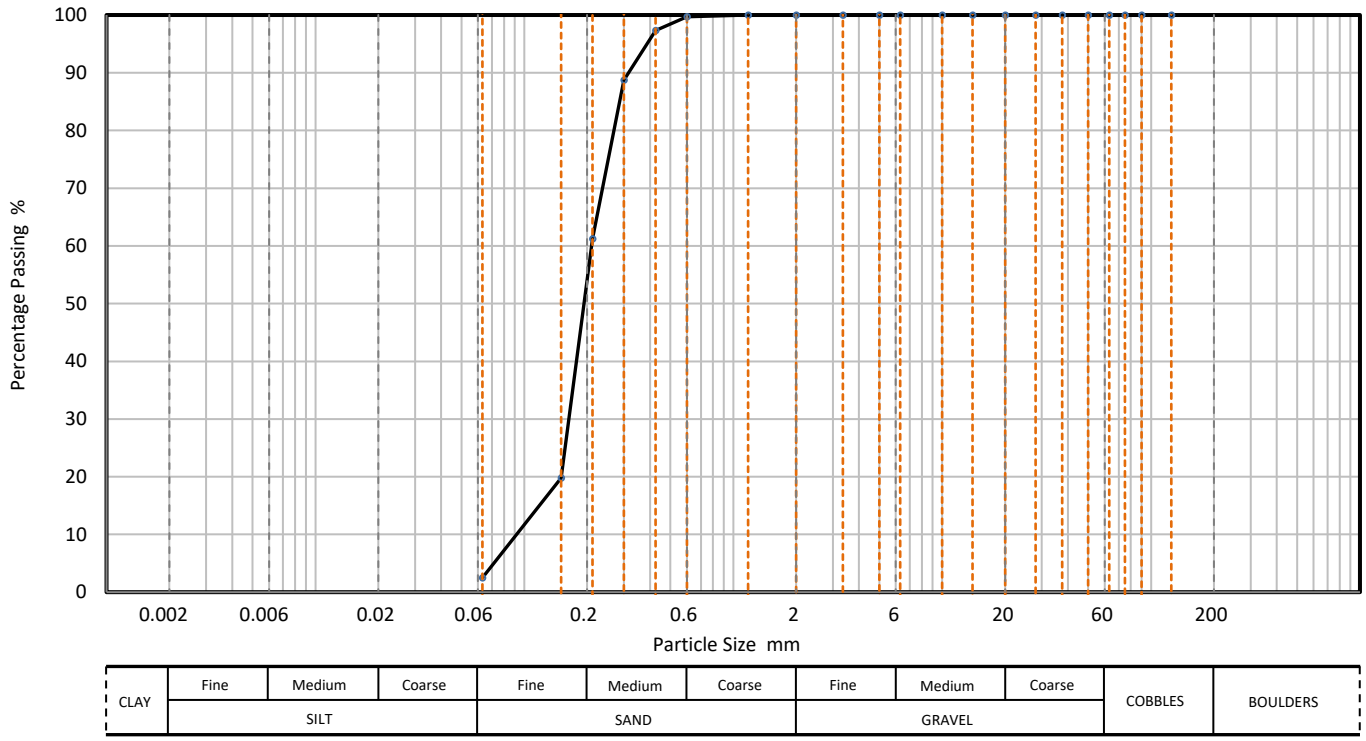
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062736
Depth (Top) m	34.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	97		
0.3	89		
0.212	61		
0.15	20		
0.063	3		

Dry Mass of sample, g: 1019

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.5
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.21
D30	mm	0.163
D10	mm	0.0918
Uniformity Coefficient		2.3
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 13:06

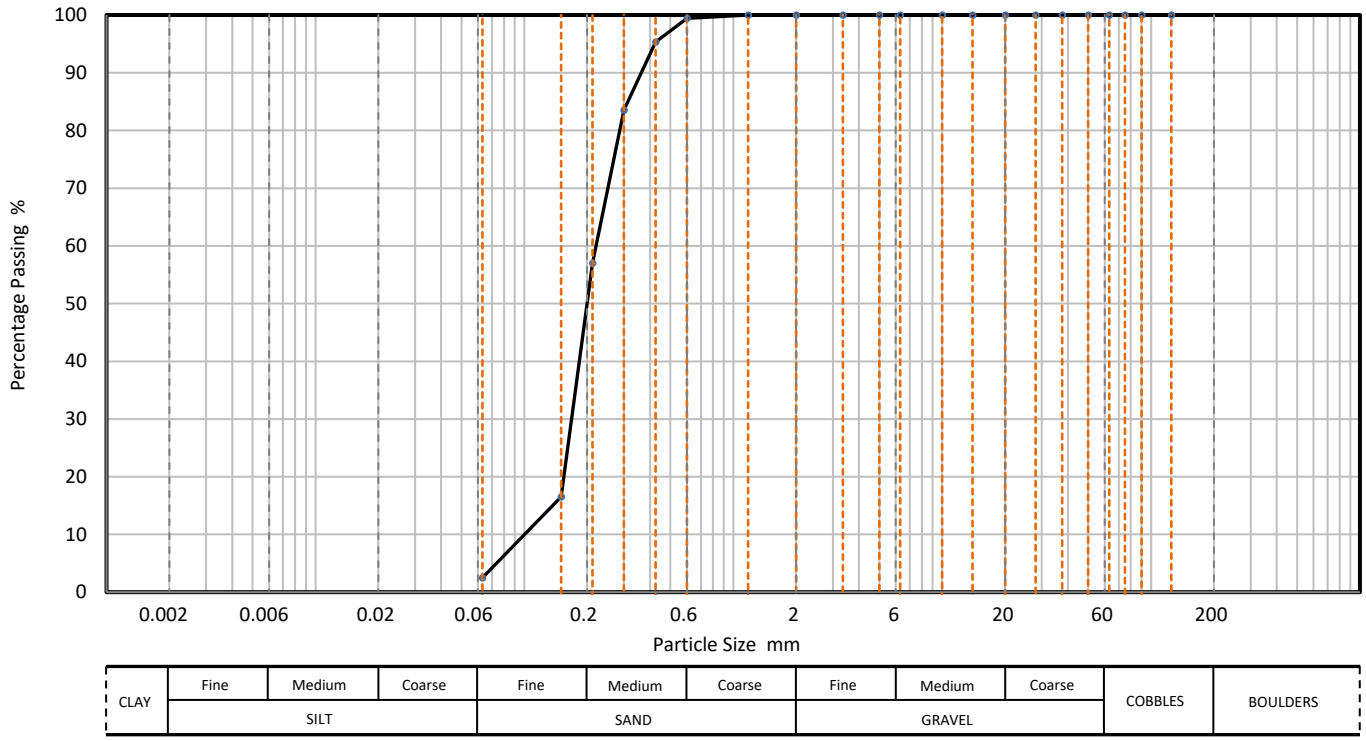
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062737
Depth (Top) m	36.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	95		
0.3	84		
0.212	57		
0.15	17		
0.063	3		

Dry Mass of sample, g: 1219

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.5
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.22
D30	mm	0.168
D10	mm	0.1
Uniformity Coefficient		2.2
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 10:19

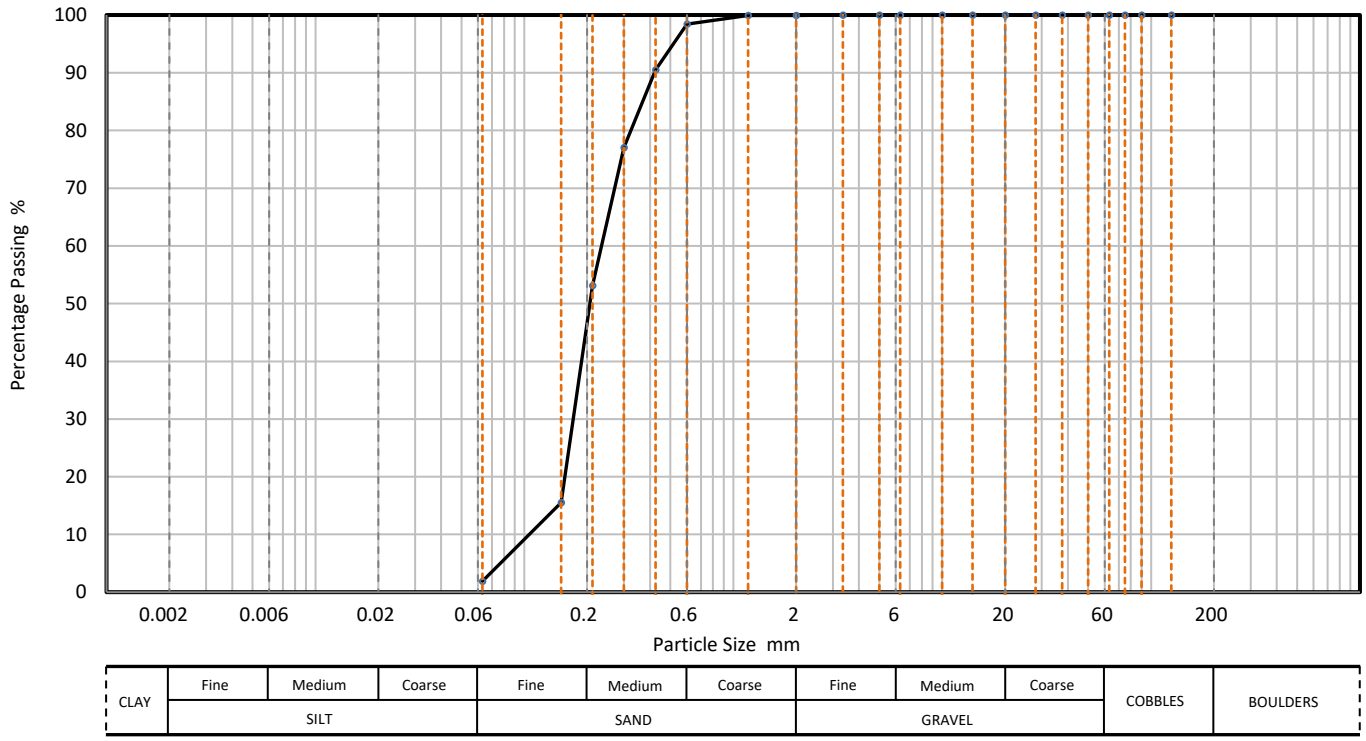
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP06	Lab sample ID	G2MT2023062738
Depth (Top) m	39.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	D		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	98		
0.425	91		
0.3	77		
0.212	53		
0.15	16		
0.063	2		

Dry Mass of sample, g: 503

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	98.1
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.234
D30	mm	0.171
D10	mm	0.106
Uniformity Coefficient		2.2
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	30/06/2023 13:08

Laboratory Report Front Sheet

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Client details:

Reference:	S230503
Name:	Solmek
Address:	12 Yarm Road, Stockton-on-tees, TS18 3NA
Telephone:	01642 607083
Email:	acutts@solmek.com
FAO:	Adrian Cutts

Samples received:

Date commenced: 14/07/2023

Date reported: 20/07/2023

Observations and interpretations are outside of the UKAS Accreditiation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Samples will be held at the laboratory for a period of 4 weeks after the report date. After the above reporting date the samples will be disposed of. Should further testing be required then the office should be informed before the above date.

Signature:	Approved Signitories:
[Redacted]	☐ D.Anderson (Managing Director) ☑ J. Brischuk (Laboratory Manager) ☐

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Ardersier Port	S230503

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BHSP07	0.70		B	20	105									
BHSP07	2.00		B	19	105									
BHSP07	4.00		B	19	105									
BHSP07	6.00		B	17	105									
BHSP07	8.00		B	7.6	105									
BHSP07	10.10		B	18	105									
BHSP07	13.50		B	19	105									
BHSP07	16.50		B	20	105									
BHSP07	19.50		B	21	105									
BHSP07	22.50		B	21	105									
BHSP07	25.50		B	21	105									
BHSP07	28.50		B	20	105									
BHSP07	31.50		B	18	105									
BHSP07	34.50		B	19	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicated

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	JBrischuk
Approval date	20/07/2023 14:09
Date report generated	
Report Number	

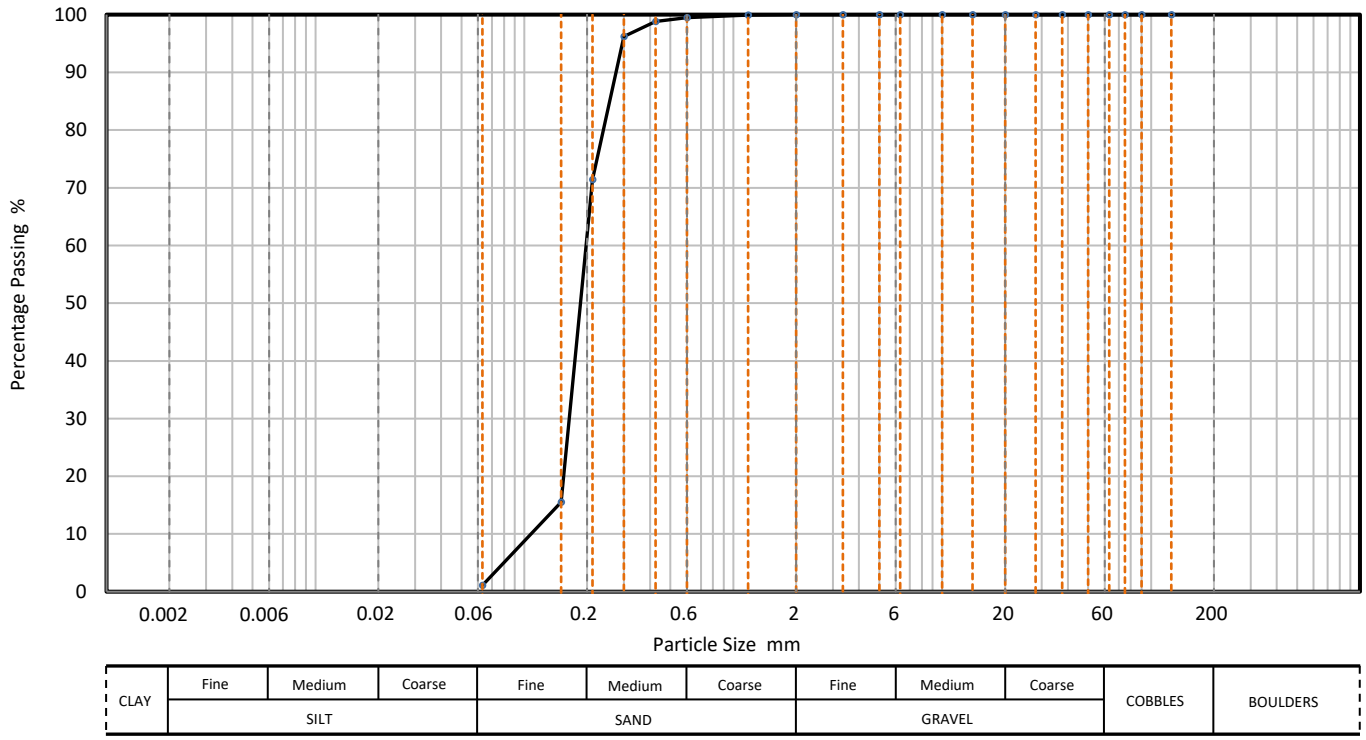
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole		BHSP07	Lab sample ID	G2MT2023071492
Depth (Top)	m	0.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Clayey SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	96		
0.212	71		
0.15	16		
0.063	1		

Dry Mass of sample, g: 497

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	98.9
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.198
D30	mm	0.164
D10	mm	0.108
Uniformity Coefficient		1.8
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	20/07/2023 14:37

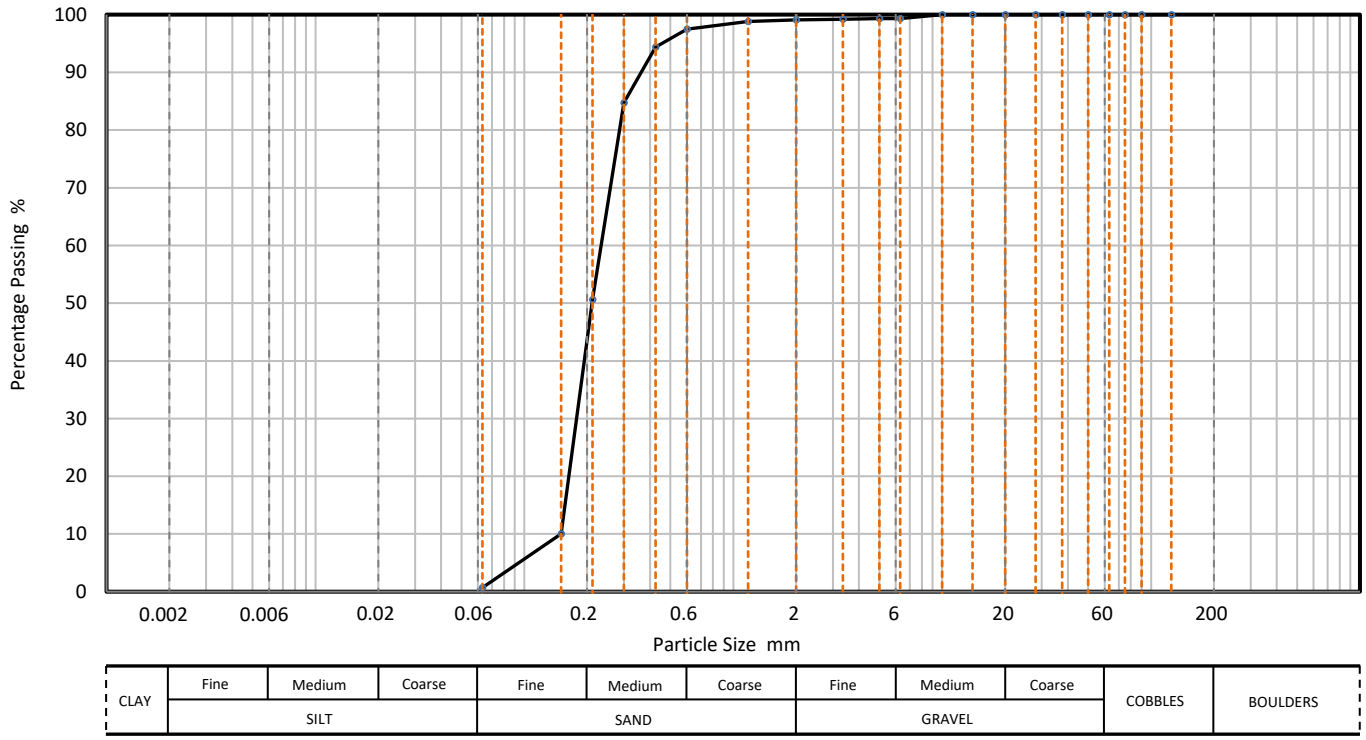
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP07	Lab sample ID	G2MT2023071493
Depth (Top) m	2.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Slightly Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	99		
2	99		
1.18	99		
0.6	98		
0.425	94		
0.3	85		
0.212	51		
0.15	10		
0.063	1		

Dry Mass of sample, g	434

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.9
Sand	98.4
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.233
D30	mm	0.178
D10	mm	0.15
Uniformity Coefficient		1.6
Curvature Coefficient		0.9

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	20/07/2023 14:37

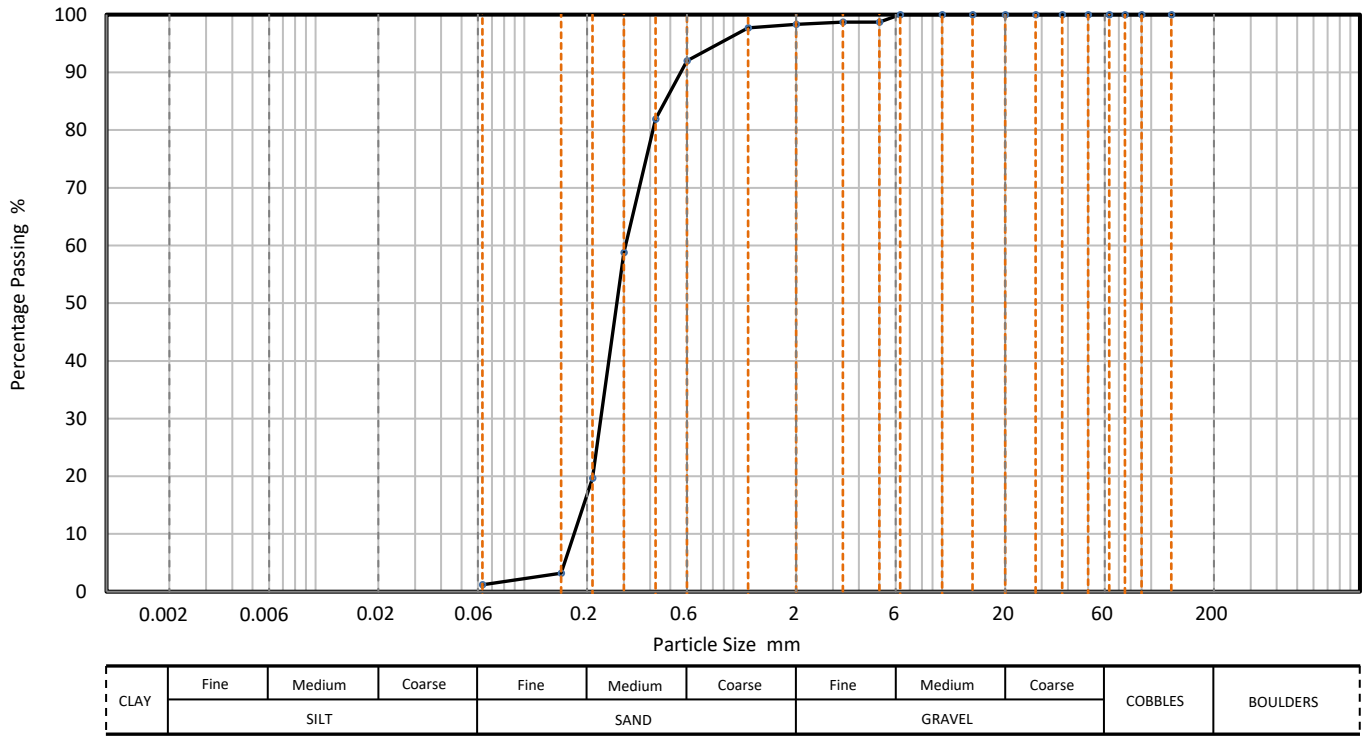
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP07	Lab sample ID	G2MT2023071494
Depth (Top) m	4.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slighlty Clayey, Slightly Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	99		
2	98		
1.18	98		
0.6	92		
0.425	82		
0.3	59		
0.212	20		
0.15	3		
0.063	1		

Dry Mass of sample, g: 911

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.7
Sand	97.1
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.306
D30	mm	0.232
D10	mm	0.173
Uniformity Coefficient		1.8
Curvature Coefficient		1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	20/07/2023 14:37

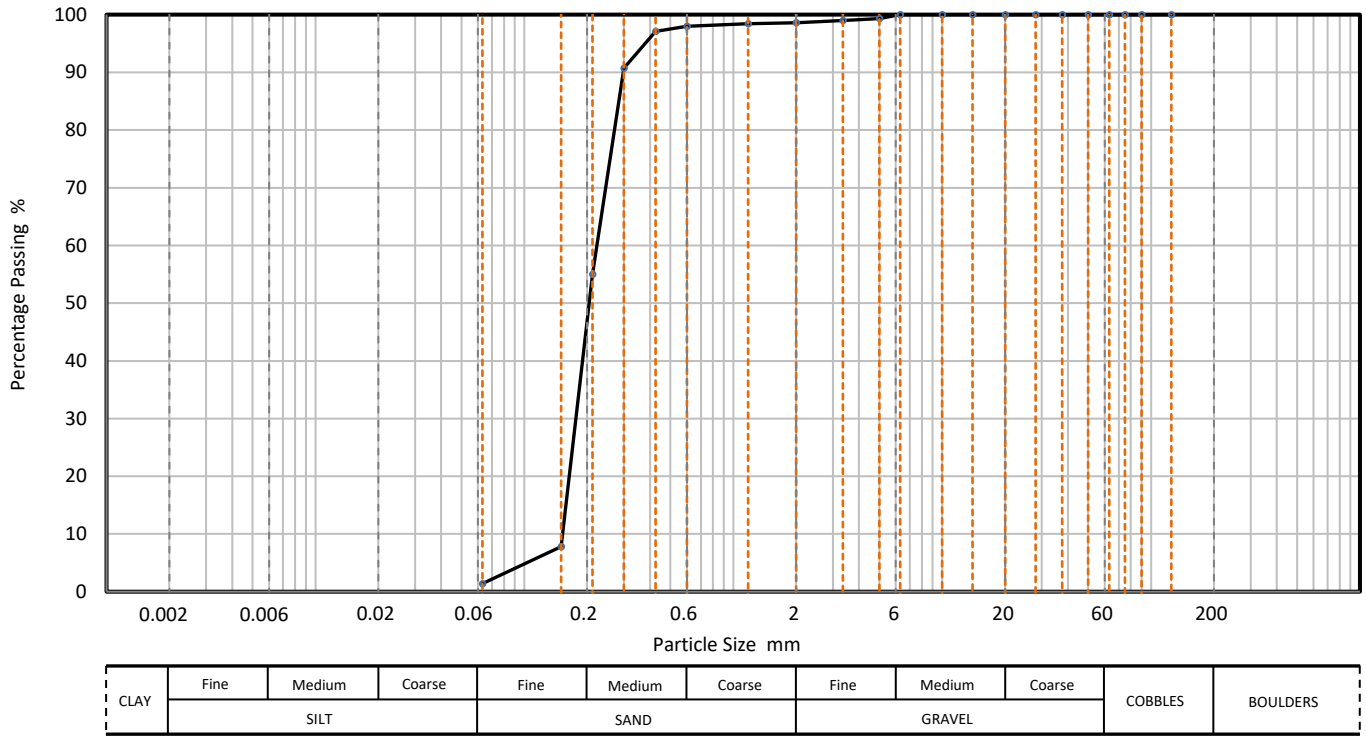
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP07	Lab sample ID	G2MT2023071495
Depth (Top) m	6.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey, Slightly Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	99		
2	99		
1.18	98		
0.6	98		
0.425	97		
0.3	91		
0.212	55		
0.15	8		
0.063	1		

Dry Mass of sample, g	429

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.4
Sand	97.2
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.223
D30	mm	0.177
D10	mm	0.152
Uniformity Coefficient		1.5
Curvature Coefficient		0.92

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 14:37

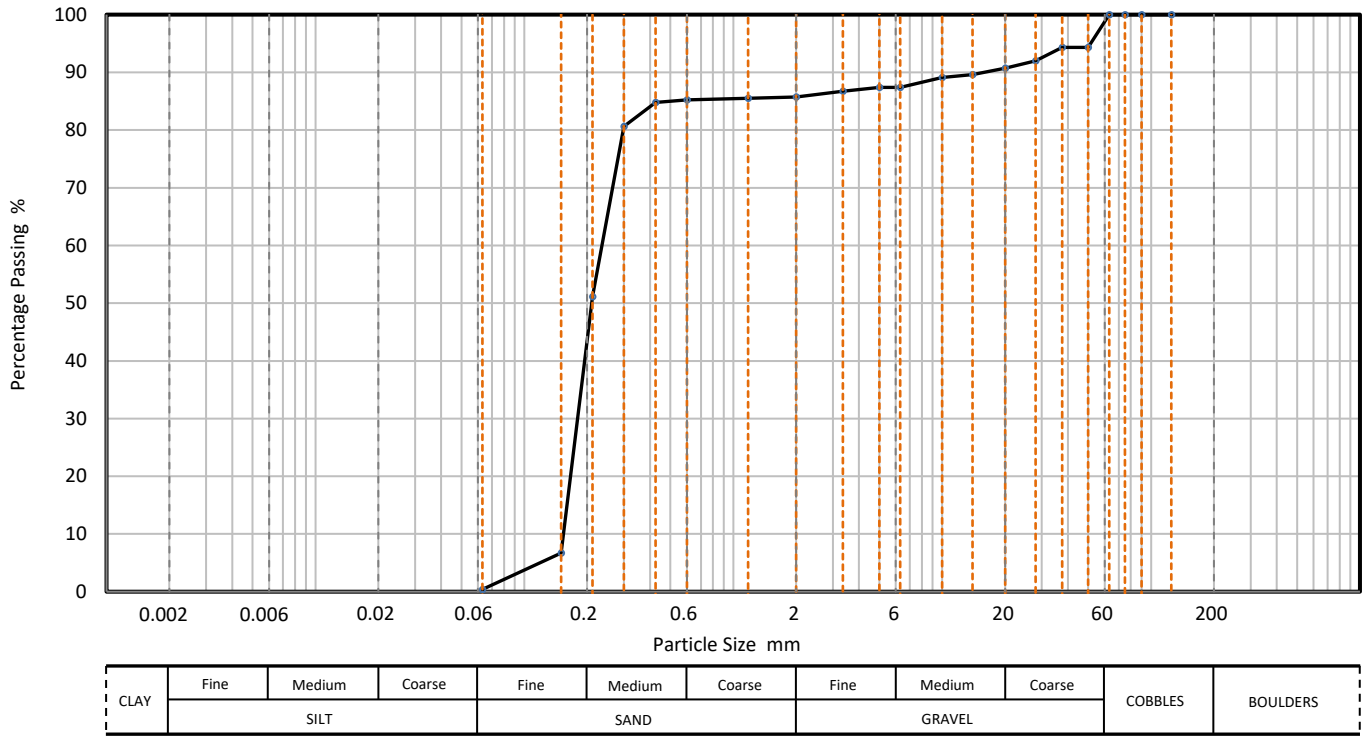
PARTICLE SIZE DISTRIBUTION

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10258

Hole	BHSP07	Lab sample ID	G2MT2023071496
Depth (Top) m	8.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Gravelly SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	94		
37.5	94		
28	92		
20	91		
14	90		
10	89		
6.3	87		
5	87		
3.35	87		
2	86		
1.18	86		
0.6	85		
0.425	85		
0.3	81		
0.212	51		
0.15	7		
0.063	0		

Dry Mass of sample, g	6819

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	14.3
Sand	85.3
Fines <0.063mm	0.0

Grading Analysis		
D100	mm	
D60	mm	0.235
D30	mm	0.18
D10	mm	0.154
Uniformity Coefficient		1.5
Curvature Coefficient		0.89

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 14:37

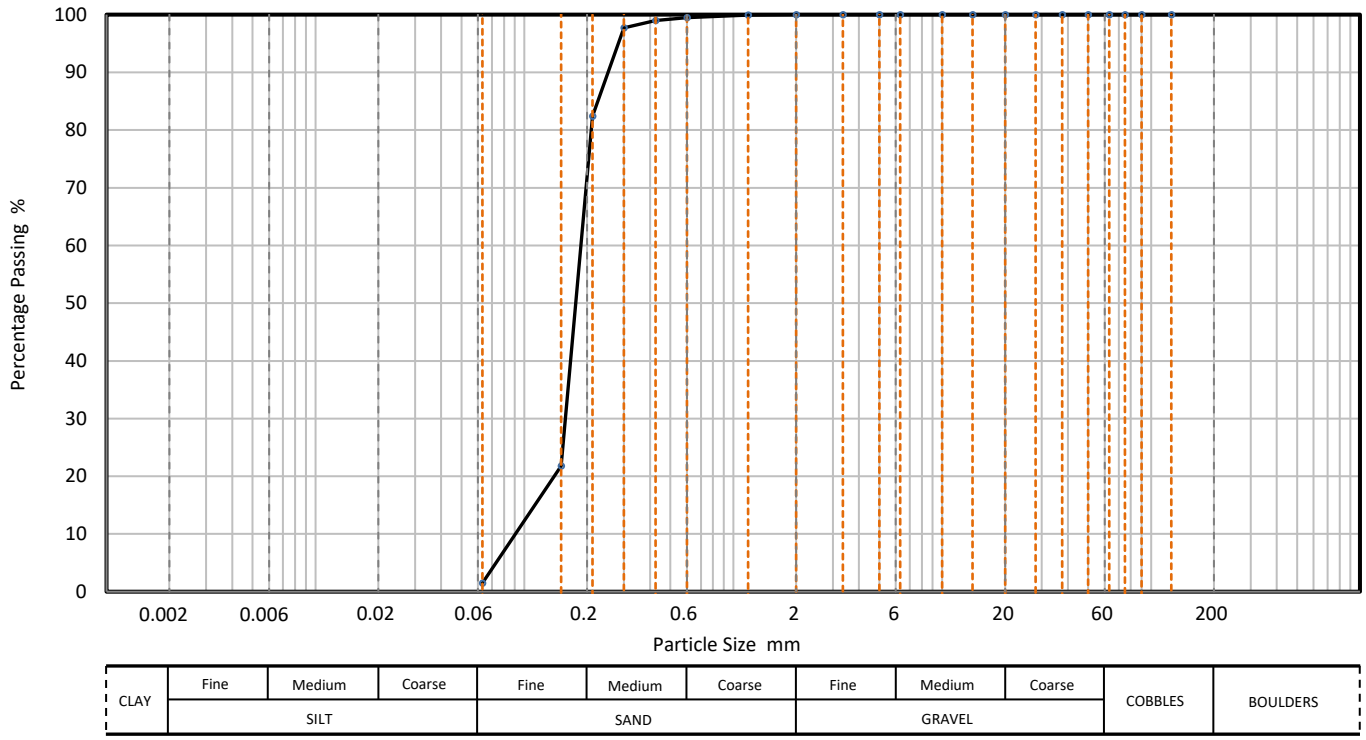
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Site name	Job number
Ardersier Port	S230503

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12-16 Yarm Road,
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UKAS TESTING
10258

Hole	BHSP07	Lab sample ID	G2MT2023071497
Depth (Top) m	10.10	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slighlty Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	82		
0.15	22		
0.063	2		

Dry Mass of sample, g: 539

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	98.5
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.187
D30	mm	0.157
D10	mm	0.0905
Uniformity Coefficient		2.1
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 14:37

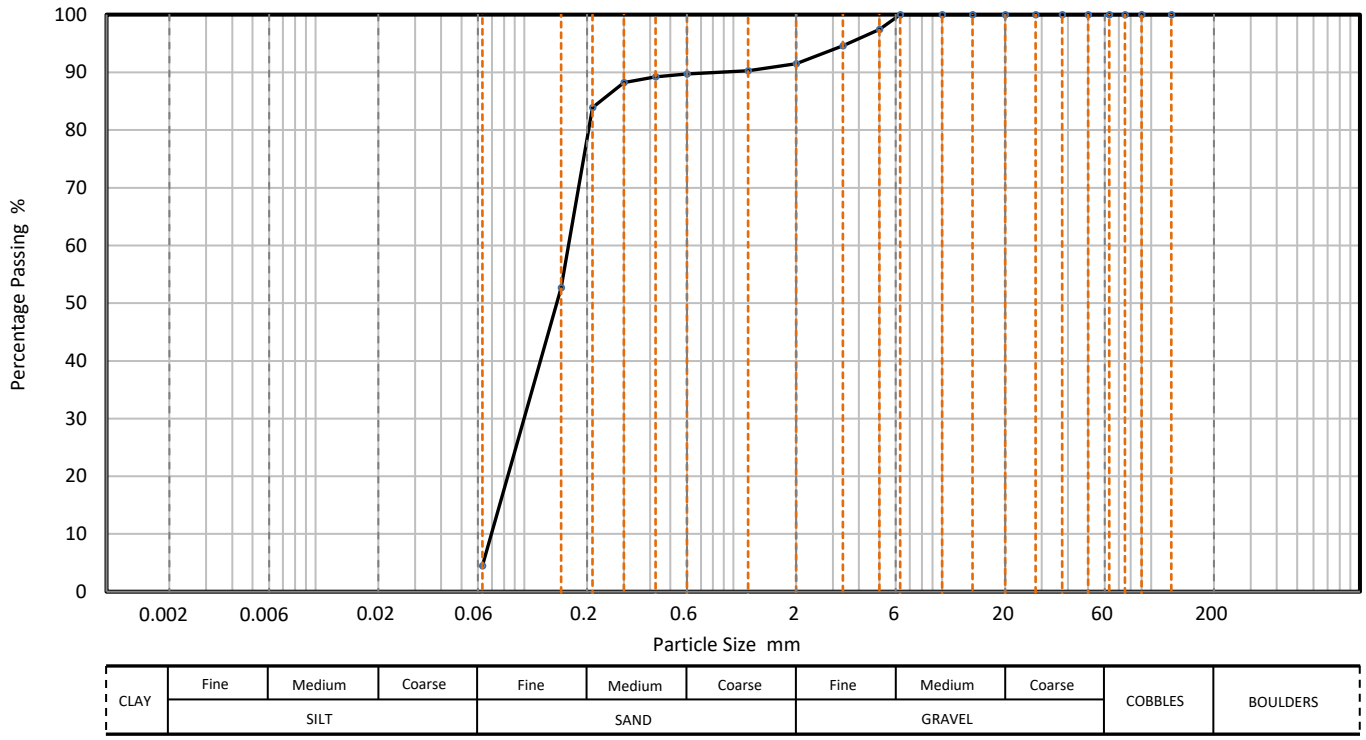
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Ardersier Port	S230503

G2M Testing (Stockton)
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UKAS TESTING
10258

Hole	BHSP07	Lab sample ID	G2MT2023071498
Depth (Top) m	13.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slighlty Clayey, Gravelly SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	97		
3.35	95		
2	92		
1.18	90		
0.6	90		
0.425	89		
0.3	88		
0.212	84		
0.15	53		
0.063	5		

Dry Mass of sample, g: 458

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	8.5
Sand	87.0
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.163
D30	mm	0.0997
D10	mm	0.0696
Uniformity Coefficient		2.3
Curvature Coefficient		0.88

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 14:37

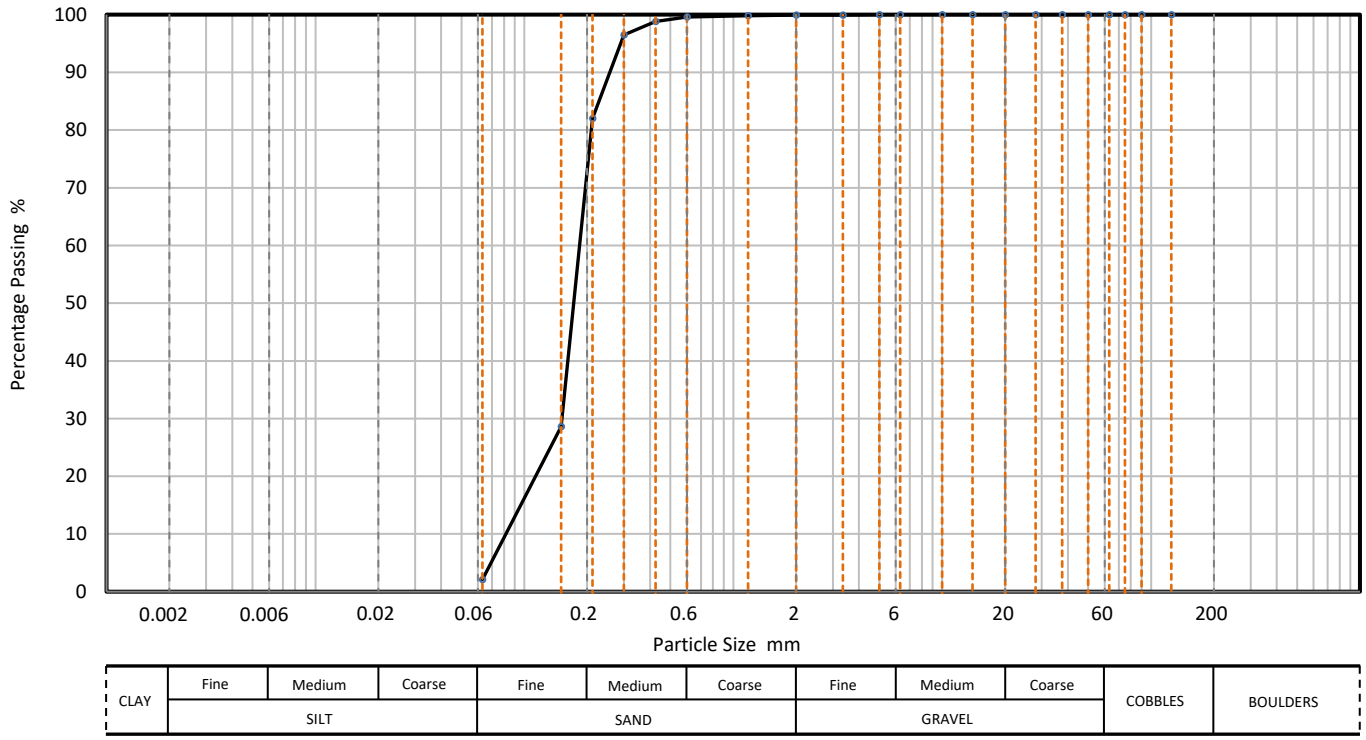
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Ardersier Port	S230503

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UKAS TESTING
10258

Hole	BHSP07	Lab sample ID	G2MT2023071499
Depth (Top) m	16.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Slightly Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	97		
0.212	82		
0.15	29		
0.063	2		

Dry Mass of sample, g	437

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	97.7
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.184
D30	mm	0.151
D10	mm	0.0815
Uniformity Coefficient		2.3
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 14:37

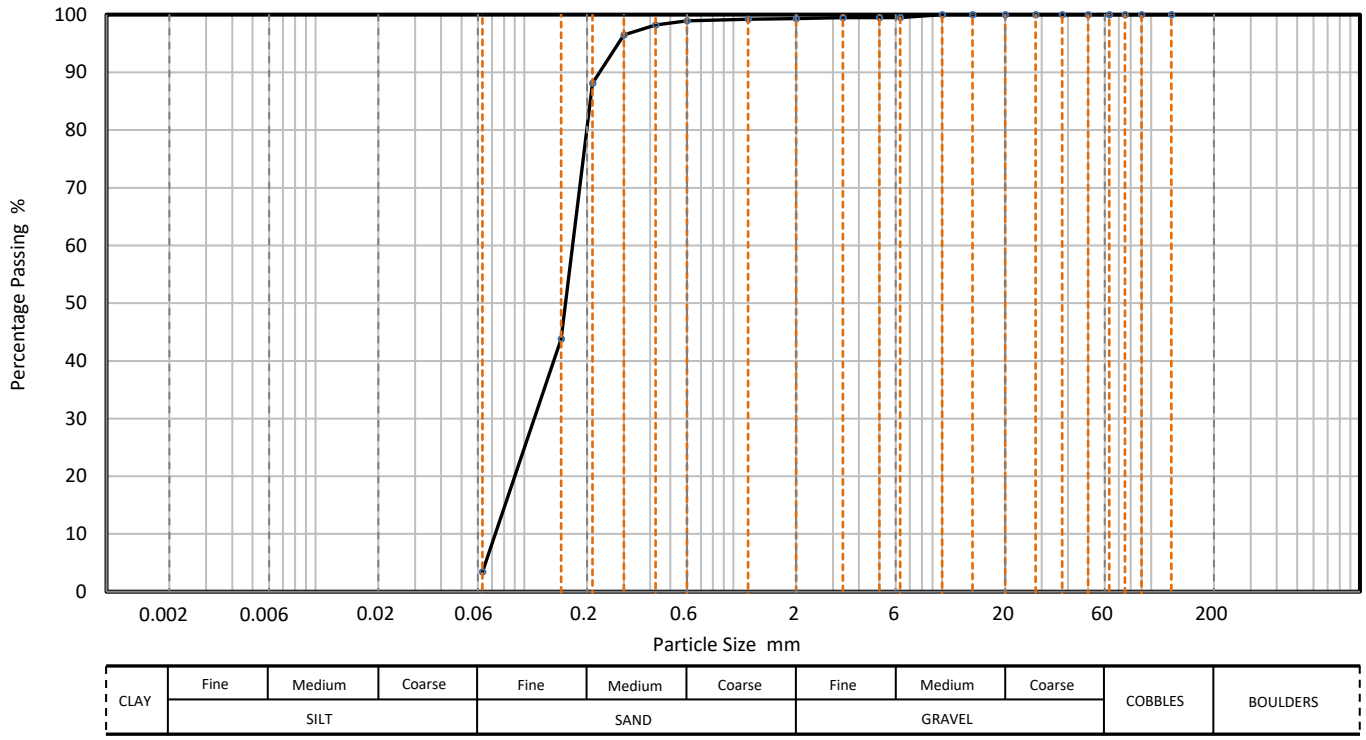
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10258

Hole	BHSP07	Lab sample ID	G2MT20230714100
Depth (Top) m	19.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Slightly Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	99		
0.425	98		
0.3	97		
0.212	88		
0.15	44		
0.063	3		

Dry Mass of sample, g	854

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.7
Sand	95.9
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.17
D30	mm	0.111
D10	mm	0.0725
Uniformity Coefficient		2.3
Curvature Coefficient		1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	20/07/2023 14:37

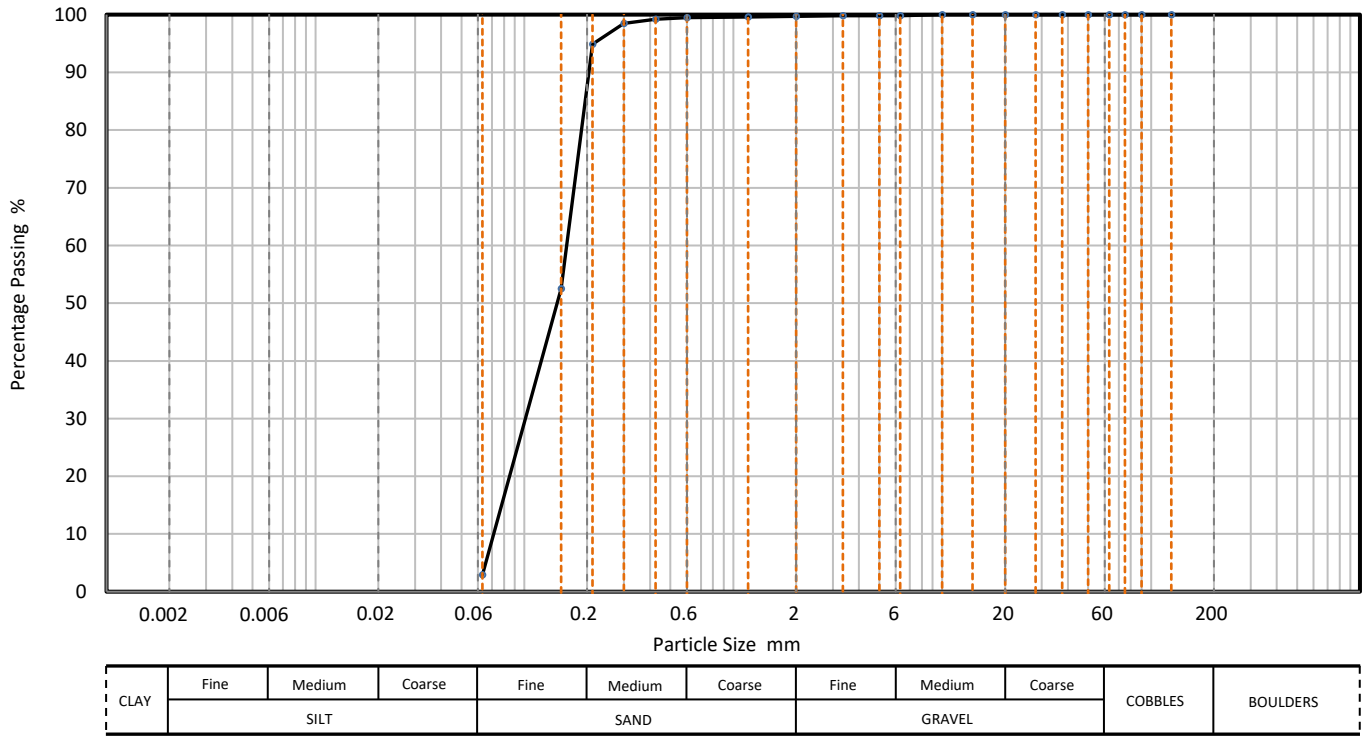
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10258

Site name	Job number
Ardersier Port	S230503

Hole	BHSP07	Lab sample ID	G2MT20230714101
Depth (Top) m	22.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Slightly Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	95		
0.15	53		
0.063	3		

Dry Mass of sample, g: 449

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	96.8
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.159
D30	mm	0.101
D10	mm	0.0713
Uniformity Coefficient		2.2
Curvature Coefficient		0.9

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	20/07/2023 14:37

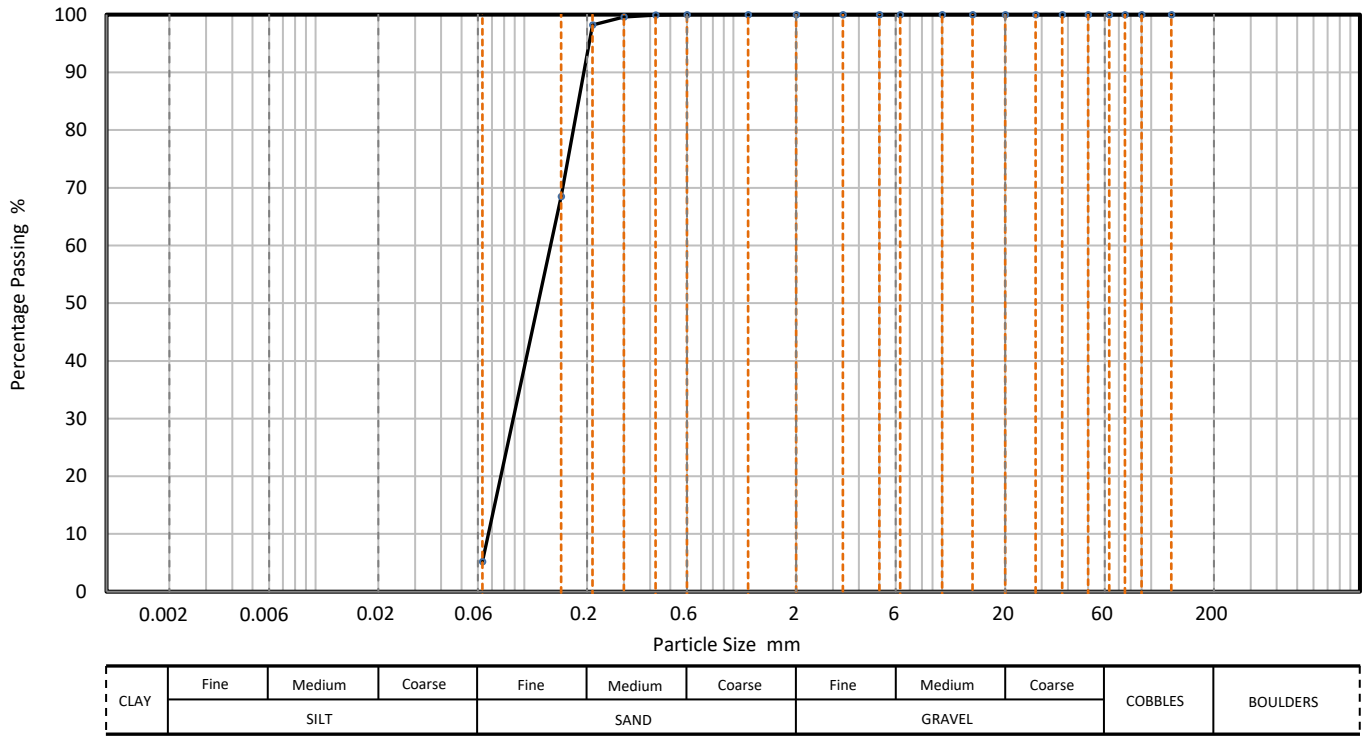
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
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TS18 3NA
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10258

Hole	BHSP07	Lab sample ID	G2MT20230714102
Depth (Top) m	25.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slighlty Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	98		
0.15	69		
0.063	5		

Dry Mass of sample, g	443

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	94.8
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.134
D30	mm	0.0885
D10	mm	0.0673
Uniformity Coefficient		2
Curvature Coefficient		0.87

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	20/07/2023 14:37

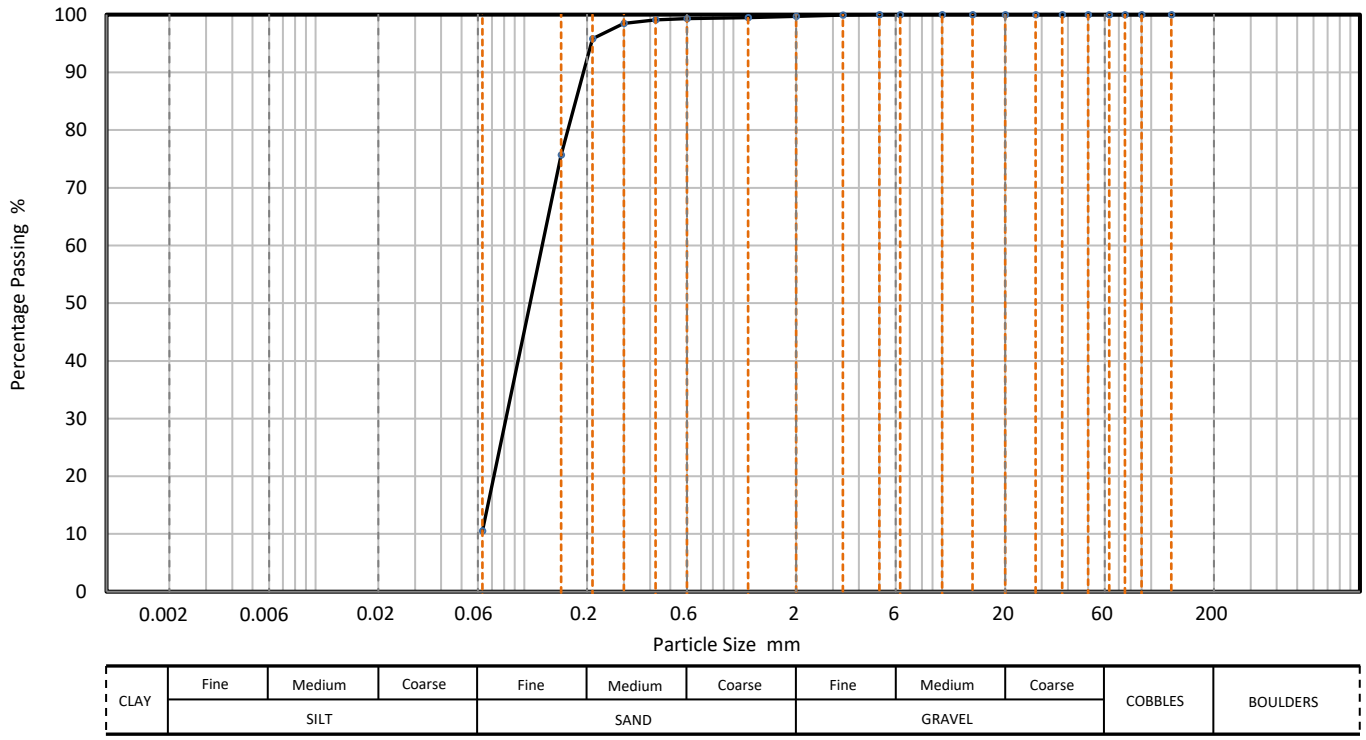
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UKAS TESTING
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Site name	Job number
Ardersier Port	S230503

Hole		BHSP07	Lab sample ID	G2MT20230714103
Depth (Top)	m	28.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Gravelly, Clayey, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	99		
0.212	96		
0.15	76		
0.063	11		

Dry Mass of sample, g: 428

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	89.1
Fines <0.063mm	11.0

Grading Analysis		
D100	mm	
D60	mm	0.122
D30	mm	0.0816
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	20/07/2023 14:37

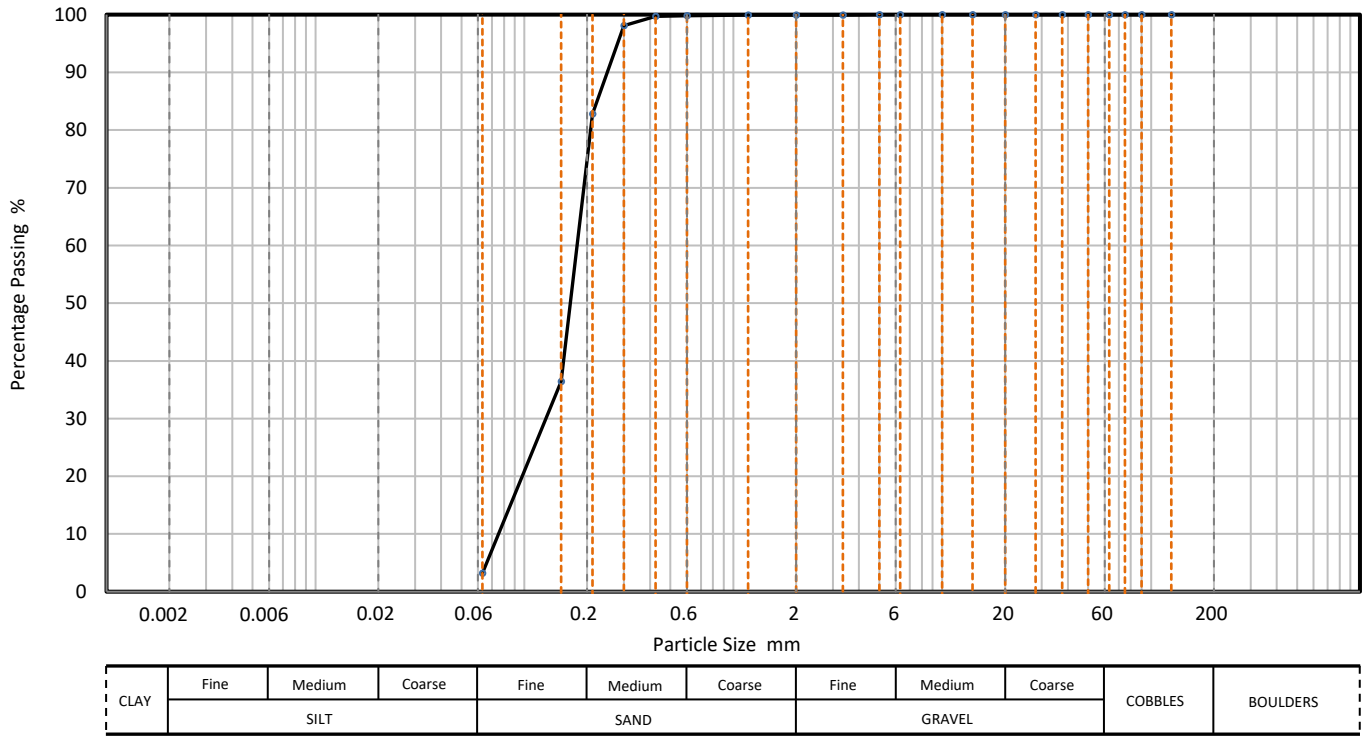
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

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12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
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10258

Hole	BHSP07	Lab sample ID	G2MT20230714104
Depth (Top) m	31.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Slightly Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	98		
0.212	83		
0.15	36		
0.063	3		

Dry Mass of sample, g: 434

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	96.7
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.179
D30	mm	0.127
D10	mm	0.0753
Uniformity Coefficient		2.4
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
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Approved by	JBrischuk
Approval date	20/07/2023 14:37

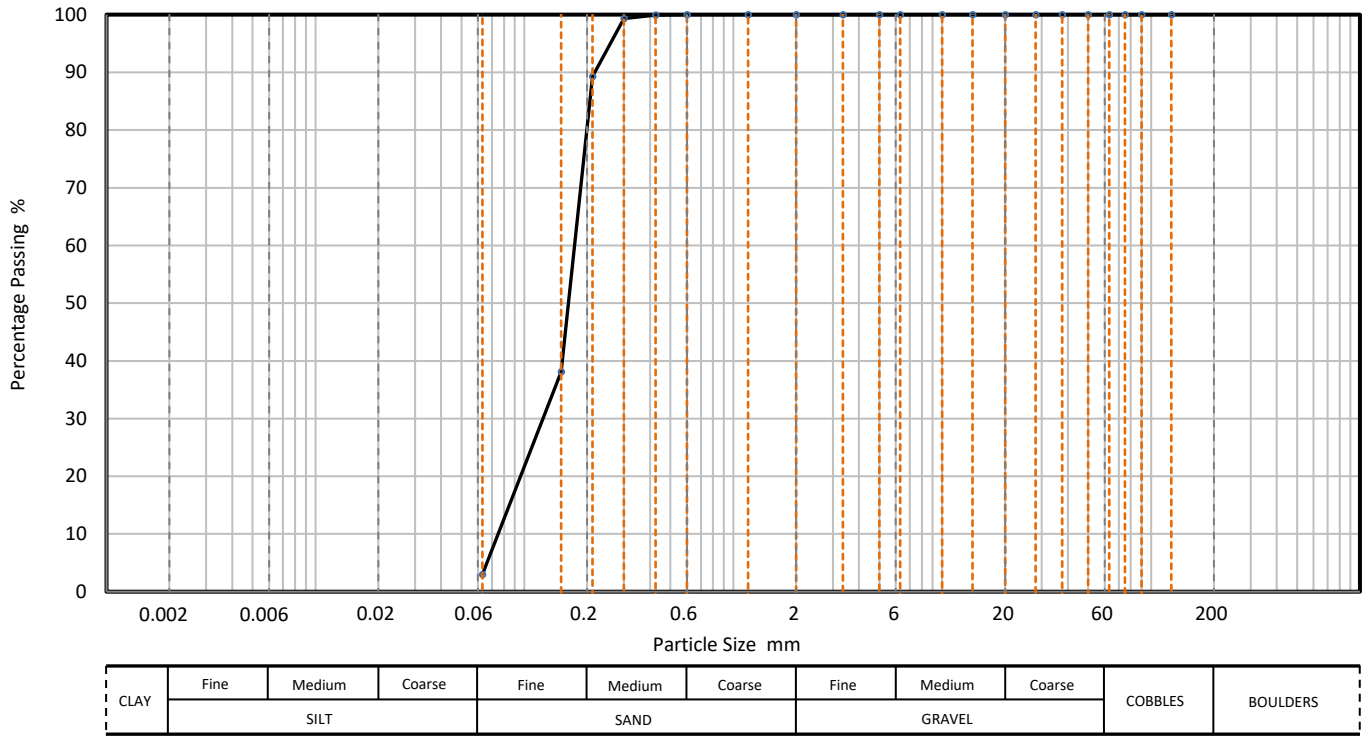
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Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
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UKAS TESTING
10258

Hole		BHSP07	Lab sample ID	G2MT20230714105
Depth (Top)	m	34.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Clayey SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	89		
0.15	38		
0.063	3		

Dry Mass of sample, g: 553

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.0
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.174
D30	mm	0.123
D10	mm	0.0749
Uniformity Coefficient		2.3
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	20/07/2023 14:37

Laboratory Report Front Sheet

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
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10258

Client details:

Reference:	S230503
Name:	Solmek
Address:	12 Yarm Road, Stockton-on-tees, TS18 3NA
Telephone:	01642 607083
Email:	acutts@solmek.com
FAO:	Adrian Cutts

Samples received:

Date commenced: 28/07/2023

Date reported: 31/07/2023

Observations and interpretations are outside of the UKAS Accreditiation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Samples will be held at the laboratory for a period of 4 weeks after the report date. After the above reporting date the samples will be disposed of. Should further testing be required then the office should be informed before the above date.

Signature:	Approved Signitories:
[Redacted]	☑ D.Anderson (Managing Director) ☐ J. Brischuk (Laboratory Manager) ☐

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
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UKAS TESTING

10258

Site name	Job number
Ardersier Port	S230503

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BHSP07	18.00		B	26	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicated

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	31/07/2023 12:32
Date report generated	
Report Number	

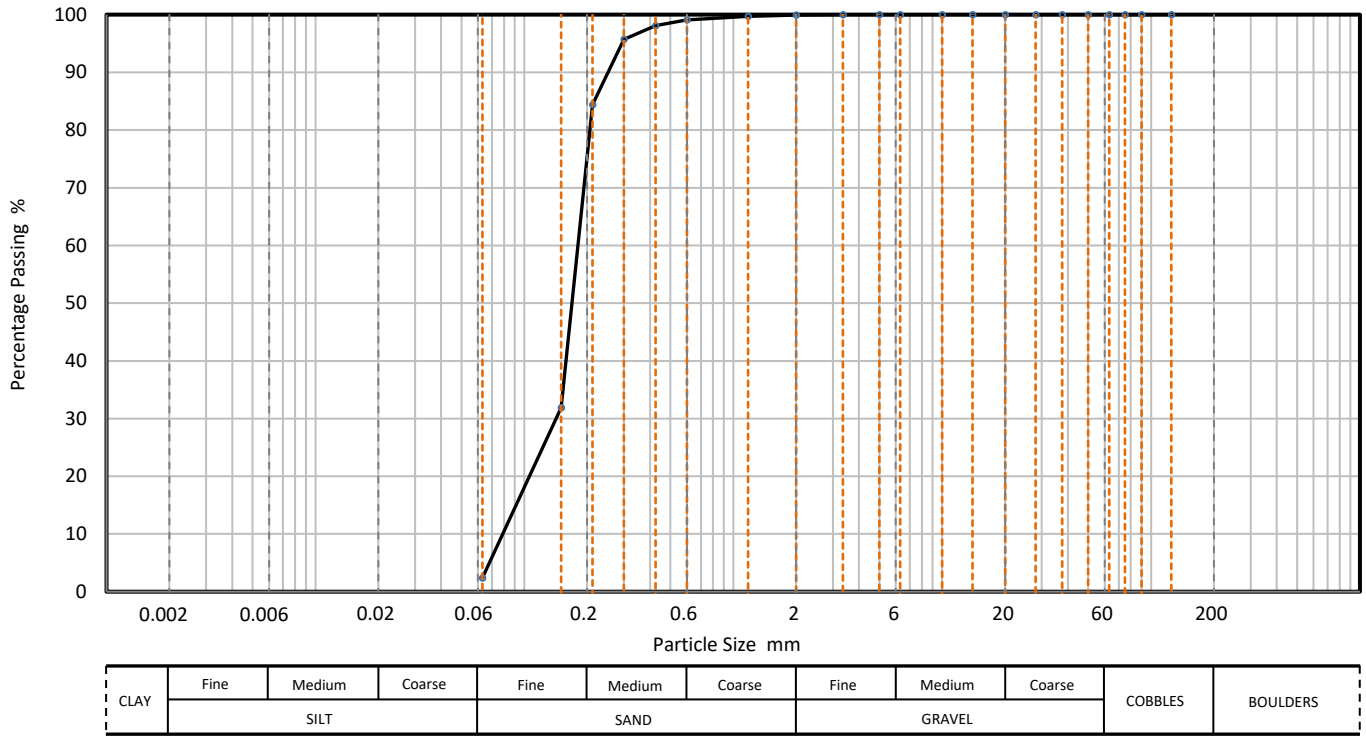
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP07	Lab sample ID	G2MT202307280
Depth (Top) m	18.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	96		
0.212	84		
0.15	32		
0.063	2		

Dry Mass of sample, g: 463

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	97.5
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.181
D30	mm	0.142
D10	mm	0.0788
Uniformity Coefficient		2.3
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	31/07/2023 12:35

Laboratory Report Front Sheet

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Client details:

Reference: S230503
Name: Solmek
Address: 12 Yarm Road,
Stockton-on-tees,
TS18 3NA

Telephone: 01642 607083
Email: acutts@solmek.com

FAO: Ardian Cutts / Richard Woods

Samples received:

Date commenced: 19/06/2023

Date reported: 23/06/2023

Observations and interpretations are outside of the UKAS Accreditiation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Samples will be held at the laboratory for a period of 4 weeks after the report date. After the above reporting date the samples will be disposed of. Should further testing be required then the office should be informed before the above date.

Signature:	Approved Signitories:
[Redacted]	☐ D.Anderson (Managing Director) ☑ J. Brischuk (Laboratory Manager) ☐

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Ardersier Port	S230503

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BHSP08	0.30		B	4.3	105									
BHSP08	2.00		B	6.1	105									
BHSP08	5.00		B	22	105									
BHSP08	8.00		B	11	105									
BHSP08	10.00		B	22	105									
BHSP08	11.80		B	20	105									
BHSP08	13.50		B	19	105									
BHSP08	16.50		B	25	105									
BHSP08	19.50		B	18	105									
BHSP08	21.00		B	22	105									
BHSP08	24.00		B	15	105									
BHSP08	27.00		B	25	105									
BHSP08	30.00		B	20	105									
BHSP08	33.00		B	22	105									
BHSP08	36.00		B	21	105									
BHSP08	39.00		B	26	105									
BHSP09	0.50		B	7.1	105									
BHSP09	2.00		B	5.1	105									
BHSP09	5.00		B	15	105									
BHSP09	8.00		B	9.2	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicated

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	23/06/2023 08:00
Date report generated	
Report Number	

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
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UKAS TESTING

10258

Site name	Job number
Ardersier Port	S230503

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BHSP09	10.50		B	20	105									
BHSP09	13.50		B	24	105									
BHSP09	16.50		B	24	105									
BHSP09	19.50		B	23	105									
BHSP09	22.50		B	24	105									
BHSP09	24.00		B	22	105									
BHSP09	27.00		B	25	105									
BHSP09	30.00		B	21	105									
BHSP09	33.00		B	22	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicated

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	JBrischuk
Approval date	23/06/2023 10:28
Date report generated	
Report Number	

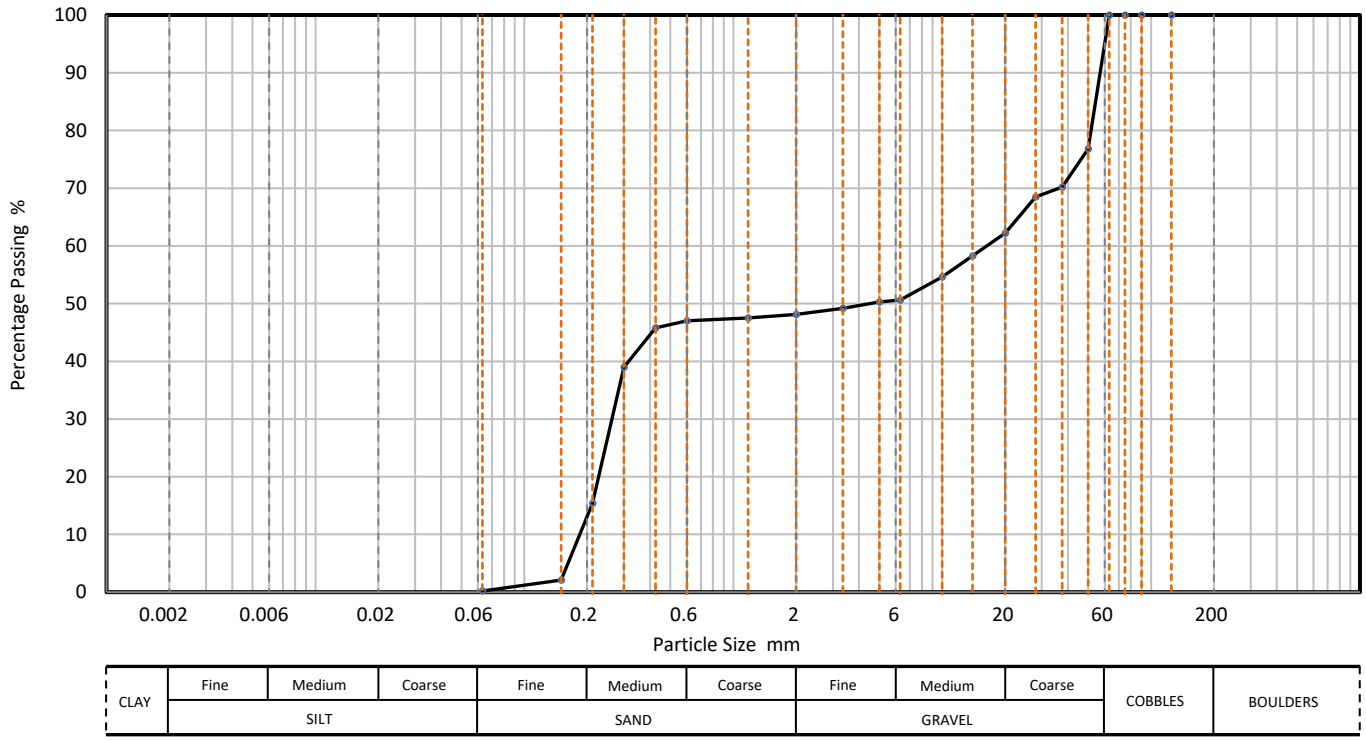
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061943
Depth (Top) m	0.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very Sandy, GRAVEL
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	77		
37.5	70		
28	69		
20	62		
14	58		
10	55		
6.3	51		
5	50		
3.35	49		
2	48		
1.18	48		
0.6	47		
0.425	46		
0.3	39		
0.212	15		
0.15	2		
0.063	0		

Dry Mass of sample, g	4893

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	51.9
Sand	47.8
Fines <0.063mm	0.0

Grading Analysis		
D100	mm	
D60	mm	16.3
D30	mm	0.263
D10	mm	0.184
Uniformity Coefficient		89
Curvature Coefficient		0.023

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 08:05

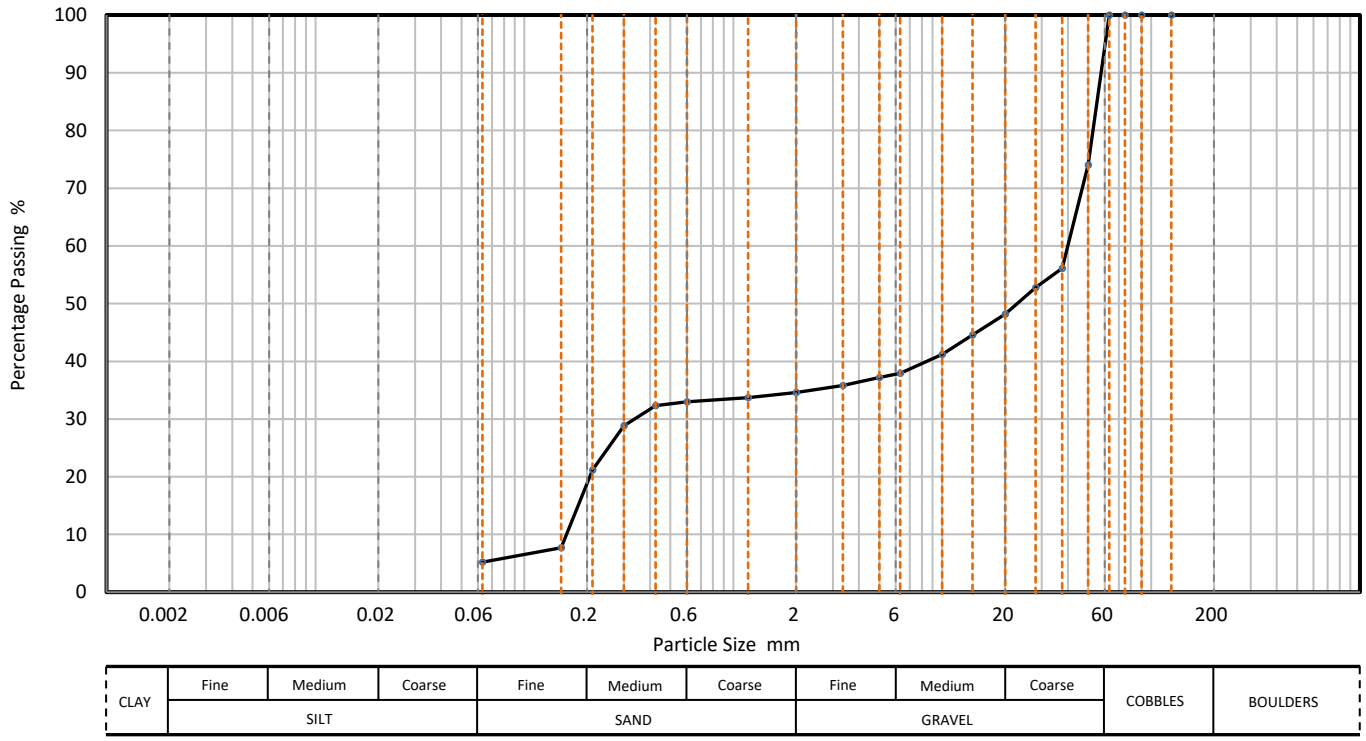
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061944
Depth (Top) m	2.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, very Sandy, GRAVEL
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	74		
37.5	56		
28	53		
20	48		
14	45		
10	41		
6.3	38		
5	37		
3.35	36		
2	35		
1.18	34		
0.6	33		
0.425	32		
0.3	29		
0.212	21		
0.15	8		
0.063	5		

Dry Mass of sample, g: 3735

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	65.4
Sand	29.4
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	39.9
D30	mm	0.337
D10	mm	0.159
Uniformity Coefficient		250
Curvature Coefficient		0.018

Remarks

Preparation and testing in accordance with test method unless noted below

Sample tested was deviating in accordance with BS1377 test standard

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 07:52

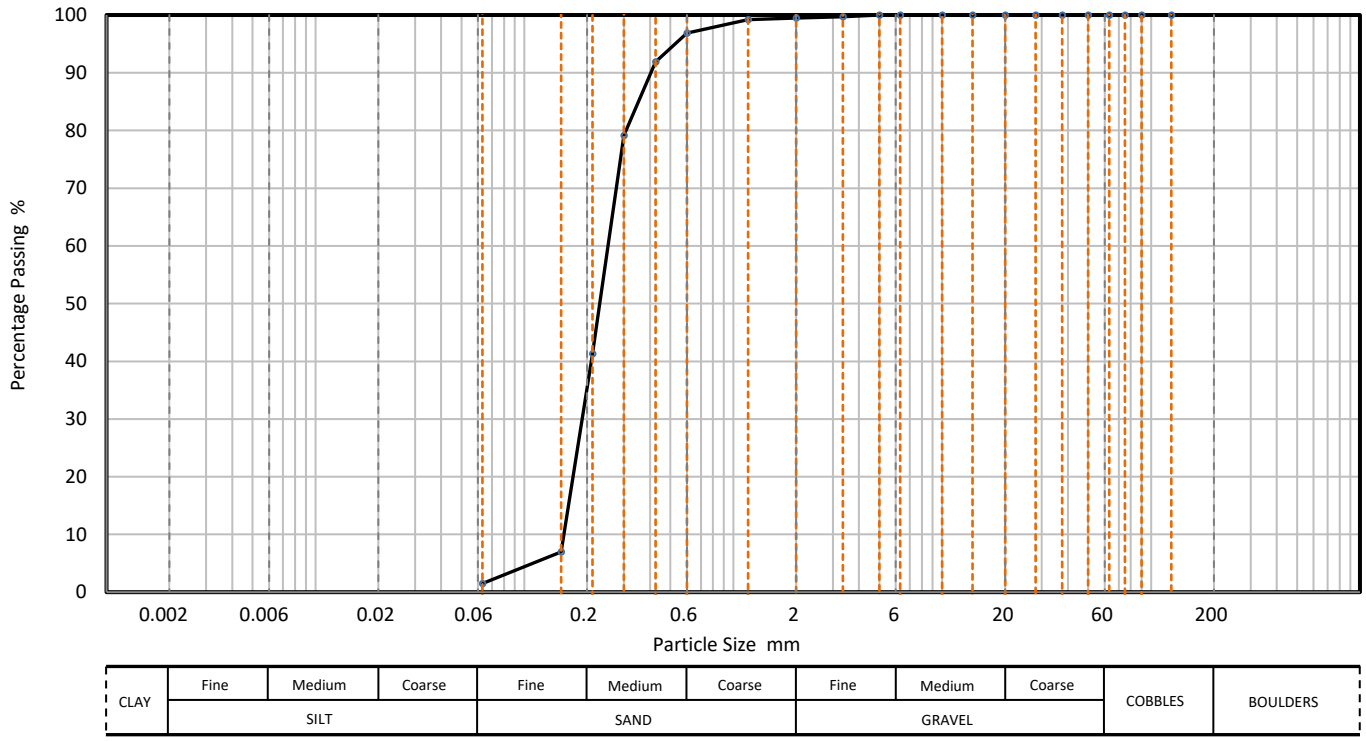
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061945
Depth (Top) m	5.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, very slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	97		
0.425	92		
0.3	79		
0.212	41		
0.15	7		
0.063	2		

Dry Mass of sample, g: 1409

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.5
Sand	98.0
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.252
D30	mm	0.189
D10	mm	0.155
Uniformity Coefficient		1.6
Curvature Coefficient		0.92

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 08:14

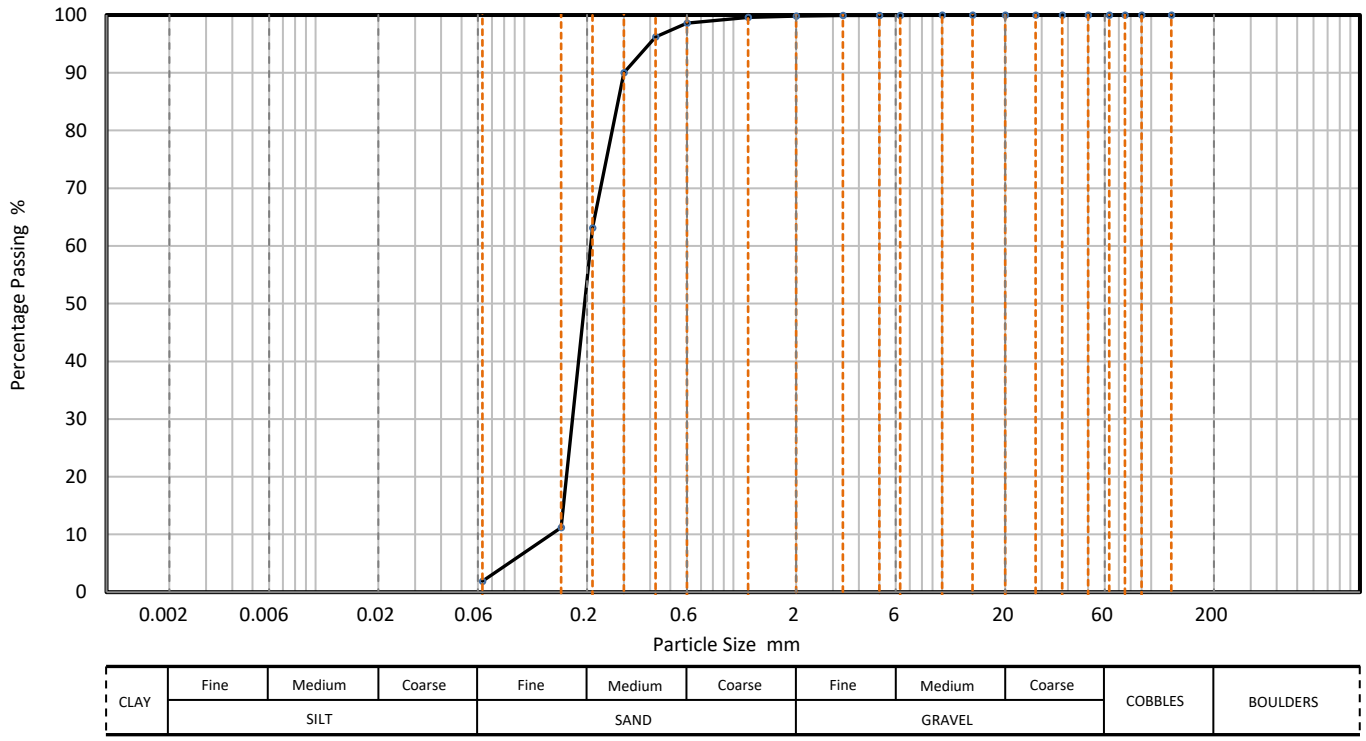
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061946
Depth (Top) m	8.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	96		
0.3	90		
0.212	63		
0.15	11		
0.063	2		

Dry Mass of sample, g: 824

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	97.9
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.208
D30	mm	0.17
D10	mm	0.134
Uniformity Coefficient		1.5
Curvature Coefficient		1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 10:56

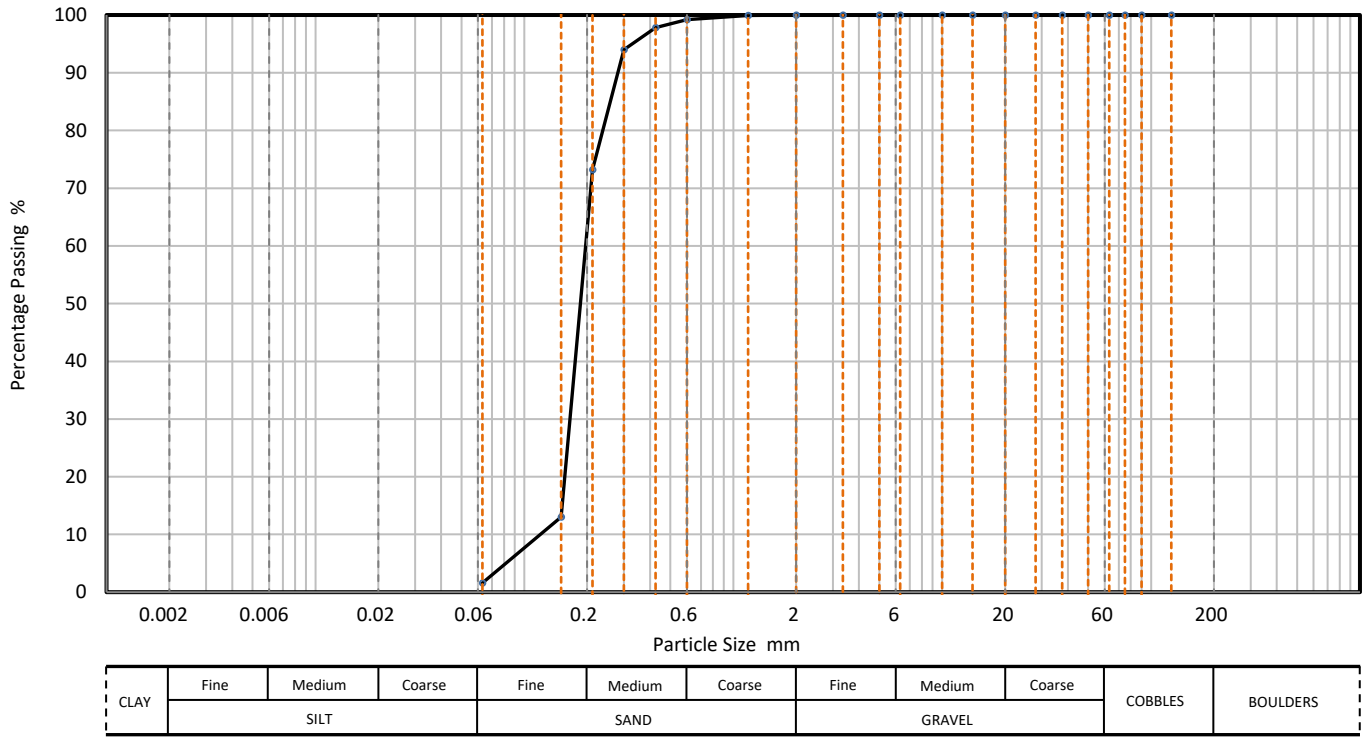
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061947
Depth (Top) m	10.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	94		
0.212	73		
0.15	13		
0.063	2		

Dry Mass of sample, g: 1403

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	98.4
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.196
D30	mm	0.165
D10	mm	0.119
Uniformity Coefficient		1.6
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 11:02

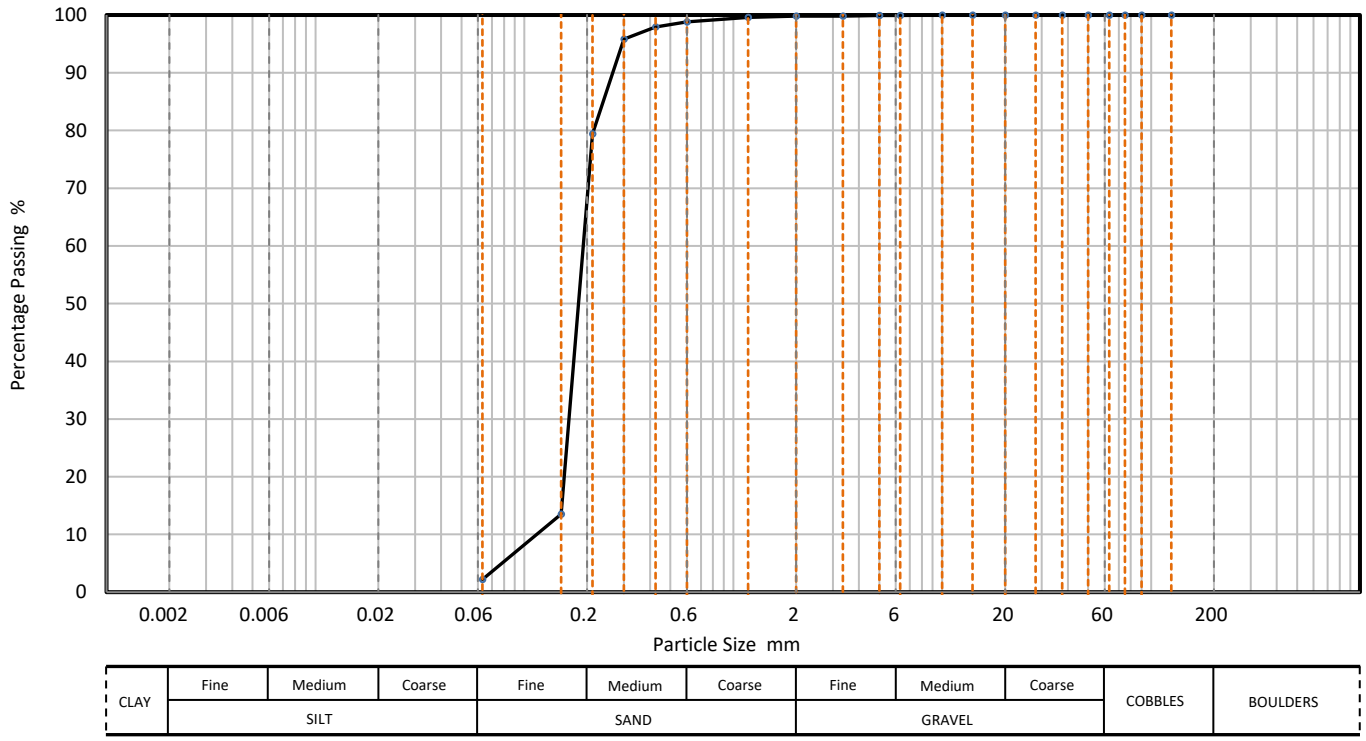
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061948
Depth (Top) m	11.80	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	96		
0.212	79		
0.15	14		
0.063	2		

Dry Mass of sample, g: 1477

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	97.5
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.191
D30	mm	0.164
D10	mm	0.115
Uniformity Coefficient		1.7
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 09:45

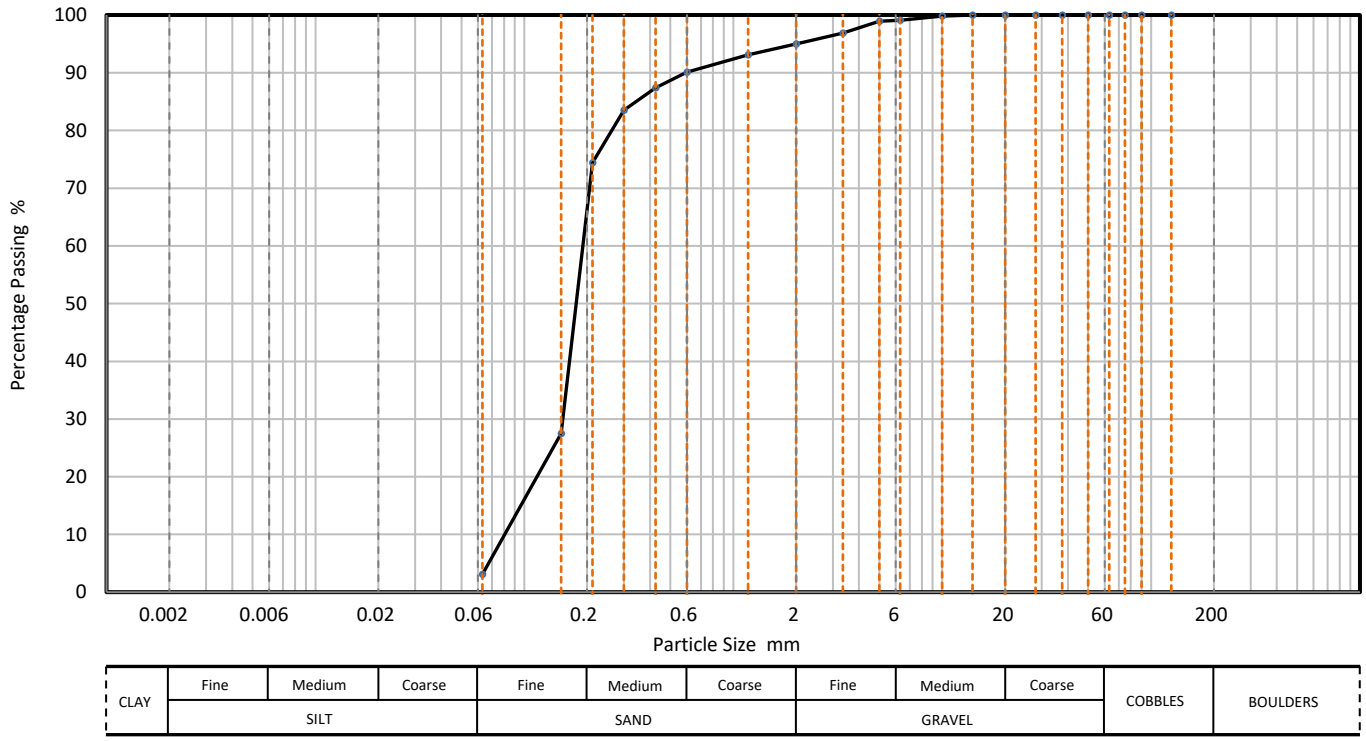
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
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UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061949
Depth (Top) m	13.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, slightly Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	97		
2	95		
1.18	93		
0.6	90		
0.425	87		
0.3	84		
0.212	74		
0.15	28		
0.063	3		

Dry Mass of sample, g	1806

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	5.0
Sand	91.9
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.191
D30	mm	0.153
D10	mm	0.0804
Uniformity Coefficient		2.4
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 09:55

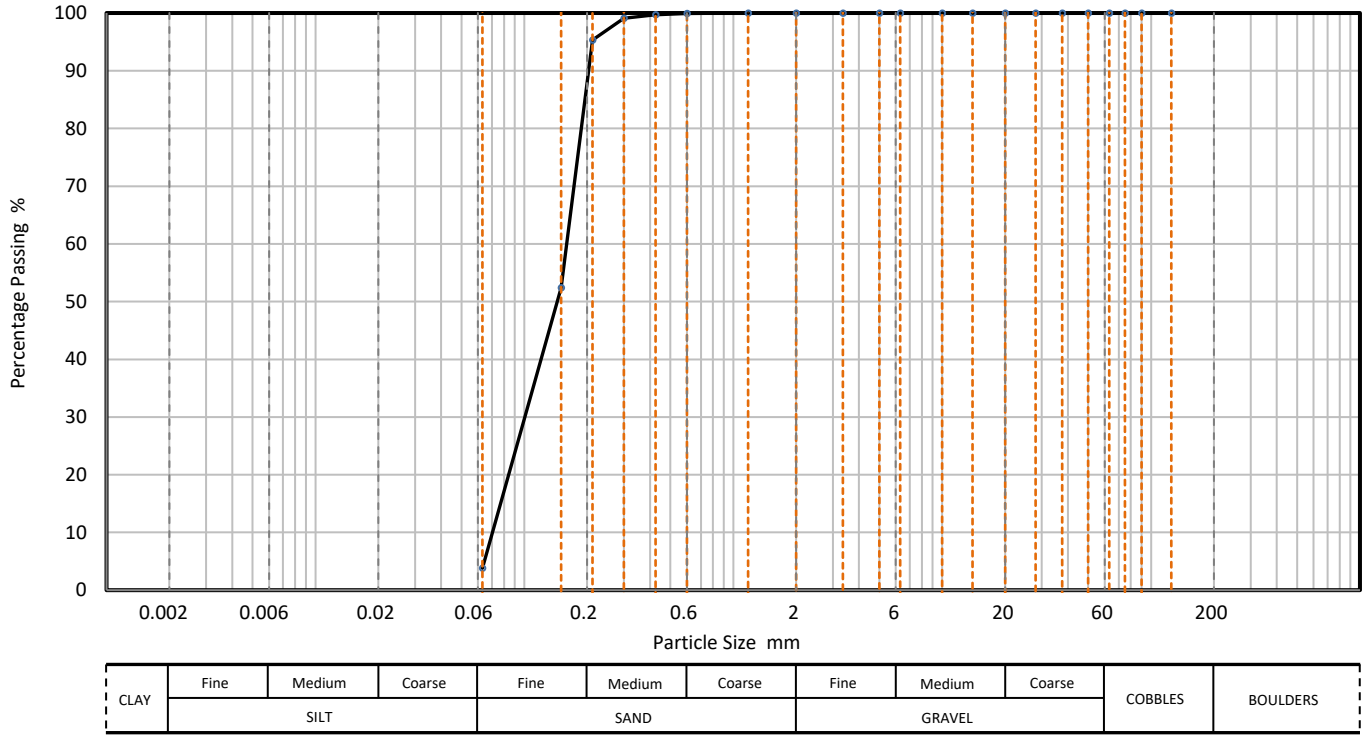
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061950
Depth (Top) m	16.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	95		
0.15	52		
0.063	4		

Dry Mass of sample, g: 1523

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	96.2
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.159
D30	mm	0.101
D10	mm	0.0704
Uniformity Coefficient		2.3
Curvature Coefficient		0.9

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 11:05

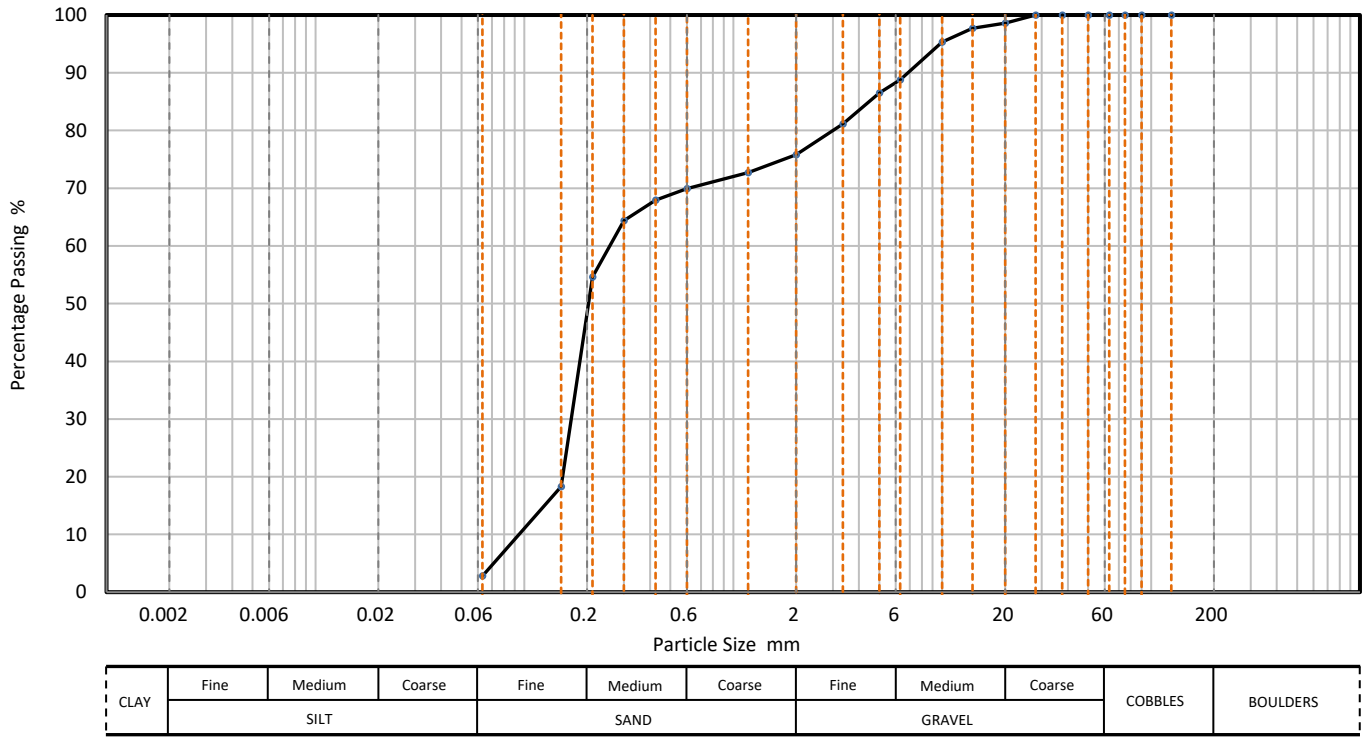
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061951
Depth (Top) m	19.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, very Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	99		
14	98		
10	95		
6.3	89		
5	87		
3.35	81		
2	76		
1.18	73		
0.6	70		
0.425	68		
0.3	64		
0.212	55		
0.15	18		
0.063	3		

Dry Mass of sample, g: 1695

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	24.2
Sand	73.0
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.256
D30	mm	0.168
D10	mm	0.0943
Uniformity Coefficient		2.7
Curvature Coefficient		1.2

Remarks

Preparation and testing in accordance with test method unless noted below

Sample tested was deviating in accordance with BS1377 test standard

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 07:58

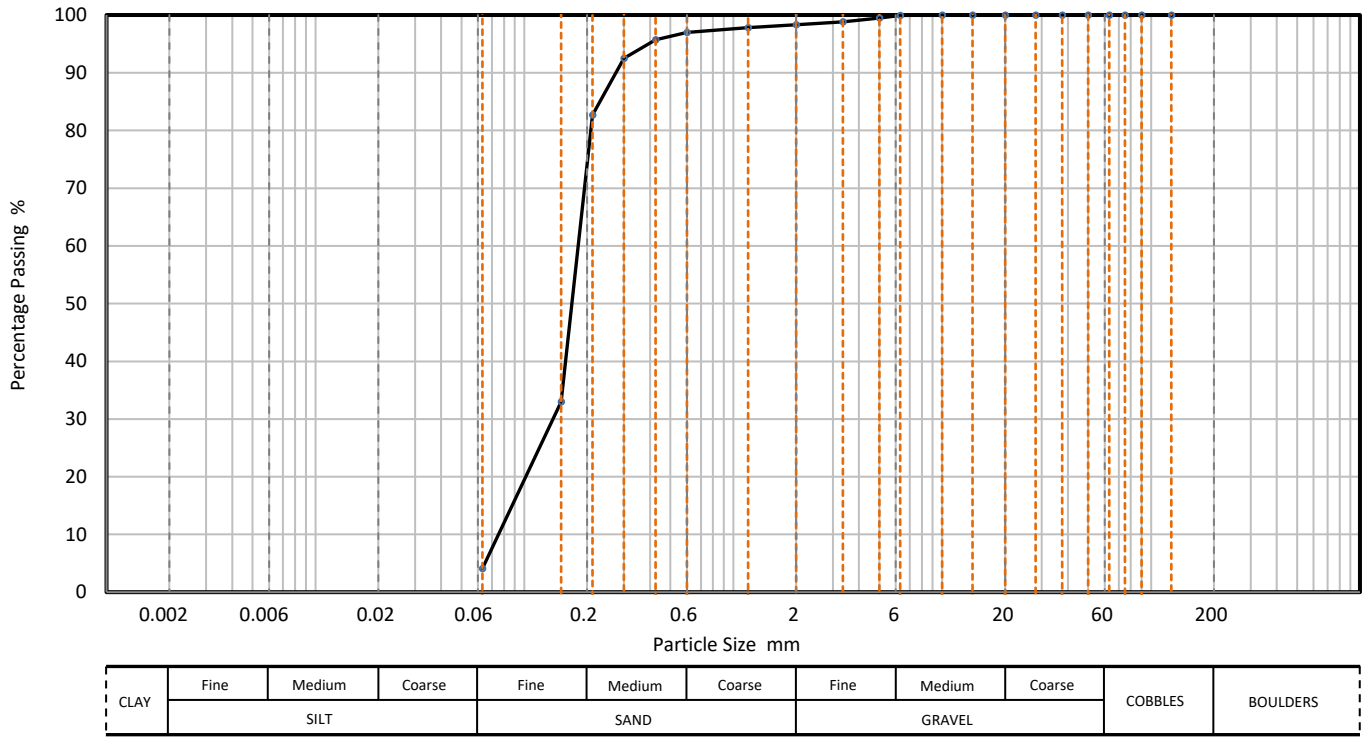
PARTICLE SIZE DISTRIBUTION

Site name	Job number
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UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061952
Depth (Top) m	21.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	98		
1.18	98		
0.6	97		
0.425	96		
0.3	93		
0.212	83		
0.15	33		
0.063	4		

Dry Mass of sample, g: 1379

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.7
Sand	94.2
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.181
D30	mm	0.137
D10	mm	0.0753
Uniformity Coefficient		2.4
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 07:58

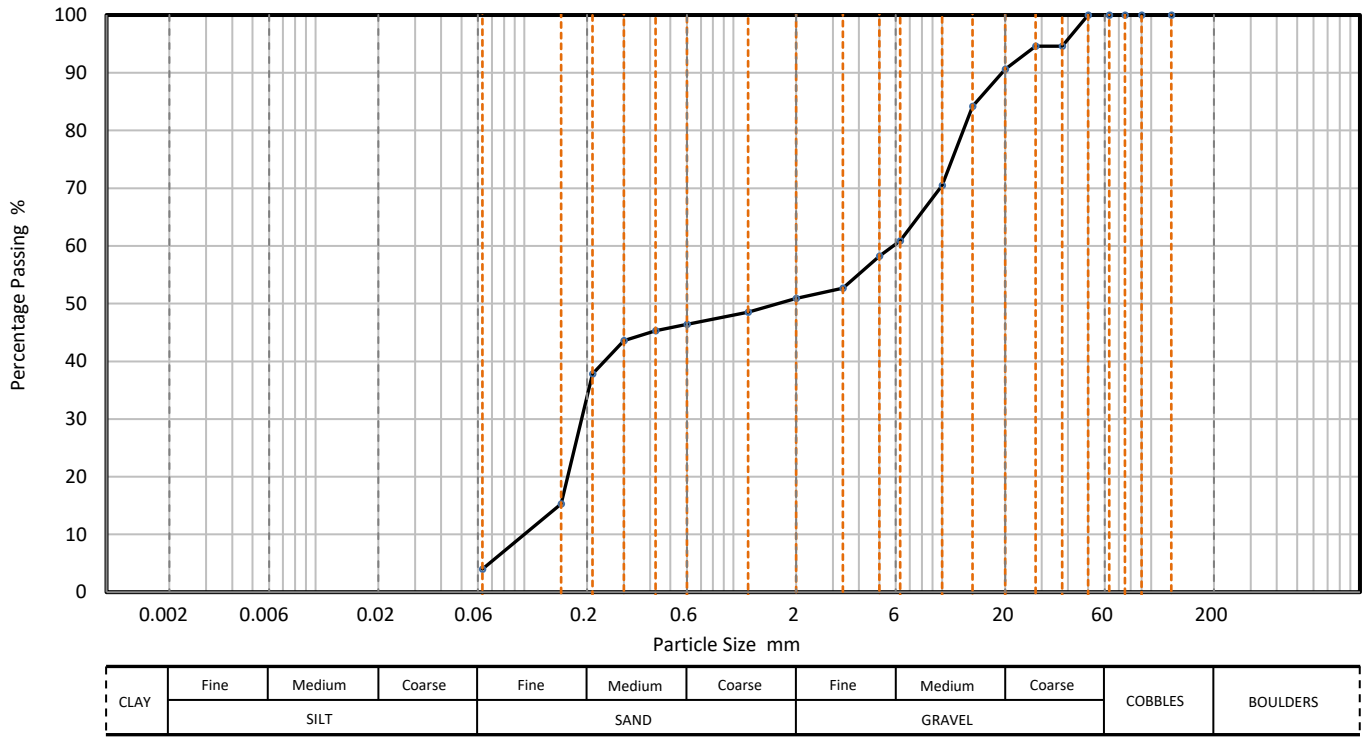
PARTICLE SIZE DISTRIBUTION

Site name	Job number
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UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061953
Depth (Top) m	24.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, very Sandy, GRAVEL
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	95		
28	95		
20	91		
14	84		
10	71		
6.3	61		
5	58		
3.35	53		
2	51		
1.18	49		
0.6	46		
0.425	45		
0.3	44		
0.212	38		
0.15	15		
0.063	4		

Dry Mass of sample, g: 1772

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	49.1
Sand	47.0
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	5.84
D30	mm	0.188
D10	mm	0.0999
Uniformity Coefficient		58
Curvature Coefficient		0.061

Remarks

Preparation and testing in accordance with test method unless noted below

Sample tested was deviating in accordance with BS1377 test standard

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 08:10

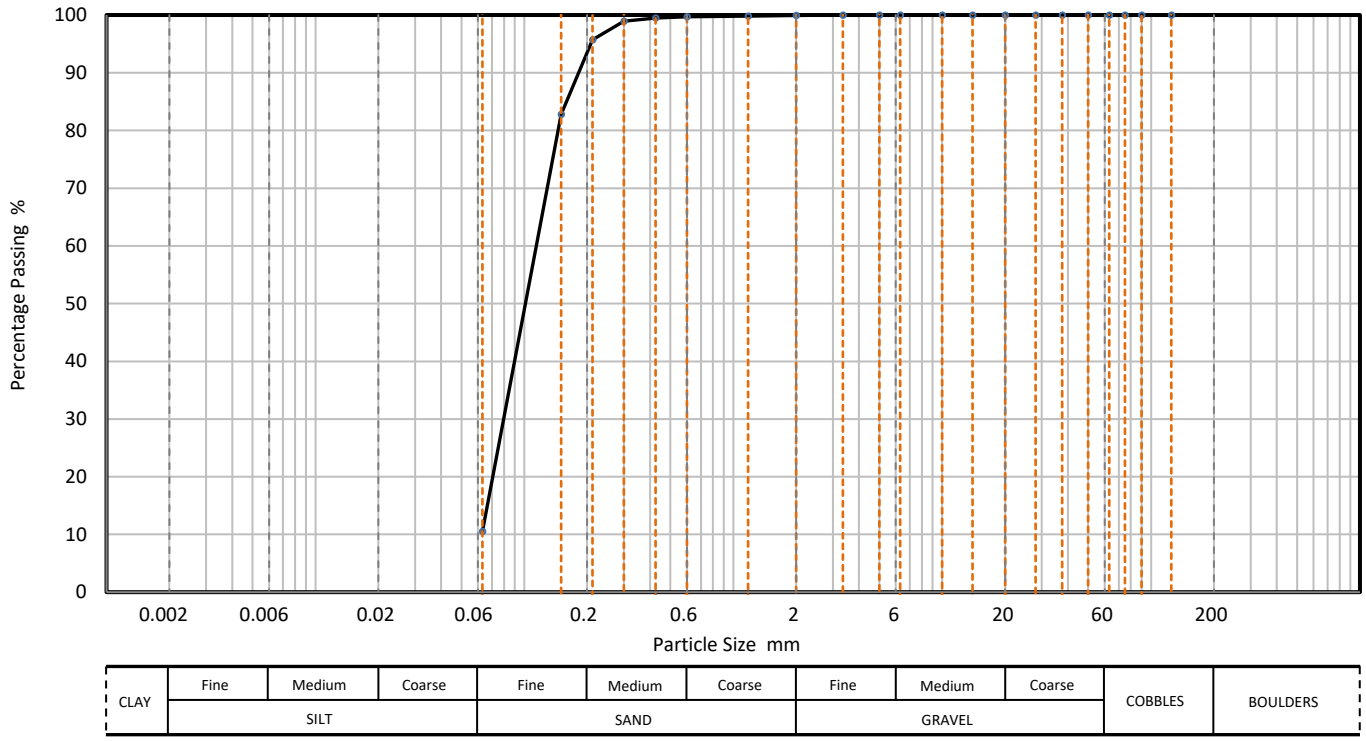
PARTICLE SIZE DISTRIBUTION

Site name	Job number
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UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061954
Depth (Top) m	27.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	96		
0.15	83		
0.063	11		

Dry Mass of sample, g: 1402

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	89.4
Fines <0.063mm	11.0

Grading Analysis		
D100	mm	
D60	mm	0.114
D30	mm	0.0796
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 10:03

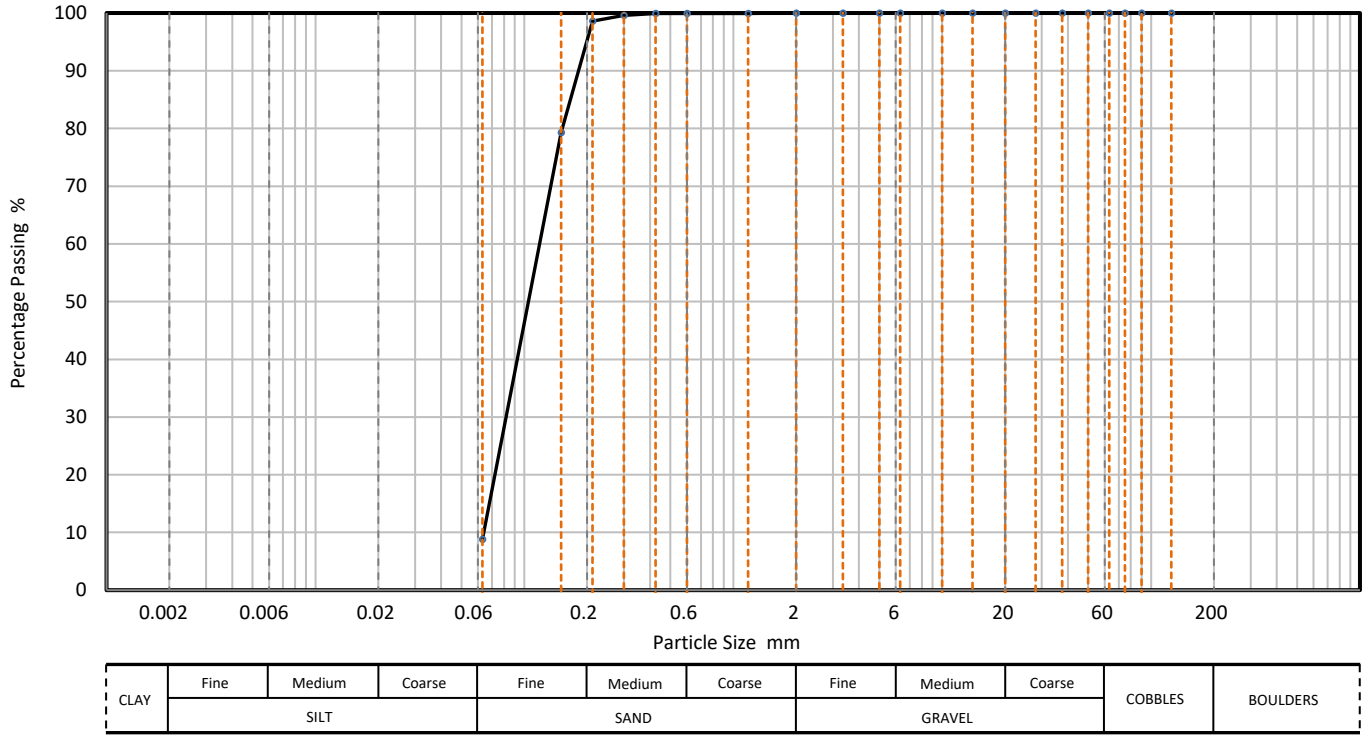
PARTICLE SIZE DISTRIBUTION

Site name	Job number
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UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061955
Depth (Top) m	30.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	99		
0.15	79		
0.063	9		

Dry Mass of sample, g: 1600

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	91.1
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.118
D30	mm	0.0818
D10	mm	0.0639
Uniformity Coefficient		1.9
Curvature Coefficient		0.88

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 11:09

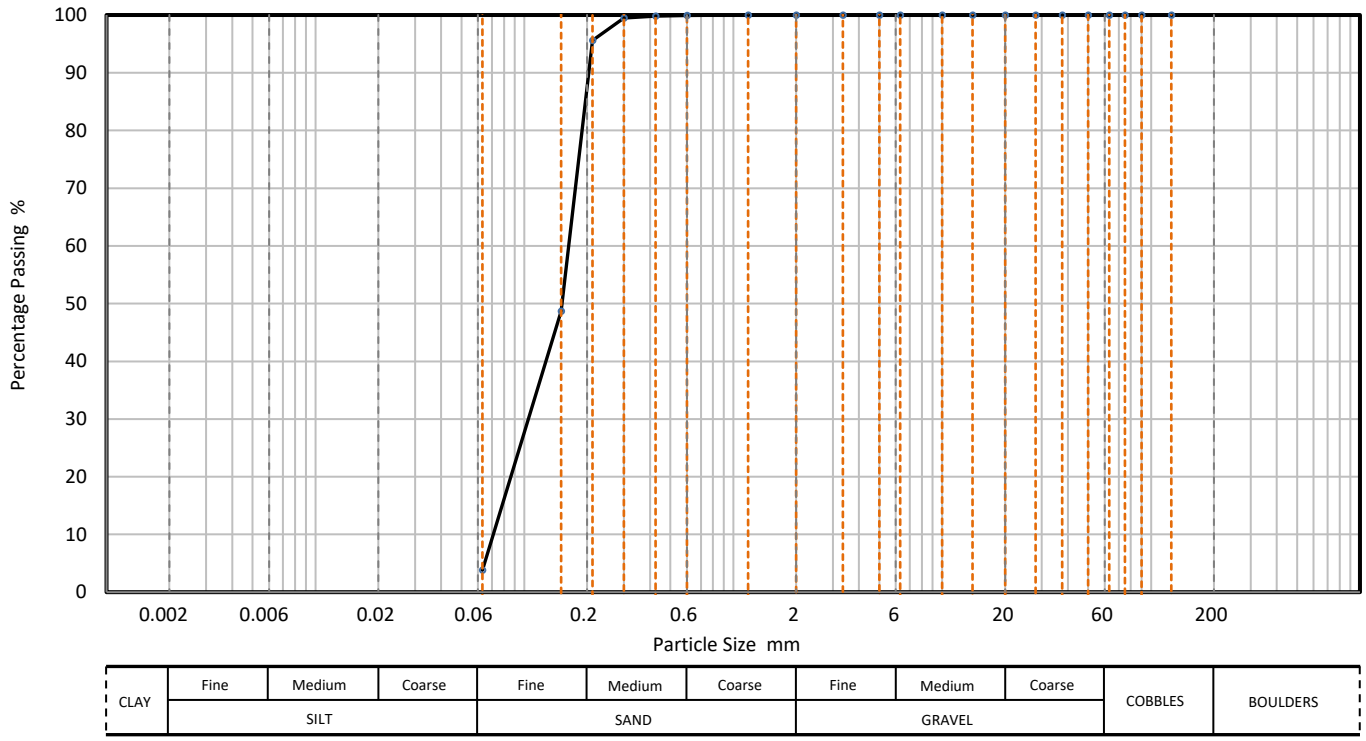
PARTICLE SIZE DISTRIBUTION

Site name	Job number
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UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061956
Depth (Top) m	33.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	96		
0.15	49		
0.063	4		

Dry Mass of sample, g: 1549

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	96.2
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.163
D30	mm	0.105
D10	mm	0.0711
Uniformity Coefficient		2.3
Curvature Coefficient		0.94

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 11:12

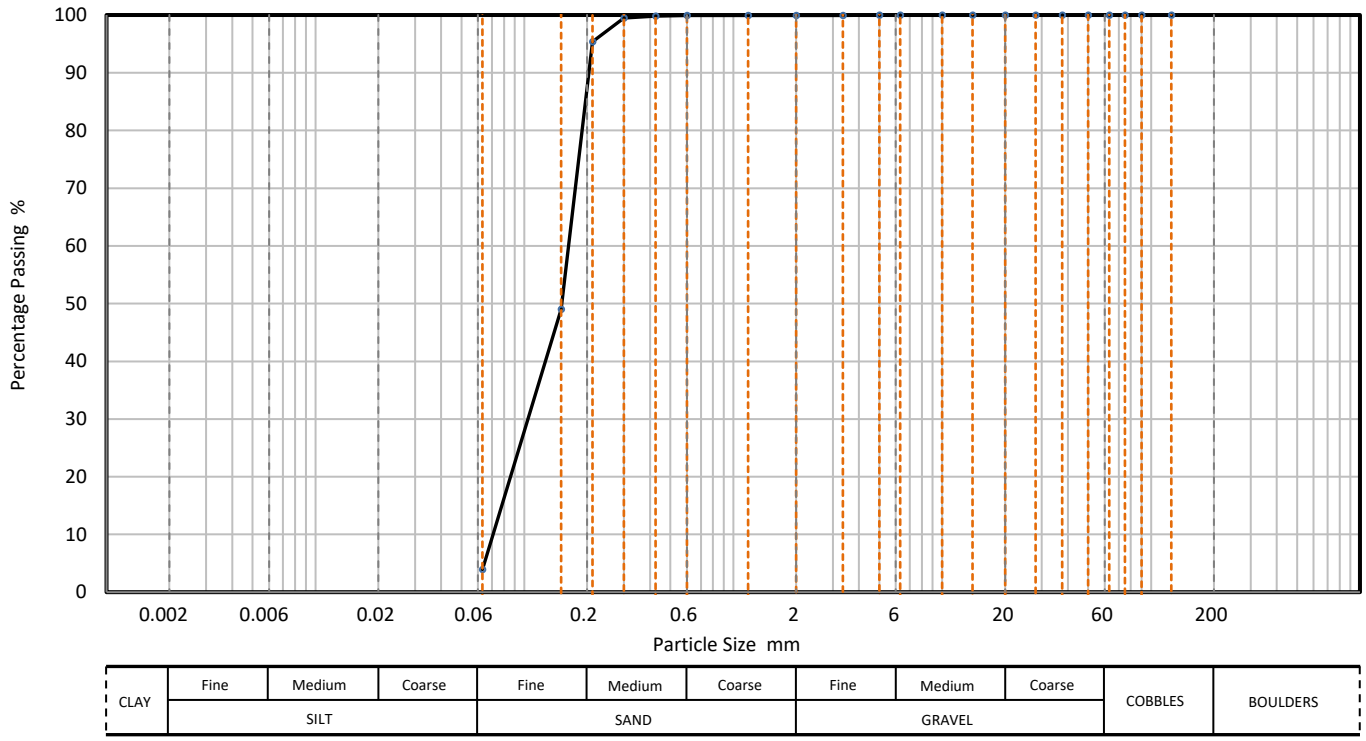
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

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12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
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UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061957
Depth (Top) m	36.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	95		
0.15	49		
0.063	4		

Dry Mass of sample, g: 1528

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	96.0
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.163
D30	mm	0.104
D10	mm	0.0708
Uniformity Coefficient		2.3
Curvature Coefficient		0.94

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 10:06

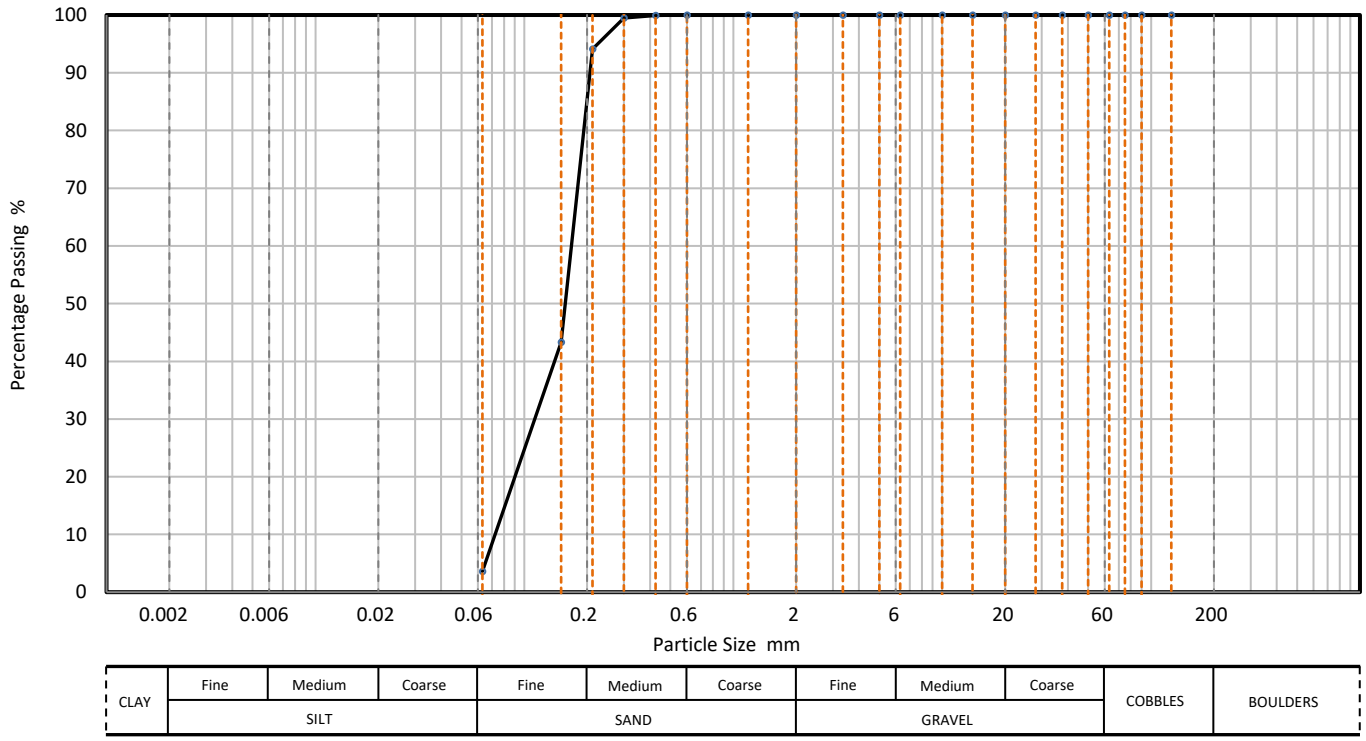
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
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UKAS TESTING
10258

Hole	BHSP08	Lab sample ID	G2MT2023061958
Depth (Top) m	39.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	94		
0.15	43		
0.063	4		

Dry Mass of sample, g: 1338

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	96.4
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.168
D30	mm	0.112
D10	mm	0.0724
Uniformity Coefficient		2.3
Curvature Coefficient		1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 10:59

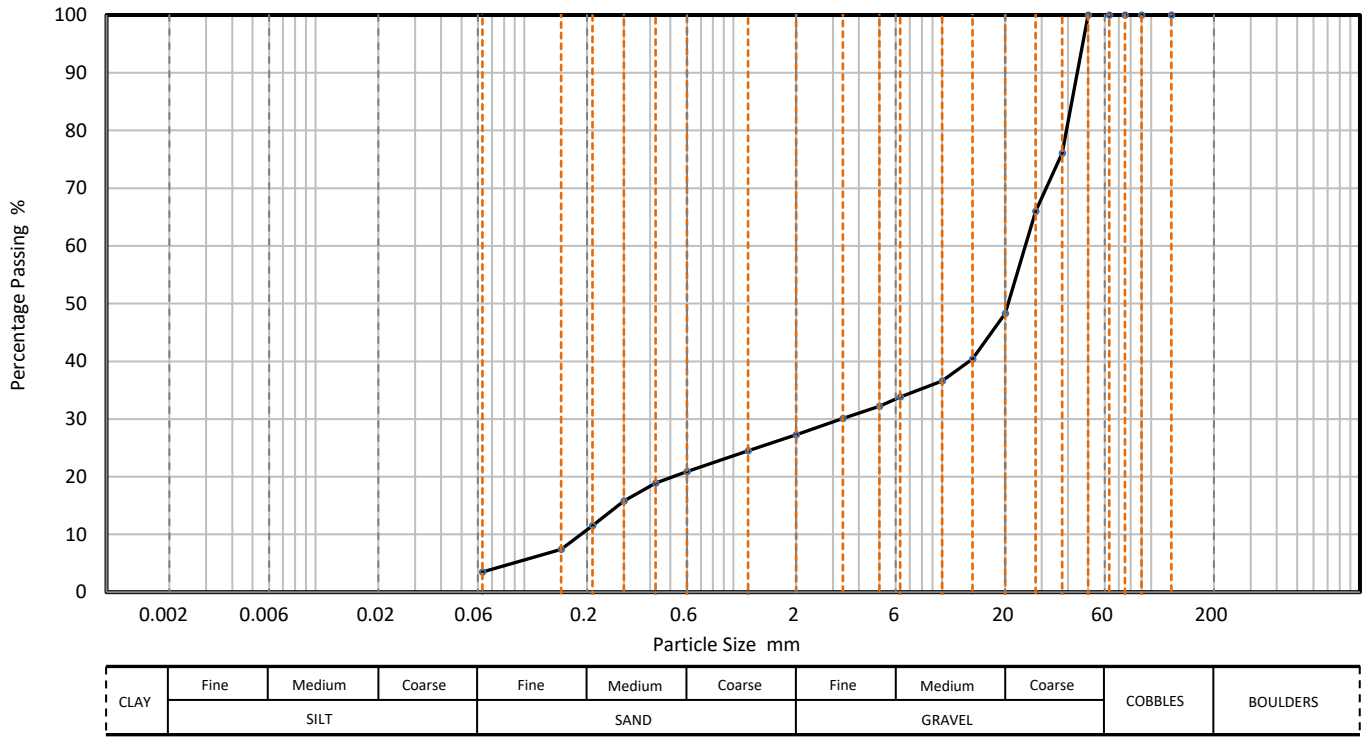
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

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01642 033318
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UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061926
Depth (Top) m	0.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, very Sandy, GRAVEL
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	76		
28	66		
20	48		
14	40		
10	37		
6.3	34		
5	32		
3.35	30		
2	27		
1.18	25		
0.6	21		
0.425	19		
0.3	16		
0.212	12		
0.15	7		
0.063	4		

Dry Mass of sample, g: 3217

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	72.7
Sand	23.9
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	25
D30	mm	3.29
D10	mm	0.187
Uniformity Coefficient		130
Curvature Coefficient		2.3

Remarks

Preparation and testing in accordance with test method unless noted below

Sample tested was deviating in accordance with BS1377 test standard

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 09:08

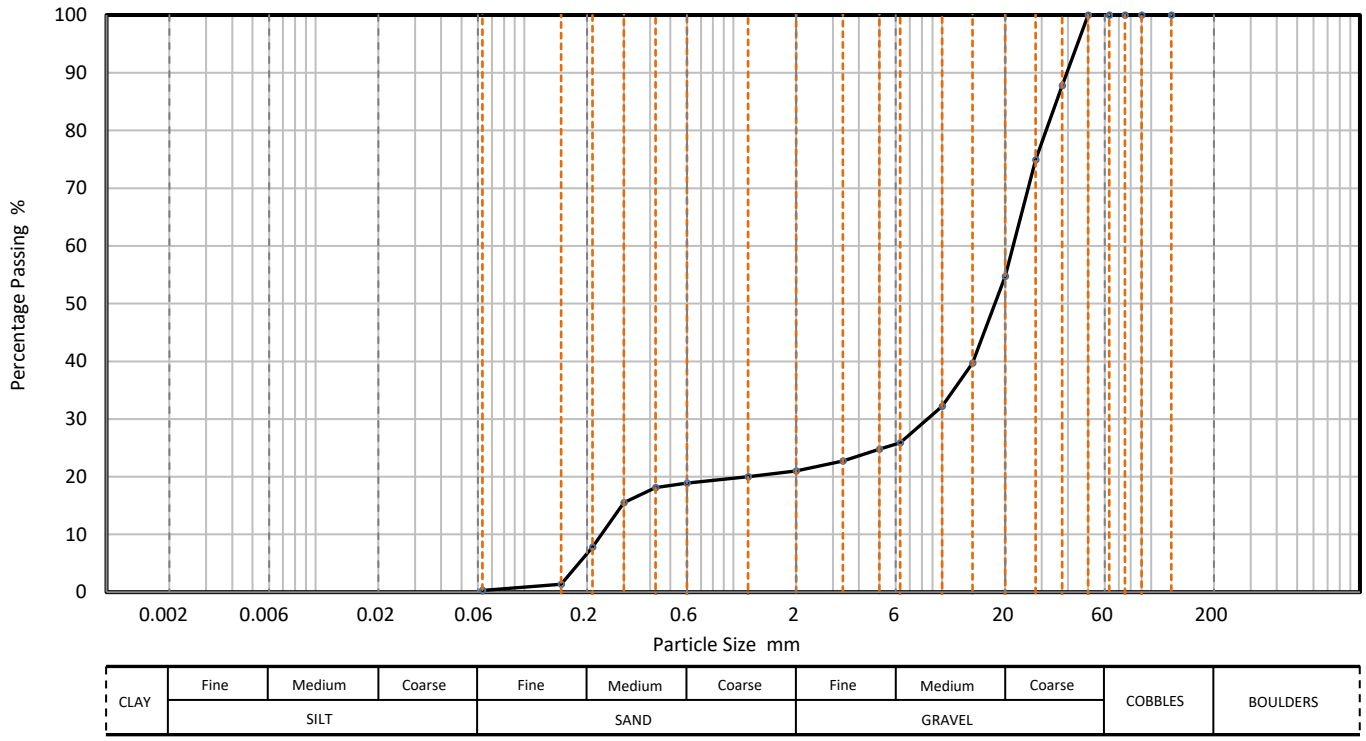
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

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UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061928
Depth (Top) m	2.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very Sandy, GRAVEL
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	88		
28	75		
20	55		
14	40		
10	32		
6.3	26		
5	25		
3.35	23		
2	21		
1.18	20		
0.6	19		
0.425	18		
0.3	16		
0.212	8		
0.15	1		
0.063	0		

Dry Mass of sample, g	3331

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	79.0
Sand	20.7
Fines <0.063mm	0.0

Grading Analysis		
D100	mm	
D60	mm	21.8
D30	mm	8.52
D10	mm	0.234
Uniformity Coefficient		93
Curvature Coefficient		14

Remarks

Preparation and testing in accordance with test method unless noted below

Sample tested was deviating in accordance with BS1377 test standard

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 10:47

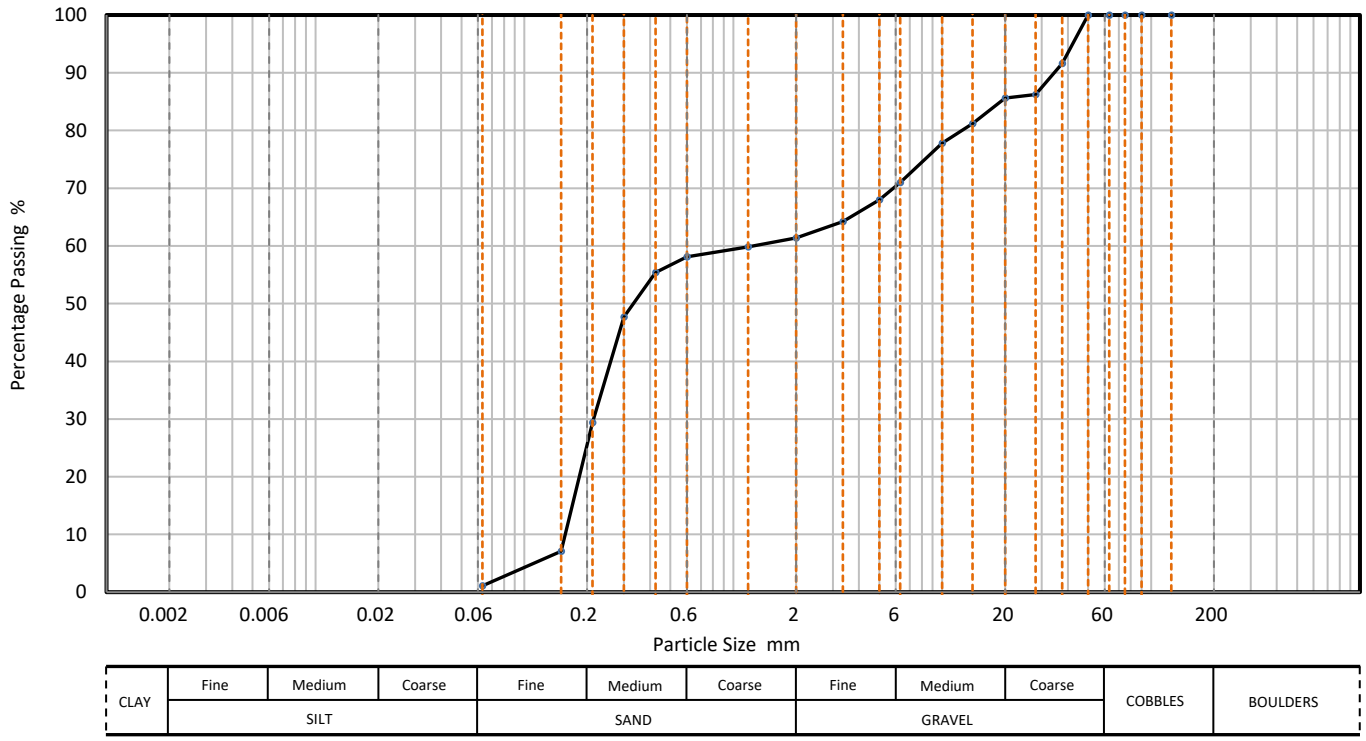
PARTICLE SIZE DISTRIBUTION

Site name	Job number
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G2M Testing (Stockton)
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Stockton on Tees,
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UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061931
Depth (Top) m	5.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Silty, very Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	92		
28	86		
20	86		
14	81		
10	78		
6.3	71		
5	68		
3.35	64		
2	61		
1.18	60		
0.6	58		
0.425	55		
0.3	48		
0.212	29		
0.15	7		
0.063	1		

Dry Mass of sample, g	2382

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	38.6
Sand	60.2
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	1.24
D30	mm	0.214
D10	mm	0.157
Uniformity Coefficient		7.9
Curvature Coefficient		0.24

Remarks

Preparation and testing in accordance with test method unless noted below

Sample tested was deviating in accordance with BS1377 test standard

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 10:34

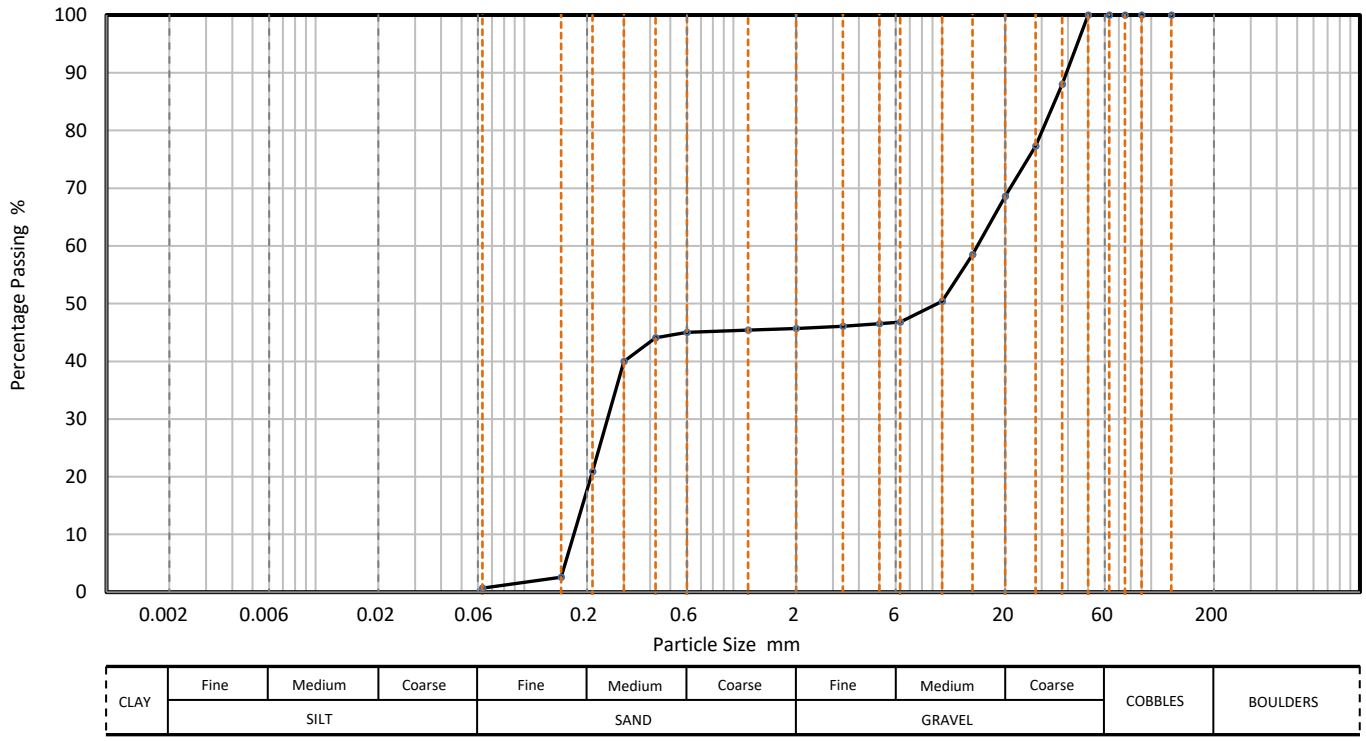
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
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Stockton on Tees,
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01642 033318
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UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061933
Depth (Top) m	8.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Silty, very Sandy, GRAVEL
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	88		
28	77		
20	69		
14	59		
10	50		
6.3	47		
5	47		
3.35	46		
2	46		
1.18	45		
0.6	45		
0.425	44		
0.3	40		
0.212	21		
0.15	3		
0.063	1		

Dry Mass of sample, g: 4370

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	54.3
Sand	45.0
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	14.8
D30	mm	0.25
D10	mm	0.173
Uniformity Coefficient		86
Curvature Coefficient		0.025

Remarks

Preparation and testing in accordance with test method unless noted below

Sample tested was deviating in accordance with BS1377 test standard

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 10:43

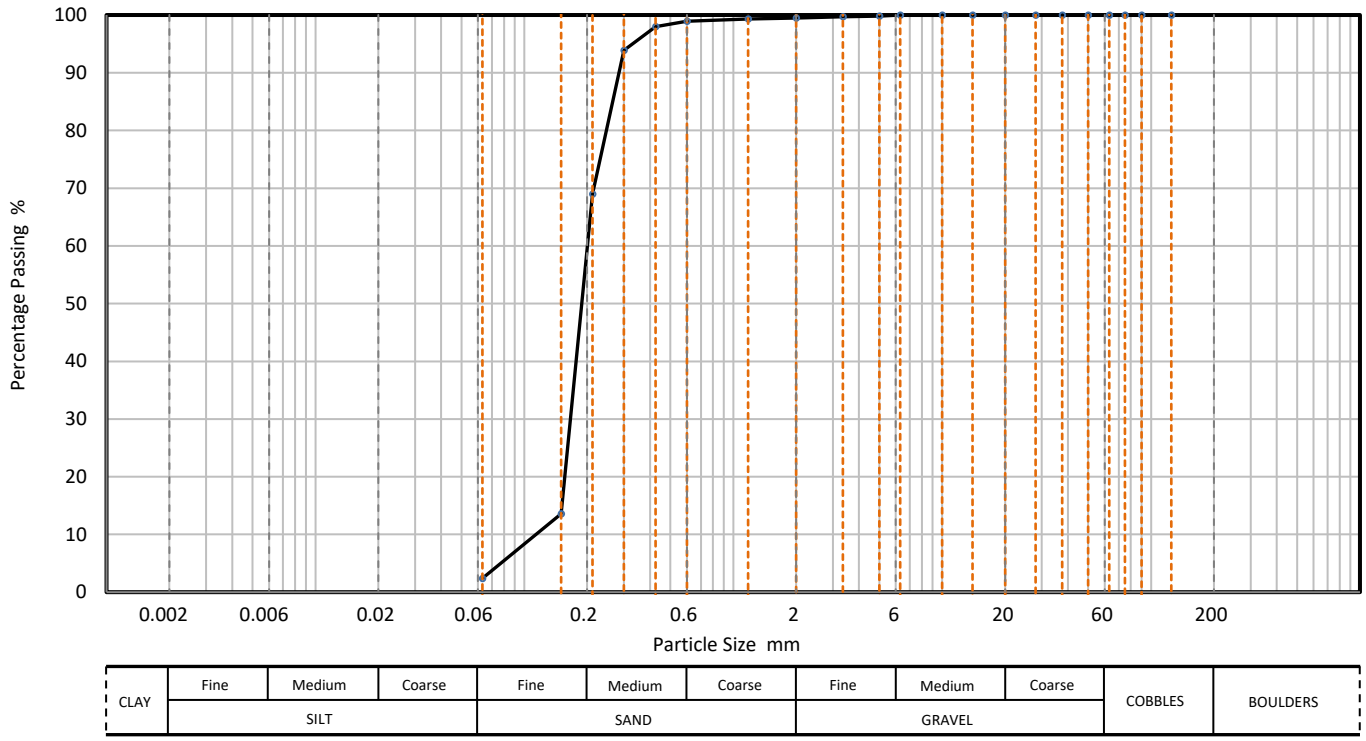
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061934
Depth (Top) m	10.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	99		
0.425	98		
0.3	94		
0.212	69		
0.15	14		
0.063	2		

Dry Mass of sample, g: 1531

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.5
Sand	97.1
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.2
D30	mm	0.166
D10	mm	0.114
Uniformity Coefficient		1.8
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 10:38

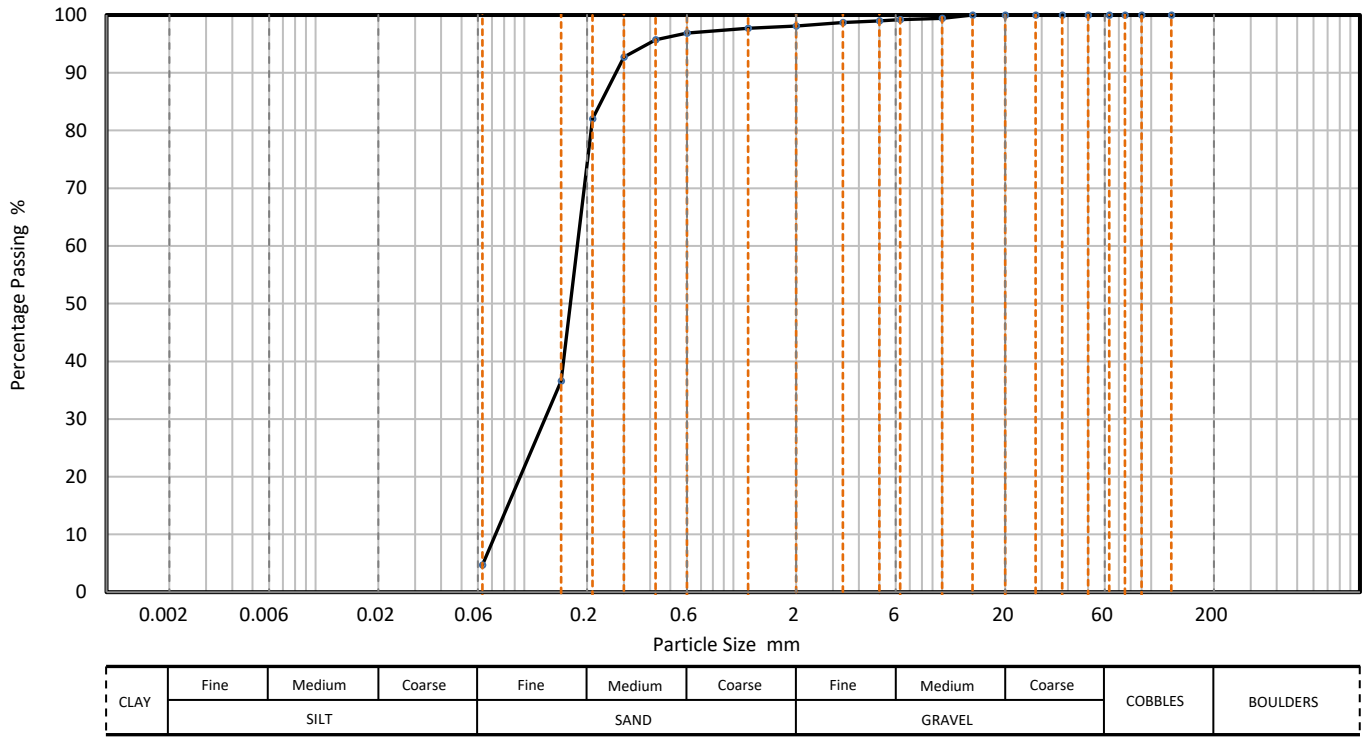
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
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UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061935
Depth (Top) m	13.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	99		
6.3	99		
5	99		
3.35	99		
2	98		
1.18	98		
0.6	97		
0.425	96		
0.3	93		
0.212	82		
0.15	37		
0.063	5		

Dry Mass of sample, g: 1703

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.9
Sand	93.4
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.179
D30	mm	0.125
D10	mm	0.0727
Uniformity Coefficient		2.5
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 08:36

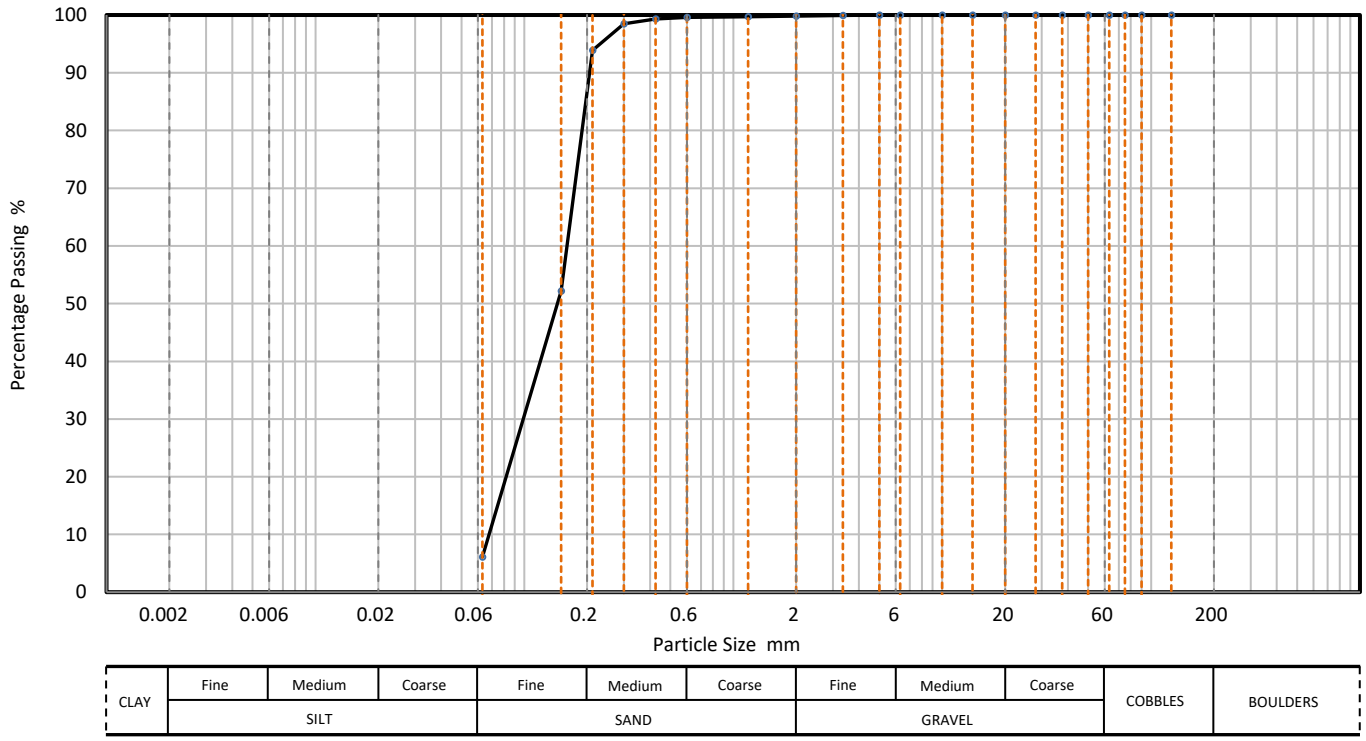
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
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UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061936
Depth (Top) m	16.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	94		
0.15	52		
0.063	6		

Dry Mass of sample, g: 1553

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	93.7
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.16
D30	mm	0.0988
D10	mm	0.0678
Uniformity Coefficient		2.4
Curvature Coefficient		0.9

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 08:44

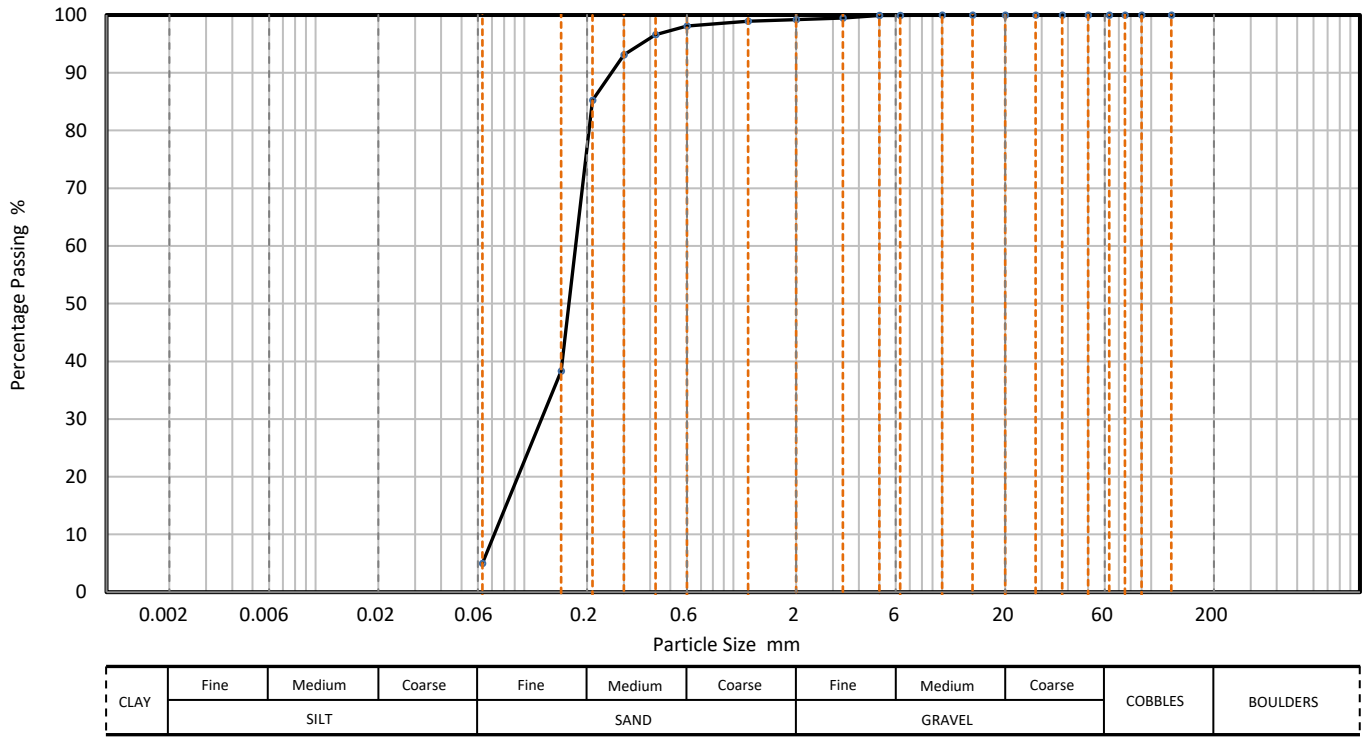
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
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TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061937
Depth (Top) m	19.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	98		
0.425	97		
0.3	93		
0.212	85		
0.15	38		
0.063	5		

Dry Mass of sample, g: 1286

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	94.2
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.176
D30	mm	0.121
D10	mm	0.0718
Uniformity Coefficient		2.5
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 09:12

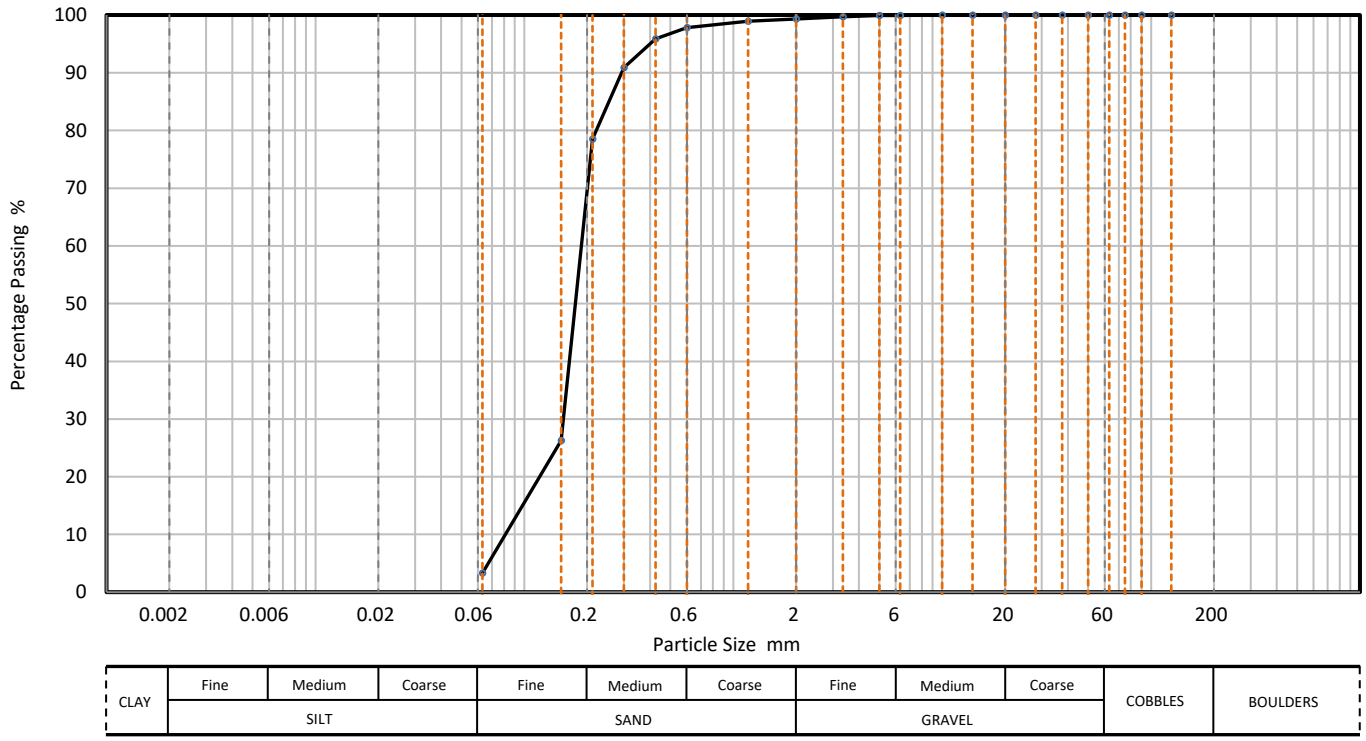
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
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UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061938
Depth (Top) m	22.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	98		
0.425	96		
0.3	91		
0.212	79		
0.15	26		
0.063	3		

Dry Mass of sample, g: 1417

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.7
Sand	95.9
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.188
D30	mm	0.154
D10	mm	0.081
Uniformity Coefficient		2.3
Curvature Coefficient		1.6

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 08:31

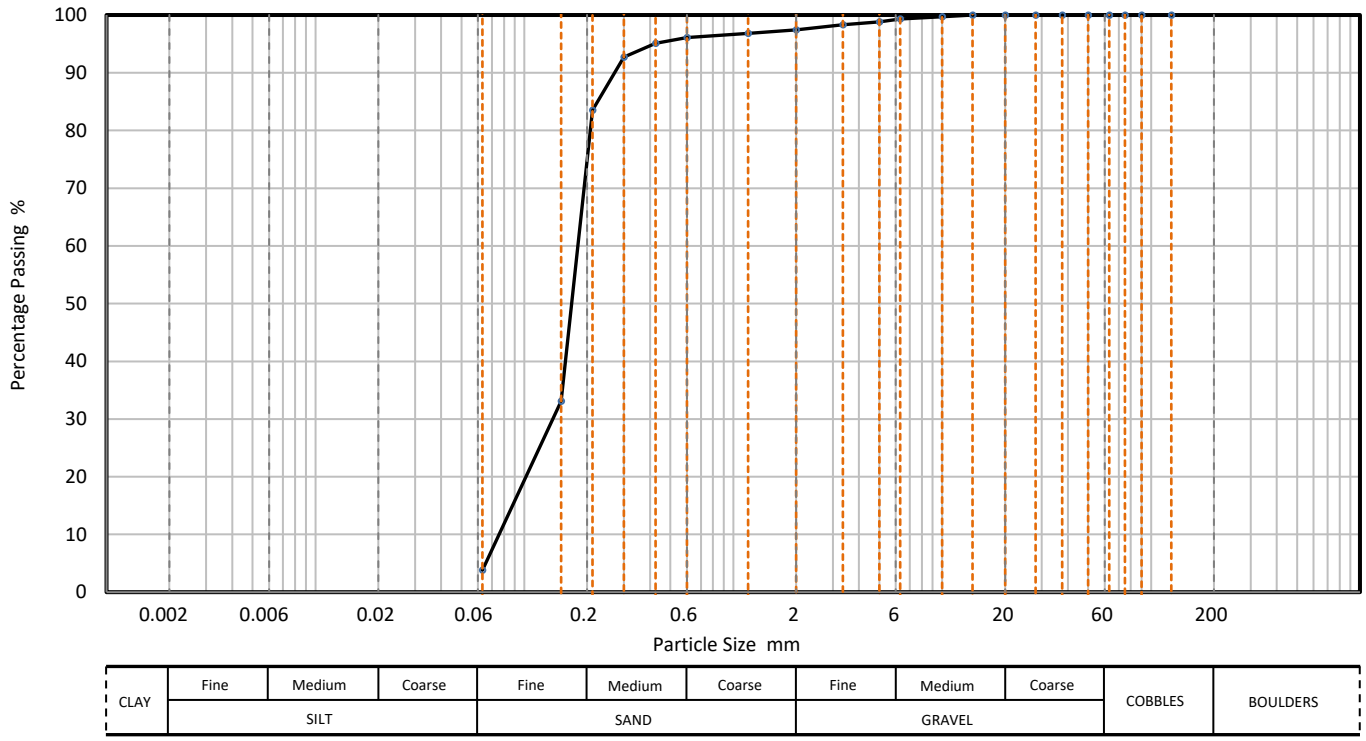
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

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TS18 3NA
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UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061939
Depth (Top) m	24.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	98		
2	97		
1.18	97		
0.6	96		
0.425	95		
0.3	93		
0.212	84		
0.15	33		
0.063	4		

Dry Mass of sample, g: 1565

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	2.6
Sand	93.6
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.18
D30	mm	0.137
D10	mm	0.0757
Uniformity Coefficient		2.4
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 10:30

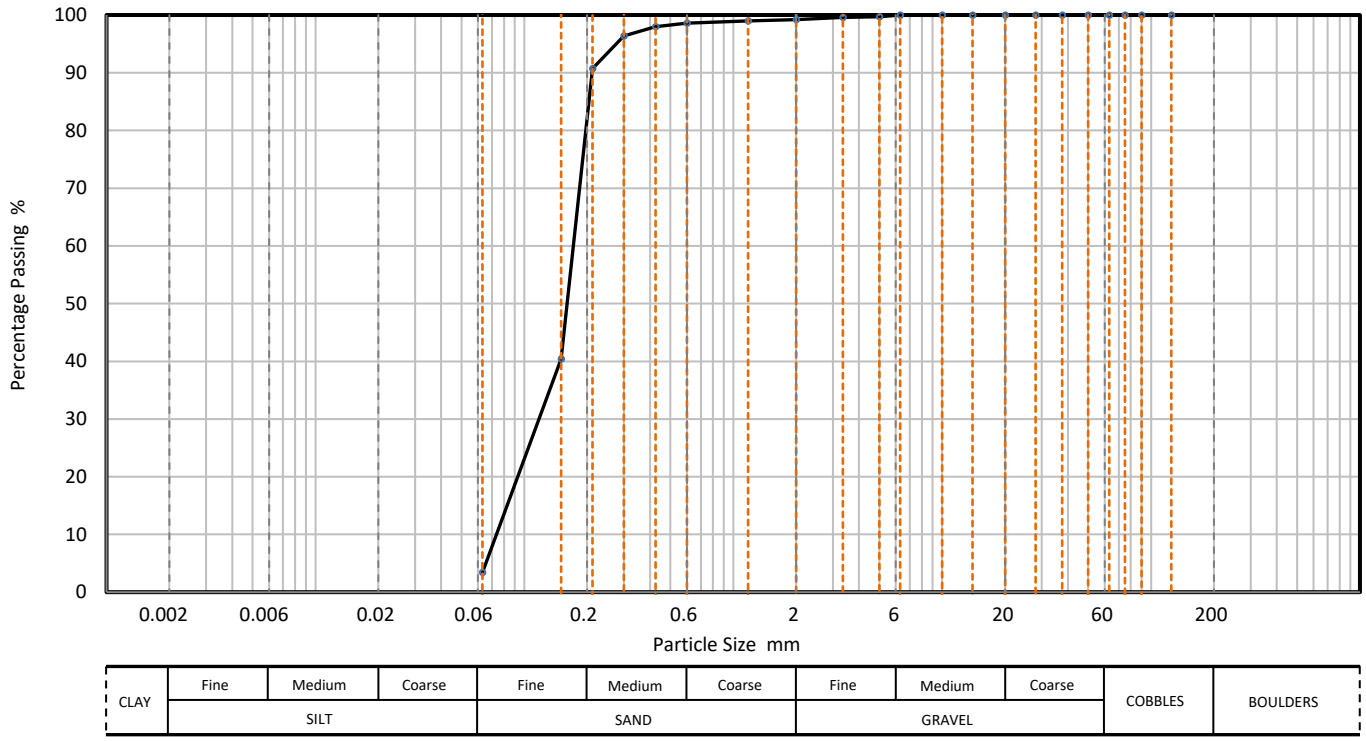
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
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UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061940
Depth (Top) m	27.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	99		
0.425	98		
0.3	96		
0.212	91		
0.15	40		
0.063	3		

Dry Mass of sample, g: 1762

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	95.8
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.172
D30	mm	0.118
D10	mm	0.0735
Uniformity Coefficient		2.3
Curvature Coefficient		1.1

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 10:51

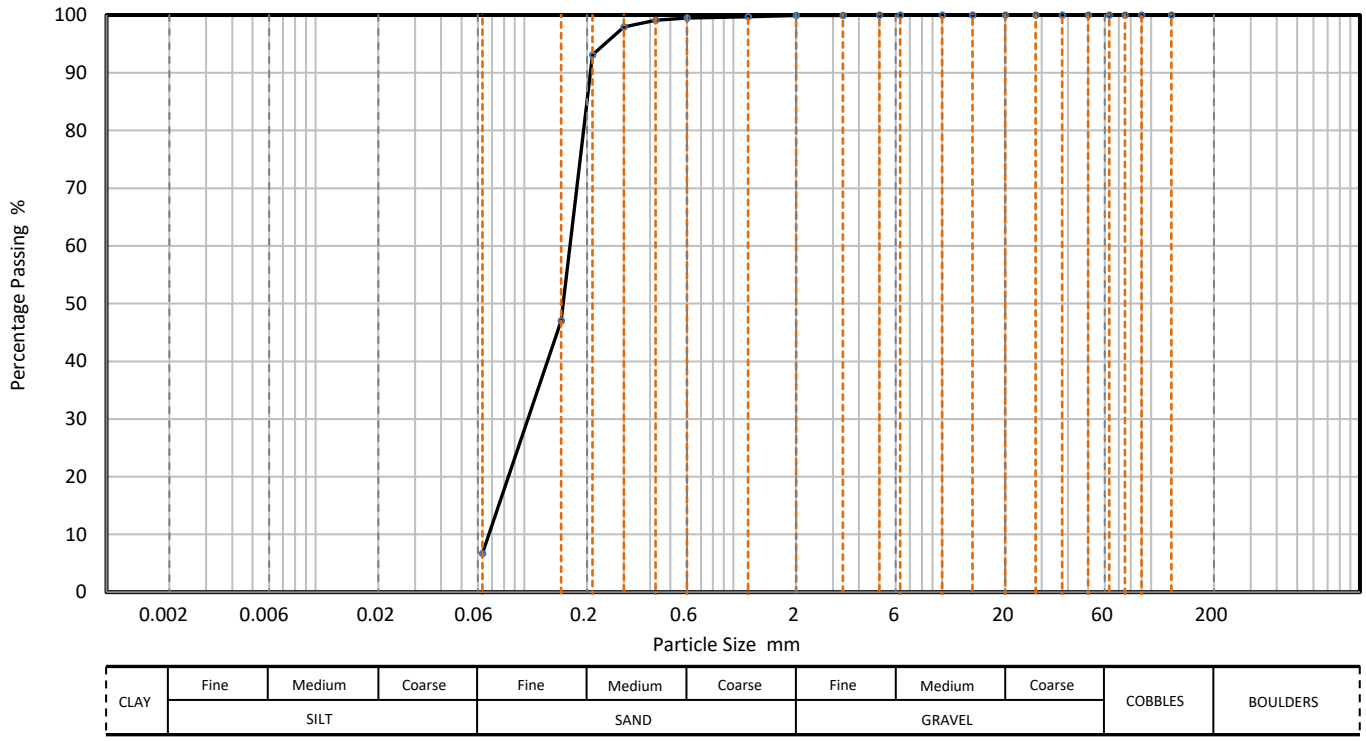
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
12-16 Yarm Road,
Stockton on Tees,
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061941
Depth (Top) m	30.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	93		
0.15	47		
0.063	7		

Dry Mass of sample, g: 1503

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	93.2
Fines <0.063mm	7.0

Grading Analysis		
D100	mm	
D60	mm	0.165
D30	mm	0.104
D10	mm	0.0677
Uniformity Coefficient		2.4
Curvature Coefficient		0.97

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	23/06/2023 09:17

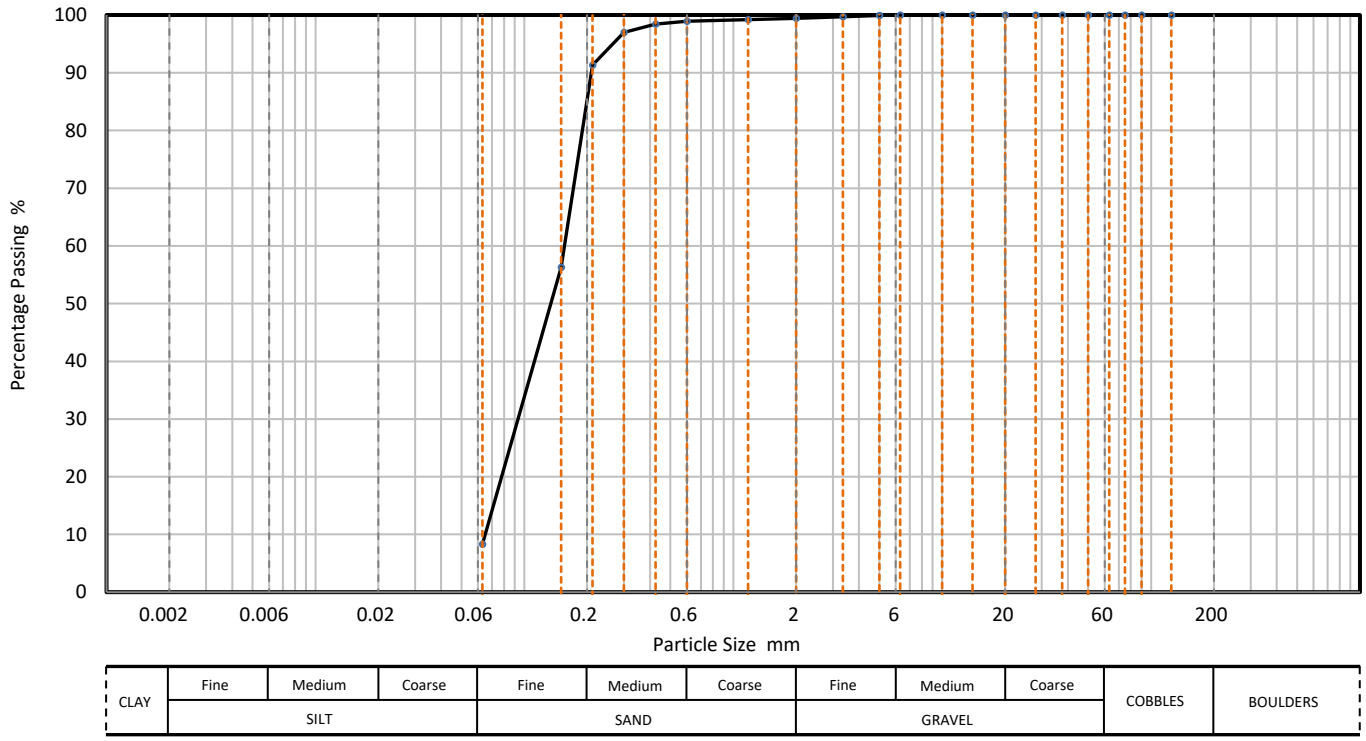
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Ardersier Port	S230503

G2M Testing (Stockton)
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Stockton on Tees,
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UKAS TESTING
10258

Hole	BHSP09	Lab sample ID	G2MT2023061942
Depth (Top) m	33.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	99		
0.425	98		
0.3	97		
0.212	91		
0.15	56		
0.063	8		

Dry Mass of sample, g: 1639

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.6
Sand	91.1
Fines <0.063mm	8.0

Grading Analysis		
D100	mm	
D60	mm	0.156
D30	mm	0.0933
D10	mm	0.065
Uniformity Coefficient		2.4
Curvature Coefficient		0.86

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	22/06/2023 08:02

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Solmek
12 Yarm Road
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TS18 3NA

16 October 2023
Report No : GEO/38553/01

For the attention of Mr A Cutts

Date samples received	27/07/2023
Date written instructions received	28/07/2023
Date testing commenced	29/07/2023
Date of sample disposal	**13/11/2023**

Our ref **GEO / 38553**
Your Ref **S23053**

Project **ARDERSIER PORT**

Further to your instructions we have pleasure in enclosing the results of the tests you requested in the attached figures.

LABORATORY TEST REPORT

Item No	Test Quantity	Description
1	4	Maximum & Minimum Density
2	2	Shear Strength by Direct Shear
3	2	Isotropic Consolidated Drained Triaxial Compression (CID) - remoulded

Any opinions or interpretations expressed herein are outside the scope of UKAS accreditation. All results contained in this report are provisional unless signed by an approved signatory. The results contained in this report relate only to samples received in the laboratory and are tested 'as received' unless otherwise stated. This report should not be reproduced, except in full, without the written approval of the laboratory. The results reported are applicable only to the test items received by the laboratory.

All the necessary data required by the documented test procedures has been recorded and will be stored for a period of not less than 6 years. This data will be issued to yourselves at your request. All samples will be disposed of after the date shown above. Written confirmation will be required to retain the samples beyond this period and a storage charge may be applied.

We trust that the above meets your requirements and should you require any further information or assistance, please do not hesitate to contact us.

Yours faithfully
on behalf of **GEOLABS Limited**

J Sturges
Operations Manager

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP05
Depth (m)	8.00-8.45
Sample Type	B

Description:

Greyish brown fine to medium SAND with rare fine to medium gravel.

Percentage of material retained on the 2 mm test sieve	0.5	%

The fines content was measured to be 1.1 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density — 1.62 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.610	g/cm³
Maximum dry density **after** surcharge application	1.622	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.610	g/cm³
Maximum dry density **after** surcharge application	1.625	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density — 1.26 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.13	g
	Run		
Mass of sand	1	558.89	g
	2	556.98	g
	3	557.25	g
	4	556.67	g
	5	557.88	g
	Minimum	557.53	g

Checked and Approved by

J Powell - Technical Consultant
23/08/2023

Project Number: **38553**

Project Name: **ARDERSIER PORT S23053**

GEOLABS®

Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP05
Depth (m)	10.00-10.45
Sample Type	B

Description:

Greyish brown fine to medium SAND with occasional fine to medium gravel.

Percentage of material retained on the 2 mm test sieve	0.4	%

The fines content was measured to be 0.7 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density (after surcharge application)	**1.55**	**g/cm³**

Determination No 1

Maximum dry density **before** surcharge application	1.548	g/cm³
Maximum dry density **after** surcharge application	1.557	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.536	g/cm³
Maximum dry density **after** surcharge application	1.550	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density		**1.20**	**g/cm³**
Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.11	g
	Run		
Mass of sand	1	529.56	g
	2	530.84	g
	3	530.62	g
	4	530.89	g
	5	530.88	g
	Minimum	530.56	g

Checked and Approved by

J Powell - Technical Consultant
23/08/2023

Project Number:

38553

Project Name:

ARDERSIER PORT
S23053

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP05
Depth (m)	16.50-16.95
Sample Type	B

Description:

Brownish grey slightly silty fine to medium SAND with rare shell fragments and fine gravel.

Percentage of material retained on the 2 mm test sieve	0.1	%

The fines content was measured to be 3.5 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density 1.54 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.522	g/cm³
Maximum dry density **after** surcharge application	1.536	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.536	g/cm³
Maximum dry density **after** surcharge application	1.548	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density 1.13 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.11	g
	Run		
Mass of sand	1	499.56	g
	2	501.90	g
	3	502.90	g
	4	502.42	g
	5	501.29	g
	Minimum	501.61	g

Checked and Approved by

J Powell - Technical Consultant
23/08/2023

Project Number:

38553

Project Name:

ARDERSIER PORT
S23053

GEOLABS®

Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP05
Depth (m)	19.50-19.95
Sample Type	B

Description:

Brownish grey slightly silty fine to medium SAND.

Percentage of material retained on the 2 mm test sieve	0.0	%

The fines content was measured to be 2.9 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density — 1.55 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.527	g/cm³
Maximum dry density **after** surcharge application	1.543	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.542	g/cm³
Maximum dry density **after** surcharge application	1.557	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density — 1.15 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.11	g
	Run		
Mass of sand	1	507.42	g
	2	509.87	g
	3	511.23	g
	4	510.50	g
	5	509.77	g
	Minimum	509.76	g

Checked and Approved by

J Powell - Technical Consultant
23/08/2023

Project Number: **38553**

Project Name: **ARDERSIER PORT S23053**

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BS EN ISO 17892 10:2018

DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

Borehole No	BHSP05
Depth (m)	8.00-8.45
Sample Type	B

Description:

Greyish brown slightly gravelly fine to medium SAND.

Specimen Details

Depth within original sample	*m*	n/a
Orientation within original sample		n/a
Test condition		Submerged
Preparation		< 2 mm material remoulded at existing water content to a relative density of 75% [1]
Particle density	*Mg/m³*	2.65 (assumed)

Specimen Number		**1**	**2**	**3**
Length	*mm*	59.78	60.00	60.06
Width	*mm*	59.77	59.98	59.99
Height	*mm*	22.48	22.37	22.38
Initial water content	*%*	23.4	23.4	23.4
Initial bulk density	*Mg/m³*	1.87	1.86	1.86
Initial dry density	*Mg/m³*	1.51	1.51	1.51
Initial voids ratio		0.752	0.756	0.758
Degree of Saturation	*%*	82.6	82.2	81.9

Shearing Stage

Normal stress	*kPa*	35	70	140
Peak Conditions:				
Rate of horizontal displacement	*mm/min*	0.18	0.18	0.18
Maximum shear stress	*kPa*	23.8	48.5	93.3
Horizontal displacement at MSS	*mm*	3.3	1.6	1.3
Vertical Displacement at Peak	*mm*	-0.25	-0.06	-0.06
Final water content	*%*	28.5	27.2	25.1
Duration	*day(s)*	1	1	1

Shear Strength Parameters

		Peak Condition
Apparent Cohesion	*kPa*	**1**
Angle of Shearing Resistance	*degrees*	**33.5**

Notes: *[1] Maximum dry density = 1.62 Mg/m³ and minimum dry density = 1.26 Mg/m³*

Tested by JJR
Checked and Approved by



C F Wallace - Technical Director
20/09/2023

Project Number:

GEO / 38553

Project Name:

ARDERSIER PORT
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DIRECT SHEAR TEST – SHEARBOX

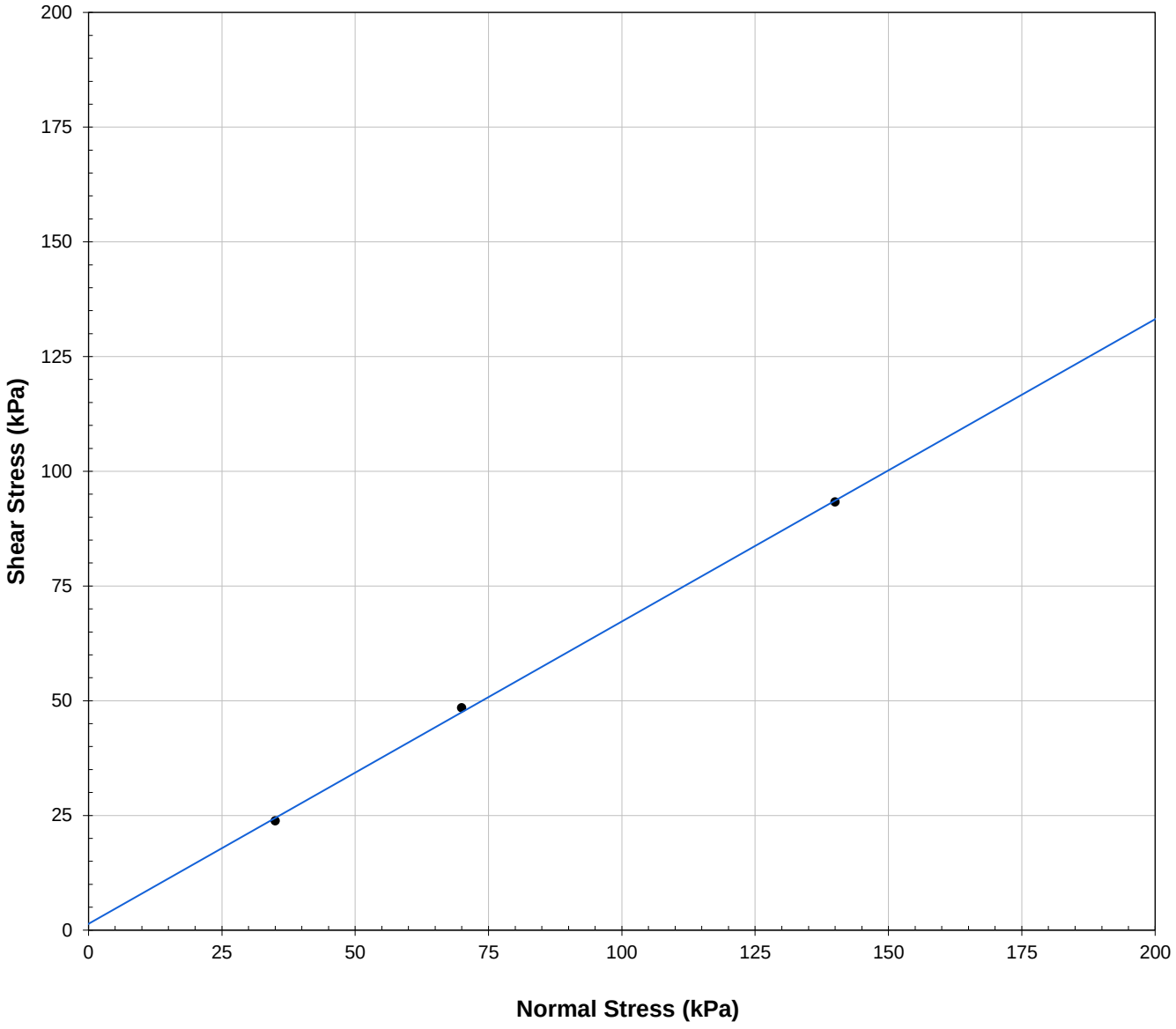
(small shearbox apparatus)

Borehole No	BHSP05
Depth (m)	8.00-8.45
Sample Type	B

Description:

Greyish brown slightly gravelly fine to medium SAND.

Shear Stress v Normal Stress



Peak: **c' = 1**

Φ' = 33.5

Tested by JJR
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C F Wallace - Technical Director
20/09/2023

Project Number:

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Project Name:

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DIRECT SHEAR TEST – SHEARBOX

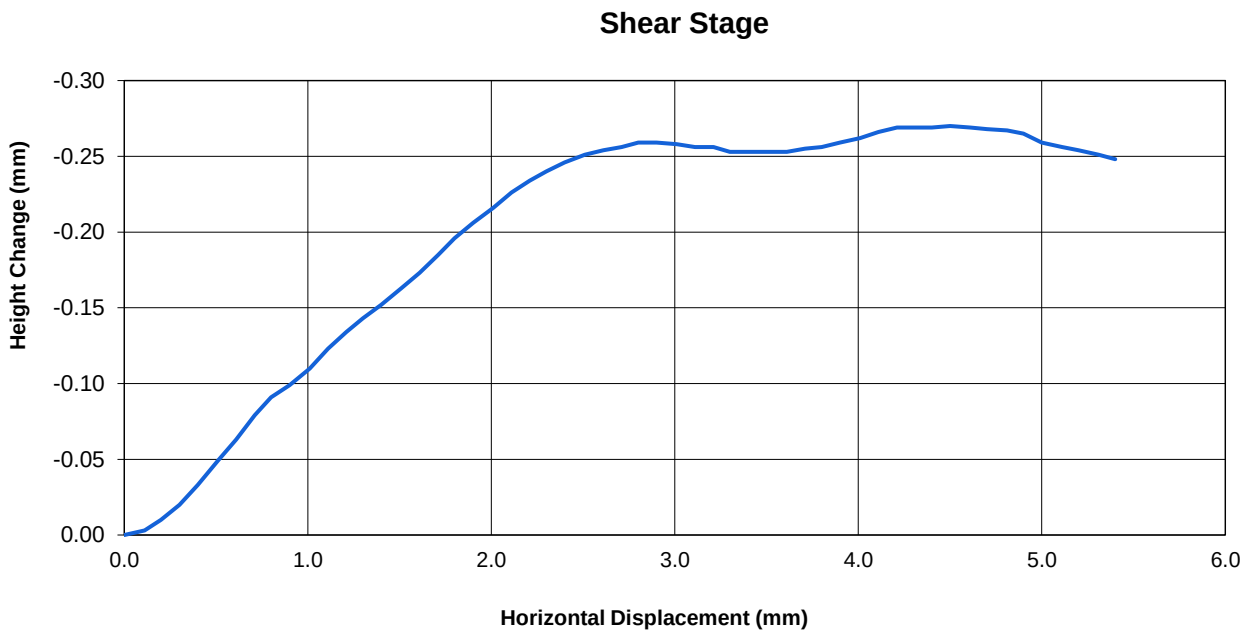
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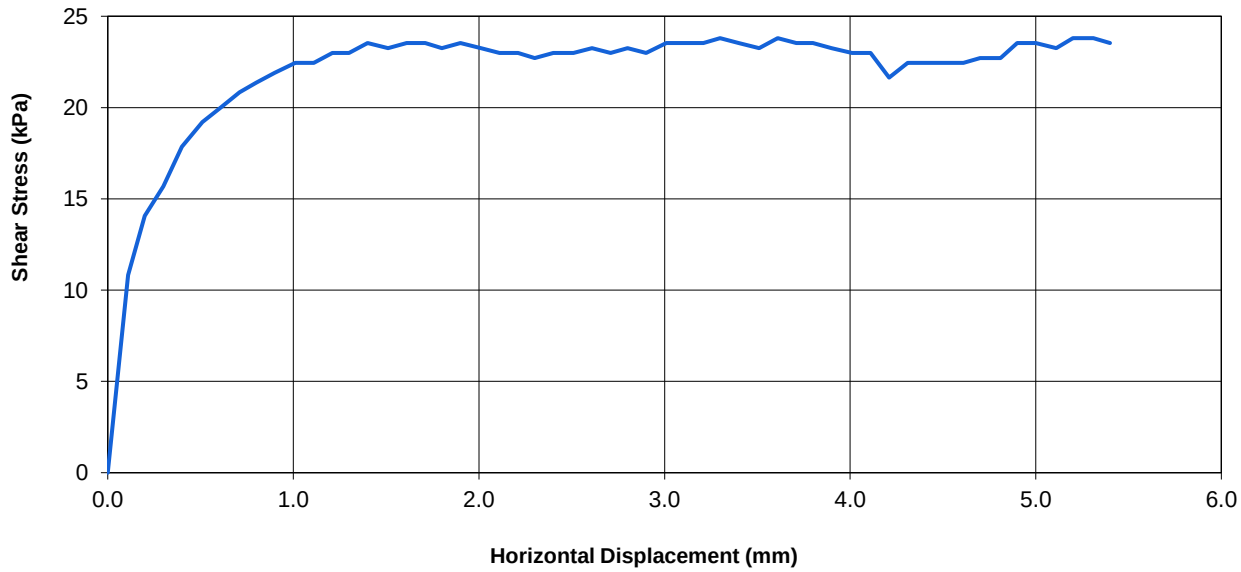
Borehole No	BHSP05
Depth (m)	8.00-8.45
Sample Type	B

Description:

Greyish brown slightly gravelly fine to medium SAND.

Specimen: 1





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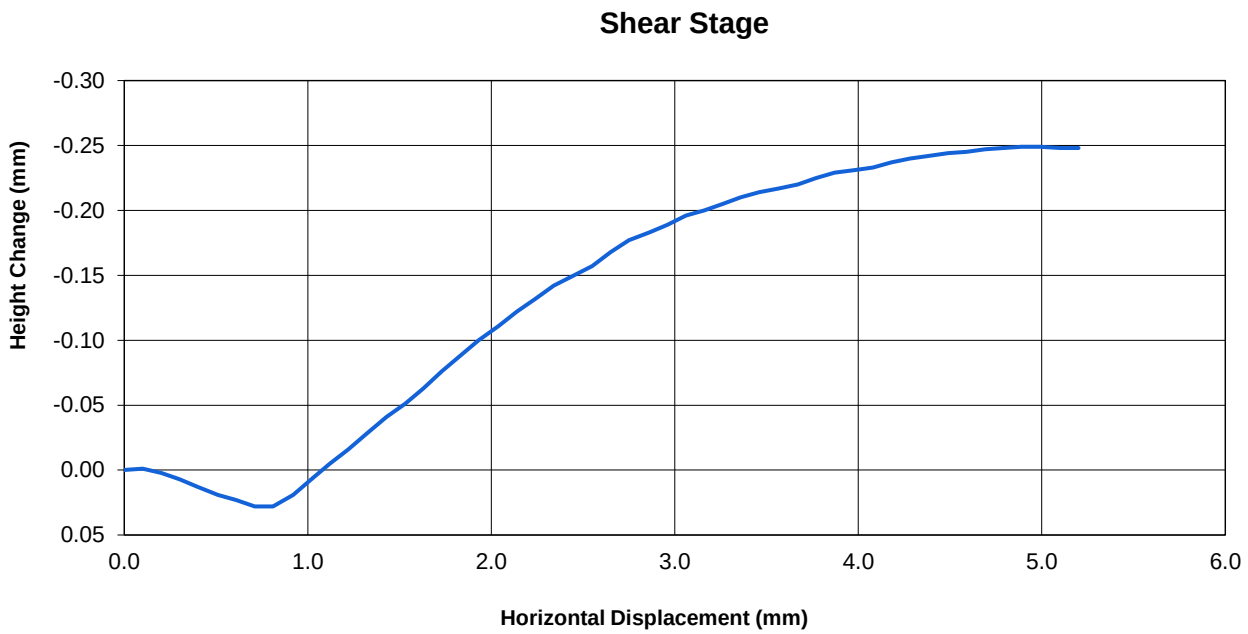
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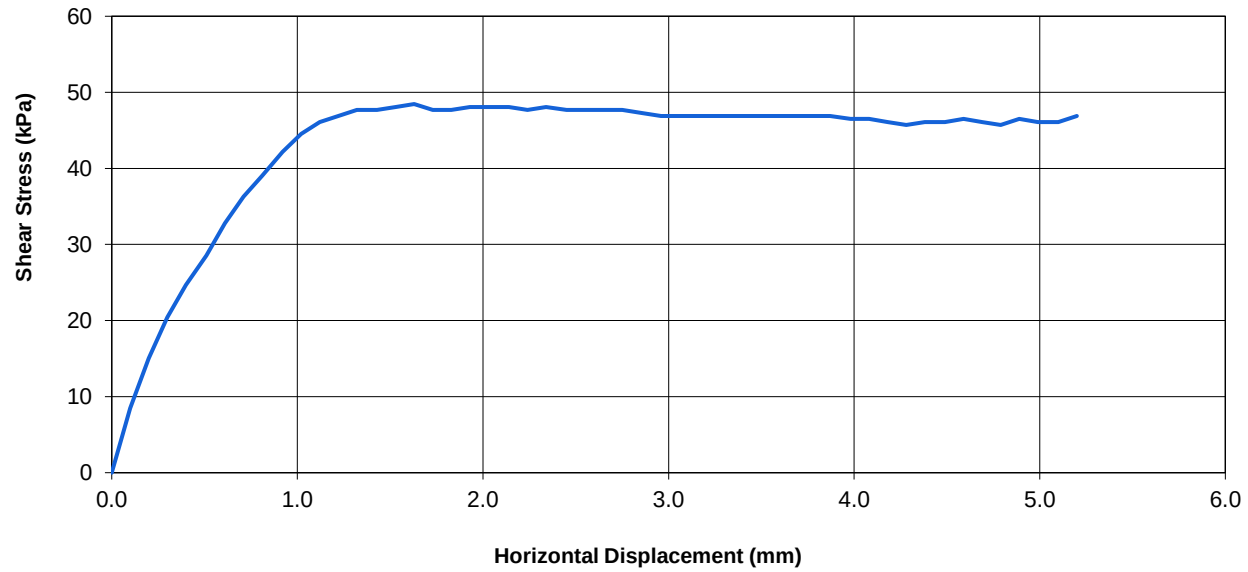
Borehole No	BHSP05
Depth (m)	8.00-8.45
Sample Type	B

Description:

Greyish brown slightly gravelly fine to medium SAND.

Specimen: 2





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DIRECT SHEAR TEST – SHEARBOX

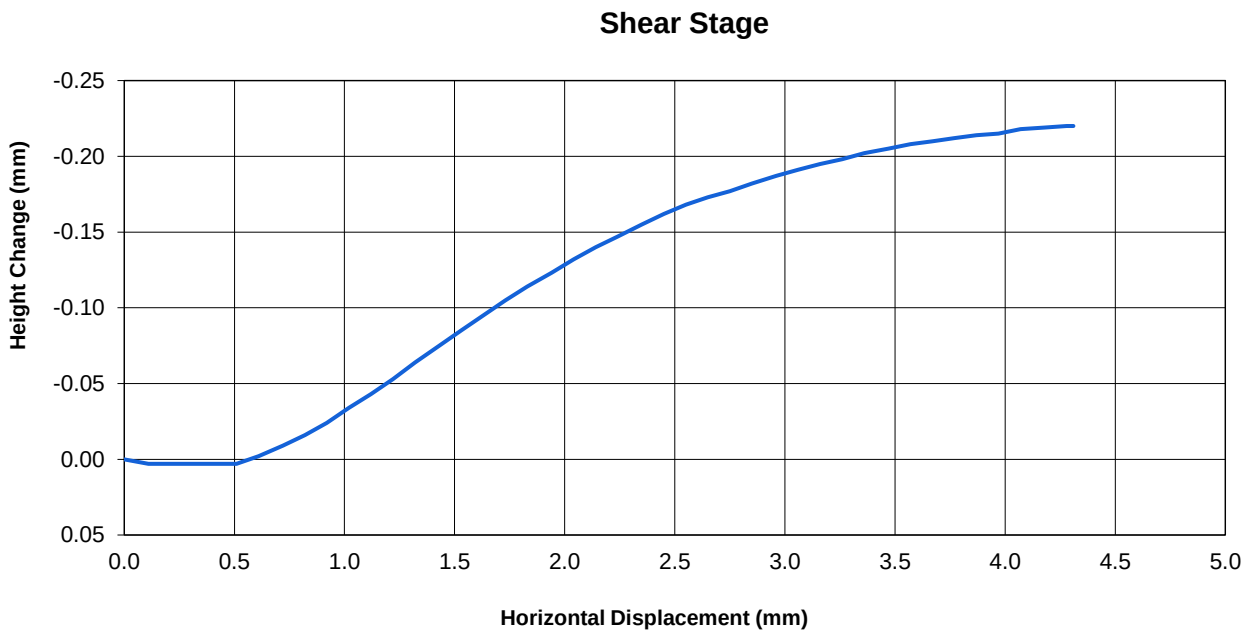
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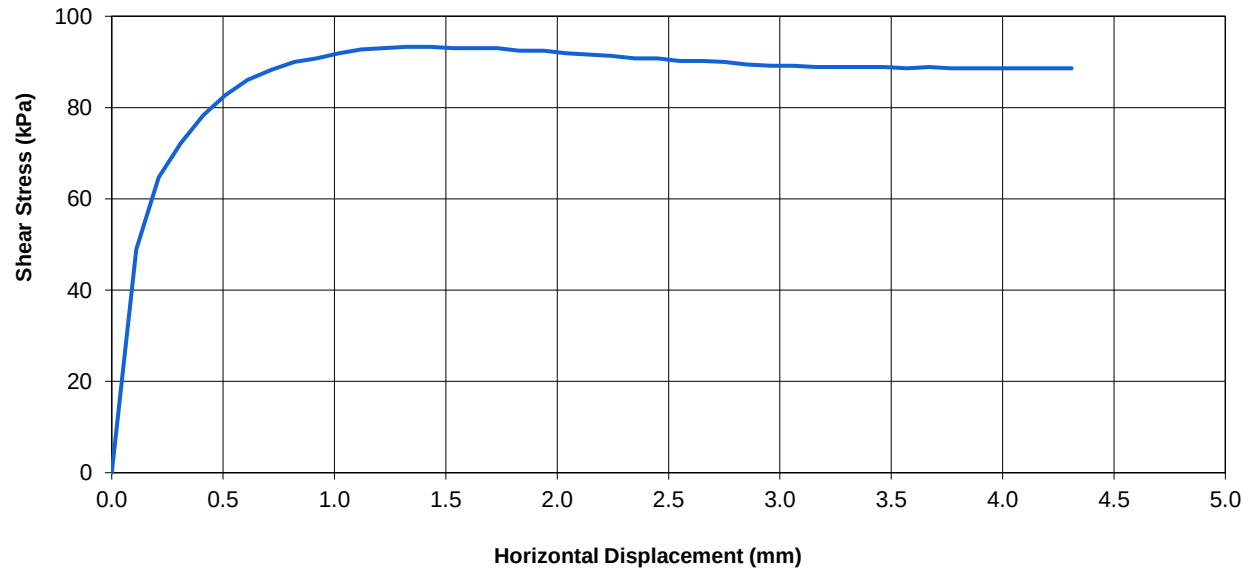
Borehole No	BHSP05
Depth (m)	8.00-8.45
Sample Type	B

Description:

Greyish brown slightly gravelly fine to medium SAND.

Specimen: 3





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20/09/2023

Project Number:

GEO / 38553

Project Name:

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DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

Borehole No	BHSP05
Depth (m)	19.50-19.95
Sample Type	B

Description:

Brownish grey slightly silty fine to medium SAND.

Specimen Details

Depth within original sample	*m*	n/a
Orientation within original sample		n/a
Test condition		Submerged
Preparation		< 2 mm material remoulded at existing water content to a relative density of 50% [1]
Particle density	*Mg/m³*	2.65 (assumed)

Specimen Number		**1**	**2**	**3**
Length	*mm*	59.78	60.00	60.06
Width	*mm*	59.77	59.98	59.99
Height	*mm*	25.24	25.12	25.16
Initial water content	*%*	27.1	27.1	27.1
Initial bulk density	*Mg/m³*	1.66	1.66	1.65
Initial dry density	*Mg/m³*	1.31	1.31	1.30
Initial voids ratio		1.025	1.030	1.036
Degree of Saturation	*%*	70.1	69.7	69.4

Shearing Stage

Normal stress	*kPa*	65	130	260
Peak Conditions:				
Rate of horizontal displacement	*mm/min*	0.18	0.18	0.18
Maximum shear stress	*kPa*	42.7	91.9	174.5
Horizontal displacement at MSS	*mm*	7.8	5.0	8.0
Vertical Displacement at Peak	*mm*	0.59	0.24	0.56
Final water content	*%*	28.8	27.6	28.3
Duration	*day(s)*	1	1	1

Shear Strength Parameters

		Peak Condition
Apparent Cohesion	*kPa*	**2**
Angle of Shearing Resistance	*degrees*	**34.0**

Notes: *[1] Maximum dry density = 1.54 Mg/m³ and minimum dry desnity = 1.13 Mg/m³*

Tested by JJR
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C F Wallace - Technical Director
20/09/2023

Project Number:

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DIRECT SHEAR TEST – SHEARBOX

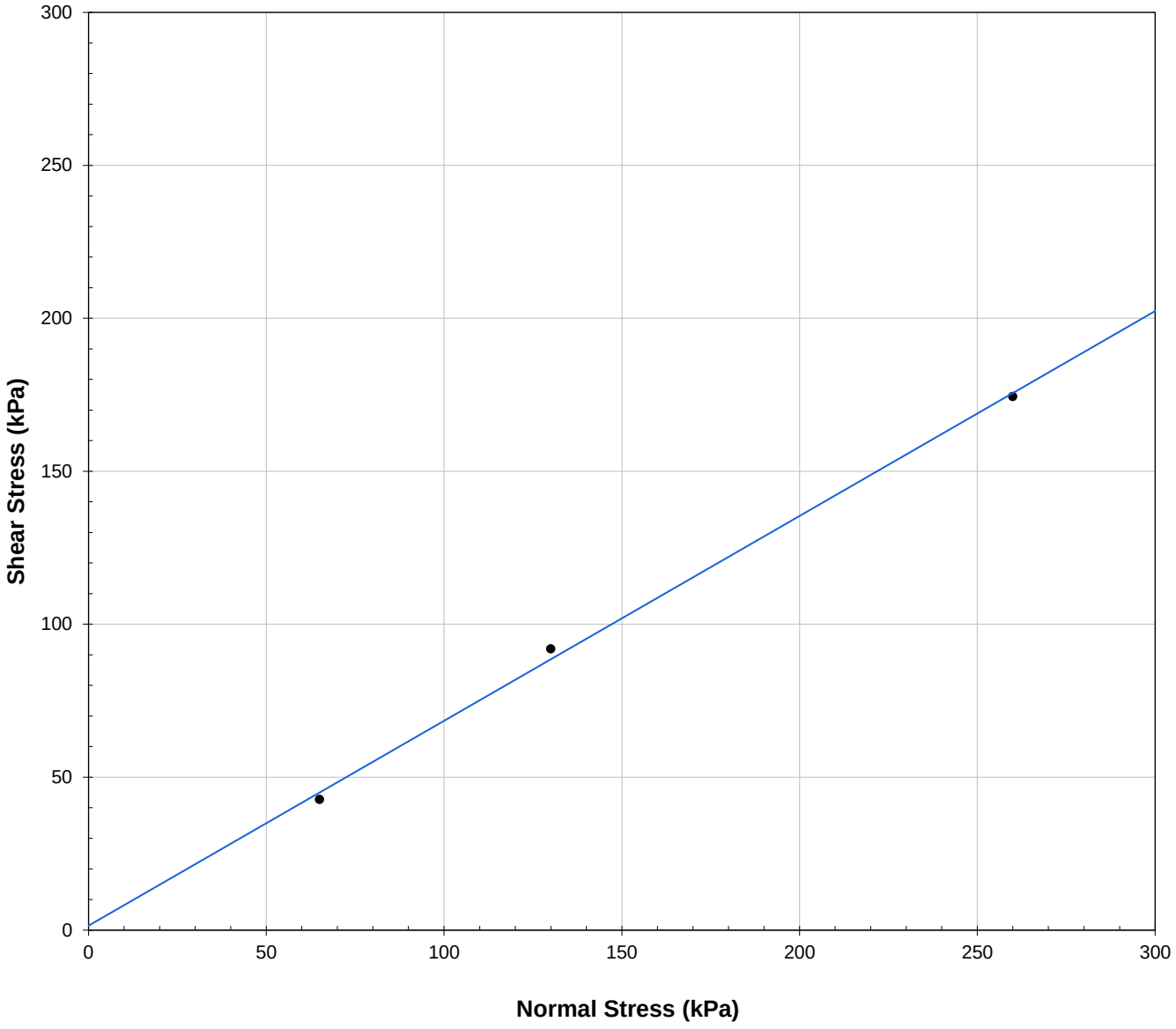
(small shearbox apparatus)

Borehole No	BHSP05
Depth (m)	19.50-19.95
Sample Type	B

Description:

Brownish grey slightly silty fine to medium SAND.

Shear Stress v Normal Stress



Peak: **c' = 2**

Φ' = 34.0

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C F Wallace - Technical Director
20/09/2023

Project Number:

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Project Name:

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DIRECT SHEAR TEST – SHEARBOX

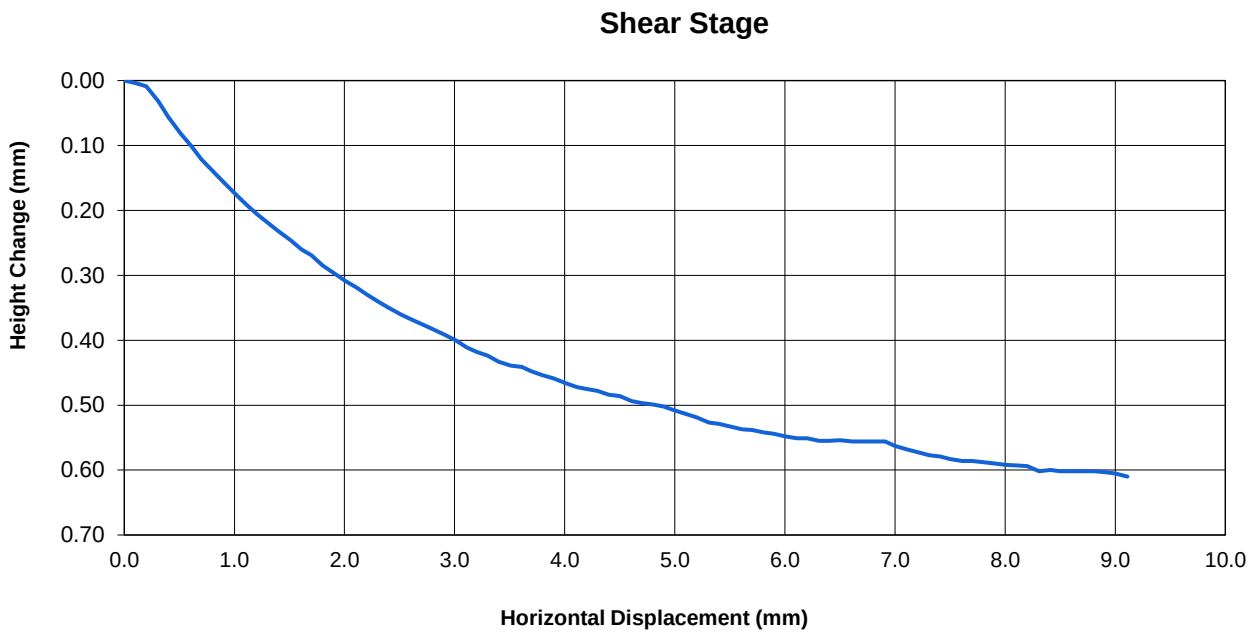
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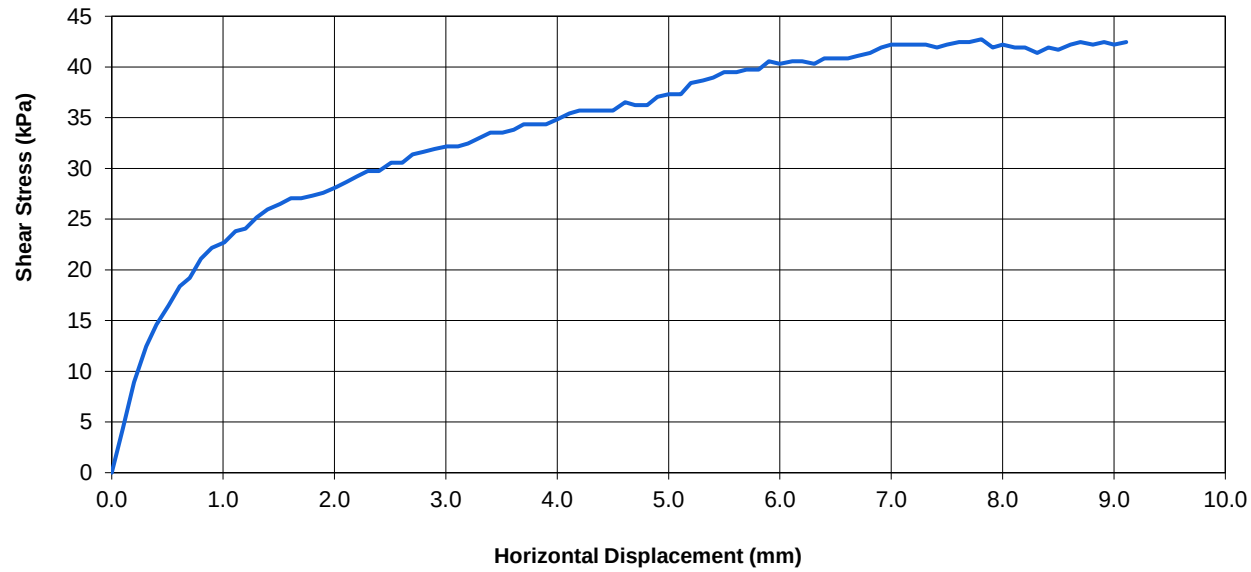
Borehole No	BHSP05
Depth (m)	19.50-19.95
Sample Type	B

Description:

Brownish grey slightly silty fine to medium SAND.

Specimen: 1





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DIRECT SHEAR TEST – SHEARBOX

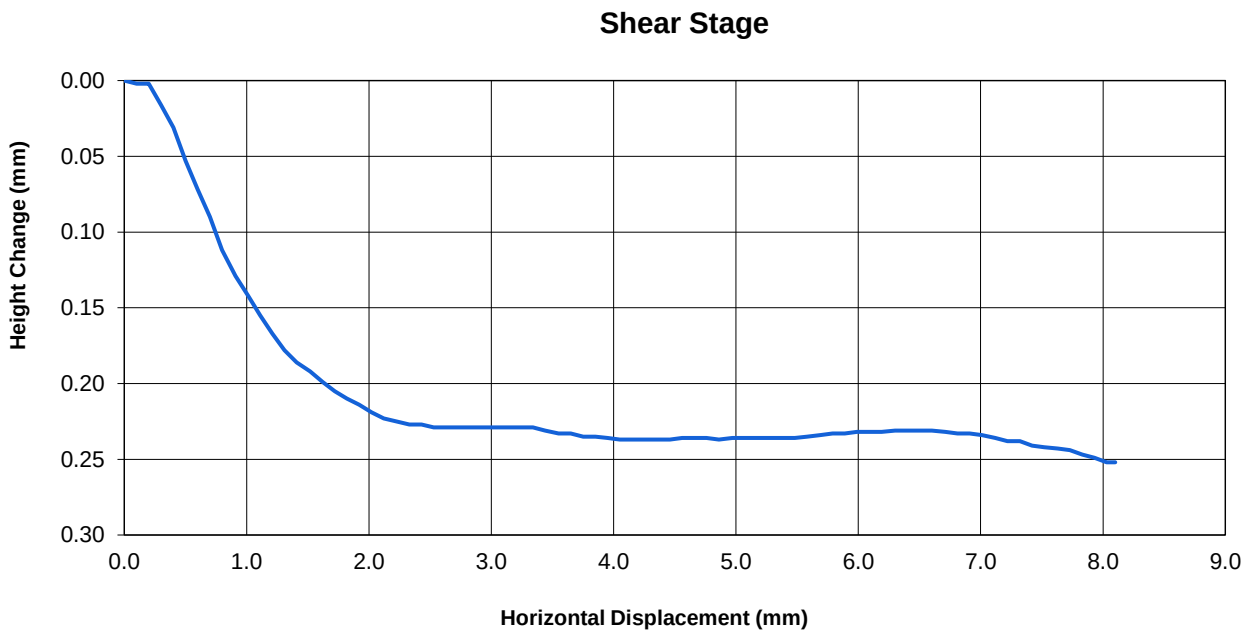
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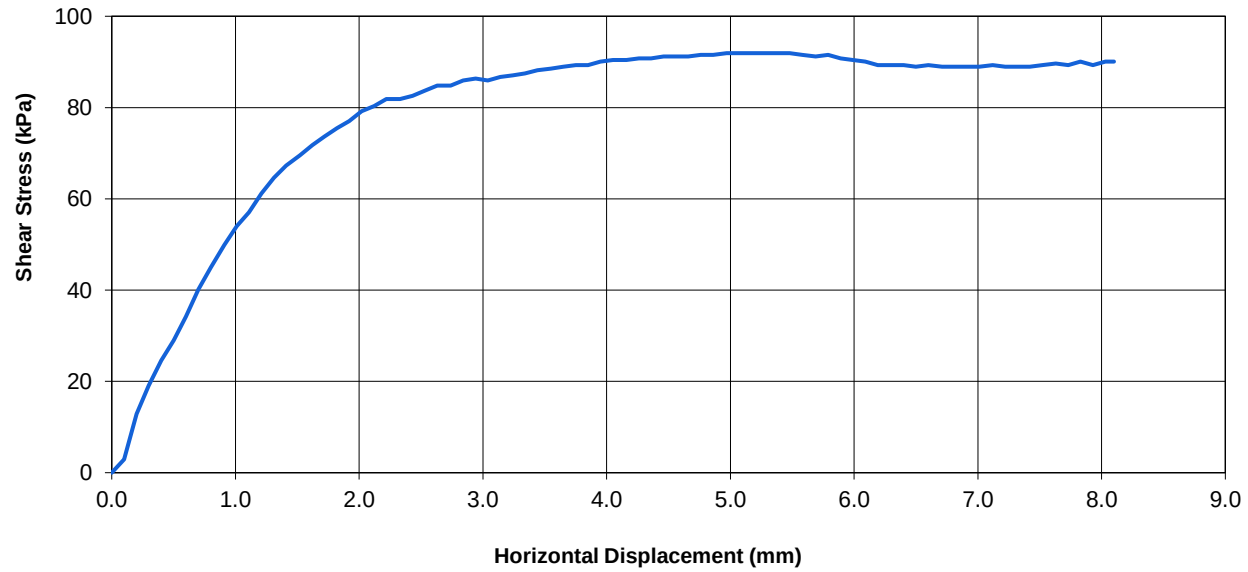
Borehole No	BHSP05
Depth (m)	19.50-19.95
Sample Type	B

Description:

Brownish grey slightly silty fine to medium SAND.

Specimen: 2





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C F Wallace - Technical Director
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Project Number:

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DIRECT SHEAR TEST – SHEARBOX

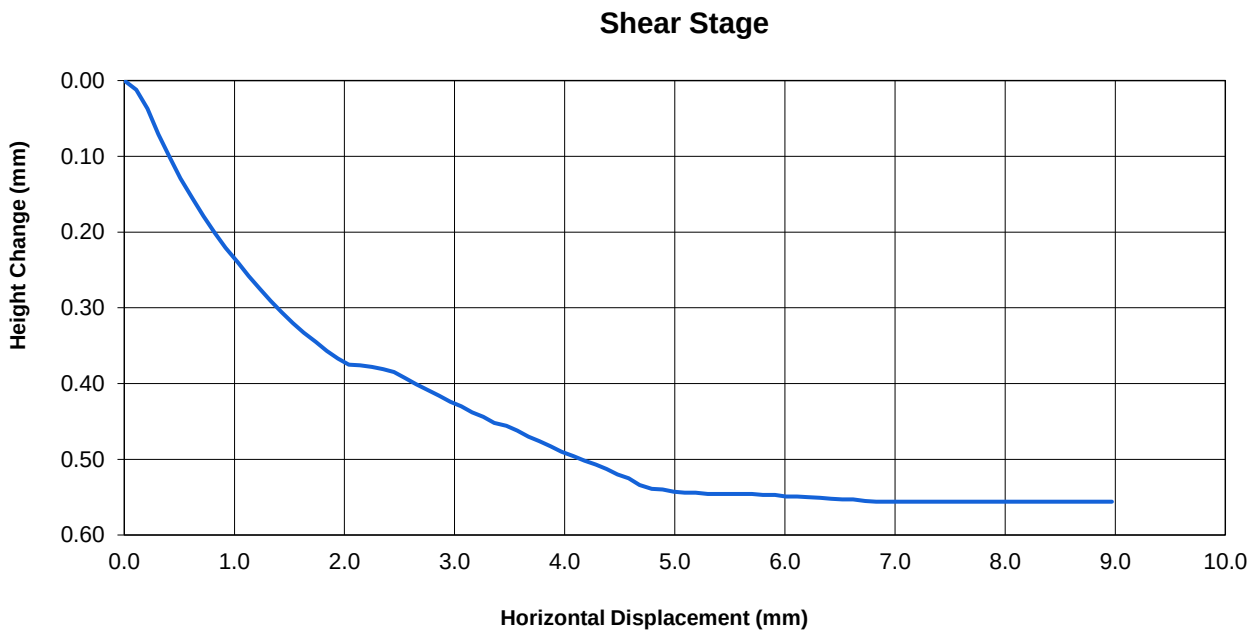
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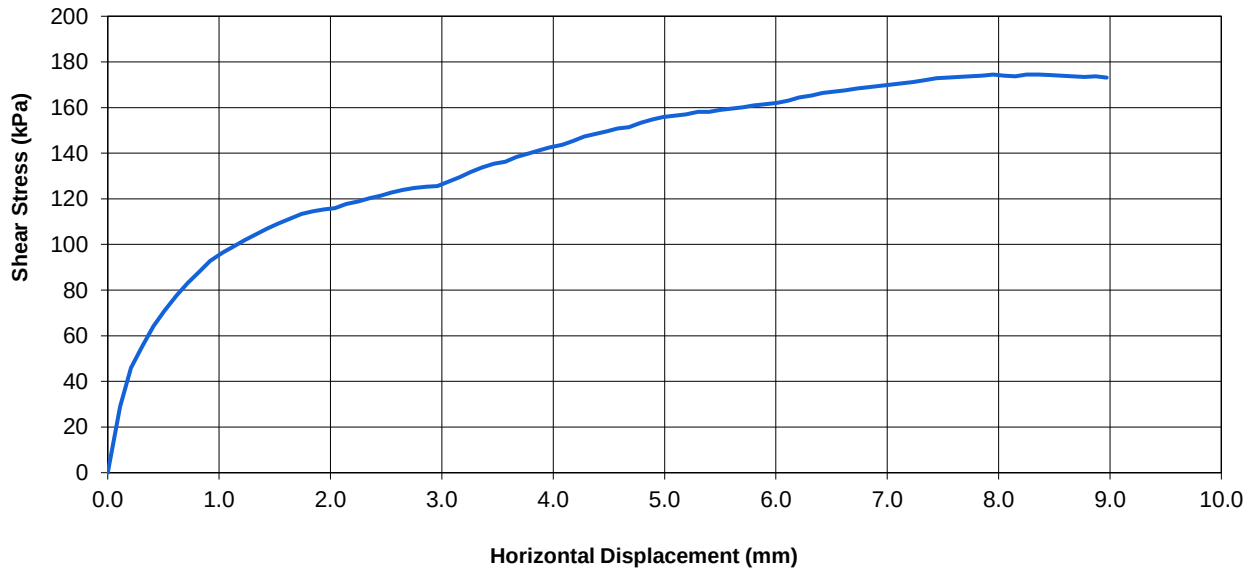
Borehole No	BHSP05
Depth (m)	19.50-19.95
Sample Type	B

Description:

Brownish grey slightly silty fine to medium SAND.

Specimen: 3





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20/09/2023

Project Number:

GEO / 38553

Project Name:

ARDERSIER PORT
S23053

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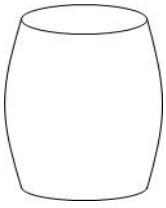
UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP05
Depth (m):	10.00-10.45

Description:
Greyish brown fine to medium SAND with occasional fine to medium gravel. .

SPECIMEN DETAILS				
Depth within original sample		NA	Orientation within original sample: NA	
Remarks		Remoulded to a target 10% water content and a target dry density of 1.492 Mg/m³		
TEST DETAILS				
Specimen Type and Preparation		B (Remoulded)		
Cell Preparation		Checks performed in accordance with Clause 3.5		
Specimen Number		**Multistage**		
Initial Diameter	*mm*	70.22		
Initial Length	*mm*	139.49		
Initial Water Content	*%*	10.1		
Initial Wet Density	*Mg/m³*	1.64		
Drainage Conditions		One end only		
SATURATION STAGE		Method: Clause 5.2		
Final Cell Pressure	*kPa*	540		
Final Pore Pressure	*kPa*	535		
Final Pore Pressure Parameter B		0.97		
Duration	*day(s)*	7		
CONSOLIDATION STAGE		**Stage No 1**	**Stage No 2**	**Stage No 3**
Cell Pressure	*kPa*	540	580	660
Back Pressure	*kPa*	500	500	500
Effective Pressure	*kPa*	40	80	160
Final Pore Pressure	*kPa*	500	500	500
Final Pore Pressure Dissipation	*%*	100	100	100
Duration	*day(s)*	1	1	1
SHEARING STAGE				
Cell Pressure	*kPa*	540	580	660
Rate of Axial Displacement	*mm/min*	0.015	0.020	0.016
Initial Pore Pressure	*kPa*	500	500	500
Initial Effective Stress	*kPa*	40	80	160
CONDITIONS AT FAILURE	*criteria*	Maximum deviator stress		
Pore Pressure	*kPa*	499	500	499
Minor Effective Principal Stress	*kPa*	41	80	161
Deviator Stress	*kPa*	130	247	477
Major Effective Principal Stress	*kPa*	171	327	638
Volume Change	*mL*	-3.20	-2.90	-2.99
Volumetric Strain	*%*	-0.6	-0.5	-0.6
Axial Strain	*%*	2.5	1.7	2.2
Membrane correction applied to Deviator Stress	*kPa*	1	0	0
Duration	*day(s)*	1	1	1
Final Water Content	*%*	28.2		
Final Wet Density	*Mg/m³*	1.93		
EFFECTIVE STRESS PARAMETERS				
Cohesion	*kPa*	3.1		
Angle of Shear Resistance	*degrees*	36		
FAILURE SKETCH				

Checked and Approved by

P Heritage

P Heritage - Project Manager
16/10/2023

Project Number:

GEO / 38553

Project Name:

ARDERSIER PORT
S23053

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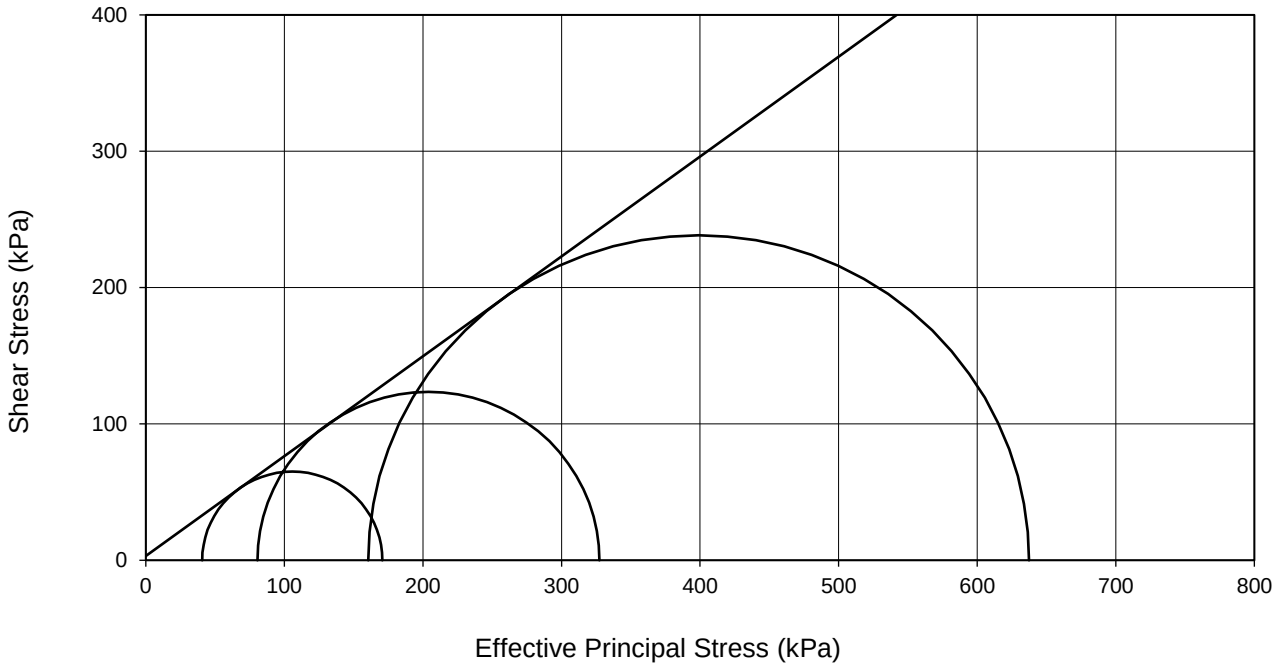
UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP05
Depth (m):	10.00-10.45

Description:
Greyish brown fine to medium SAND with occasional fine to medium gravel. .



Checked and Approved by

P. Heritage

P Heritage - Project Manager
16/10/2023

Project Number:

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ARDERSIER PORT
S23053

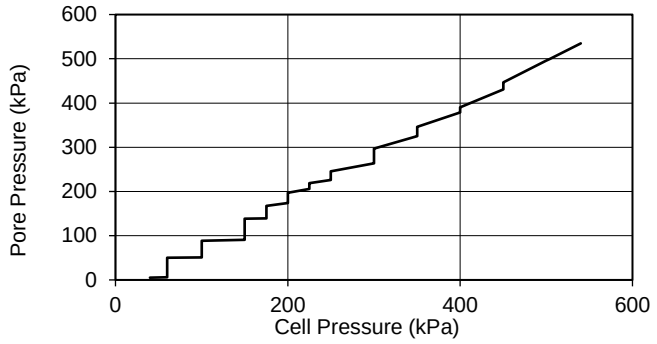
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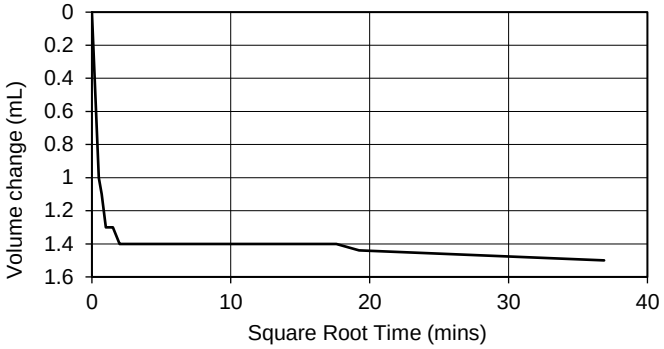
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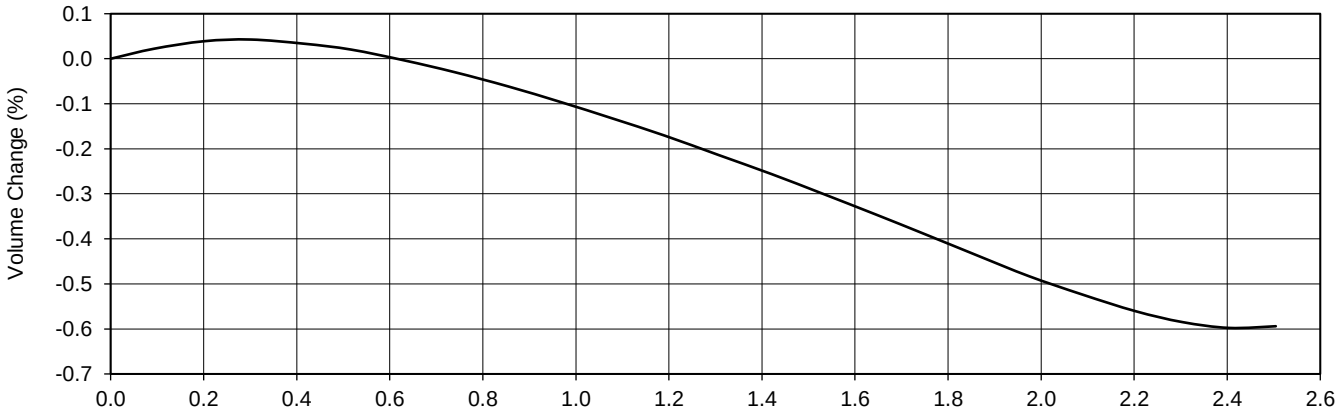
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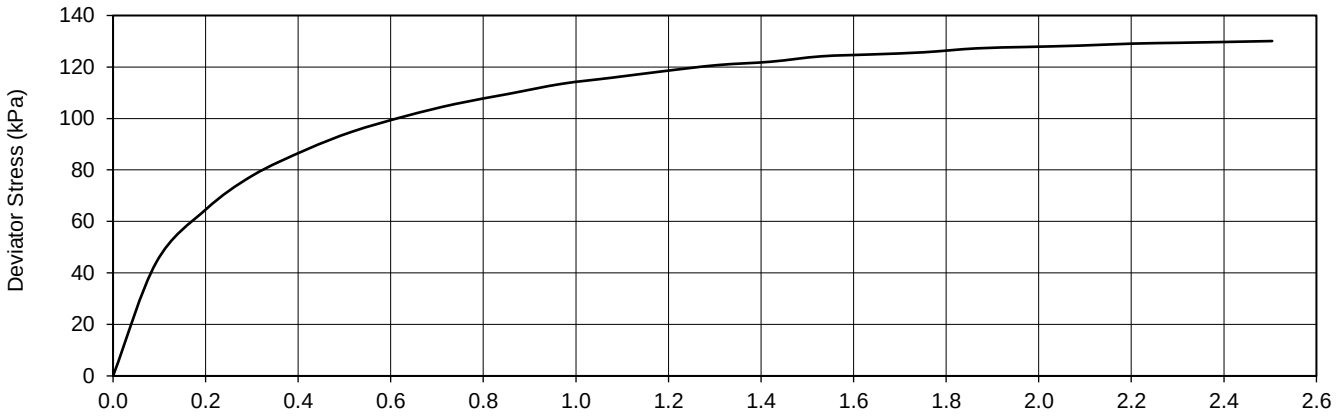
Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP05	**Stage No 1**
Depth (m): 10.00-10.45	







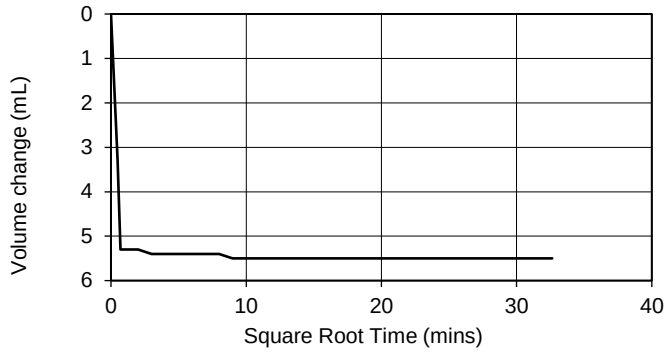


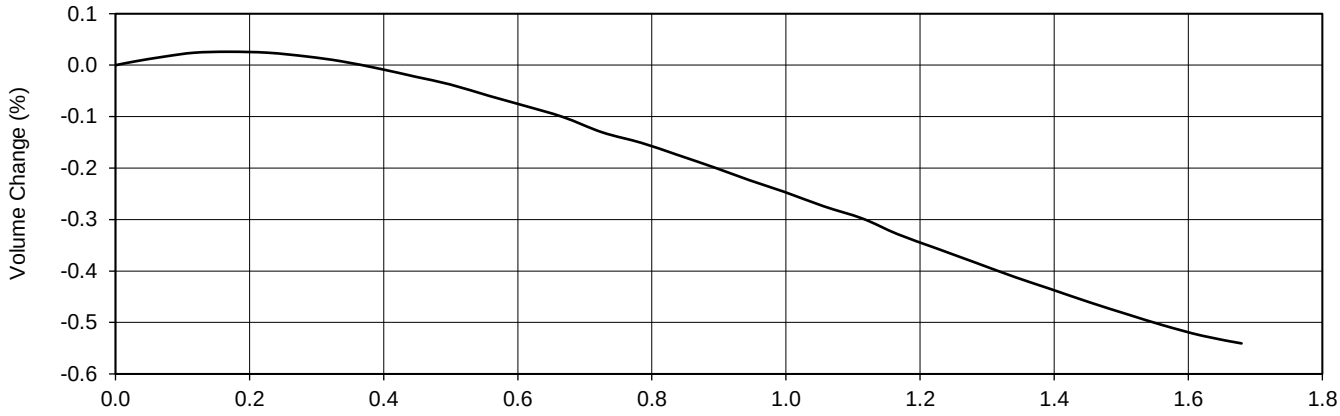
Checked and Approved by P Heritage P Heritage - Project Manager 16/10/2023	Project Number: **GEO / 38553** Project Name: **ARDERSIER PORT** **S23053**	GEOLABS UKAS TESTING 1982

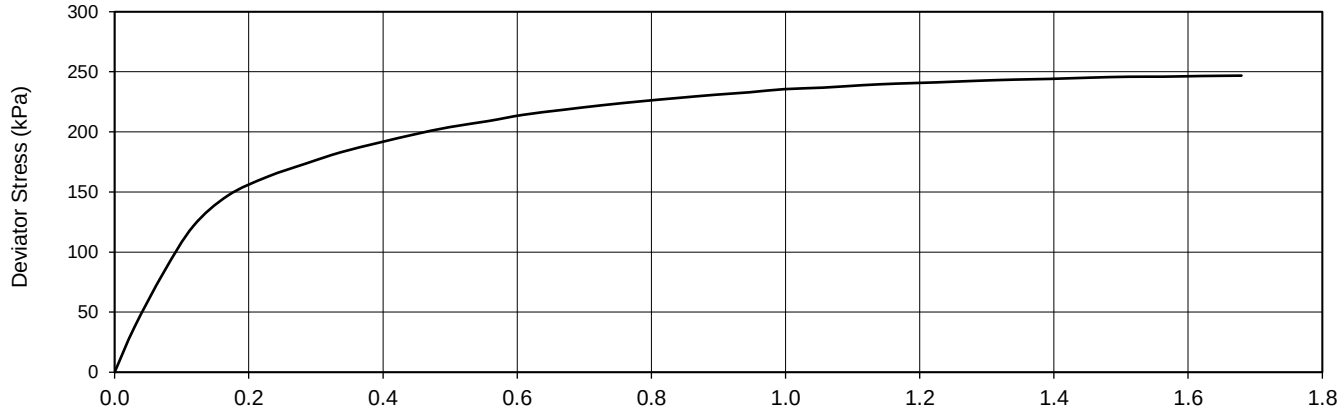
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP05	**Stage No 2**
Depth (m): 10.00-10.45	







Strain (%)

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P Heritage

P Heritage - Project Manager
16/10/2023

Project Number:

GEO / 38553

Project Name:

ARDERSIER PORT
S23053

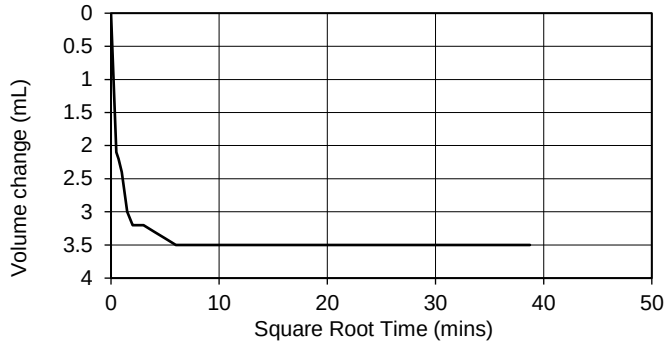
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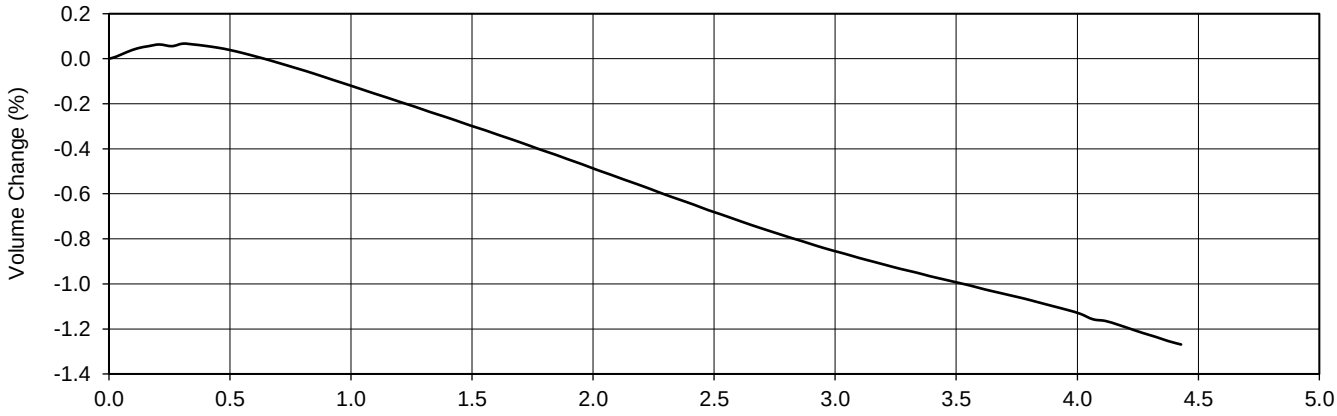
UKAS TESTING 1982

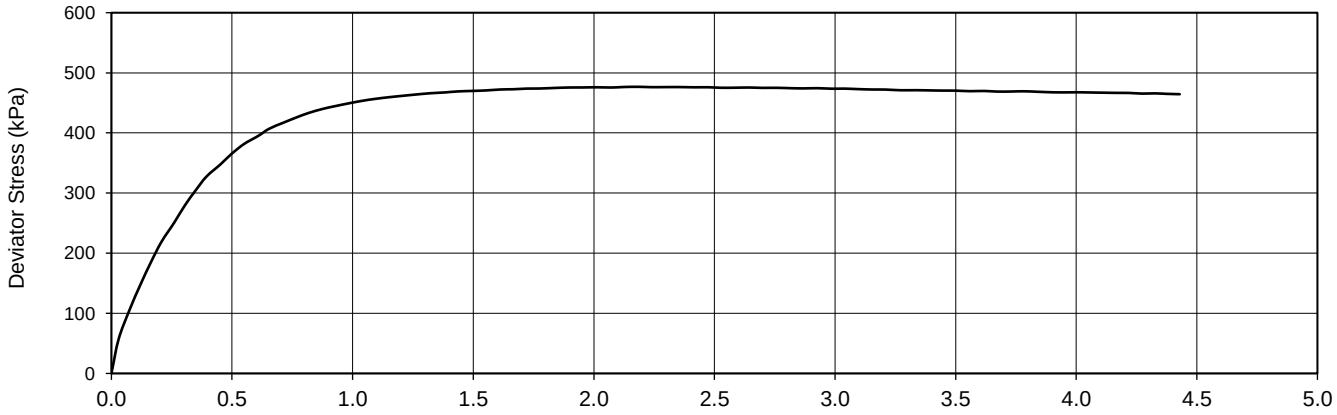
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP05	**Stage No 3**
Depth (m): 10.00-10.45	







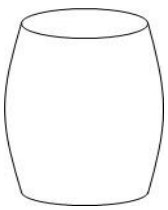
Checked and Approved by P Heritage P Heritage - Project Manager 16/10/2023	Project Number: **GEO / 38553** Project Name: **ARDERSIER PORT** **S23053**	GEOLABS UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP05
Depth (m):	16.50-16.95

Description:
Brownish grey slightly silty fine to medium SAND with rare shell fragments and fine gravel.

SPECIMEN DETAILS				
Depth within original sample		NA	Orientation within original sample: NA	
Remarks		Remoulded to a target 10% water content and a target dry density of 1.304Mg/m³		
TEST DETAILS				
Specimen Type and Preparation		B (Remoulded)		
Cell Preparation		Checks performed in accordance with Clause 3.5		
Specimen Number		**Multistage**		
Initial Diameter	*mm*	70.22		
Initial Length	*mm*	139.49		
Initial Water Content	*%*	10.4		
Initial Wet Density	*Mg/m³*	1.43		
Drainage Conditions		One end and radial boundary		
SATURATION STAGE		Method: Clause 5.2		
Final Cell Pressure	*kPa*	655		
Final Pore Pressure	*kPa*	642		
Final Pore Pressure Parameter B		1.00		
Duration	*day(s)*	7		
CONSOLIDATION STAGE		**Stage No 1**	**Stage No 2**	**Stage No 3**
Cell Pressure	*kPa*	655	710	820
Back Pressure	*kPa*	600	600	600
Effective Pressure	*kPa*	55	110	220
Final Pore Pressure	*kPa*	600	600	600
Final Pore Pressure Dissipation	*%*	100	100	100
Duration	*day(s)*	1	1	1
SHEARING STAGE				
Cell Pressure	*kPa*	655	710	820
Rate of Axial Displacement	*mm/min*	0.015	0.020	0.020
Initial Pore Pressure	*kPa*	600	600	600
Initial Effective Stress	*kPa*	55	110	220
CONDITIONS AT FAILURE	*criteria*	Maximum deviator stress		
Pore Pressure	*kPa*	599	598	599
Minor Effective Principal Stress	*kPa*	56	112	221
Deviator Stress	*kPa*	121	288	601
Major Effective Principal Stress	*kPa*	177	400	822
Volume Change	*mL*	3.60	-0.20	-3.31
Volumetric Strain	*%*	0.7	0.0	-0.7
Axial Strain	*%*	5.0	7.1	7.3
Membrane & filter correction applied to Deviator Stress	*kPa*	6	6	6
Duration	*day(s)*	1	1	1
Final Water Content	*%*	29.5		
Final Wet Density	*Mg/m³*	1.79		
EFFECTIVE STRESS PARAMETERS				
Cohesion	*kPa*	0		
Angle of Shear Resistance	*degrees*	35		
FAILURE SKETCH				

Checked and Approved by

P. Heritage

P Heritage - Project Manager
16/10/2023

Project Number:

GEO / 38553

Project Name:

ARDERSIER PORT
S23053

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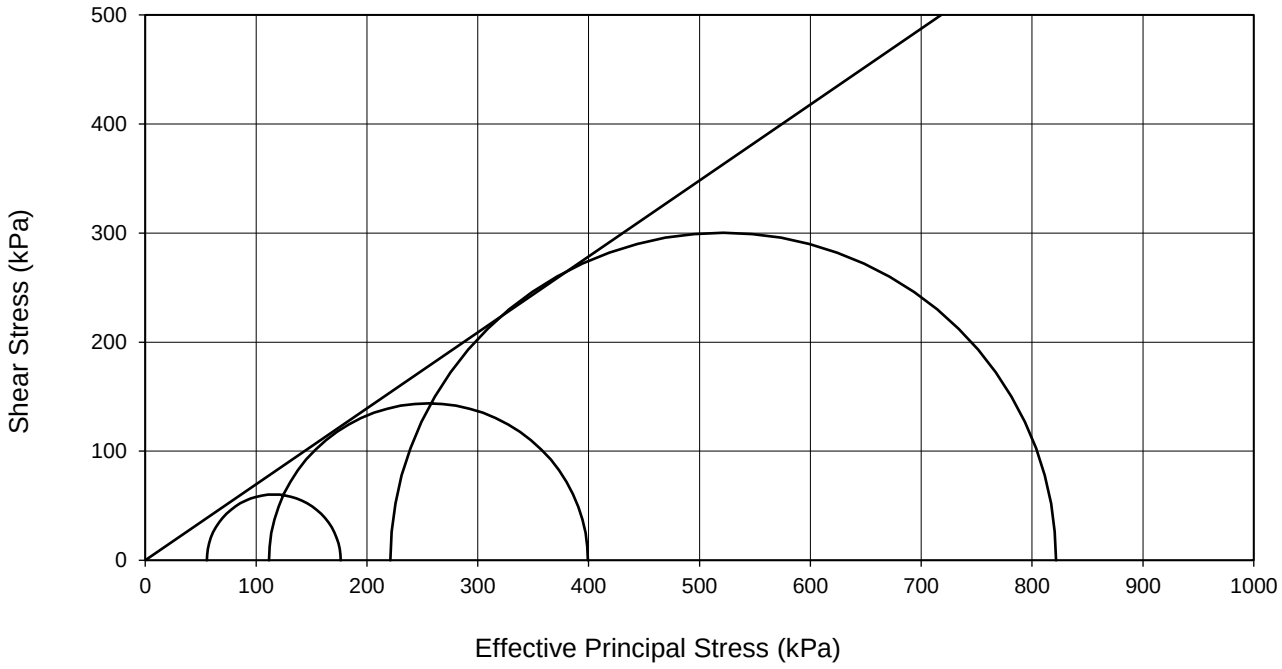
UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP05
Depth (m):	16.50-16.95

Description:
Brownish grey slightly silty fine to medium SAND with rare shell fragments and fine gravel.



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Project Number:

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Project Name:

ARDERSIER PORT
S23053

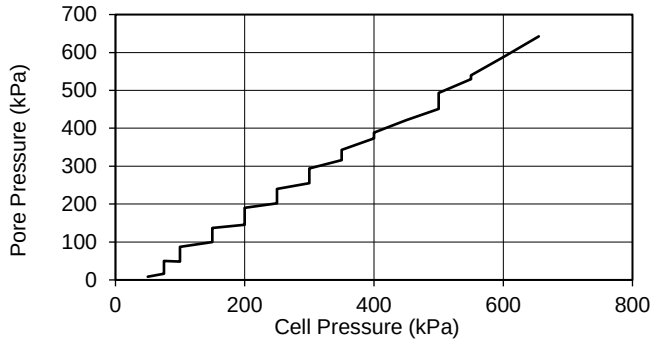
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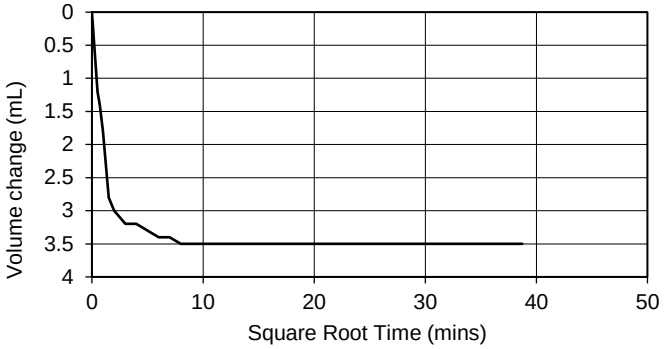
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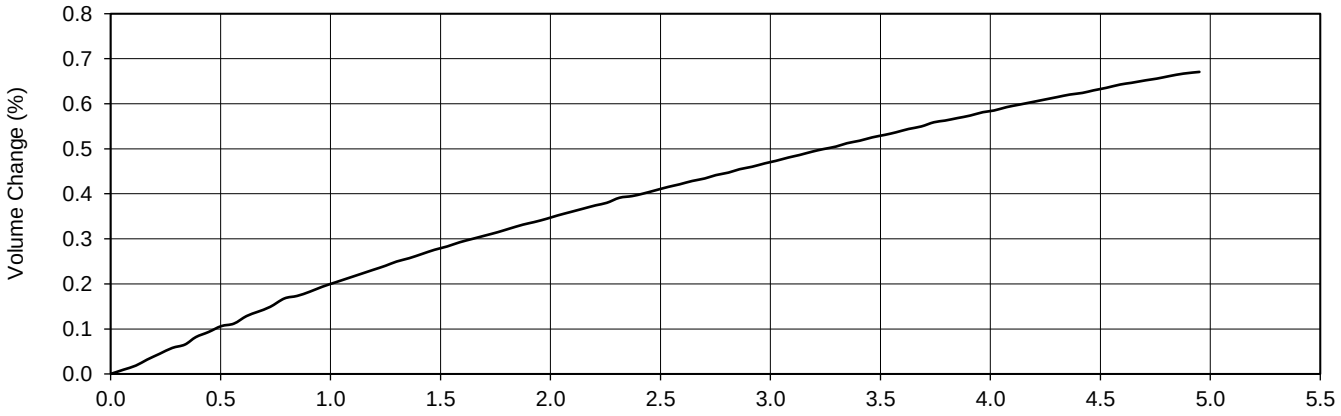
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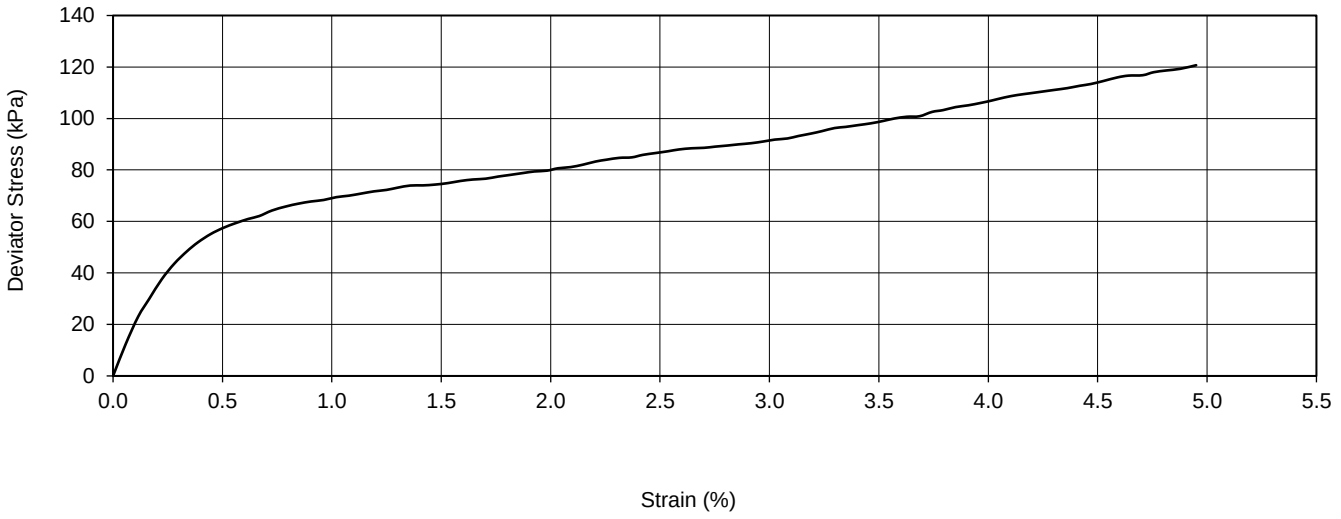
Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP05	**Stage No 1**
Depth (m): 16.50-16.95	









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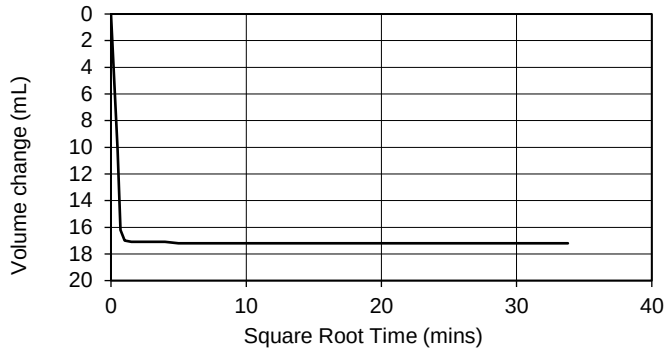
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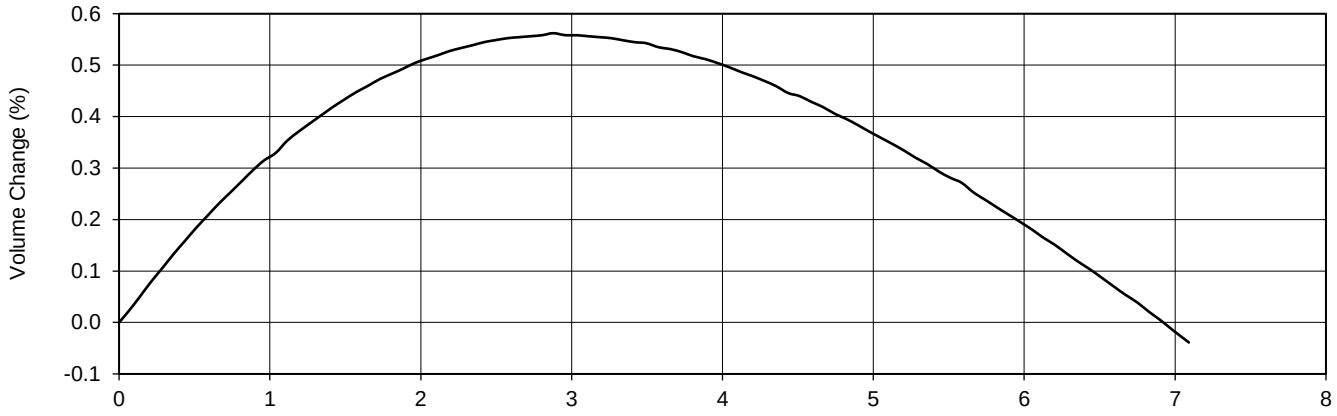
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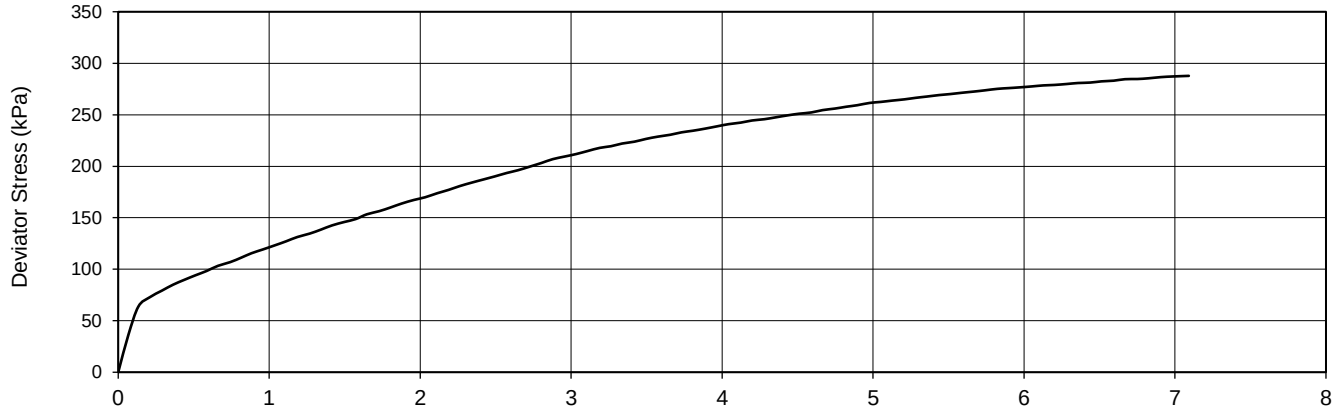
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP05	**Stage No 2**
Depth (m): 16.50-16.95	







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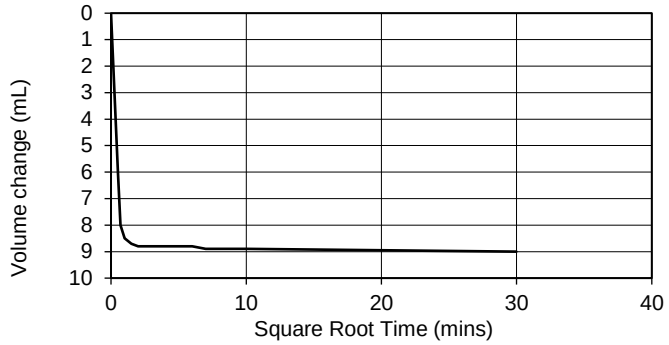
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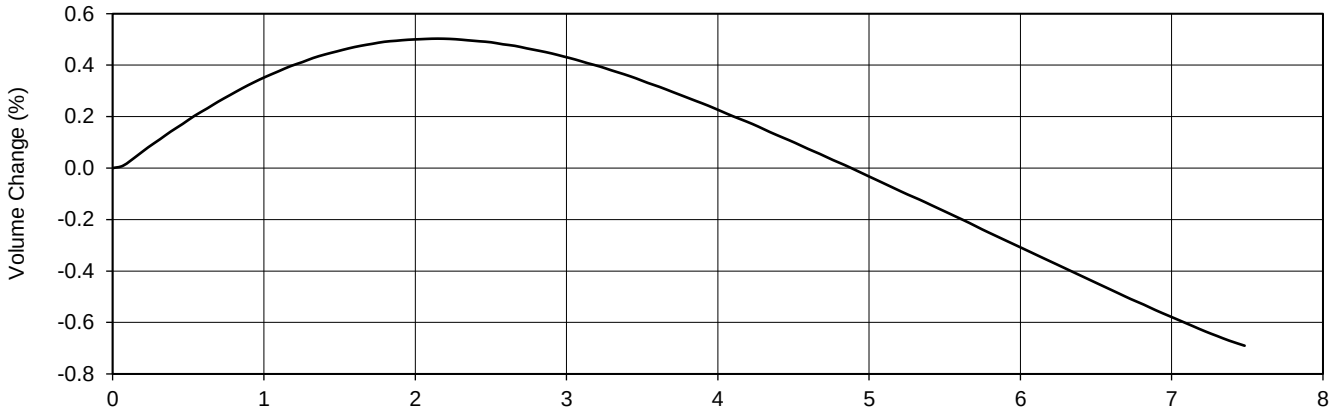
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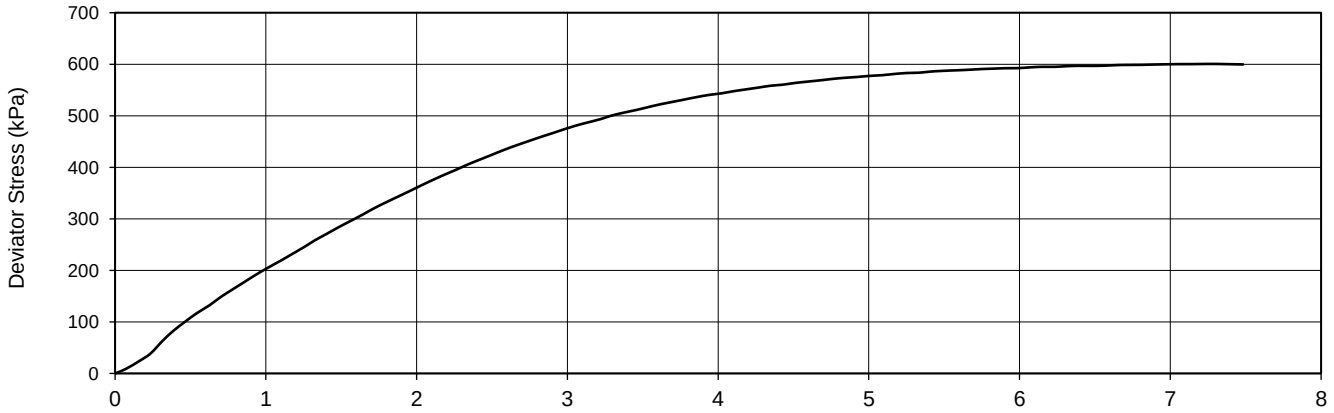
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP05	**Stage No 3**
Depth (m): 16.50-16.95	







Checked and Approved by

P. Heritage

P Heritage - Project Manager
16/10/2023

Project Number:

GEO / 38553

Project Name:

ARDERSIER PORT
S23053

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Solmek
12 Yarm Road
Stockton-on-Tees
TS18 3NA

03 October 2023
Report No : GEO/38551/01

For the attention of Mr A Cutts

Date samples received	08/08/2023
Date written instructions received	28/07/2023
Date testing commenced	09/08/2023
Date of sample disposal	**31/10/2023**

Our ref **GEO / 38551**
Your Ref **S23053**

Project **ARDERSIER PORT**

Further to your instructions we have pleasure in enclosing the results of the tests you requested in the attached figures.

LABORATORY TEST REPORT

Item No	Test Quantity	Description
1	2	Maximum & Minimum Density
2	1	Shear Strength by Direct Shear
3	1	Isotropic Consolidated Drained Multistage Triaxial Compression (CIDM) - Remoulded

Any opinions or interpretations expressed herein are outside the scope of UKAS accreditation. All results contained in this report are provisional unless signed by an approved signatory. The results contained in this report relate only to samples received in the laboratory and are tested 'as received' unless otherwise stated. This report should not be reproduced, except in full, without the written approval of the laboratory. The results reported are applicable only to the test items received by the laboratory.

All the necessary data required by the documented test procedures has been recorded and will be stored for a period of not less than 6 years. This data will be issued to yourselves at your request. All samples will be disposed of after the date shown above. Written confirmation will be required to retain the samples beyond this period and a storage charge may be applied.

We trust that the above meets your requirements and should you require any further information or assistance, please do not hesitate to contact us.

Yours faithfully
on behalf of **GEOLABS Limited**

J Sturges
Operations Manager

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP06
Depth (m)	19.50-19.95
Sample Type	B

Description:

Brownish grey slightly silty fine to medium SAND with rare fine to medium gravel.

Percentage of material retained on the 2 mm test sieve	0.1	%

The fines content was measured to be 4.5 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density 1.59 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.587	g/cm³
Maximum dry density **after** surcharge application	1.594	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.584	g/cm³
Maximum dry density **after** surcharge application	1.591	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density 1.17 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.12	g
	Run		
Mass of sand	1	517.85	g
	2	520.89	g
	3	520.80	g
	4	520.52	g
	5	519.87	g
	Minimum	519.99	g

Checked and Approved by



J Powell - Technical Consultant
17/08/2023

Project Number:

38551

Project Name:

ARDERSIER PORT
S23053

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP06
Depth (m)	22.50-22.95
Sample Type	B

Description:

Brownish grey slightly silty fine to medium SAND with frequent fine to medium gravel and shell fragments.

Percentage of material retained on the 2 mm test sieve	10.2	%

The fines content was measured to be 5.3 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density 1.62 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.594	g/cm³
Maximum dry density **after** surcharge application	1.614	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.605	g/cm³
Maximum dry density **after** surcharge application	1.617	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density 1.20 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.12	g
	Run		
Mass of sand	1	531.95	g
	2	533.99	g
	3	533.02	g
	4	535.19	g
	5	534.78	g
	Minimum	533.79	g

Checked and Approved by



J Powell - Technical Consultant
17/08/2023

Project Number:

38551

Project Name:

ARDERSIER PORT
S23053

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BS EN ISO 17892 10:2018

DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

Borehole No	BHSP06
Depth (m)	22.50-22.95
Sample Type	B

Description:

Brownish grey slightly silty gravelly fine to medium SAND with occasional shell fragments. Gravel is fine to medium.

Specimen Details

Depth within original sample	*m*	n/a
Orientation within original sample		n/a
Test condition		Submerged
Preparation		< 2 mm material remoulded at existing water content to a relative density of 45% [1]
Particle density	*Mg/m³*	2.65 (assumed)

Specimen Number		**1**	**2**	**3**
Length	*mm*	59.78	59.78	59.78
Width	*mm*	59.77	59.77	59.77
Height	*mm*	25.23	25.43	25.43
Initial water content	*%*	22.0	22.0	22.0
Initial bulk density	*Mg/m³*	1.66	1.65	1.65
Initial dry density	*Mg/m³*	1.36	1.35	1.35
Initial voids ratio		0.943	0.958	0.958
Degree of Saturation	*%*	61.8	60.8	60.8

Shearing Stage

Normal stress	*kPa*	75	150	300
Peak Conditions:				
Rate of horizontal displacement	*mm/min*	0.4	0.4	0.4
Maximum shear stress	*kPa*	58.7	117.7	232.9
Horizontal displacement at MSS	*mm*	2.6	2.8	3.4
Vertical Displacement at Peak	*mm*	-0.19	-0.23	-0.18
Final water content	*%*	24.4	22.9	23.1
Duration	*day(s)*	1	1	1

Shear Strength Parameters

		Peak Condition
Apparent Cohesion	*kPa*	**1**
Angle of Shearing Resistance	*degrees*	**37.5**

Notes: *[1] Maximum dry density = 1.62 mg/m³ and minimum dry density = 1.20 Mg/m³*

Tested by JJR
Checked and Approved by



C F Wallace - Technical Director
19/09/2023

Project Number:

GEO / 38551

Project Name:

ARDERSIER PORT
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DIRECT SHEAR TEST – SHEARBOX

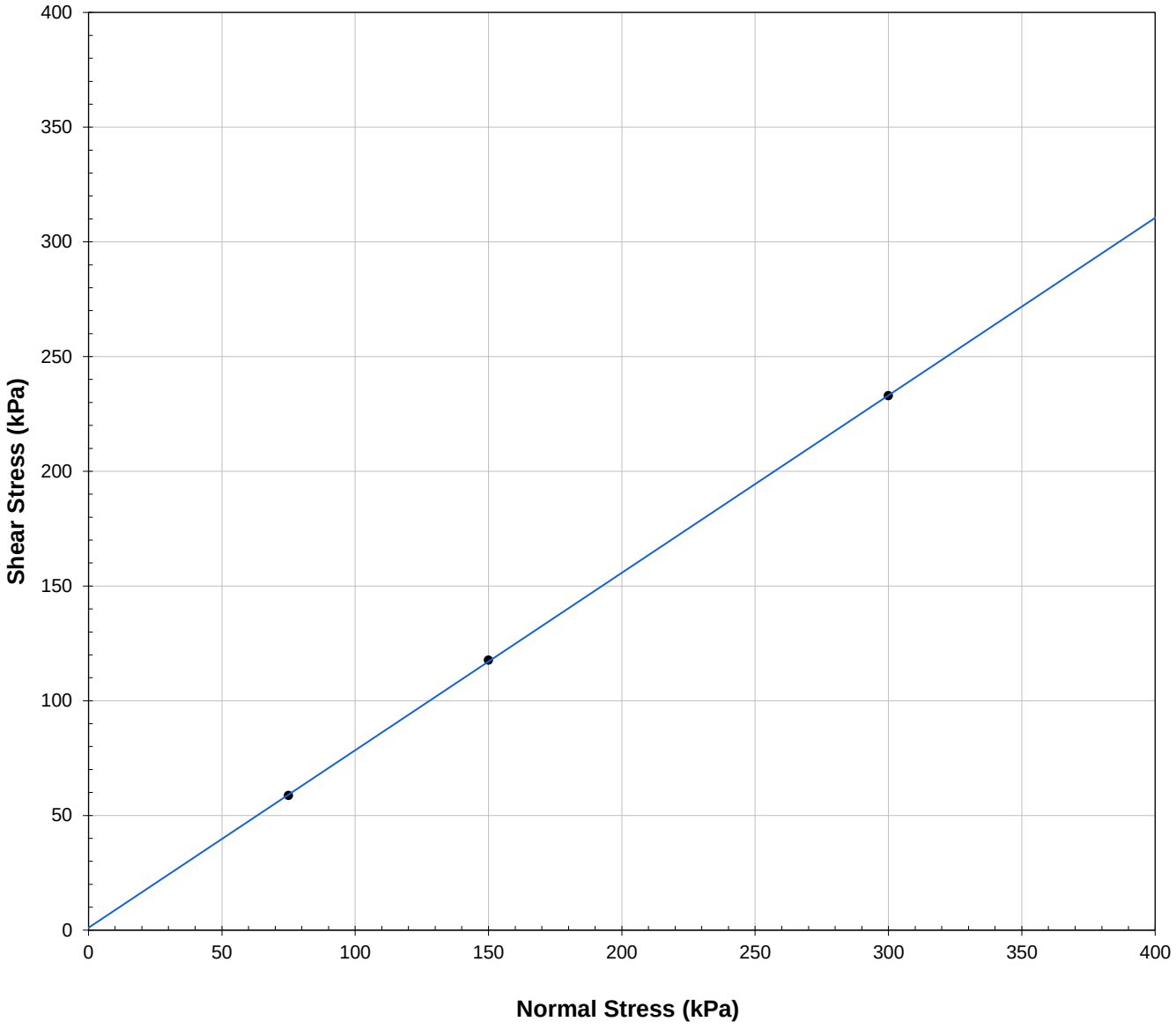
(small shearbox apparatus)

Borehole No	BHSP06
Depth (m)	22.50-22.95
Sample Type	B

Description:

Brownish grey slightly silty gravelly fine to medium SAND with occasional shell fragments. Gravel is fine to medium.

Shear Stress v Normal Stress



Peak: **c' = 1**

Φ' = 37.5

Tested by JJR
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C F Wallace - Technical Director
19/09/2023

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DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

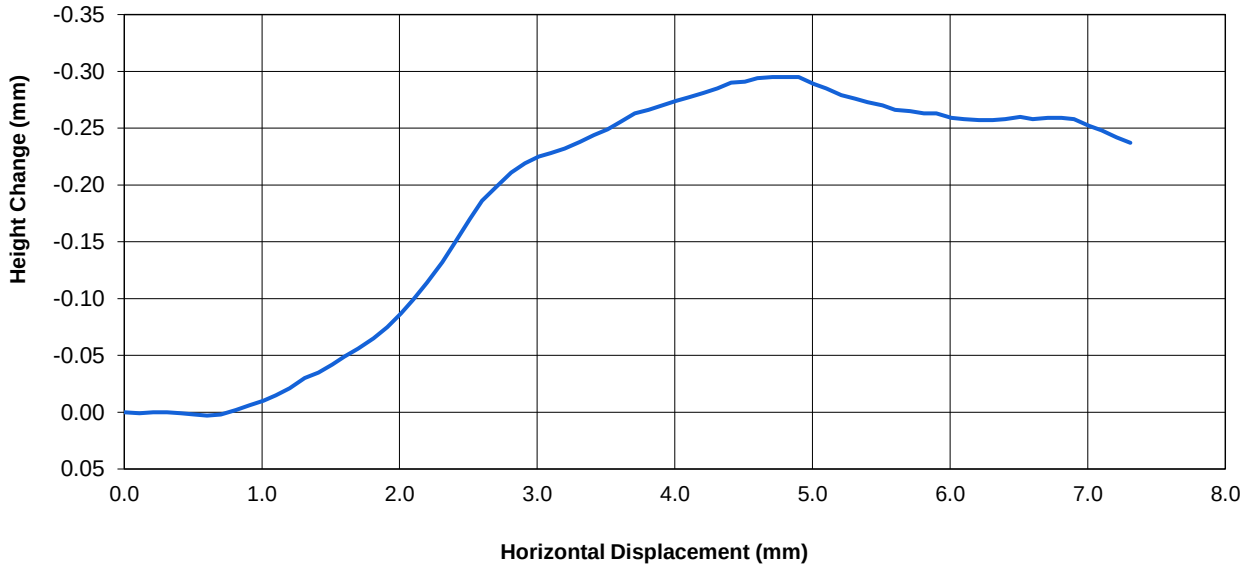
Borehole No	BHSP06
Depth (m)	22.50-22.95
Sample Type	B

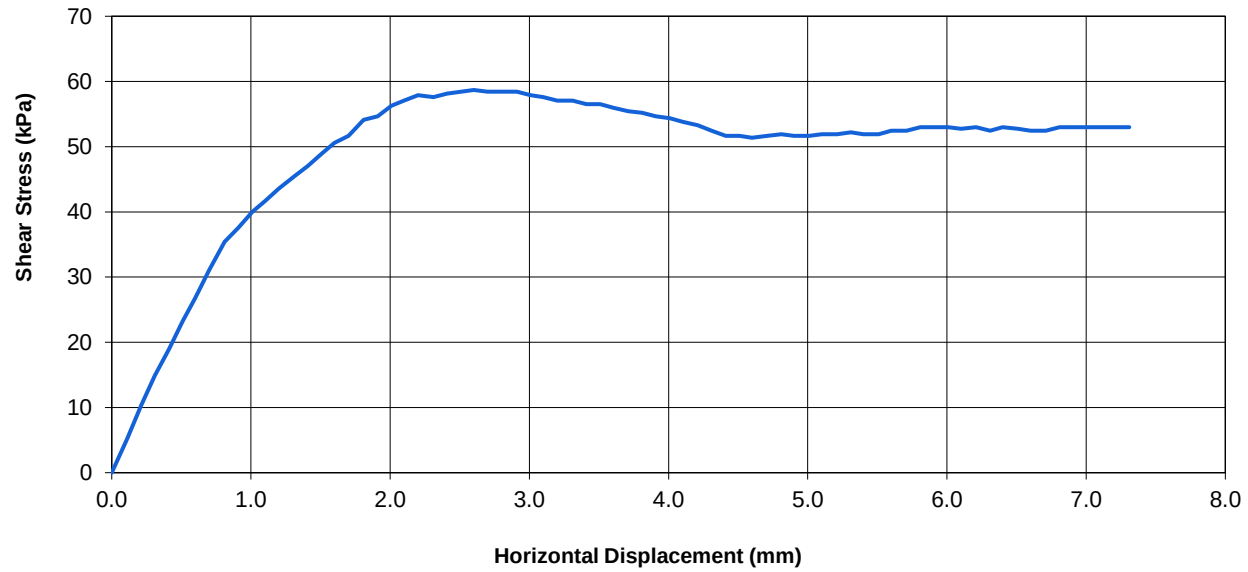
Description:

Brownish grey slightly silty gravelly fine to medium SAND with occasional shell fragments. Gravel is fine to medium.

Specimen: 1

Shear Stage





Tested by JJR
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DIRECT SHEAR TEST – SHEARBOX

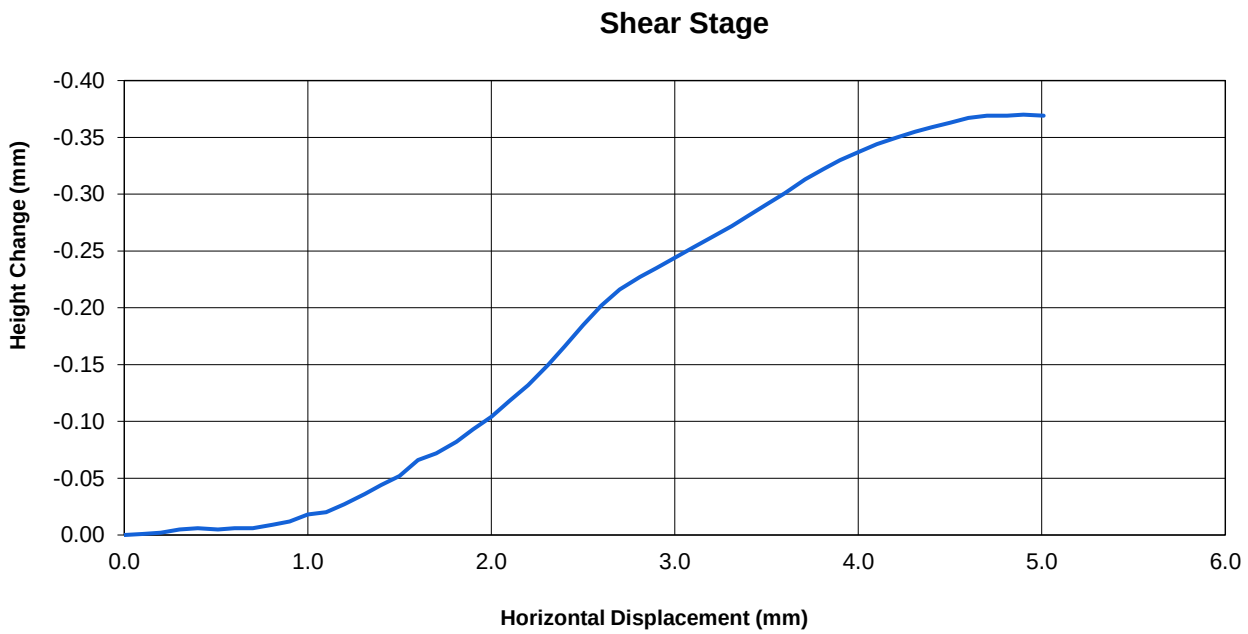
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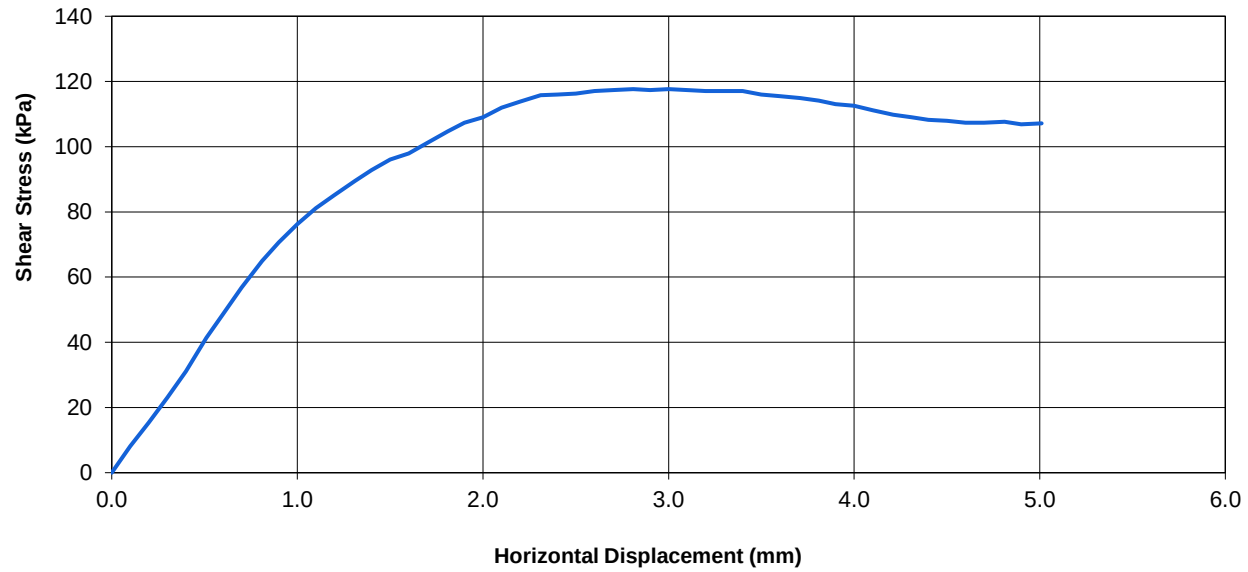
Borehole No	BHSP06
Depth (m)	22.50-22.95
Sample Type	B

Description:

Brownish grey slightly silty gravelly fine to medium SAND with occasional shell fragments. Gravel is fine to medium.

Specimen: 2





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Project Name:

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DIRECT SHEAR TEST – SHEARBOX

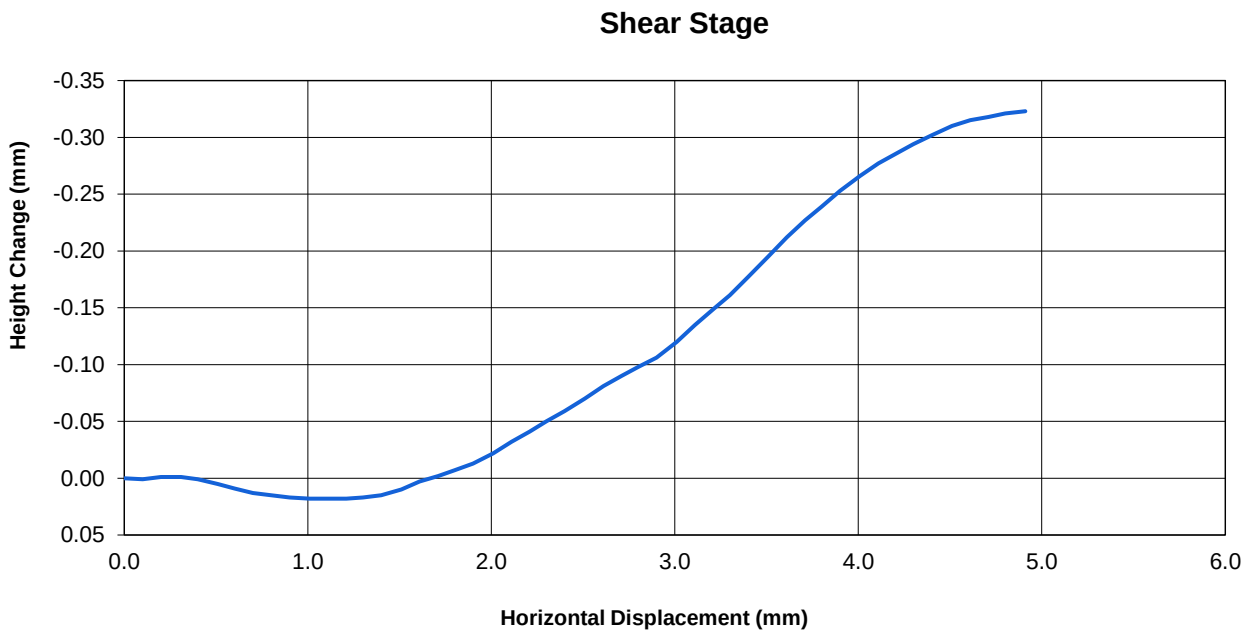
(small shearbox apparatus)

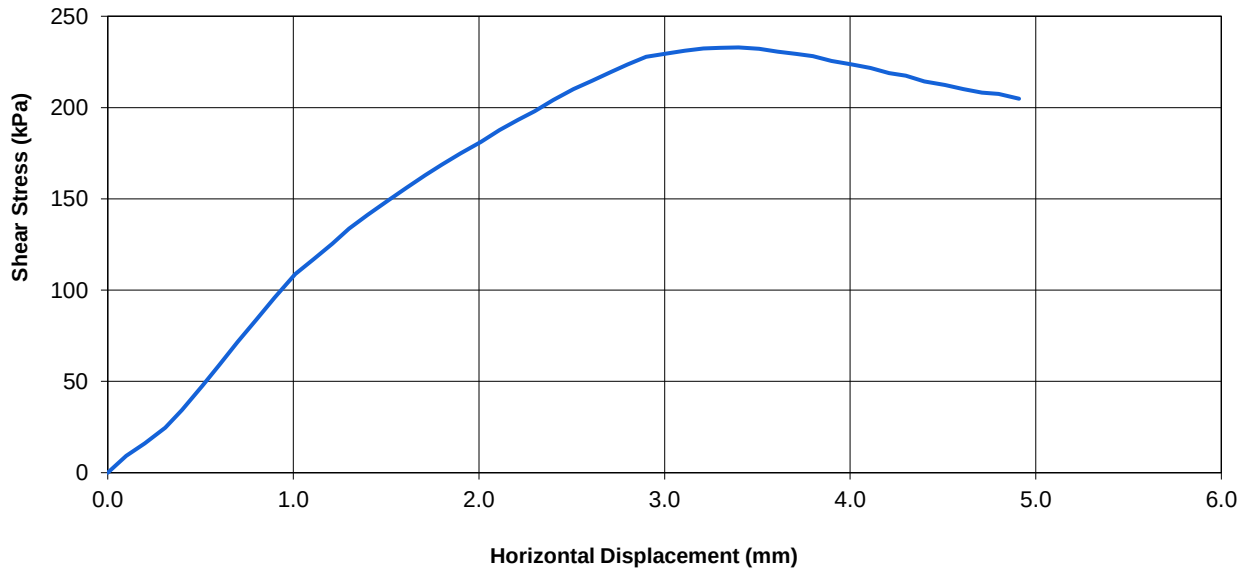
Borehole No	BHSP06
Depth (m)	22.50-22.95
Sample Type	B

Description:

Brownish grey slightly silty gravelly fine to medium SAND with occasional shell fragments. Gravel is fine to medium.

Specimen: 3





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19/09/2023

Project Number:

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Project Name:

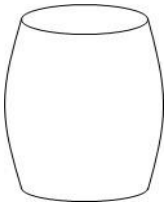
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BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP06
Depth (m):	19.50-19.95

Description: Brownish grey slightly silty fine to medium SAND with rare fine to medium gravel. .

SPECIMEN DETAILS				
Depth within original sample		20 mm from top		
Orientation within original sample		Vertical		
TEST DETAILS				
Specimen Type and Preparation		B (Remoulded)		
Cell Preparation		Checks performed in accordance with Clause 3.5		
Specimen Number		**Multistage**		
Initial Diameter	*mm*	70.22		
Initial Length	*mm*	139.49		
Initial Water Content	*%*	10.4		
Initial Wet Density	*Mg/m³*	1.48		
Drainage Conditions		One end and radial boundary		
SATURATION STAGE		Method: Clause 5.2		
Final Cell Pressure	*kPa*	665		
Final Pore Pressure	*kPa*	656		
Final Pore Pressure Parameter B		0.99		
Duration	*day(s)*	6		
CONSOLIDATION STAGE		**Stage No 1**	**Stage No 2**	**Stage No 3**
Cell Pressure	*kPa*	665	730	800
Back Pressure	*kPa*	600	600	600
Effective Pressure	*kPa*	65	130	200
Final Pore Pressure	*kPa*	600	600	600
Final Pore Pressure Dissipation	*%*	100	100	100
Duration	*day(s)*	1	1	1
SHEARING STAGE				
Cell Pressure	*kPa*	665	730	800
Rate of Axial Displacement	*mm/min*	0.015	0.021	0.016
Initial Pore Pressure	*kPa*	600	600	600
Initial Effective Stress	*kPa*	65	130	200
CONDITIONS AT FAILURE	*criteria*	Maximum deviator stress		
Pore Pressure	*kPa*	600	600	600
Minor Effective Principal Stress	*kPa*	65	130	200
Deviator Stress	*kPa*	134	297	595
Major Effective Principal Stress	*kPa*	199	427	795
Volume Change	*mL*	1.40	1.15	1.29
Volumetric Strain	*%*	0.3	0.2	0.2
Axial Strain	*%*	2.6	3.2	4.8
Membrane & filter correction applied to Deviator Stress	*kPa*	6	5	5
Duration	*day(s)*	1	1	1
Final Water Content	*%*	31.6		
Final Wet Density	*Mg/m³*	1.80		
EFFECTIVE STRESS PARAMETERS				
Cohesion	*kPa*	0		
Angle of Shear Resistance	*degrees*	35.5		
FAILURE SKETCH				

Checked and Approved by

P Heritage

P Heritage - Project Manager
02/10/2023

Project Number:

GEO / 38551

Project Name:

ARDERSIER PORT
S23053

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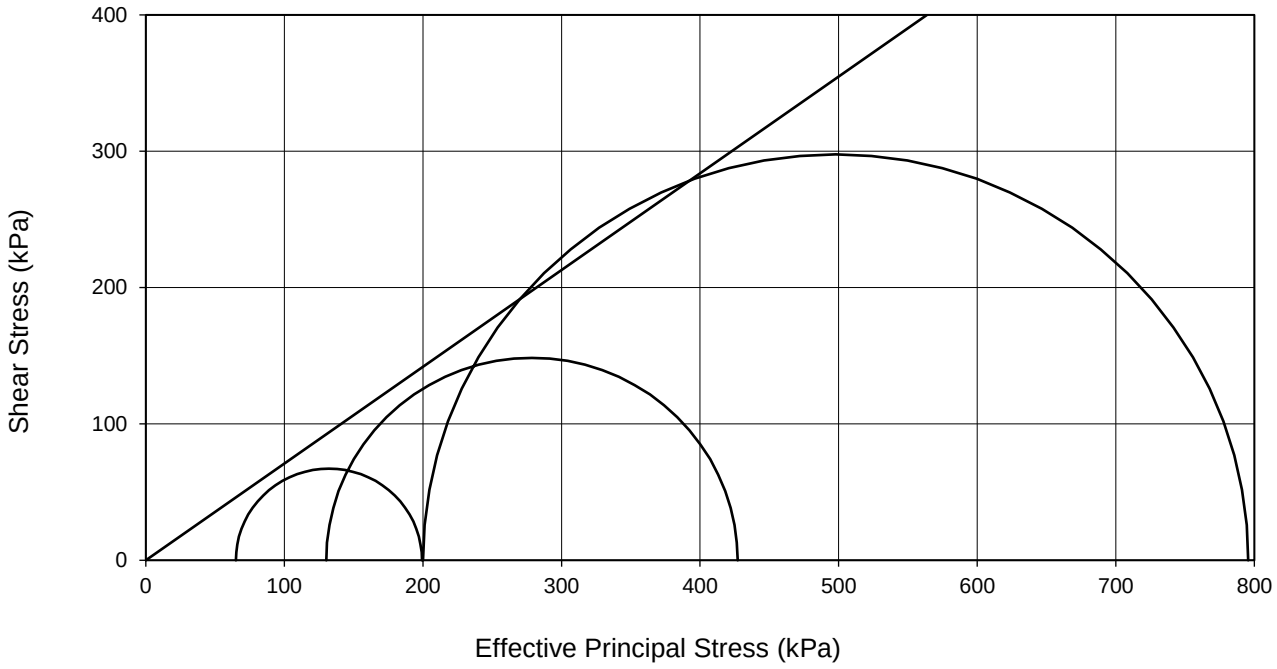
UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP06
Depth (m):	19.50-19.95

Description:
Brownish grey slightly silty fine to medium SAND with rare fine to medium gravel. .



Checked and Approved by

P. Heritage

P Heritage - Project Manager
02/10/2023

Project Number:

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Project Name:

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S23053

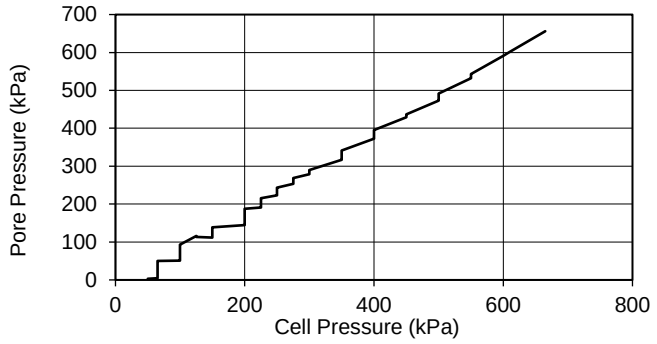
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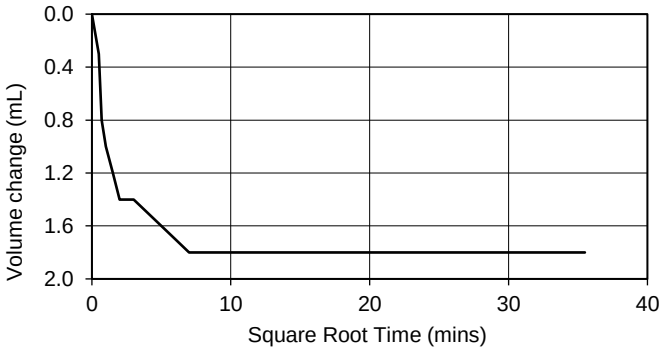
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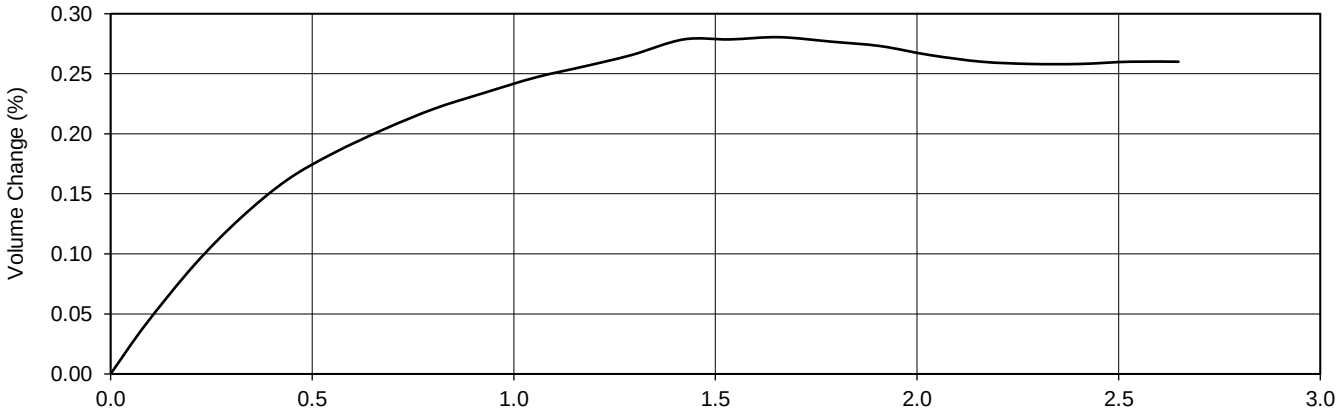
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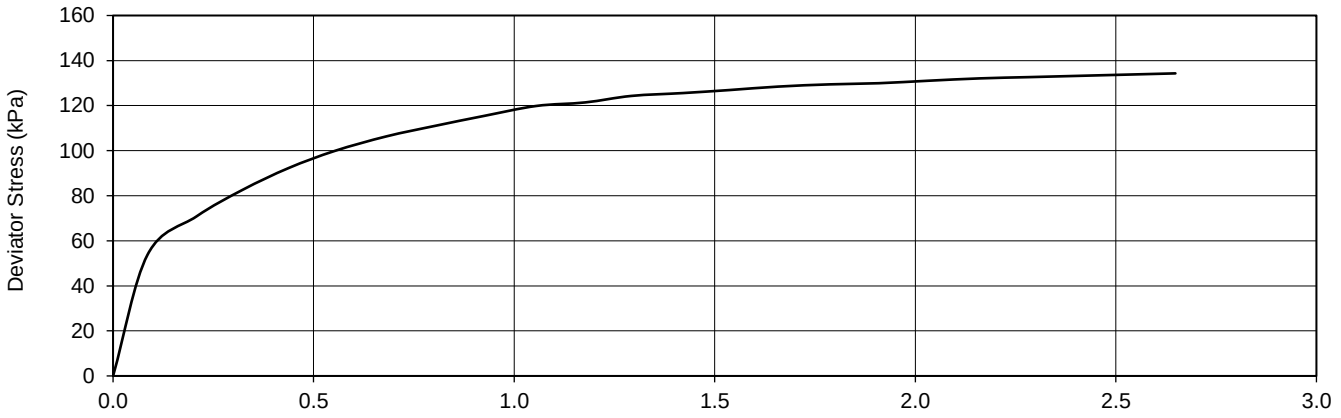
Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP06	**Stage No 1**
Depth (m): 19.50-19.95	







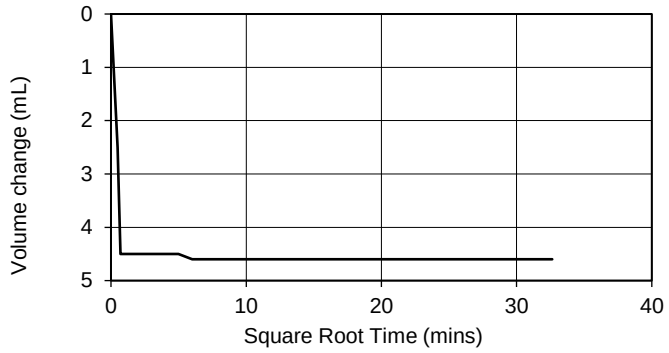


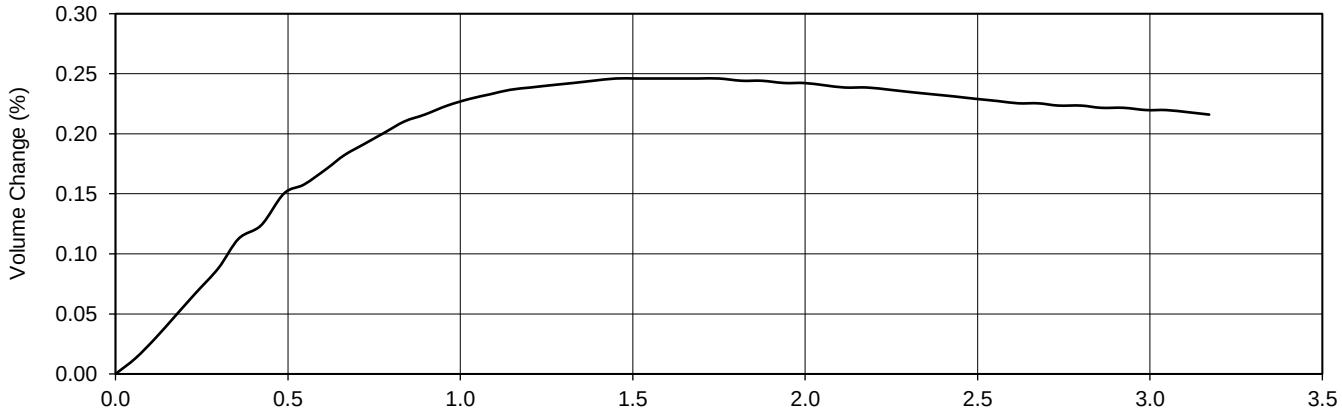
Checked and Approved by P Heritage P Heritage - Project Manager 02/10/2023	Project Number: **GEO / 38551** Project Name: **ARDERSIER PORT** **S23053**	GEOLABS UKAS TESTING 1982

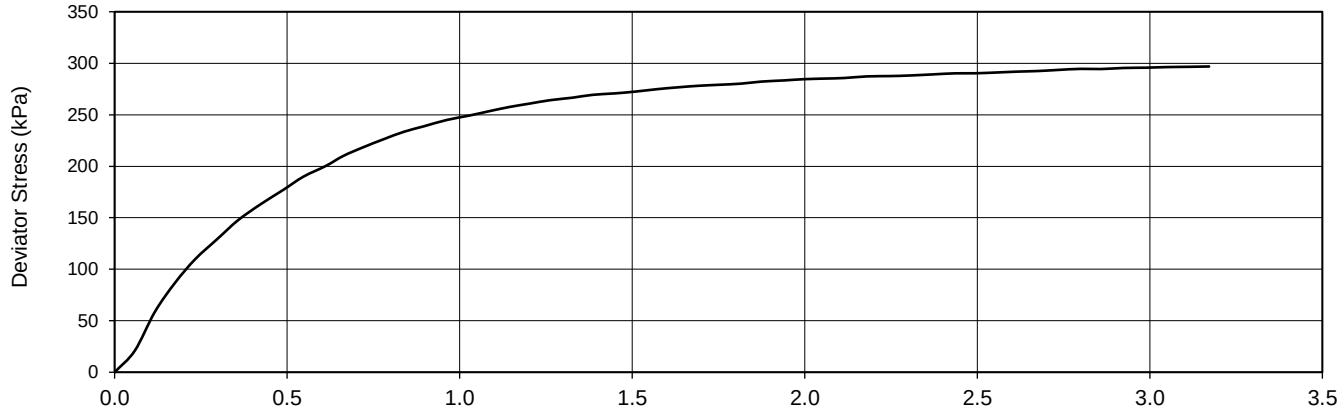
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP06	**Stage No 2**
Depth (m): 19.50-19.95	







Strain (%)

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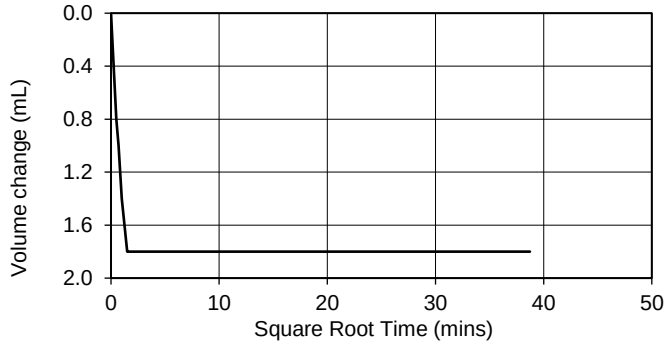
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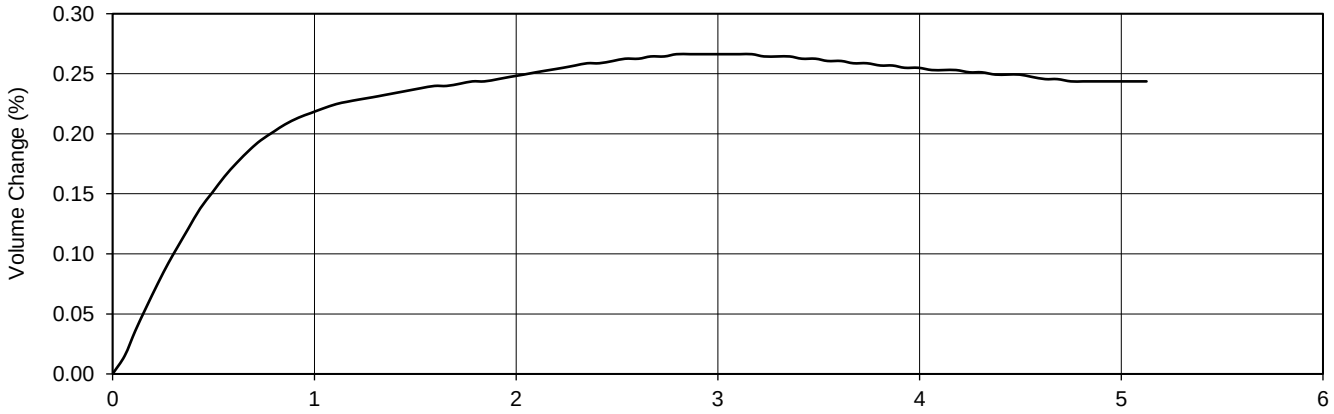
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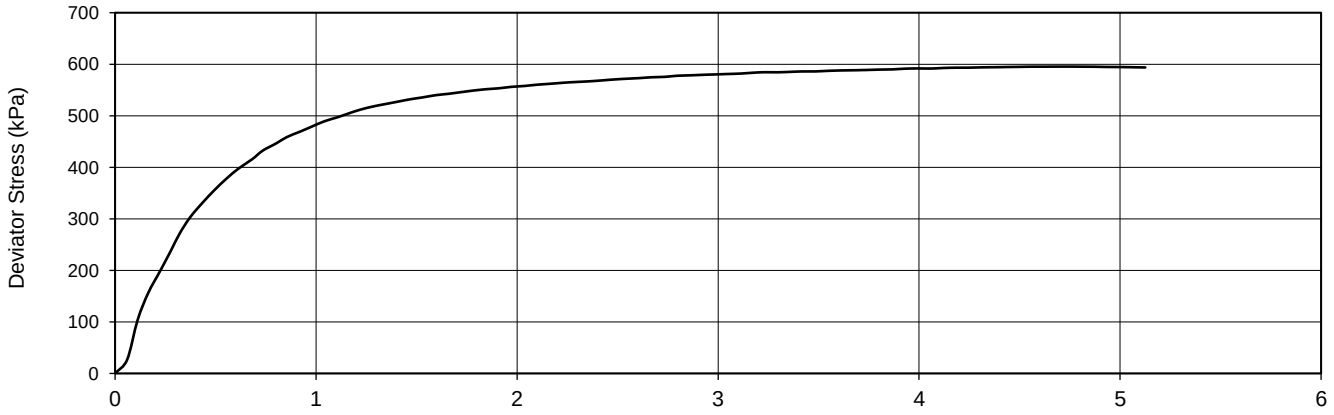
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP06	**Stage No 3**
Depth (m): 19.50-19.95	







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P Heritage

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Project Number:

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ARDERSIER PORT
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Solmek
12 Yarm Road
Stockton-on-Tees
TS18 3NA

03 October 2023
Report No : GEO/38552/01

For the attention of Mr A Cutts

Date samples received	27/07/2023
Date written instructions received	28/07/2023
Date testing commenced	29/07/2023
Date of sample disposal	**31/10/2023**

Our ref **GEO / 38552**
Your Ref **S23053**

Project **ARDERSIER PORT**

Further to your instructions we have pleasure in enclosing the results of the tests you requested in the attached figures.

LABORATORY TEST REPORT

Item No	Test Quantity	Description
1	4	Maximum & Minimum Density
2	2	Shear Strength by Direct Shear
3	2	Isotropic Consolidated Drained Multistage Triaxial Compression (CIDM) - Remoulded

Any opinions or interpretations expressed herein are outside the scope of UKAS accreditation. All results contained in this report are provisional unless signed by an approved signatory. The results contained in this report relate only to samples received in the laboratory and are tested 'as received' unless otherwise stated. This report should not be reproduced, except in full, without the written approval of the laboratory. The results reported are applicable only to the test items received by the laboratory.

All the necessary data required by the documented test procedures has been recorded and will be stored for a period of not less than 6 years. This data will be issued to yourselves at your request. All samples will be disposed of after the date shown above. Written confirmation will be required to retain the samples beyond this period and a storage charge may be applied.

We trust that the above meets your requirements and should you require any further information or assistance, please do not hesitate to contact us.

Yours faithfully
on behalf of **GEOLABS Limited**

J Sturges
Operations Manager

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP07
Depth (m)	5.00-5.45
Sample Type	B

Description:

Light brown fine to medium SAND with rare fine gravel.

Percentage of material retained on the 2 mm test sieve 0.2 %

The fines content was measured to be 1.1 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density **1.60** **g/cm³**

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.591	g/cm³
Maximum dry density **after** surcharge application	1.602	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.592	g/cm³
Maximum dry density **after** surcharge application	1.605	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density **1.27** **g/cm³**

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.11	g
	Run		
Mass of sand	1	561.11	g
	2	562.00	g
	3	562.89	g
	4	562.93	g
	5	561.87	g
	Minimum	562.16	g

Checked and Approved by



J Powell - Technical Consultant
22/08/2023

Project Number:

38552

Project Name:

ARDERSIER PORT
S23053

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP07
Depth (m)	7.00-7.45
Sample Type	B

Description:

Light brown gravelly fine to medium SAND.

Percentage of material retained on the 2 mm test sieve	7.7	%

The fines content was measured to be 2.7 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density — 1.58 g/cm³

(after surcharge application)

Determination No 1		
Maximum dry density **before** surcharge application	1.573	g/cm³
Maximum dry density **after** surcharge application	1.580	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	
Determination No 2		
Maximum dry density **before** surcharge application	1.576	g/cm³
Maximum dry density **after** surcharge application	1.585	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density — 1.22 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.12	g
	Run		
Mass of sand	1	543.05	g
	2	544.60	g
	3	542.86	g
	4	542.54	g
	5	542.99	g
	Minimum	543.21	g

Checked and Approved by

J Powell - Technical Consultant
22/08/2023

Project Number: **38552**

Project Name: **ARDERSIER PORT S23053**

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP07
Depth (m)	10.50-10.95
Sample Type	B

Description:

Greyish brown fine to medium SAND with rare fine to medium gravel and shell fragments.

Percentage of material retained on the 2 mm test sieve	0.3	%

The fines content was measured to be 3.1 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density — 1.56 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.546	g/cm³
Maximum dry density **after** surcharge application	1.557	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.552	g/cm³
Maximum dry density **after** surcharge application	1.564	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density — 1.19 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.12	g
	Run		
Mass of sand	1	529.66	g
	2	530.03	g
	3	529.95	g
	4	530.99	g
	5	529.86	g
	Minimum	530.10	g

Checked and Approved by

J Powell - Technical Consultant
22/08/2023

Project Number: **38552**

Project Name: **ARDERSIER PORT S23053**

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP07
Depth (m)	15.00-15.45
Sample Type	B

Description:

Brownish grey fine to medium SAND with frequent gravel and shell fragments.

Percentage of material retained on the 2 mm test sieve	10.6	%

The fines content was measured to be 2.5 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density 1.55 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.548	g/cm³
Maximum dry density **after** surcharge application	1.560	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.542	g/cm³
Maximum dry density **after** surcharge application	1.548	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density 1.21 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.11	g
	Run		
Mass of sand	1	533.47	g
	2	536.90	g
	3	536.35	g
	4	536.28	g
	5	535.06	g
	Minimum	535.61	g

Checked and Approved by



J Powell - Technical Consultant
22/08/2023

Project Number:

38552

Project Name:

ARDERSIER PORT
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BS EN ISO 17892 10:2018

DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

Borehole No	BHSP07
Depth (m)	7.00-7.45
Sample Type	B

Description:

Light brown gravelly fine to medium SAND.

Specimen Details

Depth within original sample	*m*	n/a
Orientation within original sample		n/a
Test condition		Submerged
Preparation		< 2 mm material remoulded at existing water content to a relative density of 75% [1]
Particle density	*Mg/m³*	2.65 (assumed)

Specimen Number		**1**	**2**	**3**
Length	*mm*	59.78	59.78	59.78
Width	*mm*	59.77	59.77	59.77
Height	*mm*	23.70	23.70	23.62
Initial water content	*%*	20.4	20.4	20.4
Initial bulk density	*Mg/m³*	1.77	1.77	1.78
Initial dry density	*Mg/m³*	1.47	1.47	1.48
Initial voids ratio		0.802	0.802	0.796
Degree of Saturation	*%*	67.5	67.5	68.1

Shearing Stage

Normal stress	*kPa*	40	80	160
Peak Conditions:				
Rate of horizontal displacement	*mm/min*	0.18	0.18	0.18
Maximum shear stress	*kPa*	36.9	56.8	118.7
Horizontal displacement at MSS	*mm*	1.3	5.4	2.8
Vertical Displacement at Peak	*mm*	-0.22	0.32	-0.07
Final water content	*%*	22.1	24.9	23.8
Duration	*day(s)*	1	1	1

Shear Strength Parameters

		Peak Condition
Apparent Cohesion	*kPa*	**6**
Angle of Shearing Resistance	*degrees*	**35.0**

Notes: *[1] Maximum dry density = 1.58 Mg/³ and minimum dry density = 1.22 Mg/m³*

Tested by JJR
Checked and Approved by



C F Wallace - Technical Director
20/09/2023

Project Number:

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DIRECT SHEAR TEST – SHEARBOX

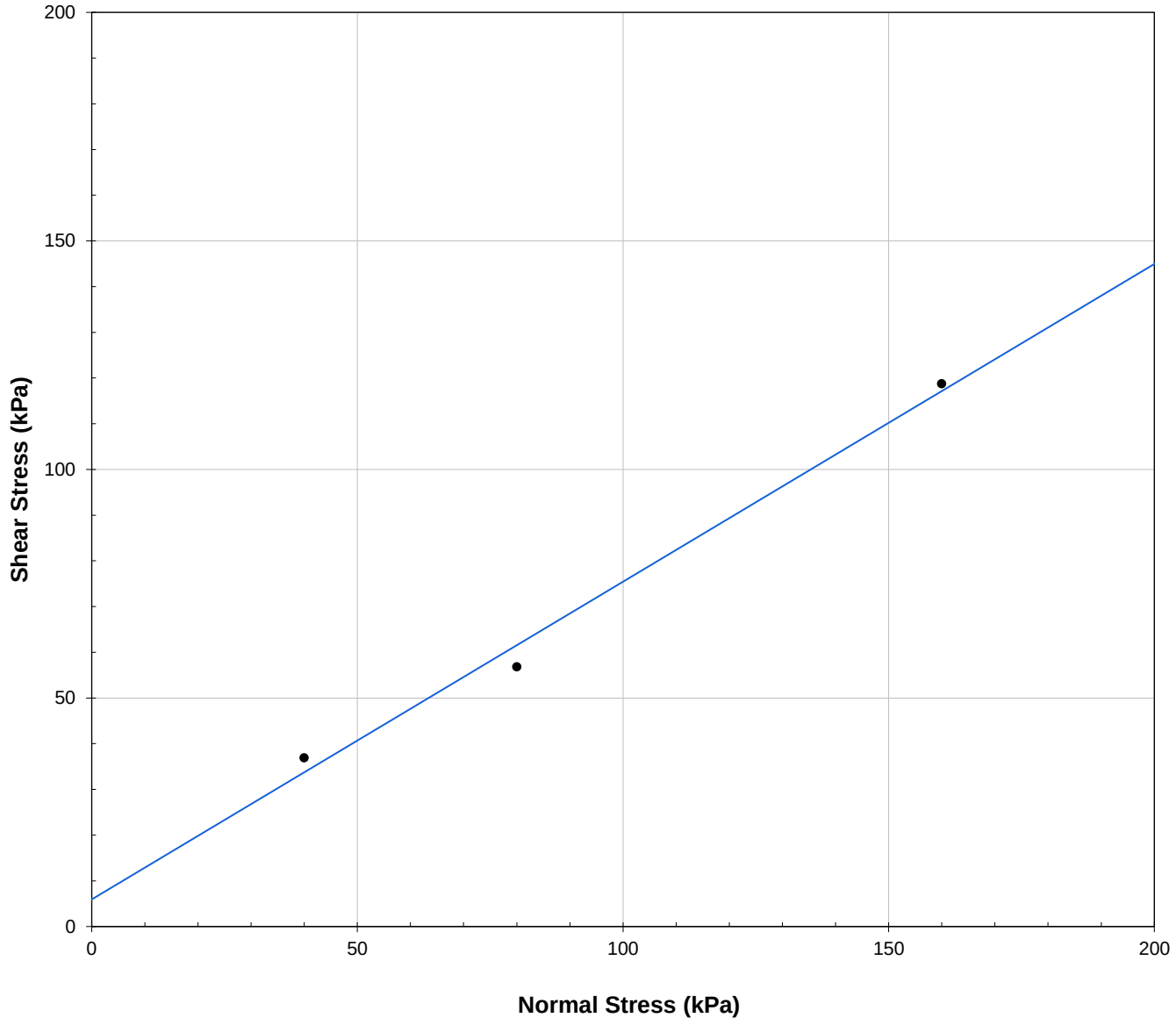
(small shearbox apparatus)

Borehole No	BHSP07
Depth (m)	7.00-7.45
Sample Type	B

Description:

Light brown gravelly fine to medium SAND.

Shear Stress v Normal Stress



Peak: **c' = 6**

Φ' = 35.0

Tested by JJR
Checked and Approved by

C F Wallace - Technical Director
20/09/2023

Project Number:

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DIRECT SHEAR TEST – SHEARBOX

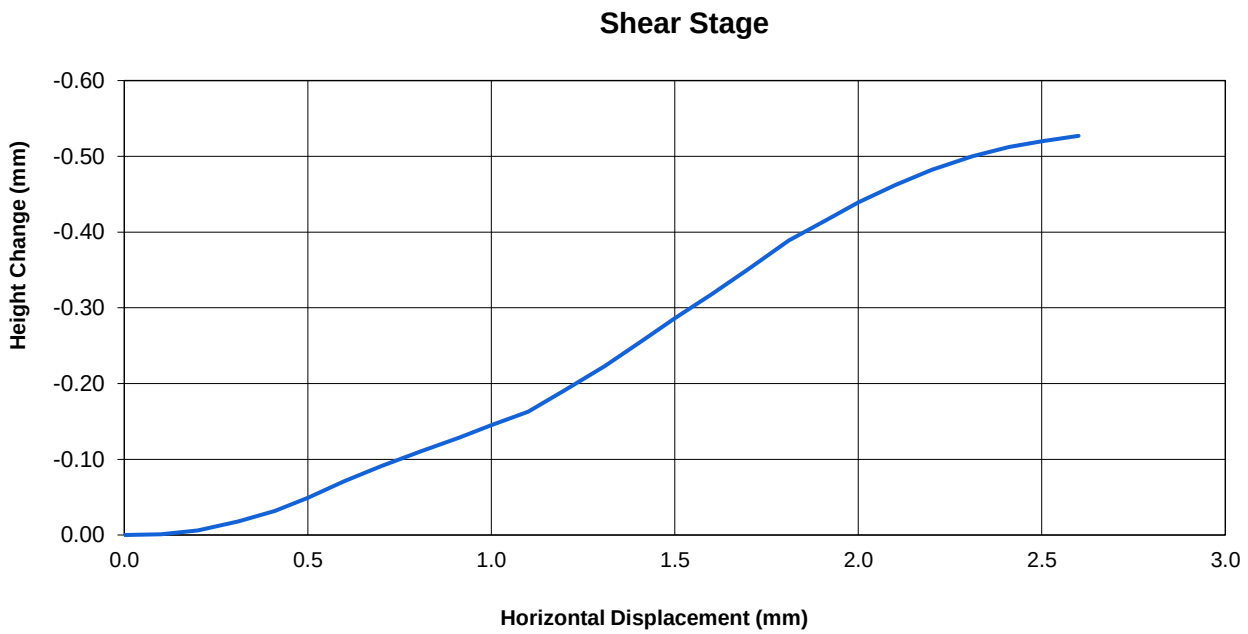
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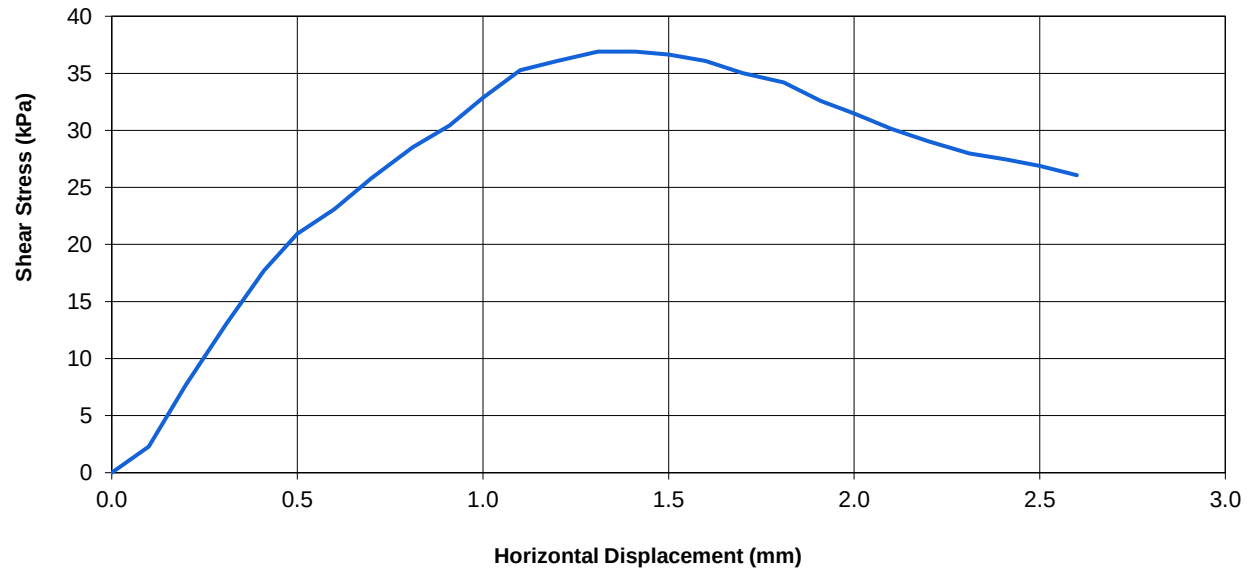
Borehole No	BHSP07
Depth (m)	7.00-7.45
Sample Type	B

Description:

Light brown gravelly fine to medium SAND.

Specimen: 1





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DIRECT SHEAR TEST – SHEARBOX

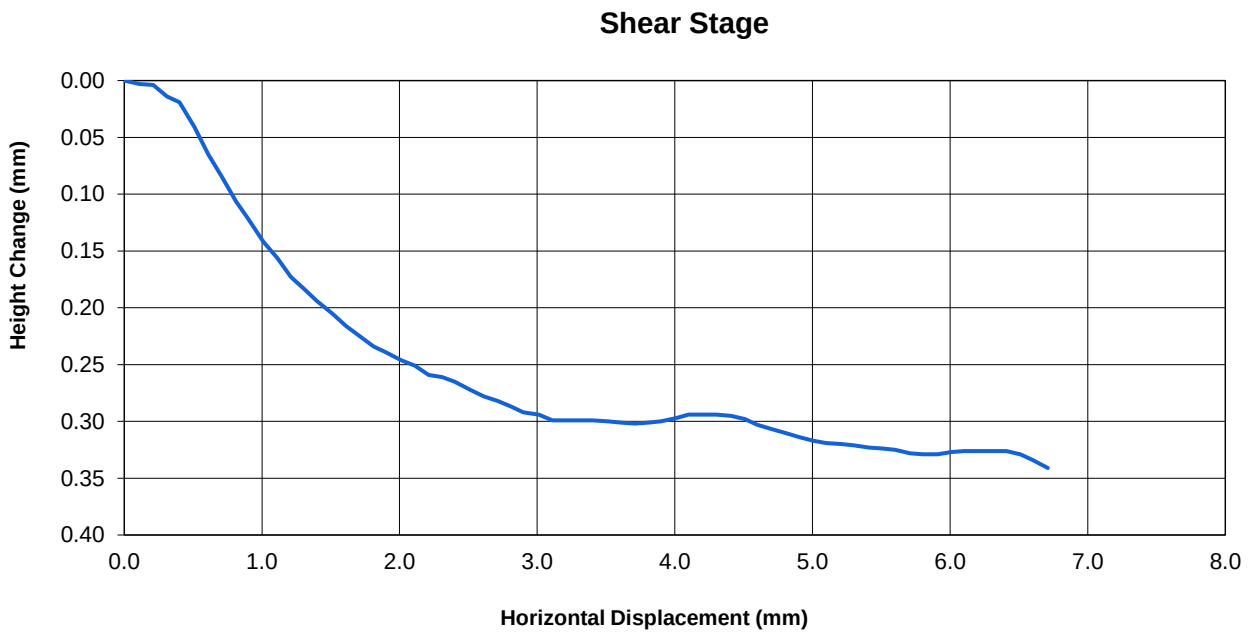
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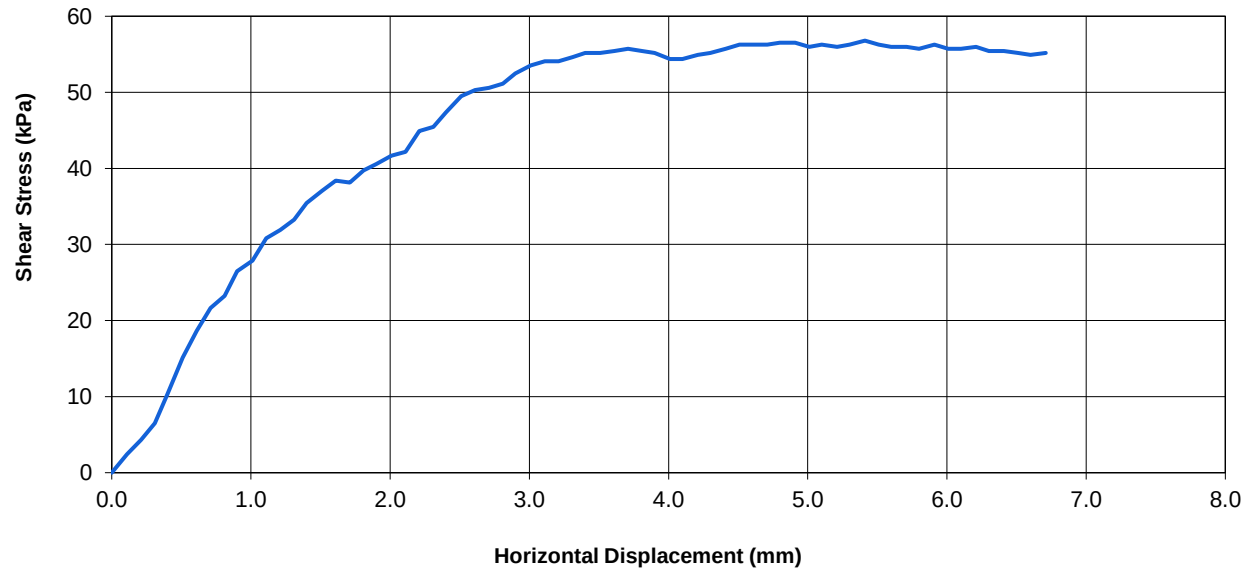
Borehole No	BHSP07
Depth (m)	7.00-7.45
Sample Type	B

Description:

Light brown gravelly fine to medium SAND.

Specimen: 2





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DIRECT SHEAR TEST – SHEARBOX

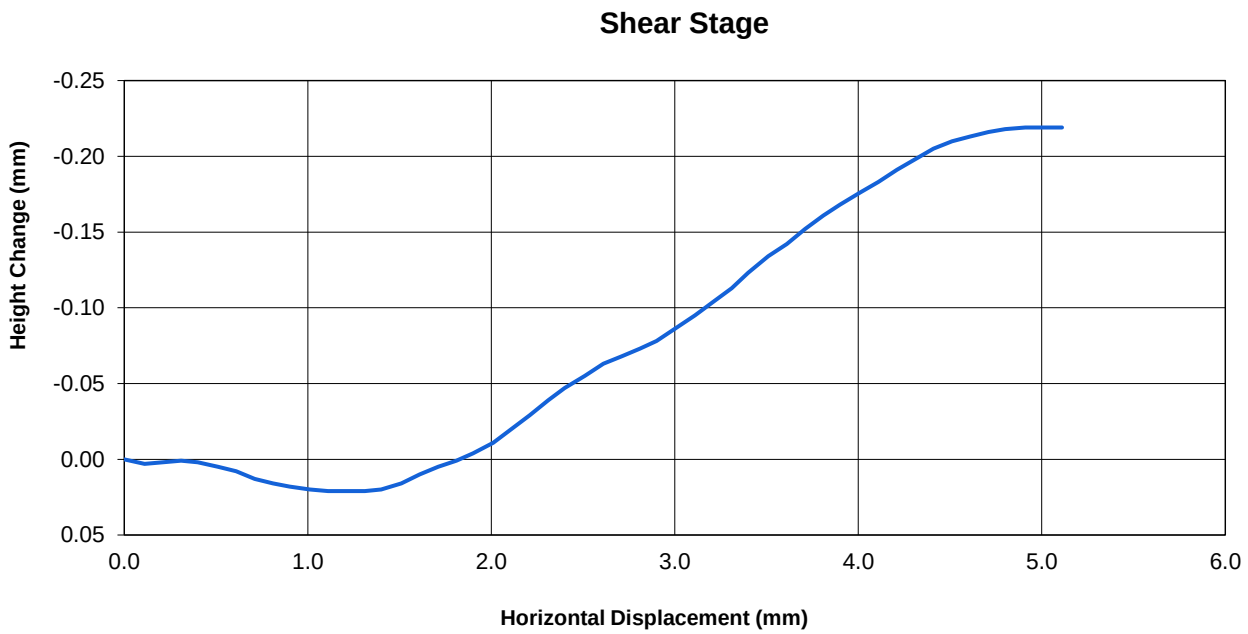
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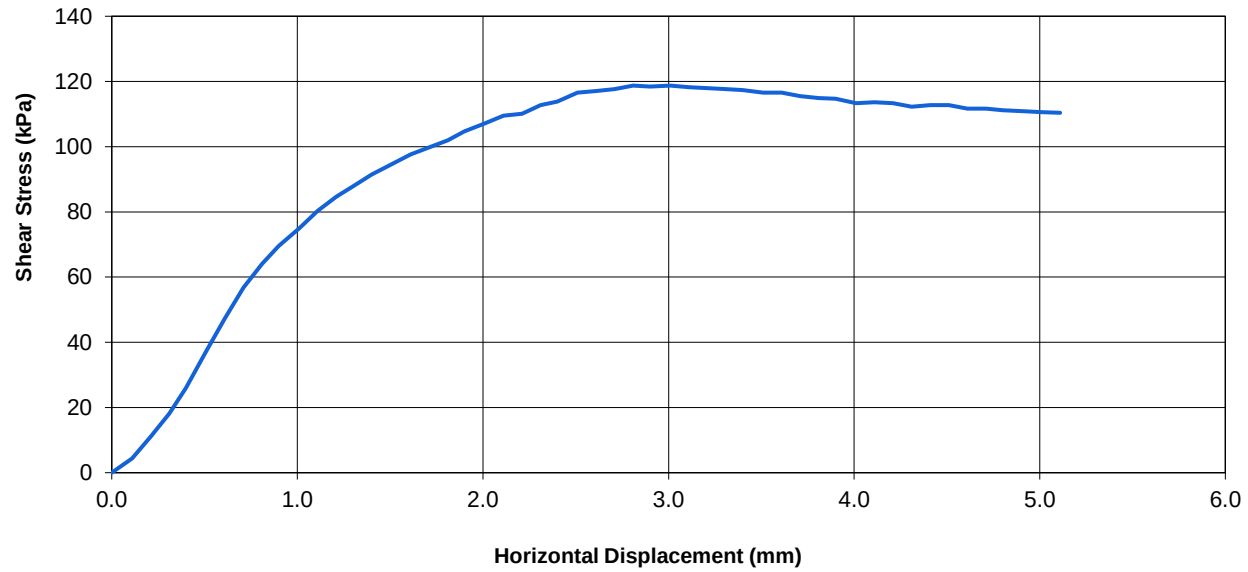
Borehole No	BHSP07
Depth (m)	7.00-7.45
Sample Type	B

Description:

Light brown gravelly fine to medium SAND.

Specimen: 3





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DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

Borehole No	BHSP07
Depth (m)	15.00-15.45
Sample Type	B

Description:

Brownish grey gravelly fine to medium SAND with occasional shell fragments.

Specimen Details

Depth within original sample	*m*	n/a
Orientation within original sample		n/a
Test condition		Submerged
Preparation		< 2 mm material remoulded at existing water content to a relative density of 55% [1]
Particle density	*Mg/m³*	2.65 (assumed)

Specimen Number		**1**	**2**	**3**
Length	*mm*	59.78	60.00	60.06
Width	*mm*	59.77	59.98	59.99
Height	*mm*	25.30	25.18	25.08
Initial water content	*%*	20.2	20.2	20.2
Initial bulk density	*Mg/m³*	1.66	1.66	1.66
Initial dry density	*Mg/m³*	1.38	1.38	1.38
Initial voids ratio		0.920	0.925	0.920
Degree of Saturation	*%*	58.3	58.0	58.3

Shearing Stage

Normal stress	*kPa*	60	120	240
Peak Conditions:				
Rate of horizontal displacement	*mm/min*	0.18	0.18	0.18
Maximum shear stress	*kPa*	38.7	78.3	152.8
Horizontal displacement at MSS	*mm*	6.7	4.1	7.3
Vertical Displacement at Peak	*mm*	0.24	0.21	0.33
Final water content	*%*	29.3	28.9	30.5
Duration	*day(s)*	1	1	1

Shear Strength Parameters

		Peak Condition
Apparent Cohesion	*kPa*	**1**
Angle of Shearing Resistance	*degrees*	**32.5**

Notes: *[1] Maximum dry density = 1.55 Mg/m³ and minimum dry density = 1.21 g/m³*

Tested by JJR
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C F Wallace - Technical Director
20/09/2023

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DIRECT SHEAR TEST – SHEARBOX

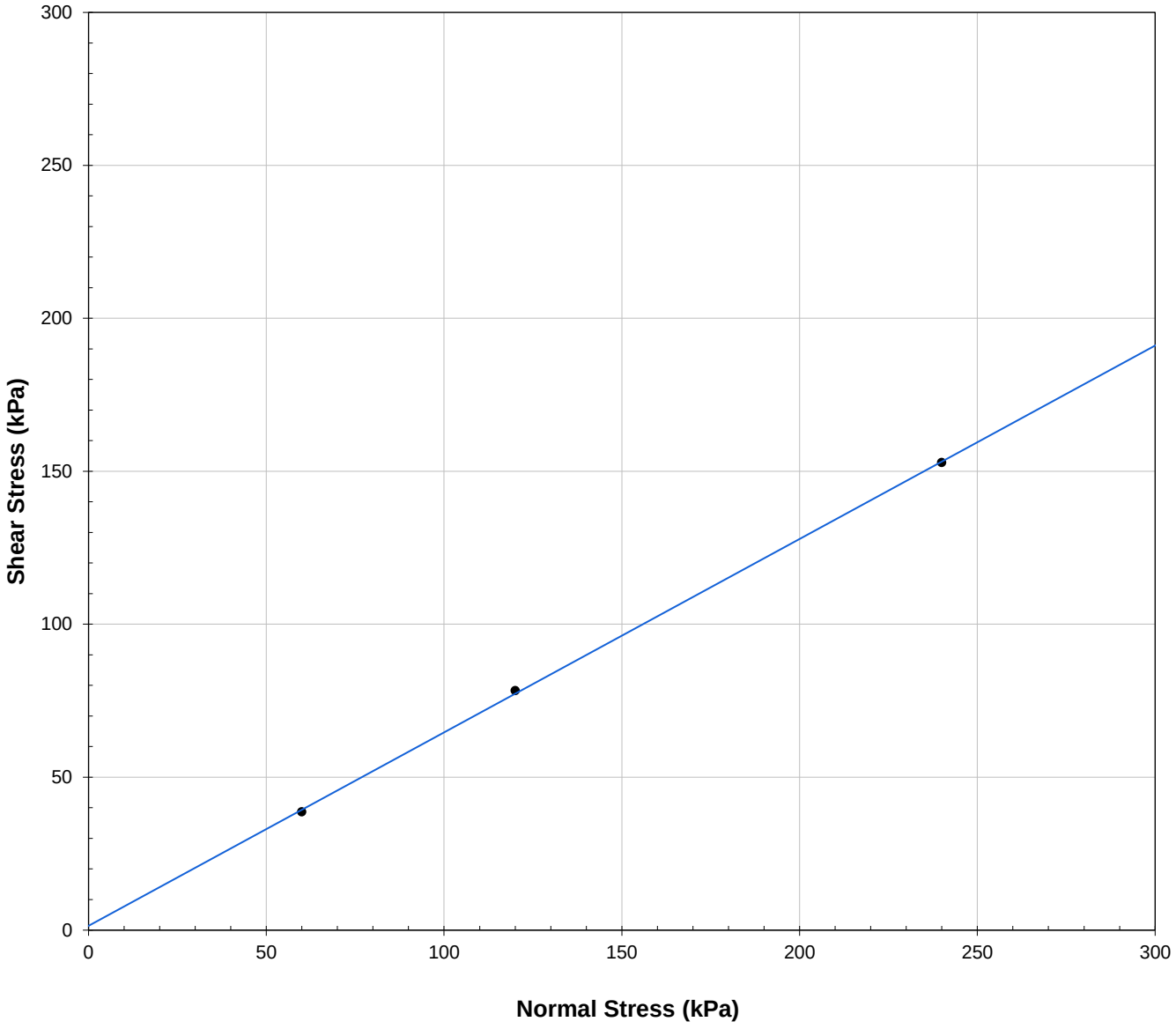
(small shearbox apparatus)

Borehole No	BHSP07
Depth (m)	15.00-15.45
Sample Type	B

Description:

Brownish grey gravelly fine to medium SAND with occasional shell fragments.

Shear Stress v Normal Stress



Peak: **c' = 1**

Φ' = 32.5

Tested by JJR
Checked and Approved by

C F Wallace - Technical Director
20/09/2023

Project Number:

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BS EN ISO 17892 10:2018

DIRECT SHEAR TEST – SHEARBOX

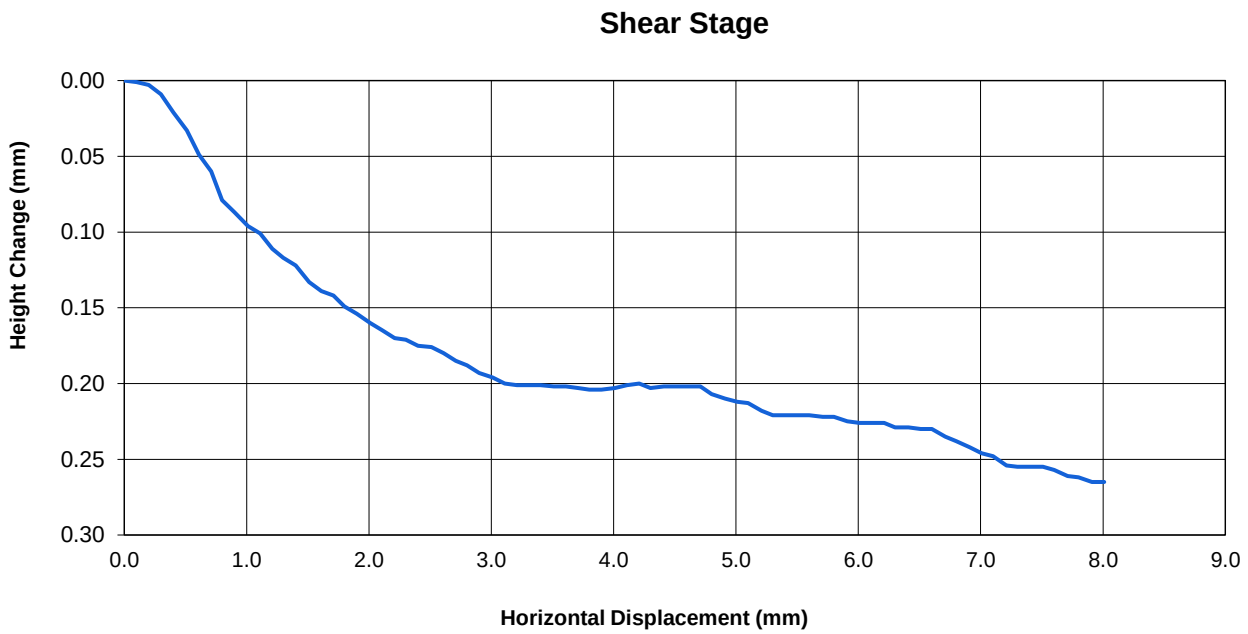
(small shearbox apparatus)

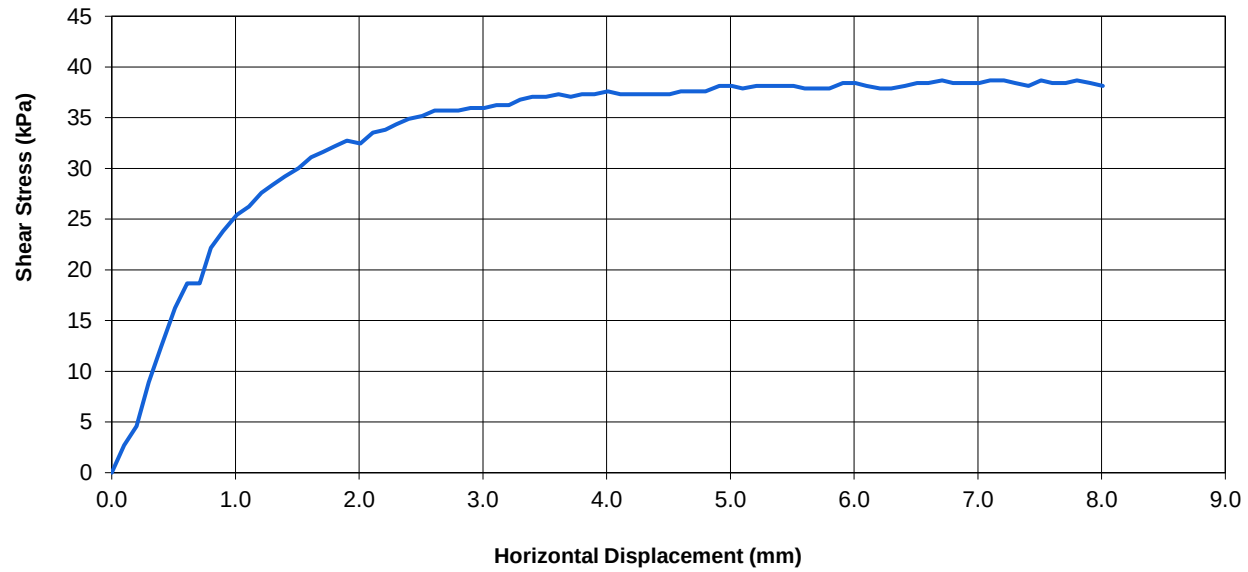
Borehole No	BHSP07
Depth (m)	15.00-15.45
Sample Type	B

Description:

Brownish grey gravelly fine to medium SAND with occasional shell fragments.

Specimen: 1





Tested by JJR
Checked and Approved by

C F Wallace - Technical Director
20/09/2023

Project Number:

GEO / 38552

Project Name:

ARDERSIER PORT
S23053

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UKAS TESTING 1982

BS EN ISO 17892 10:2018

DIRECT SHEAR TEST – SHEARBOX

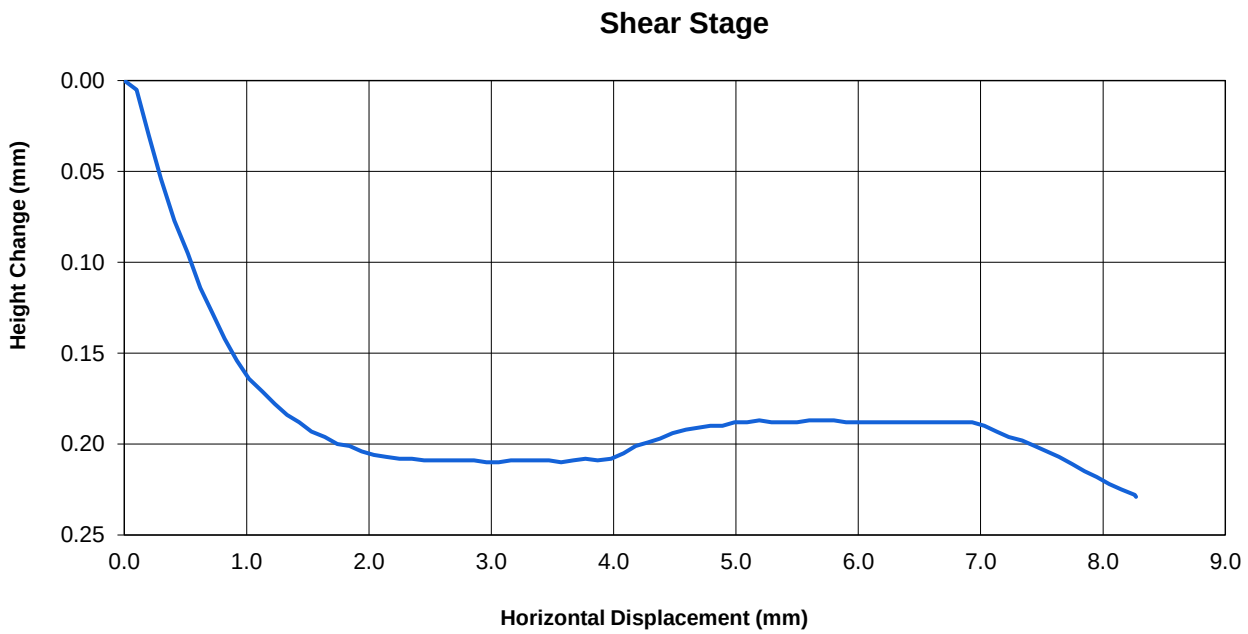
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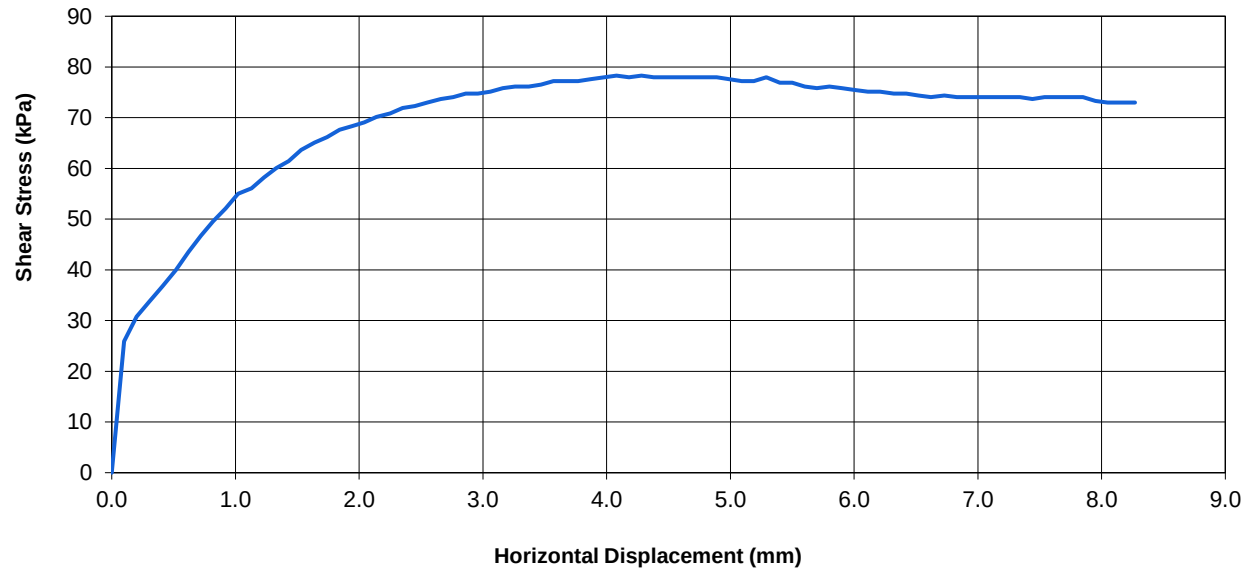
Borehole No	BHSP07
Depth (m)	15.00-15.45
Sample Type	B

Description:

Brownish grey gravelly fine to medium SAND with occasional shell fragments.

Specimen: 2





Tested by JJR
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20/09/2023

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DIRECT SHEAR TEST – SHEARBOX

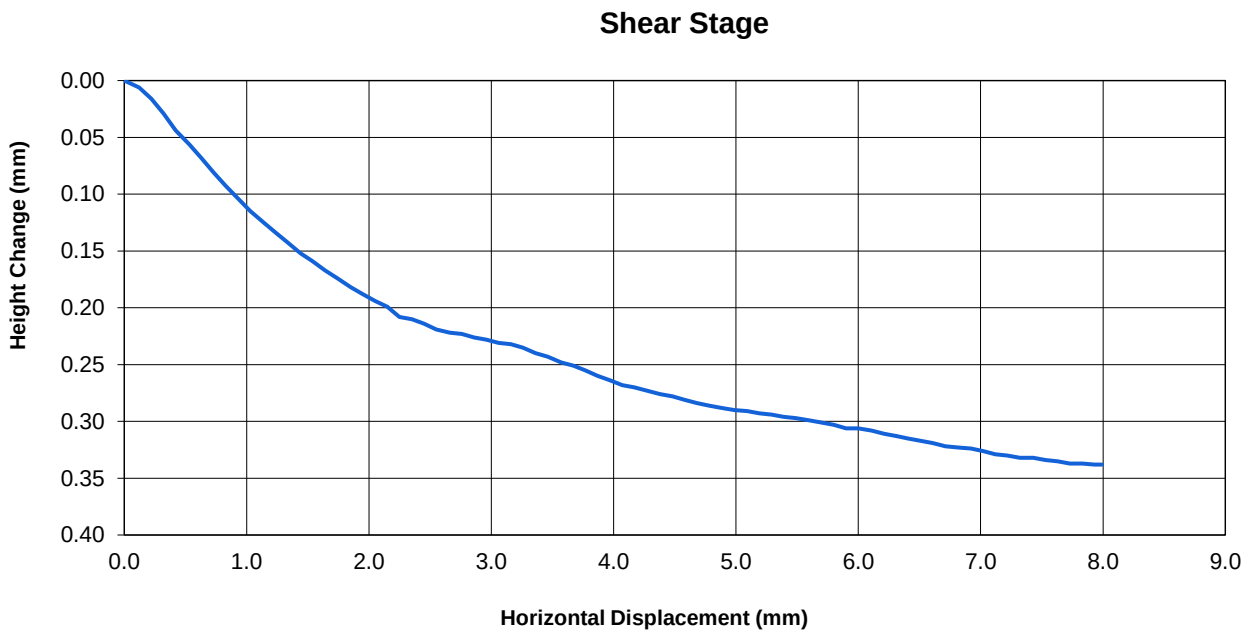
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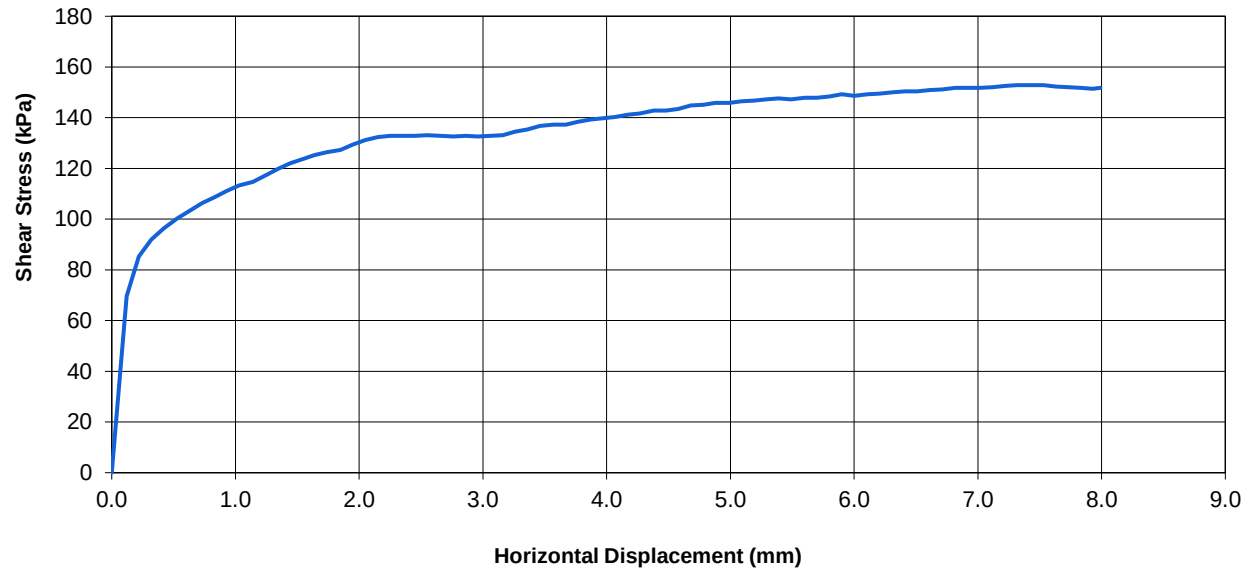
Borehole No	BHSP07
Depth (m)	15.00-15.45
Sample Type	B

Description:

Brownish grey gravelly fine to medium SAND with occasional shell fragments.

Specimen: 3





Tested by JJR
Checked and Approved by

C F Wallace - Technical Director
20/09/2023

Project Number:

GEO / 38552

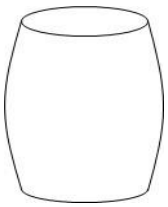
Project Name:

ARDERSIER PORT
S23053

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP07	Description: Light brown fine to medium SAND with rare fine gravel.
Depth (m): 5.00-5.45	

SPECIMEN DETAILS				
Depth within original sample		NA	Orientation within original sample: NA	
Remarks		Remoulded to a target 10 % MC and a target dry density of 1.521 Mg/m³		
TEST DETAILS				
Specimen Type and Preparation		B (Remoulded)		
Cell Preparation		Checks performed in accordance with Clause 3.5		
Specimen Number		**Multistage**		
Initial Diameter	*mm*	70.22		
Initial Length	*mm*	139.49		
Initial Water Content	*%*	9.9		
Initial Wet Density	*Mg/m³*	1.67		
Drainage Conditions		One end only		
SATURATION STAGE		Method: Clause 5.2		
Final Cell Pressure	*kPa*	635		
Final Pore Pressure	*kPa*	619		
Final Pore Pressure Parameter B		1.00		
Duration	*day(s)*	6		
CONSOLIDATION STAGE		**Stage No 1**	**Stage No 2**	**Stage No 3**
Cell Pressure	*kPa*	635	670	740
Back Pressure	*kPa*	600	600	600
Effective Pressure	*kPa*	35	70	140
Final Pore Pressure	*kPa*	600	600	600
Final Pore Pressure Dissipation	*%*	100	100	100
Duration	*day(s)*	1	1	1
SHEARING STAGE				
Cell Pressure	*kPa*	635	670	740
Rate of Axial Displacement	*mm/min*	0.015	0.020	0.016
Initial Pore Pressure	*kPa*	600	600	600
Initial Effective Stress	*kPa*	35	70	140
CONDITIONS AT FAILURE	*criteria*	Maximum deviator stress		
Pore Pressure	*kPa*	600	600	600
Minor Effective Principal Stress	*kPa*	35	70	140
Deviator Stress	*kPa*	106	224	405
Major Effective Principal Stress	*kPa*	141	294	545
Volume Change	*mL*	-3.60	-4.20	-4.54
Volumetric Strain	*%*	-0.7	-0.8	-0.9
Axial Strain	*%*	2.6	3.0	4.0
Membrane correction applied to Deviator Stress	*kPa*	1	0	0
Duration	*day(s)*	1	1	1
Final Water Content	*%*	23.4		
Final Wet Density	*Mg/m³*	1.90		
EFFECTIVE STRESS PARAMETERS				
Cohesion	*kPa*	3.3		
Angle of Shear Resistance	*degrees*	36		
FAILURE SKETCH				

Checked and Approved by

P Heritage

P Heritage - Project Manager
02/10/2023

Project Number:

GEO / 38552

Project Name:

ARDERSIER PORT
S23053

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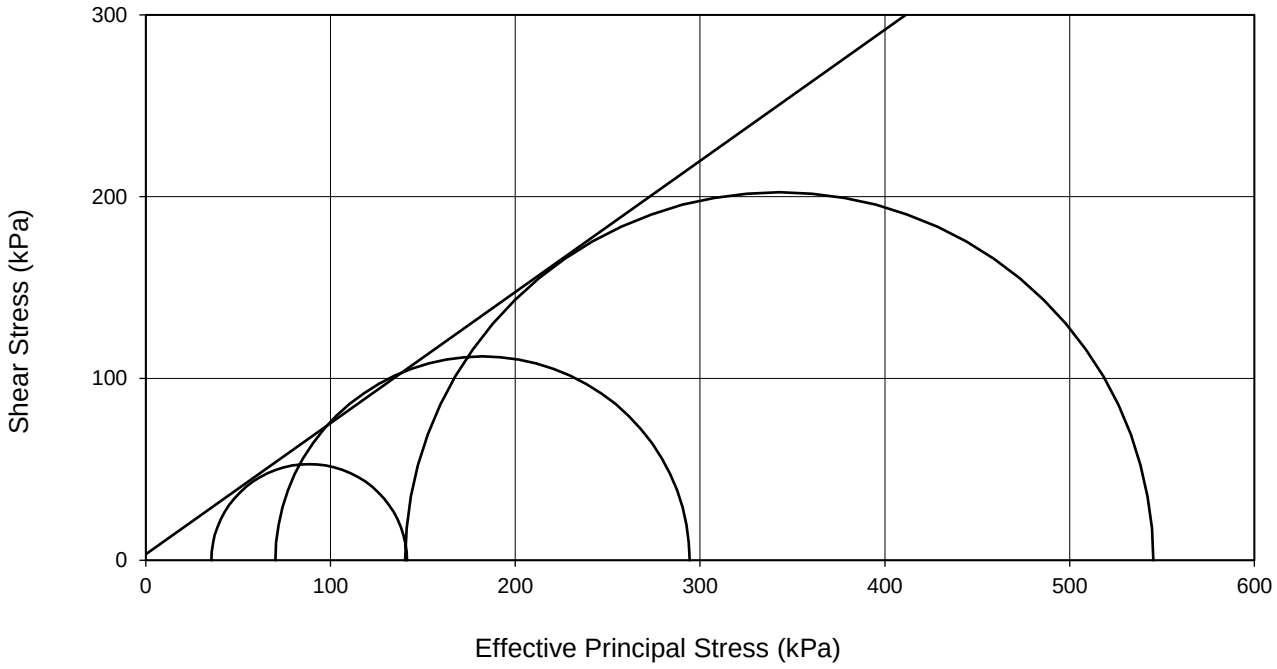
UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP07
Depth (m):	5.00-5.45

Description:
Light brown fine to medium SAND with rare fine gravel.



Checked and Approved by

P. Heritage

P Heritage - Project Manager
02/10/2023

Project Number:

GEO / 38552

Project Name:

ARDERSIER PORT
S23053

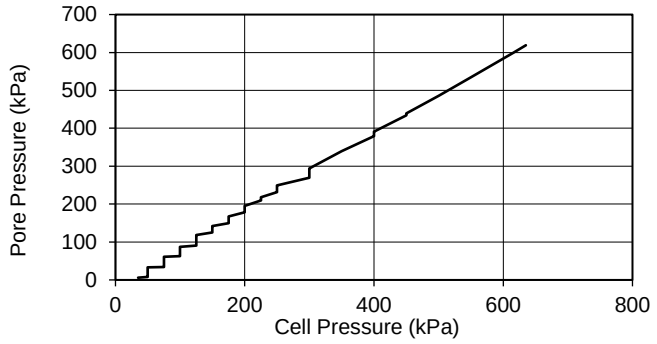
GEOLABS®

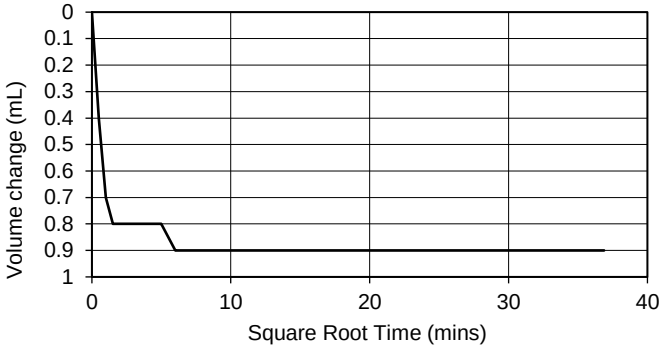
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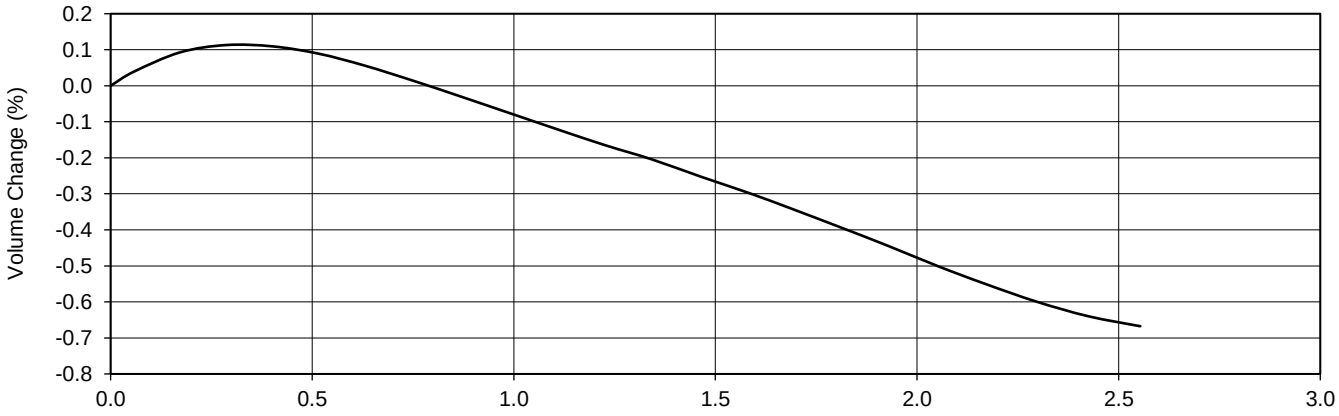
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

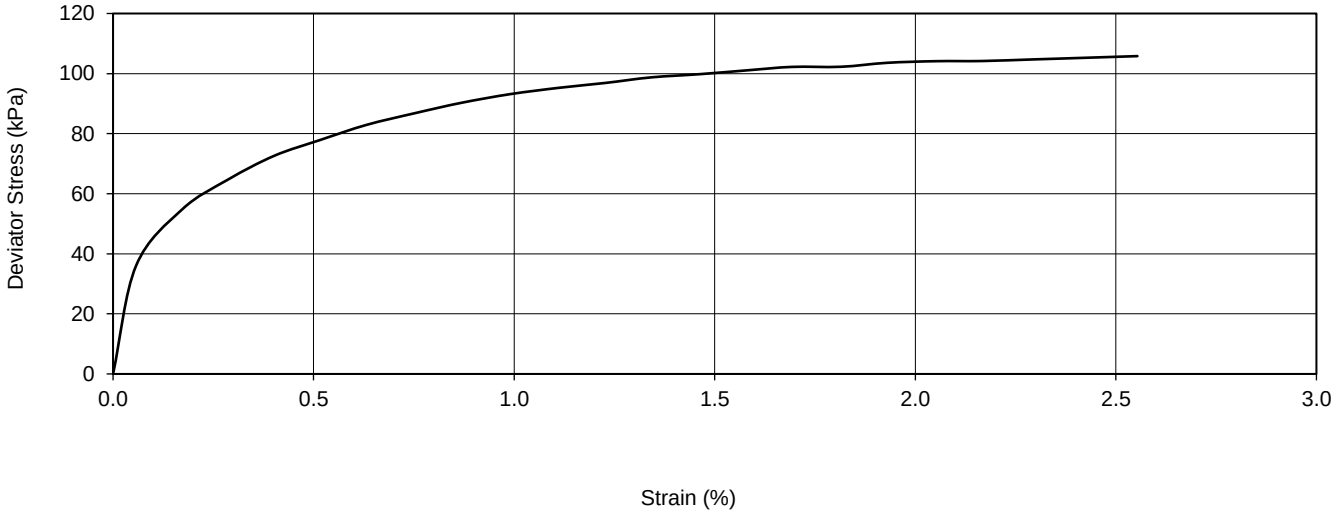
Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP07	**Stage No 1**
Depth (m): 5.00-5.45	









Checked and Approved by

P Heritage

P Heritage - Project Manager
02/10/2023

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ARDERSIER PORT
S23053

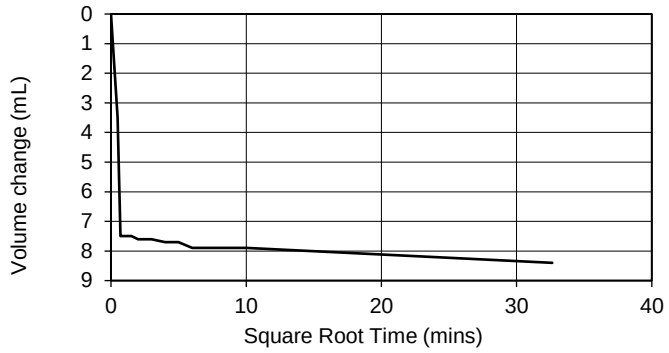
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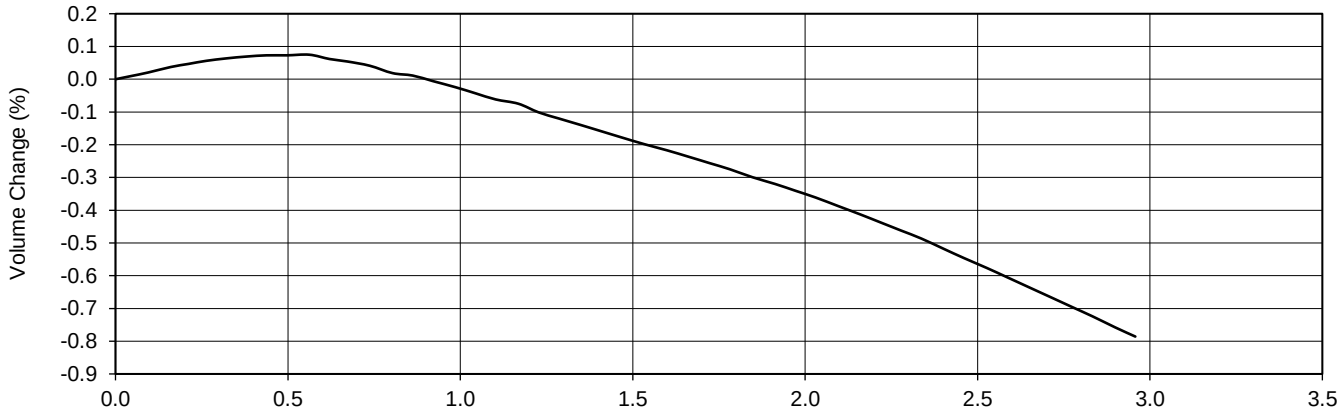
UKAS TESTING 1982

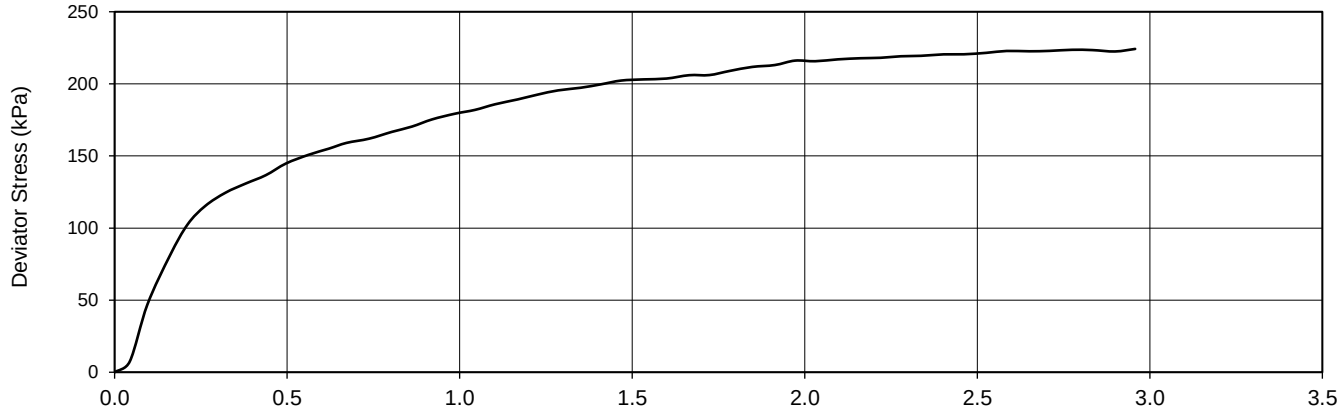
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP07	**Stage No 2**
Depth (m): 5.00-5.45	







Strain (%)

Checked and Approved by

P Heritage

P Heritage - Project Manager
02/10/2023

Project Number:

GEO / 38552

Project Name:

ARDERSIER PORT
S23053

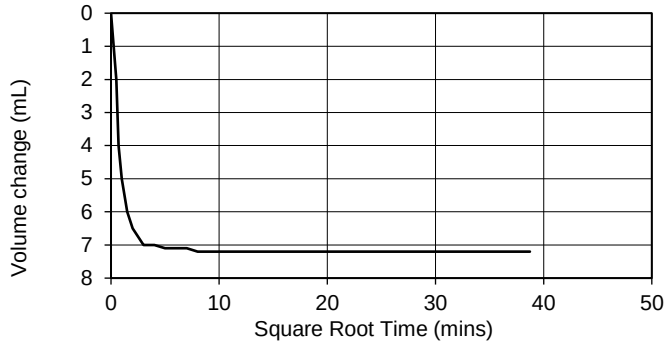
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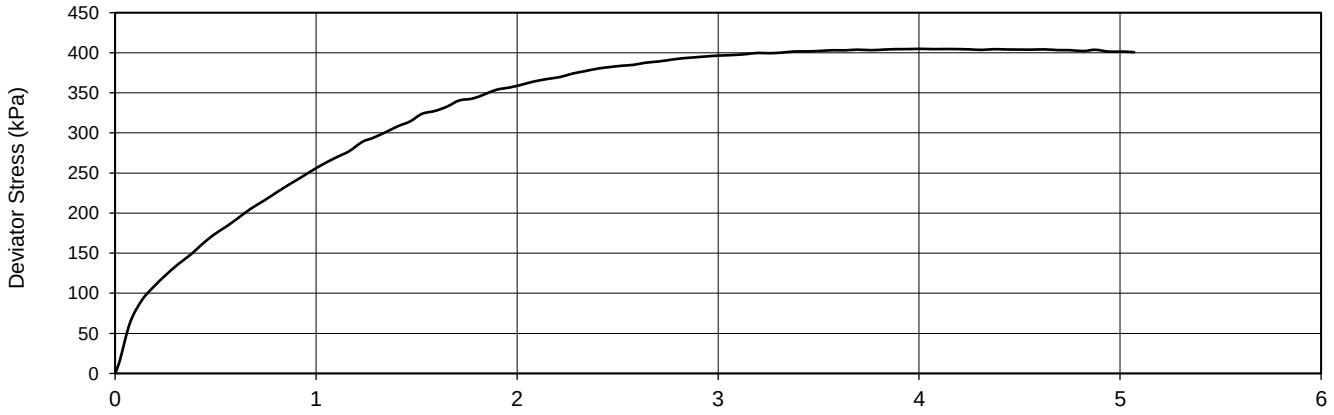
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP07	**Stage No 3**
Depth (m): 5.00-5.45	







Strain (%)

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P Heritage

P Heritage - Project Manager
02/10/2023

Project Number:

GEO / 38552

Project Name:

ARDERSIER PORT
S23053

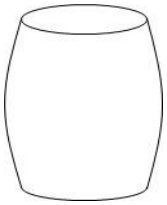
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BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP07	Description: Greyish brown fine to medium SAND with rare fine to medium gravel and shell fragments.
Depth (m): 10.50-10.95	

SPECIMEN DETAILS				
Depth within original sample		NA	Orientation within original sample: NA	
Remarks		Remoulded to a target 10 % MC and a target dry density of 1.427 Mg/m³		
TEST DETAILS				
Specimen Type and Preparation		B (Undisturbed)		
Cell Preparation		Checks performed in accordance with Clause 3.5		
Specimen Number		**Multistage**		
Initial Diameter	*mm*	70.22		
Initial Length	*mm*	139.49		
Initial Water Content	*%*	10.4		
Initial Wet Density	*Mg/m³*	1.57		
Drainage Conditions		One end only		
SATURATION STAGE		Method: Clause 5.2		
Final Cell Pressure	*kPa*	650		
Final Pore Pressure	*kPa*	645		
Final Pore Pressure Parameter B		1.00		
Duration	*day(s)*	6		
CONSOLIDATION STAGE		**Stage No 1**	**Stage No 2**	**Stage No 3**
Cell Pressure	*kPa*	650	700	800
Back Pressure	*kPa*	600	600	600
Effective Pressure	*kPa*	50	100	200
Final Pore Pressure	*kPa*	600	600	600
Final Pore Pressure Dissipation	*%*	100	100	100
Duration	*day(s)*	1	1	1
SHEARING STAGE				
Cell Pressure	*kPa*	650	700	800
Rate of Axial Displacement	*mm/min*	0.015	0.020	0.016
Initial Pore Pressure	*kPa*	600	600	600
Initial Effective Stress	*kPa*	50	100	200
CONDITIONS AT FAILURE	*criteria*	Maximum deviator stress		
Pore Pressure	*kPa*	600	599	599
Minor Effective Principal Stress	*kPa*	50	101	201
Deviator Stress	*kPa*	144	278	571
Major Effective Principal Stress	*kPa*	194	379	772
Volume Change	*mL*	-2.90	-1.81	-4.09
Volumetric Strain	*%*	-0.5	-0.3	-0.8
Axial Strain	*%*	2.1	3.1	4.5
Membrane correction applied to Deviator Stress	*kPa*	1	0	1
Duration	*day(s)*	1	1	1
Final Water Content	*%*	28.6		
Final Wet Density	*Mg/m³*	1.86		
EFFECTIVE STRESS PARAMETERS				
Cohesion	*kPa*	0		
Angle of Shear Resistance	*degrees*	36		
FAILURE SKETCH				

Checked and Approved by

P. Heritage

P Heritage - Project Manager
02/10/2023

Project Number:

GEO / 38552

Project Name:

ARDERSIER PORT
S23053

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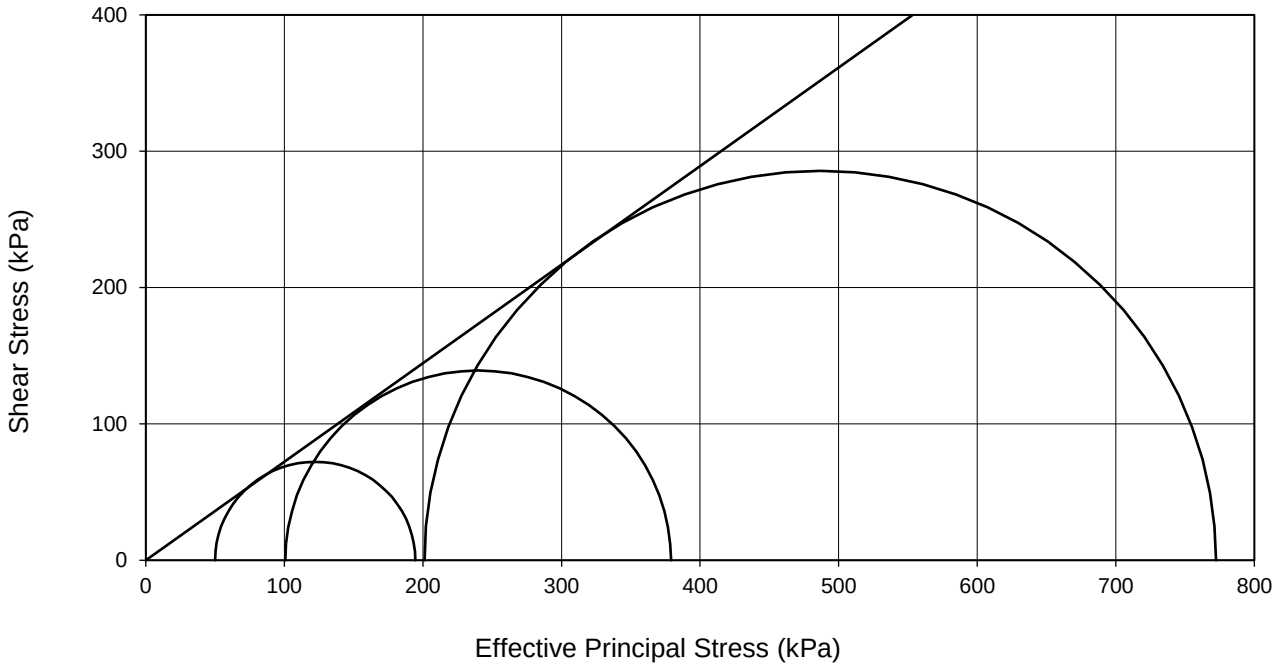
UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP07
Depth (m):	10.50-10.95

Description:
Greyish brown fine to medium SAND with rare fine to medium gravel and shell fragments.



Checked and Approved by

P. Heritage

P Heritage - Project Manager
02/10/2023

Project Number:

GEO / 38552

Project Name:

ARDERSIER PORT
S23053

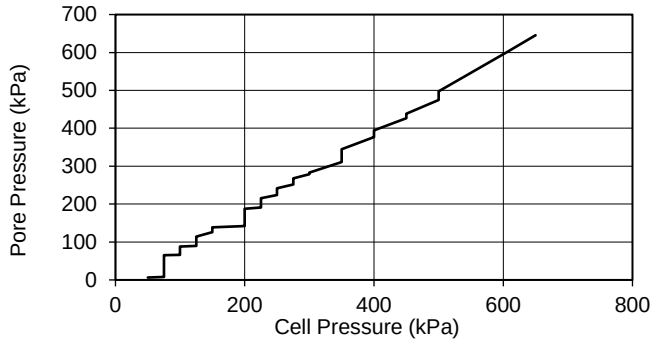
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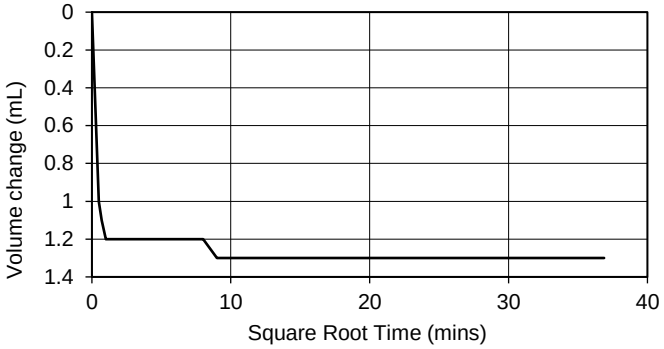
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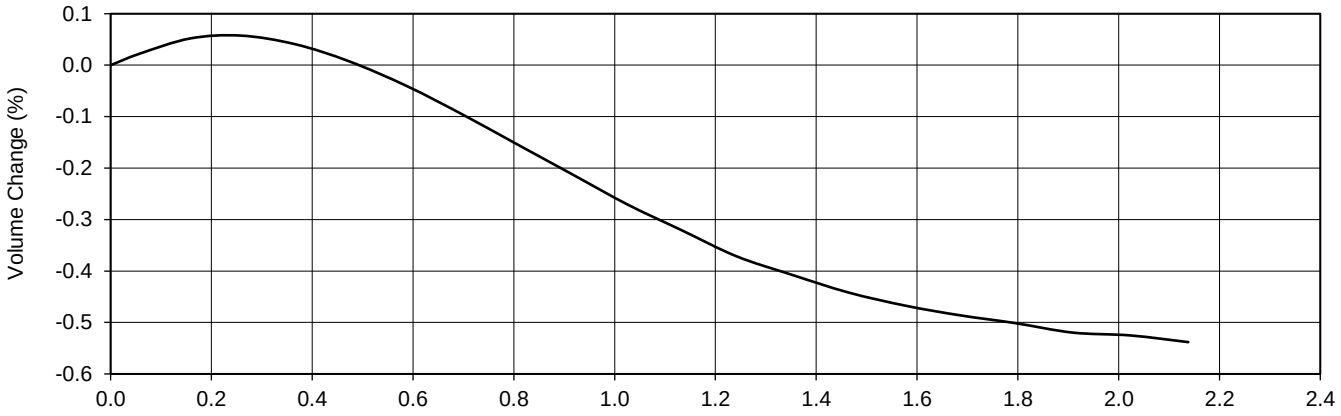
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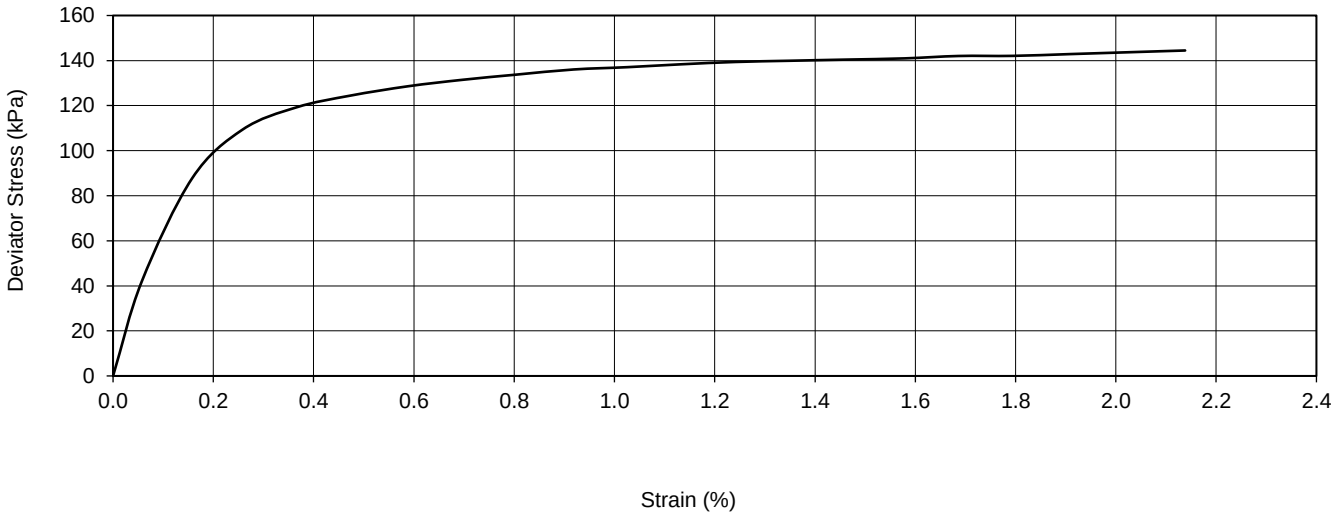
Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP07	**Stage No 1**
Depth (m): 10.50-10.95	









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P Heritage

P Heritage - Project Manager
02/10/2023

Project Number:

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ARDERSIER PORT
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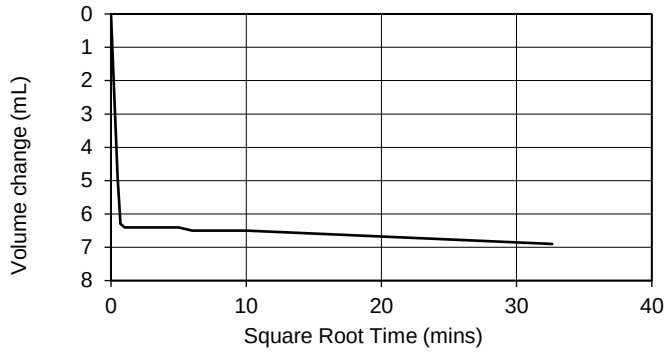
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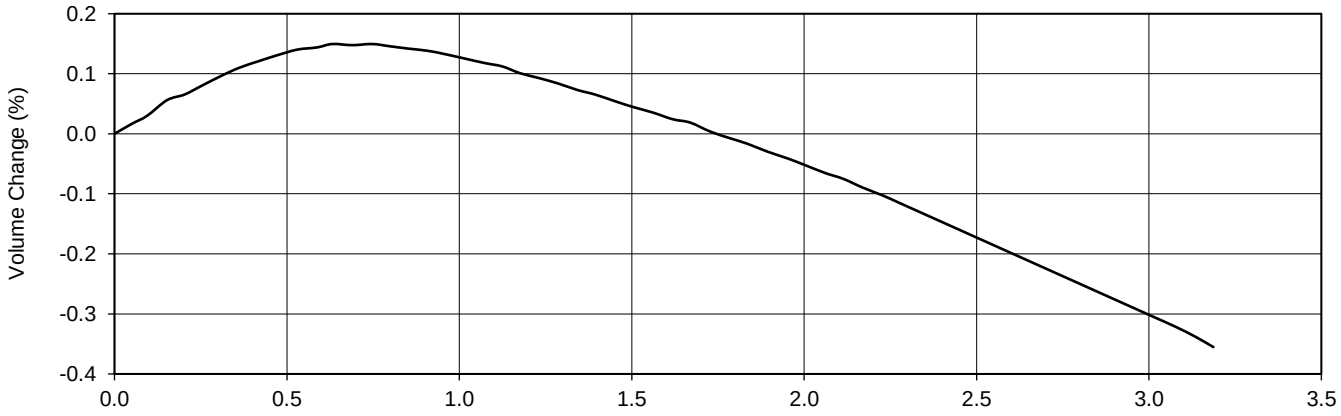
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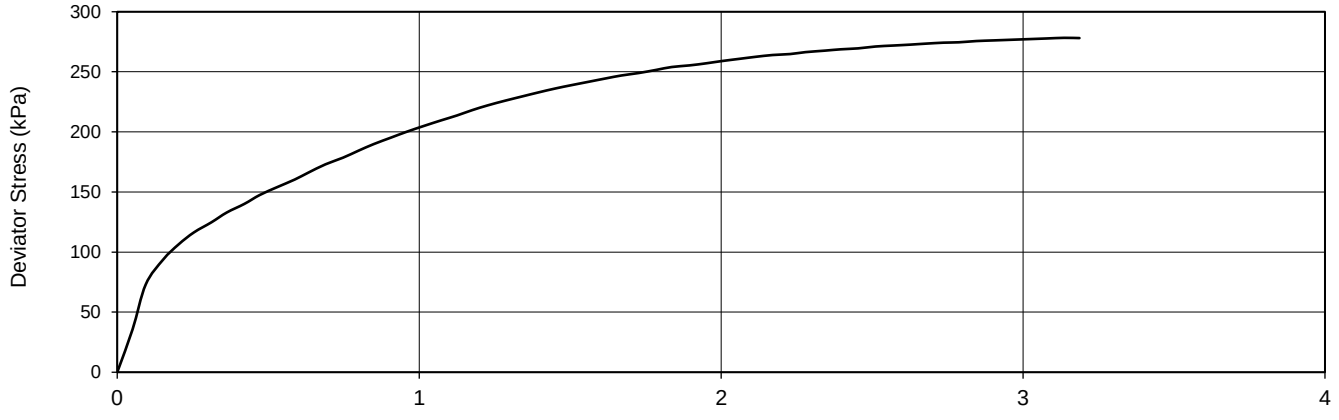
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP07	**Stage No 2**
Depth (m): 10.50-10.95	





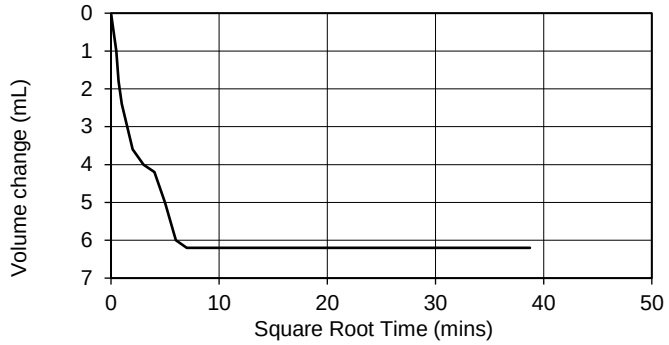


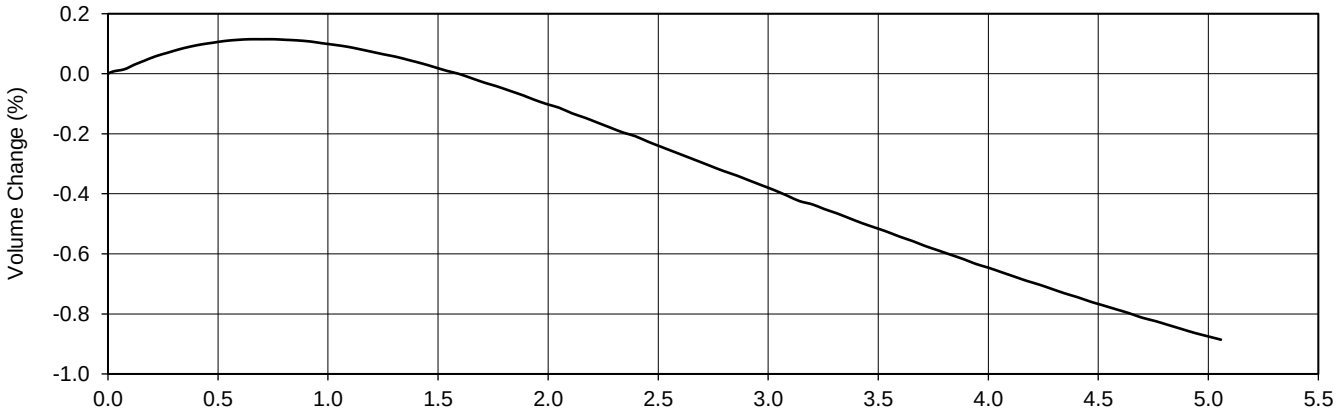
Checked and Approved by P. Heritage P Heritage - Project Manager 02/10/2023	Project Number: **GEO / 38552** Project Name: **ARDERSIER PORT** **S23053**	GEOLABS UKAS TESTING 1982

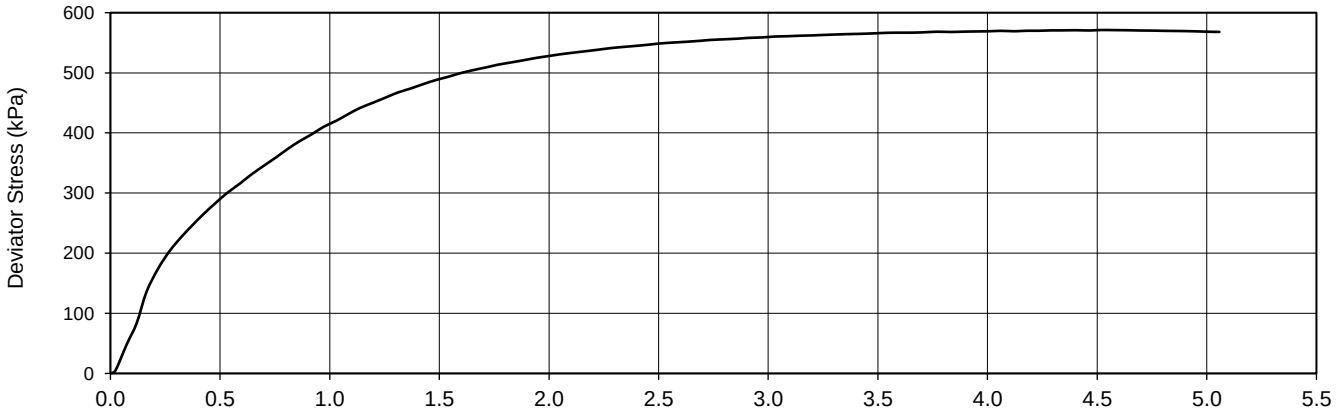
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP07	**Stage No 3**
Depth (m): 10.50-10.95	







Strain (%)

Checked and Approved by

P Heritage

P Heritage - Project Manager
02/10/2023

Project Number:

GEO / 38552

Project Name:

ARDERSIER PORT
S23053

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UKAS TESTING 1982

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web: www.geolabs.co.uk

Solmek
12 Yarm Road
Stockton-on-Tees
TS18 3NA

06 September 2023
Report No : GEO/38343/01

For the attention of Mr A Cutts

Date samples received	22/06/2023
Date written instructions received	26/06/2023
Date testing commenced	27/06/2023
Date of sample disposal	**04/10/2023**

Our ref **GEO / 38343**
Your Ref **S23053**

Project **ARDERSIER PORT**

Further to your instructions we have pleasure in enclosing the results of the tests you requested in the attached figures.

LABORATORY TEST REPORT

Item No	Test Quantity	Description
1	5	Maximum & Minimum Density
2	3	Shear Strength by Direct Shear
3	2	Isotropic Consolidated Drained Multistage Triaxial Compression (CIDM)

Any opinions or interpretations expressed herein are outside the scope of UKAS accreditation. All results contained in this report are provisional unless signed by an approved signatory. The results contained in this report relate only to samples received in the laboratory and are tested 'as received' unless otherwise stated. This report should not be reproduced, except in full, without the written approval of the laboratory. The results reported are applicable only to the test items received by the laboratory.

All the necessary data required by the documented test procedures has been recorded and will be stored for a period of not less than 6 years. This data will be issued to yourselves at your request. All samples will be disposed of after the date shown above. Written confirmation will be required to retain the samples beyond this period and a storage charge may be applied.

We trust that the above meets your requirements and should you require any further information or assistance, please do not hesitate to contact us.

Yours faithfully
on behalf of **GEOLABS Limited**

S Burke
Senior Technician

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP08
Depth (m)	6.00-6.45
Sample Type	B

Description:

Light brown fine to medium SAND with numerous mica crystals and occasional fine to medium gravel.

Percentage of material retained on the 2 mm test sieve	1.5	%

The fines content was measured to be 0.6 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density 1.64 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.616	g/cm³
Maximum dry density **after** surcharge application	1.644	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.628	g/cm³
Maximum dry density **after** surcharge application	1.646	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density 1.30 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.12	g
	Run		
Mass of sand	1	578.23	g
	2	580.33	g
	3	577.80	g
	4	577.48	g
	5	576.78	g
	Minimum	578.12	g

Checked and Approved by

J Powell - Technical Consultant
14/07/2023

Project Number:

38343

Project Name:

ARDERSIER PORT
S23053

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP08
Depth (m)	7.00-7.45
Sample Type	B

Description:

Light brown fine to medium SAND with occasional fine to medium gravel.

Percentage of material retained on the 2 mm test sieve	1.0	%

The fines content was measured to be 0.9 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density — 1.61 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.591	g/cm³
Maximum dry density **after** surcharge application	1.606	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.595	g/cm³
Maximum dry density **after** surcharge application	1.620	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density — 1.26 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.12	g
	Run		
Mass of sand	1	560.51	g
	2	560.90	g
	3	562.88	g
	4	561.48	g
	5	560.02	g
	Minimum	561.16	g

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J Powell - Technical Consultant
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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP08
Depth (m)	18.00-18.45
Sample Type	B

Description:

Brownish grey fine to medium SAND with rare shell fragments, numerous mica and rare fine gravel.

Percentage of material retained on the 2 mm test sieve	0.4	%

The fines content was measured to be 3.5 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density 1.59 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.567	g/cm³
Maximum dry density **after** surcharge application	1.582	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.572	g/cm³
Maximum dry density **after** surcharge application	1.593	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density 1.14 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.11	g
	Run		
Mass of sand	1	508.19	g
	2	507.36	g
	3	509.00	g
	4	508.49	g
	5	507.81	g
	Minimum	508.17	g

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP08
Depth (m)	19.50-19.95
Sample Type	B

Description:

Brownish grey fine to medium SAND with occasional fine to medium gravel and numerous of mica crystals.

Percentage of material retained on the 2 mm test sieve	1.4	%

The fines content was measured to be 2.4 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density — 1.58 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.567	g/cm³
Maximum dry density **after** surcharge application	1.582	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.571	g/cm³
Maximum dry density **after** surcharge application	1.582	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density — 1.15 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.11	g
	Run		
Mass of sand	1	508.28	g
	2	510.43	g
	3	510.90	g
	4	511.30	g
	5	508.88	g
	Minimum	509.96	g

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J Powell - Technical Consultant
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Project Number: **38343**

Project Name: **ARDERSIER PORT S23053**

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP08
Depth (m)	25.50-25.95
Sample Type	B

Description:

Grey fine to medium SAND with occasional medium to coarse gravel and shell fragments.

Percentage of material retained on the 2 mm test sieve	3.0	%

The fines content was measured to be 5.0 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density — 1.61 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.595	g/cm³
Maximum dry density **after** surcharge application	1.606	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.594	g/cm³
Maximum dry density **after** surcharge application	1.604	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density — 1.13 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.11	g
	Run		
Mass of sand	1	500.06	g
	2	502.90	g
	3	503.03	g
	4	501.53	g
	5	502.94	g
	Minimum	502.09	g

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J Powell - Technical Consultant
14/07/2023

Project Number: **38343**

Project Name: **ARDERSIER PORT S23053**

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DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

Borehole No	BHSP08
Depth (m)	6.00-6.45
Sample Type	B

Description:

Light brown gravelly fine to medium SAND.
Gravel is fine to medium.

Specimen Details

Depth within original sample	*m*	n/a
Orientation within original sample		n/a
Test condition		Submerged
Preparation		< 2 mm material remoulded at existing water content to a a relative density of 80% [1]
Particle density	*Mg/m³*	2.65 (assumed)

Specimen Number		**1**	**2**	**3**
Length	*mm*	59.78	59.78	59.78
Width	*mm*	59.77	59.77	59.77
Height	*mm*	23.99	24.13	24.17
Initial water content	*%*	19.1	19.1	19.1
Initial bulk density	*Mg/m³*	1.87	1.86	1.85
Initial dry density	*Mg/m³*	1.57	1.56	1.56
Initial voids ratio		0.691	0.701	0.704
Degree of Saturation	*%*	73.3	72.2	71.9

Shearing Stage

Normal stress	*kPa*	30	60	120
Peak Conditions:				
Rate of horizontal displacement	*mm/min*	0.4	0.4	0.4
Maximum shear stress	*kPa*	28.1	46.5	99.5
Horizontal displacement at MSS	*mm*	1.8	2.9	2.2
Vertical Displacement at Peak	*mm*	-0.23	-0.21	-0.19
Final water content	*%*	24.7	24.2	24.6
Duration	*day(s)*	1	1	1

Shear Strength Parameters

		Peak Condition
Apparent Cohesion	*kPa*	**2**
Angle of Shearing Resistance	*degrees*	**39.0**

Notes: *[1] Maximum dry density = 1.64 Mg/m³ and minimum dry density = 1.30 Mg/m³*

Tested by SRA
Checked and Approved by



C F Wallace - Technical Director
20/07/2023

Project Number:

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Project Name:

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DIRECT SHEAR TEST – SHEARBOX

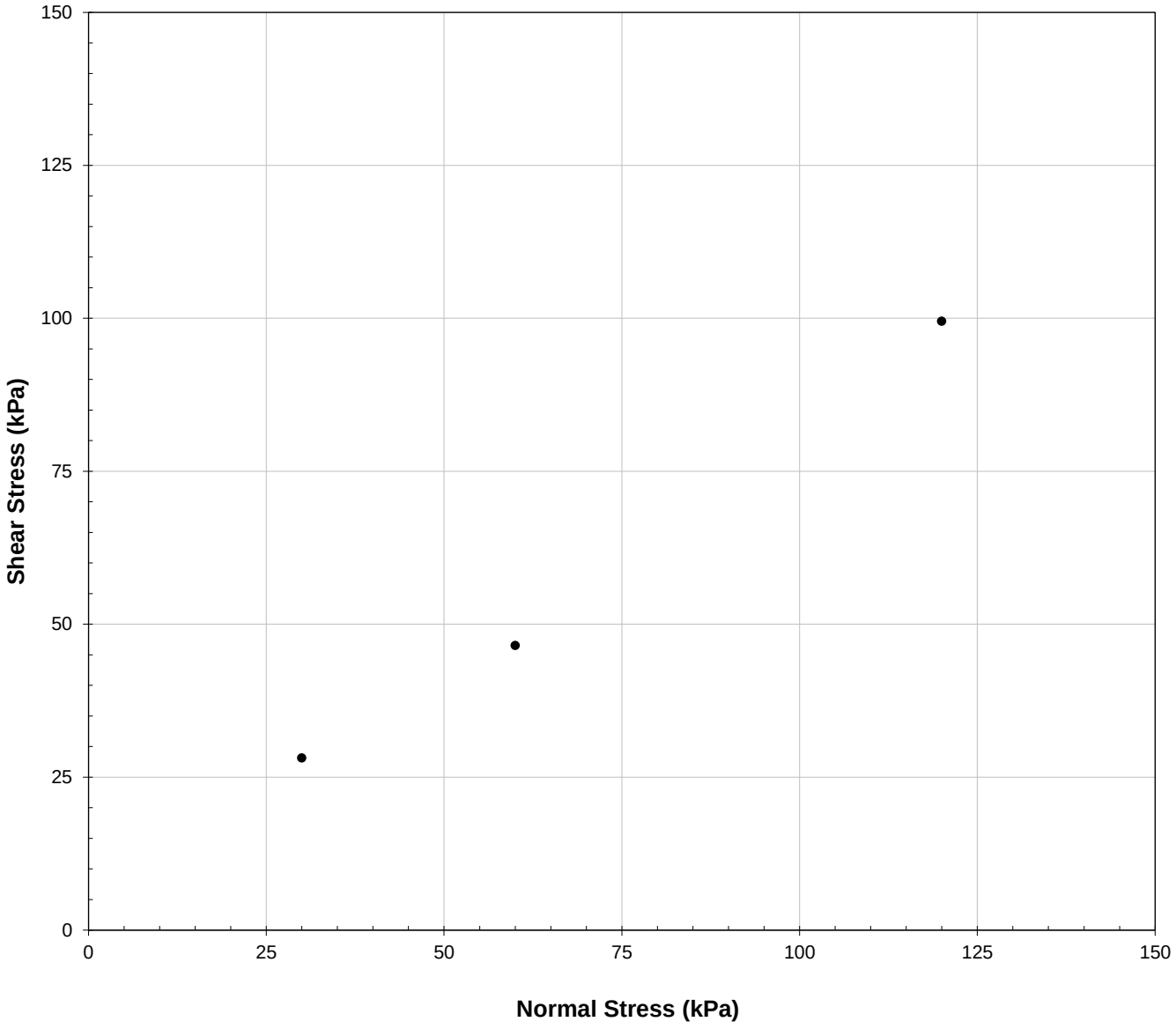
(small shearbox apparatus)

Borehole No	BHSP08
Depth (m)	6.00-6.45
Sample Type	B

Description:

Light brown gravelly fine to medium SAND.
Gravel is fine to medium.

Shear Stress v Normal Stress



Peak: **c' = 2**

Φ' = 39.0

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C F Wallace - Technical Director
20/07/2023

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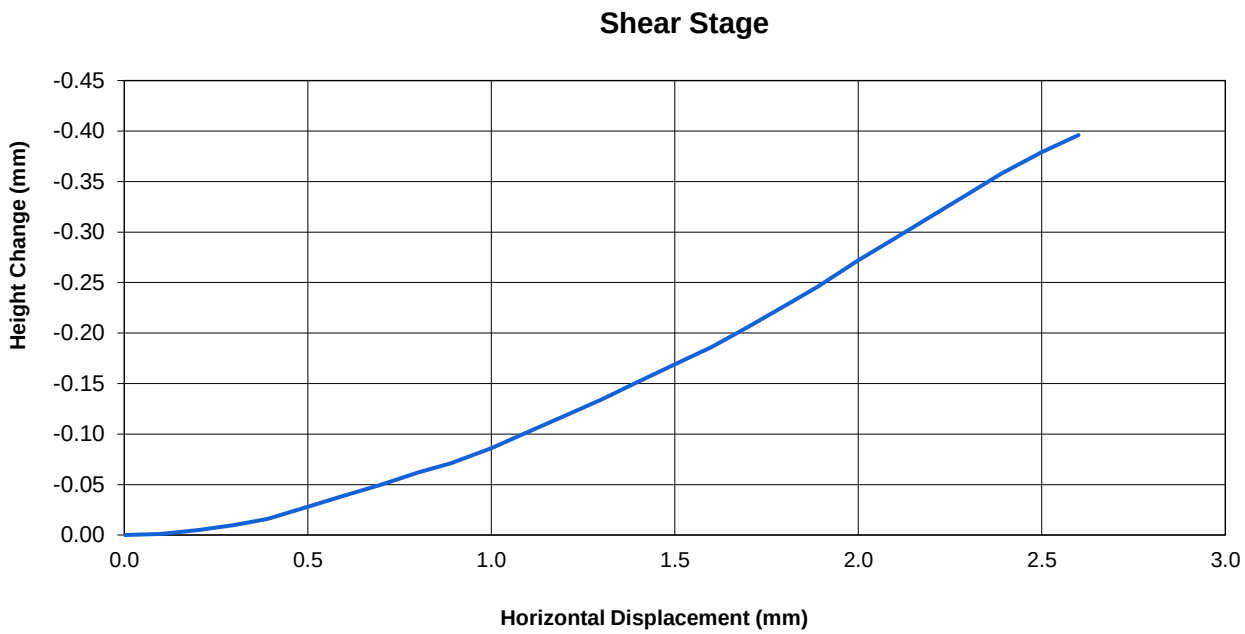
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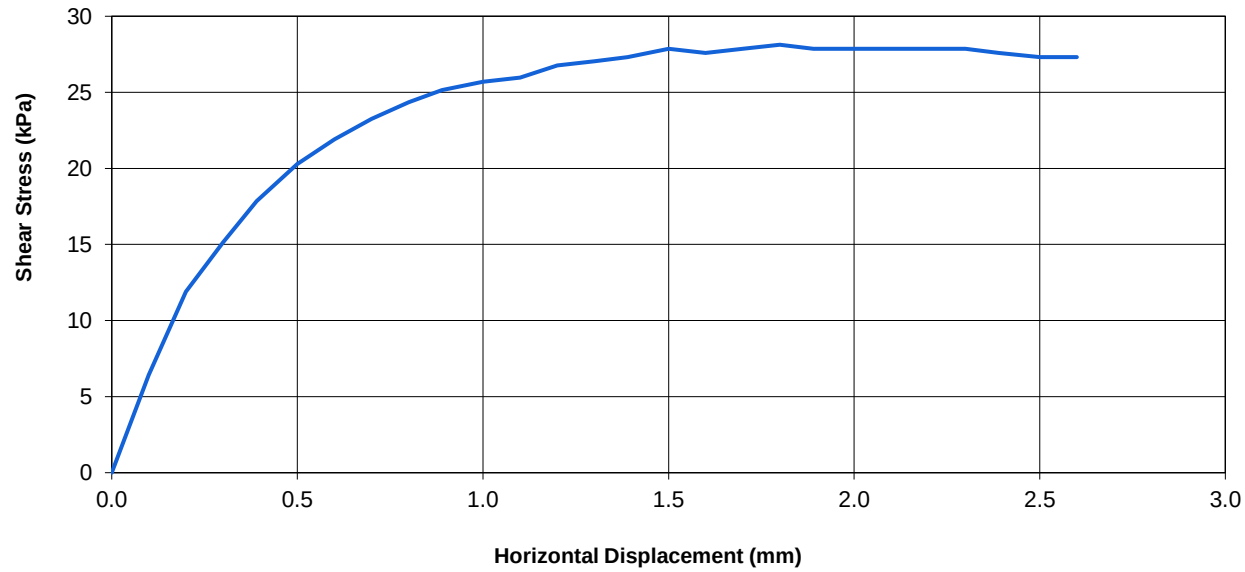
Borehole No	BHSP08
Depth (m)	6.00-6.45
Sample Type	B

Description:

Light brown gravelly fine to medium SAND.
Gravel is fine to medium.

Specimen: 1





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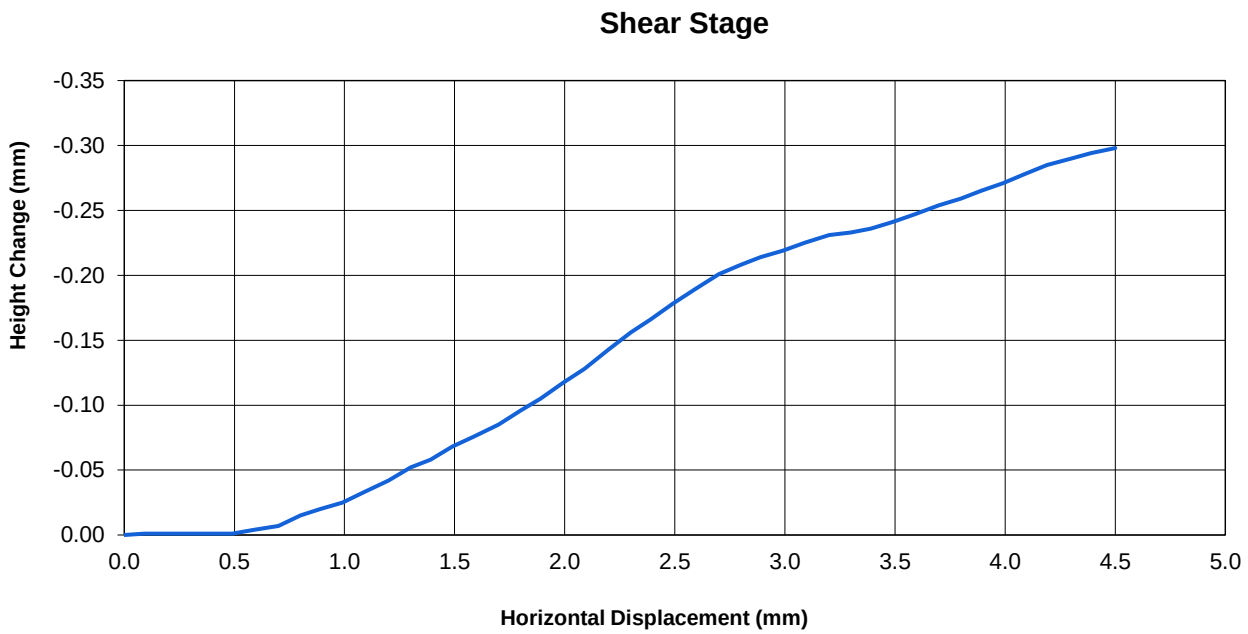
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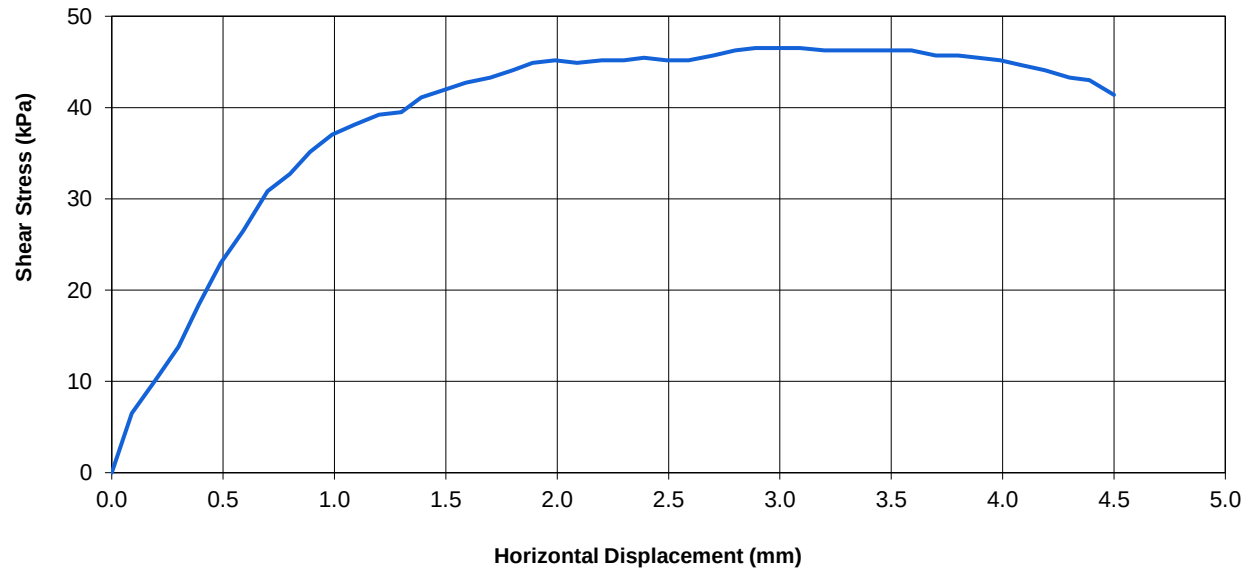
Borehole No	BHSP08
Depth (m)	6.00-6.45
Sample Type	B

Description:

Light brown gravelly fine to medium SAND.
Gravel is fine to medium.

Specimen: 2





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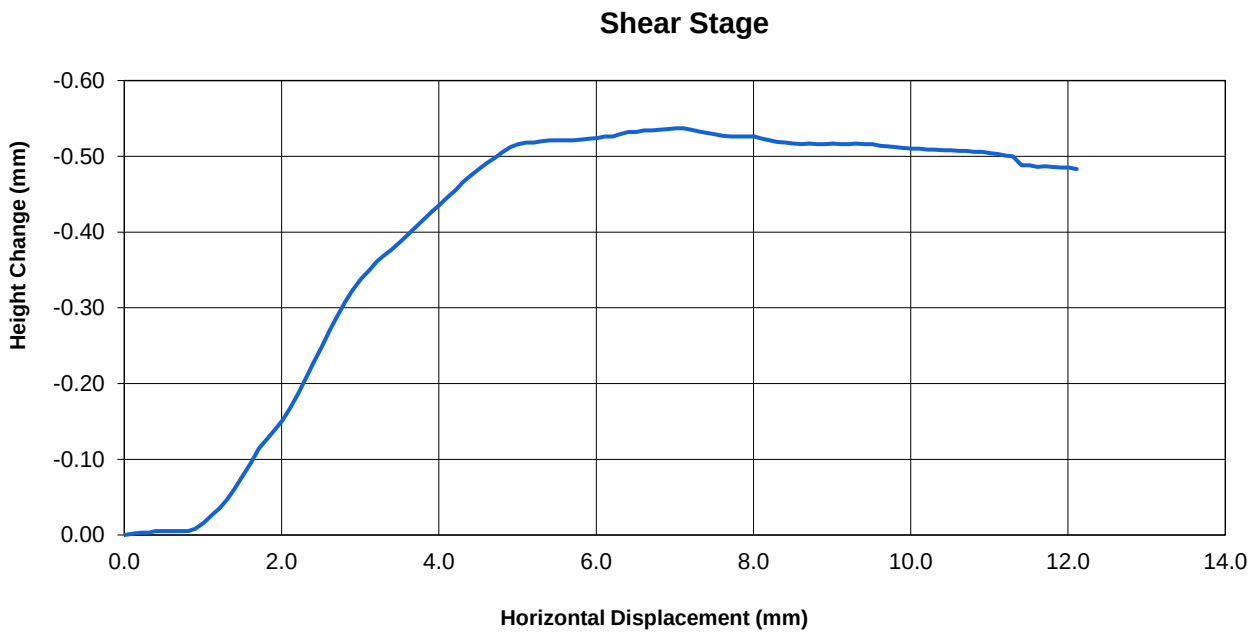
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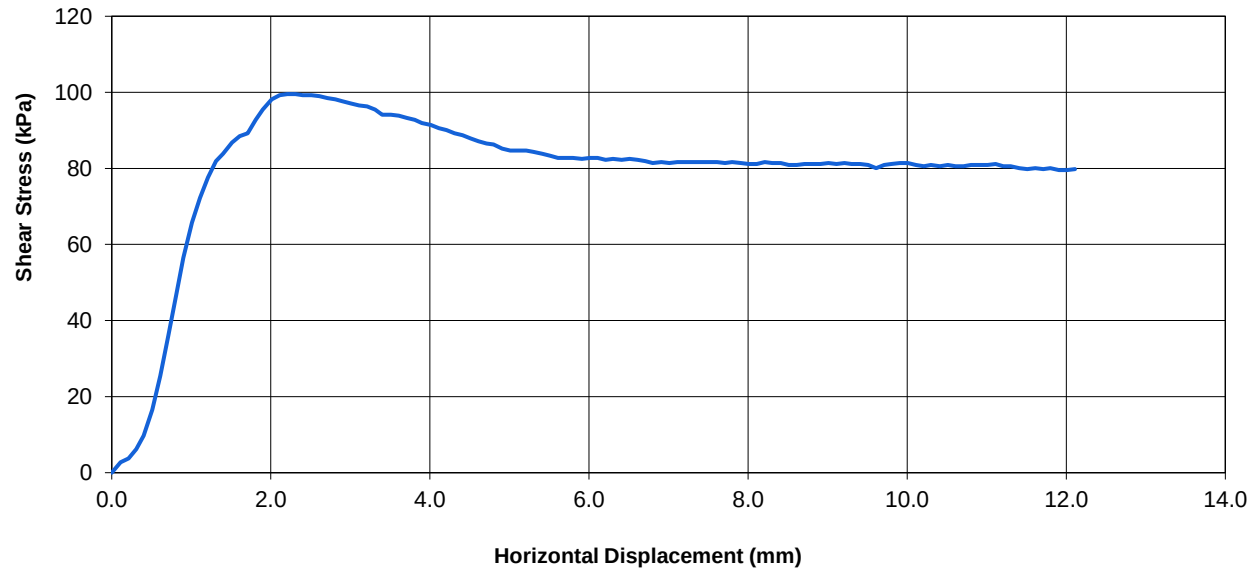
Borehole No	BHSP08
Depth (m)	6.00-6.45
Sample Type	B

Description:

Light brown gravelly fine to medium SAND.
Gravel is fine to medium.

Specimen: 3





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DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

Borehole No	BHSP08
Depth (m)	19.50-19.95
Sample Type	B

Description:

Grey gravelly SAND with rare mica crystals.
Gravel is fine to medium.

Specimen Details

Depth within original sample	*m*	n/a
Orientation within original sample		n/a
Test condition		Submerged
Preparation		< 2 mm material remoulded at existing water content to a relative density of 60% [1]
Particle density	*Mg/m³*	2.65 (assumed)

Specimen Number		**1**	**2**	**3**
Length	*mm*	60.04	60.05	60.05
Width	*mm*	60.00	60.00	60.01
Height	*mm*	25.54	25.42	25.39
Initial water content	*%*	21.5	21.5	21.5
Initial bulk density	*Mg/m³*	1.63	1.64	1.64
Initial dry density	*Mg/m³*	1.34	1.35	1.35
Initial voids ratio		0.975	0.966	0.964
Degree of Saturation	*%*	58.5	59.0	59.1

Shearing Stage

Normal stress	*kPa*	60	120	240
Peak Conditions:				
Rate of horizontal displacement	*mm/min*	0.4	0.4	0.4
Maximum shear stress	*kPa*	41.6	86.1	168.0
Horizontal displacement at MSS	*mm*	5.0	4.9	6.6
Vertical Displacement at Peak	*mm*	-0.02	0.43	0.65
Final water content	*%*	26.6	25.9	26.5
Duration	*day(s)*	1	1	1

Shear Strength Parameters

		Peak Condition
Apparent Cohesion	*kPa*	**1**
Angle of Shearing Resistance	*degrees*	**35.0**

Notes: *[1] Maximum dry density = 1.58 Mg/m³ and minimum dry density 1.15 Mg/m³*

Tested by JJR
Checked and Approved by

P Heritage - Project Manager
26/07/2023

Project Number:

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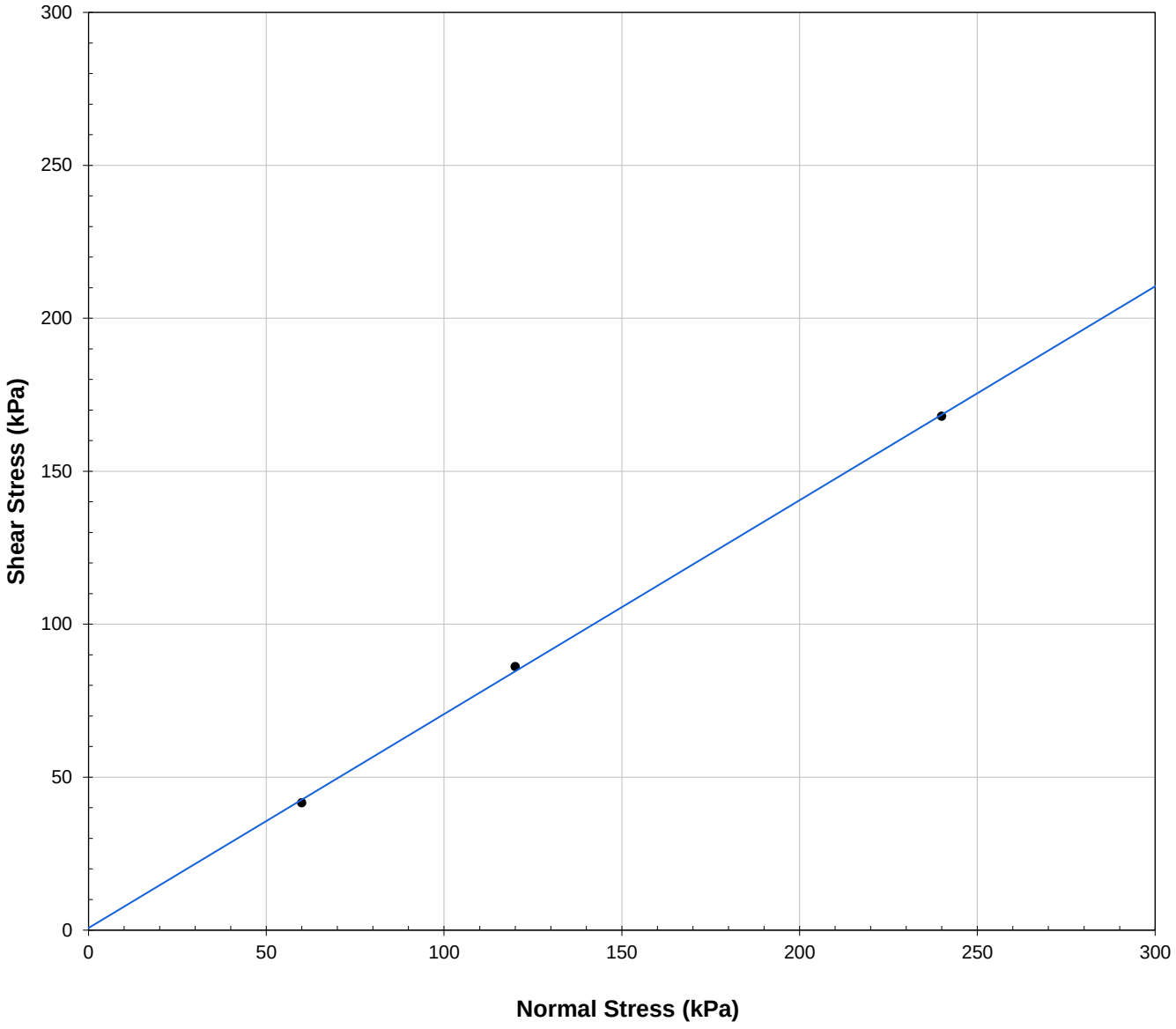
(small shearbox apparatus)

Borehole No	BHSP08
Depth (m)	19.50-19.95
Sample Type	B

Description:

Grey gravelly SAND with rare mica crystals.
Gravel is fine to medium.

Shear Stress v Normal Stress



Peak: **c' = 1**

Φ' = 35.0

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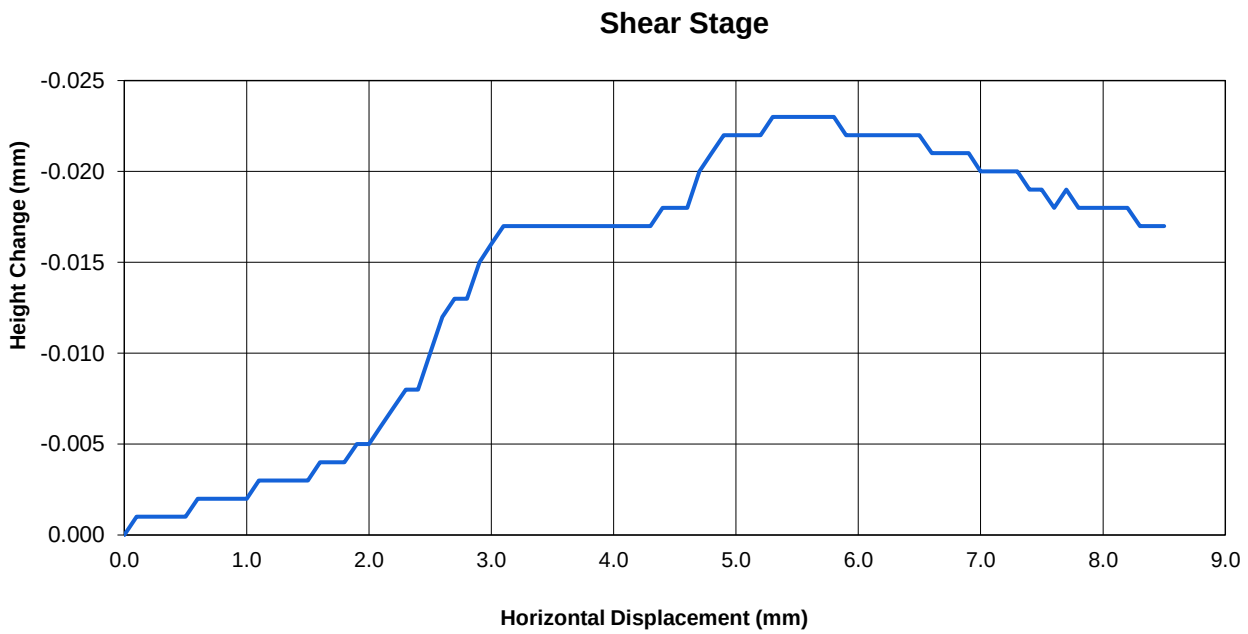
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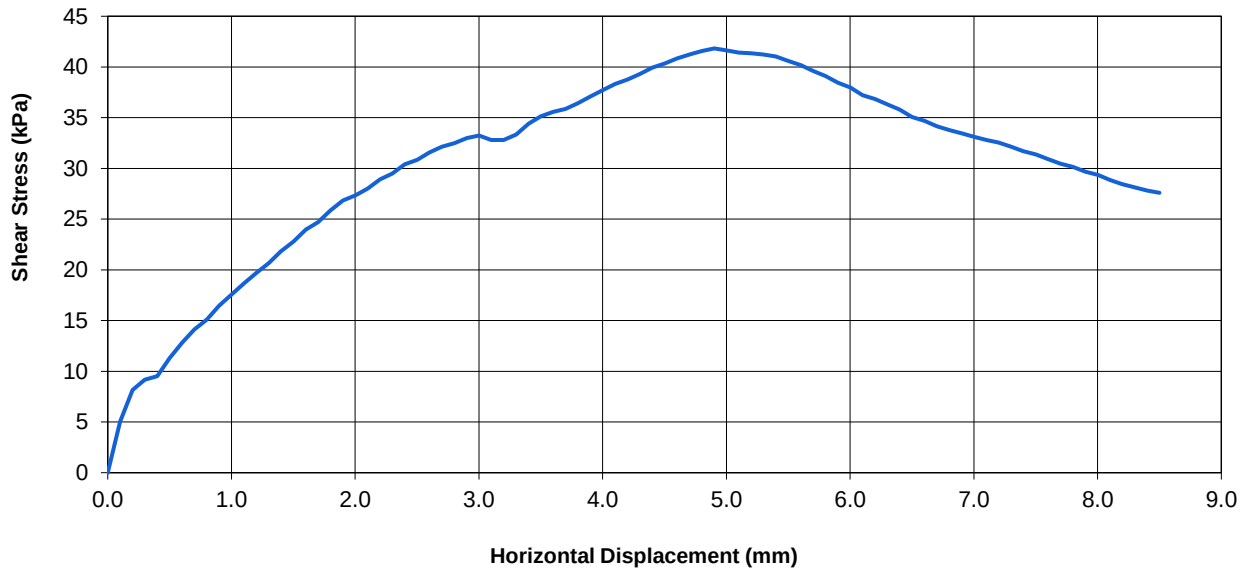
Borehole No	BHSP08
Depth (m)	19.50-19.95
Sample Type	B

Description:

Grey gravelly SAND with rare mica crystals.
Gravel is fine to medium.

Specimen: 1





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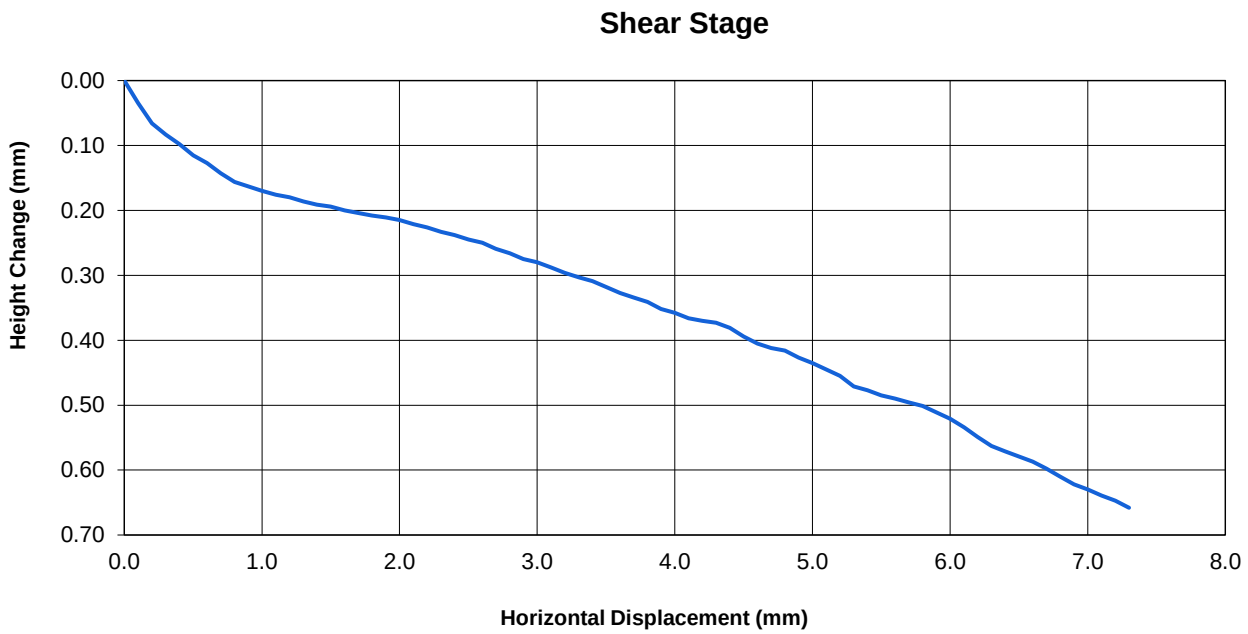
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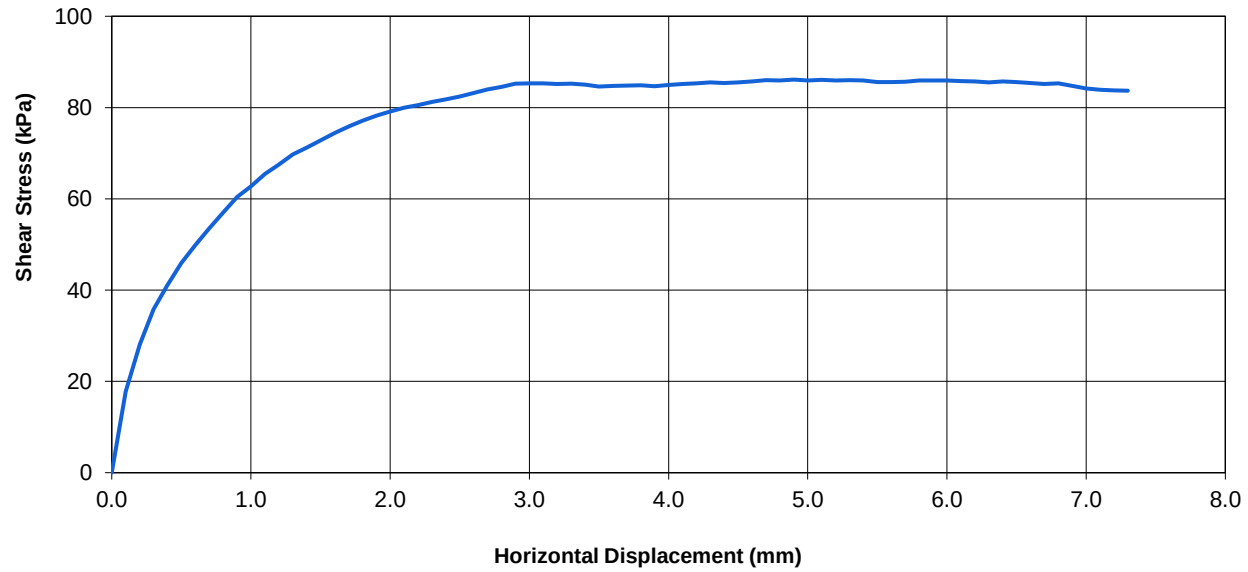
Borehole No	BHSP08
Depth (m)	19.50-19.95
Sample Type	B

Description:

Grey gravelly SAND with rare mica crystals.
Gravel is fine to medium.

Specimen: 2





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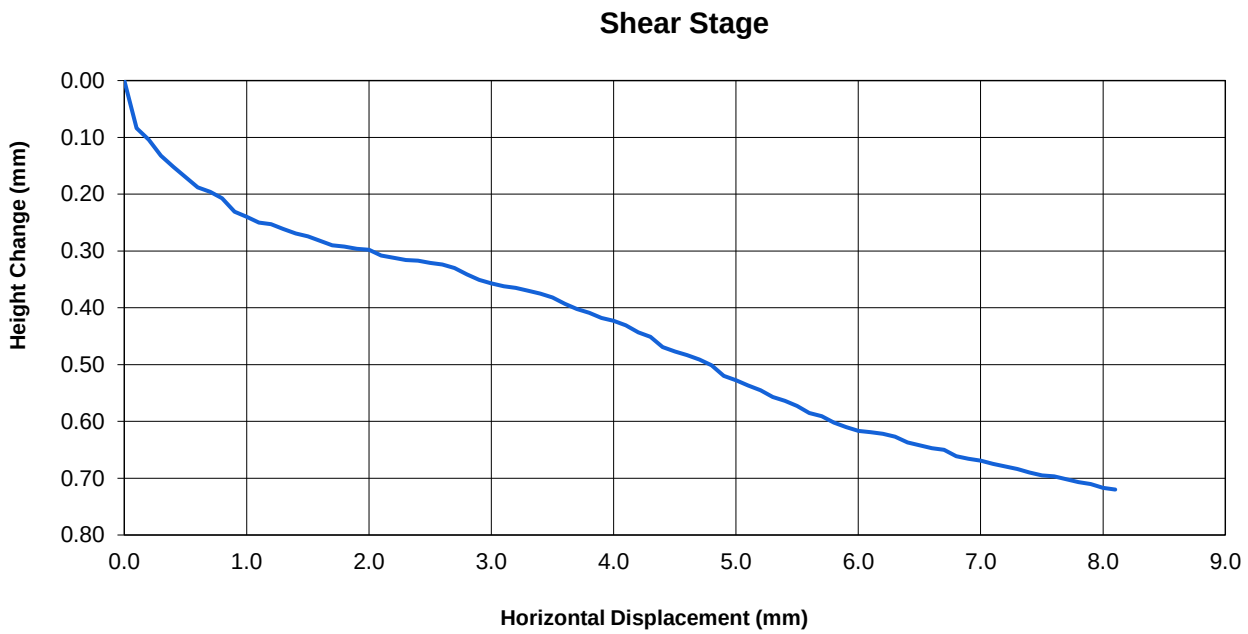
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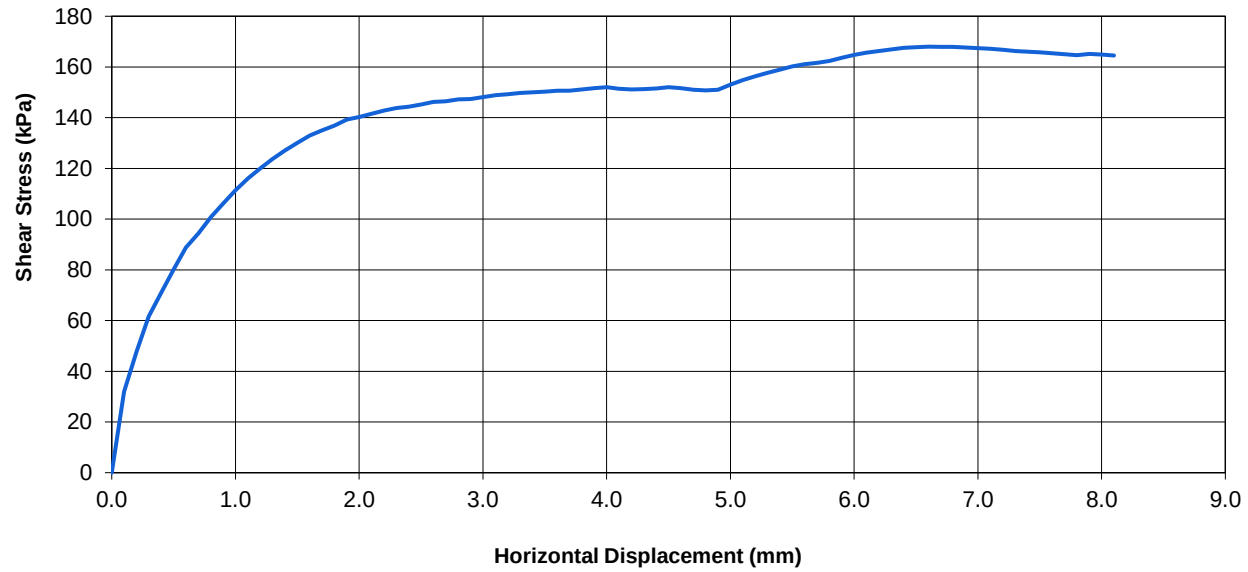
Borehole No	BHSP08
Depth (m)	19.50-19.95
Sample Type	B

Description:

Grey gravelly SAND with rare mica crystals.
Gravel is fine to medium.

Specimen: 3





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DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

Borehole No	BHSP08
Depth (m)	25.50-25.95
Sample Type	B

Description:

Grey gravelly fine to medium SAND with rare shell fragments.

Specimen Details

Depth within original sample	*m*	n/a
Orientation within original sample		n/a
Test condition		Submerged
Preparation		< 2 mm material remoulded at existing water content to a relative density of 50% [1]
Particle density	*Mg/m³*	2.65 (assumed)

Specimen Number		**1**	**2**	**3**
Length	*mm*	59.78	60.05	60.03
Width	*mm*	59.77	60.03	60.03
Height	*mm*	25.08	25.06	25.13
Initial water content	*%*	24.5	24.5	24.5
Initial bulk density	*Mg/m³*	1.67	1.66	1.66
Initial dry density	*Mg/m³*	1.34	1.33	1.33
Initial voids ratio		0.971	0.987	0.992
Degree of Saturation	*%*	66.9	65.8	65.5

Shearing Stage

Normal stress	*kPa*	75	150	300
Peak Conditions:				
Rate of horizontal displacement	*mm/min*	0.4	0.4	0.4
Maximum shear stress	*kPa*	51.9	103.9	199.4
Horizontal displacement at MSS	*mm*	6.9	8.8	9.1
Vertical Displacement at Peak	*mm*	0.38	0.34	0.84
Final water content	*%*	24.8	25.7	25.9
Duration	*day(s)*	1	1	1

Shear Strength Parameters

		Peak Condition
Apparent Cohesion	*kPa*	**4**
Angle of Shearing Resistance	*degrees*	**33.0**

Notes: *[1] Maximum dry density = 1.61 Mg/m³ and minimum dry density = 1.13 Mg/m³*

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Checked and Approved by

P Heritage - Project Manager
26/07/2023

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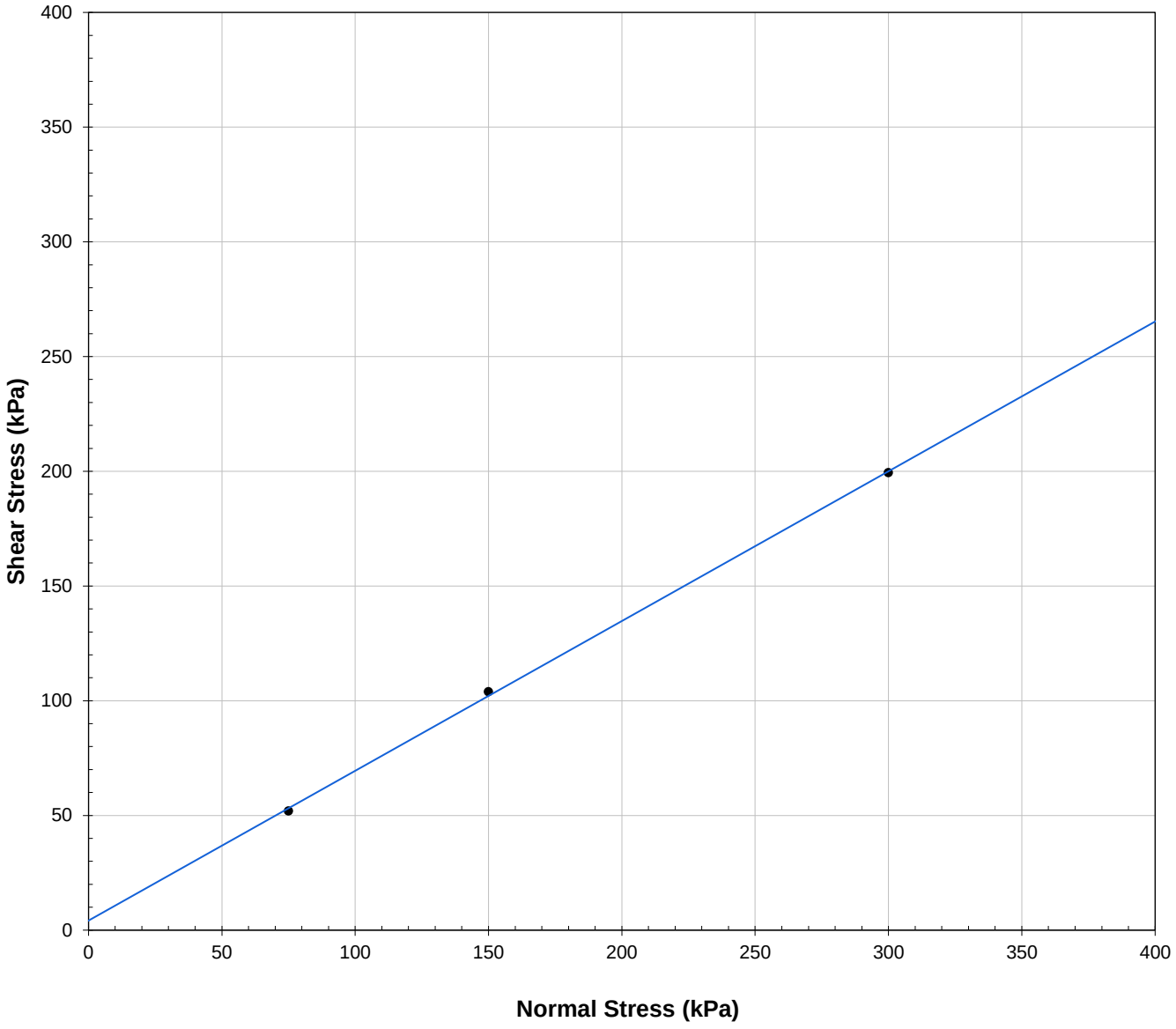
(small shearbox apparatus)

Borehole No	BHSP08
Depth (m)	25.50-25.95
Sample Type	B

Description:

Grey gravelly fine to medium SAND with rare shell fragments.

Shear Stress v Normal Stress



Peak: **c' = 4**

Φ' = 33.0

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26/07/2023

Project Number:

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DIRECT SHEAR TEST – SHEARBOX

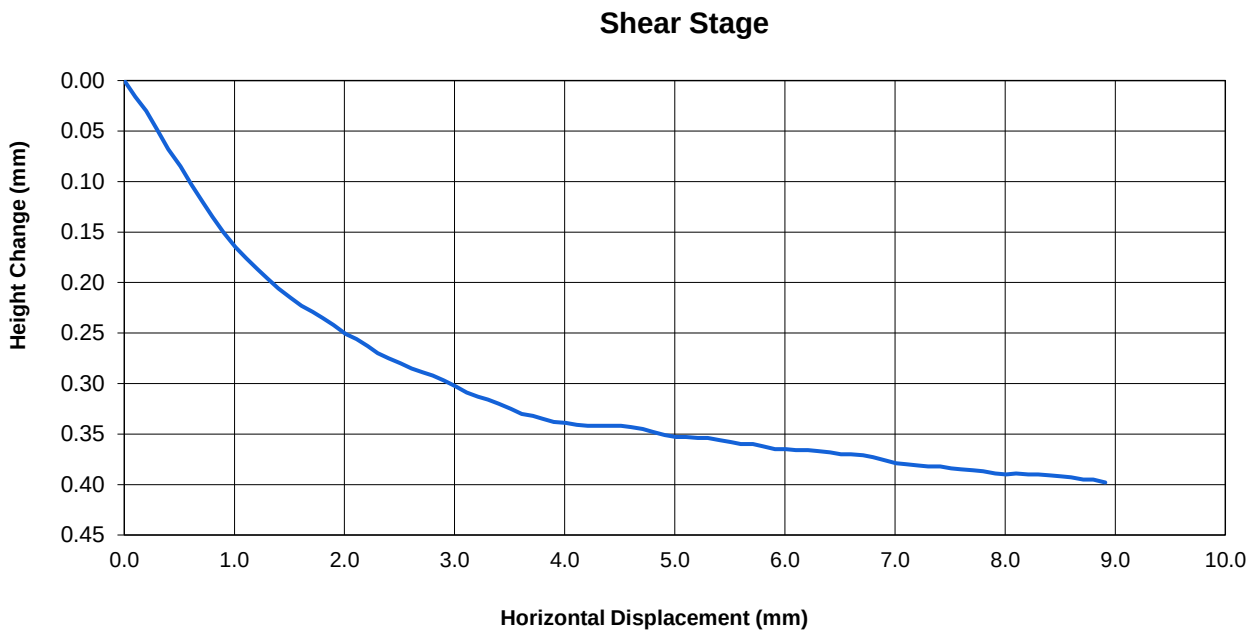
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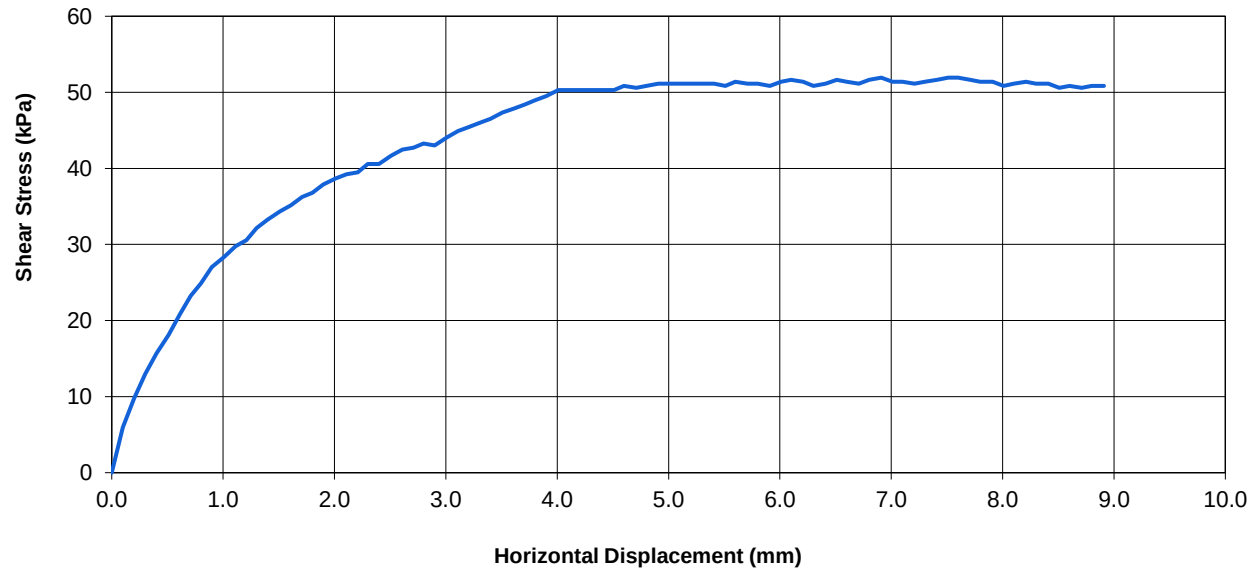
Borehole No	BHSP08
Depth (m)	25.50-25.95
Sample Type	B

Description:

Grey gravelly fine to medium SAND with rare shell fragments.

Specimen: 1





Tested by JJR
Checked and Approved by

P Heritage - Project Manager
26/07/2023

Project Number:

GEO / 38343

Project Name:

ARDERSIER PORT
S23053

BS EN ISO 17892 10:2018

DIRECT SHEAR TEST – SHEARBOX

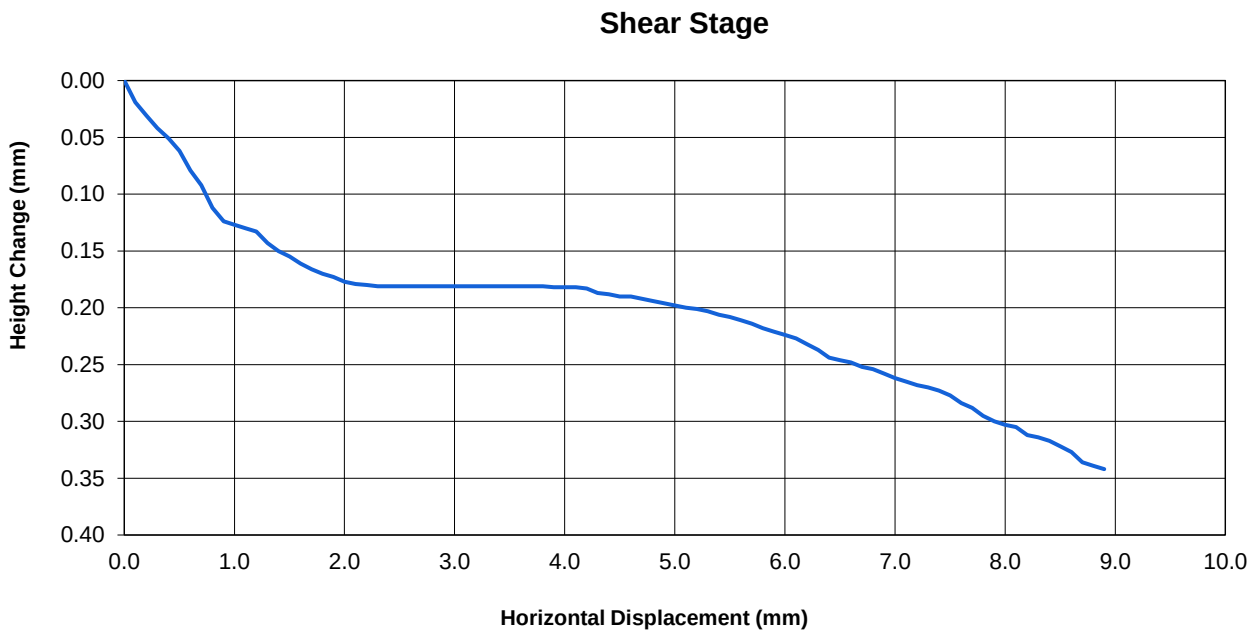
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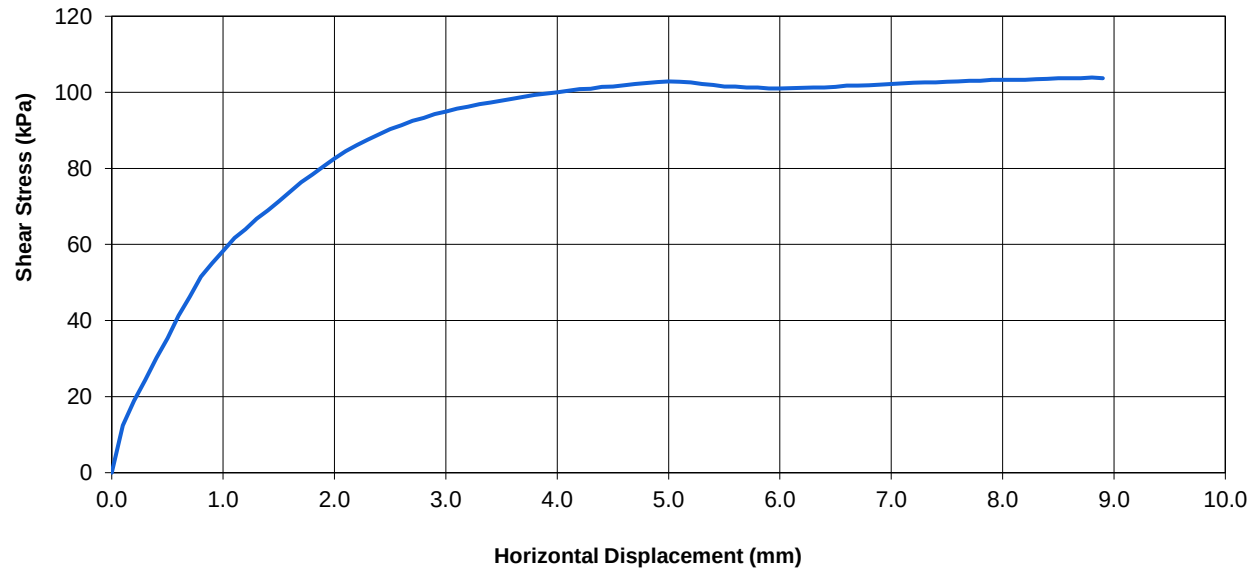
Borehole No	BHSP08
Depth (m)	25.50-25.95
Sample Type	B

Description:

Grey gravelly fine to medium SAND with rare shell fragments.

Specimen: 2





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Project Name:

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BS EN ISO 17892 10:2018

DIRECT SHEAR TEST – SHEARBOX

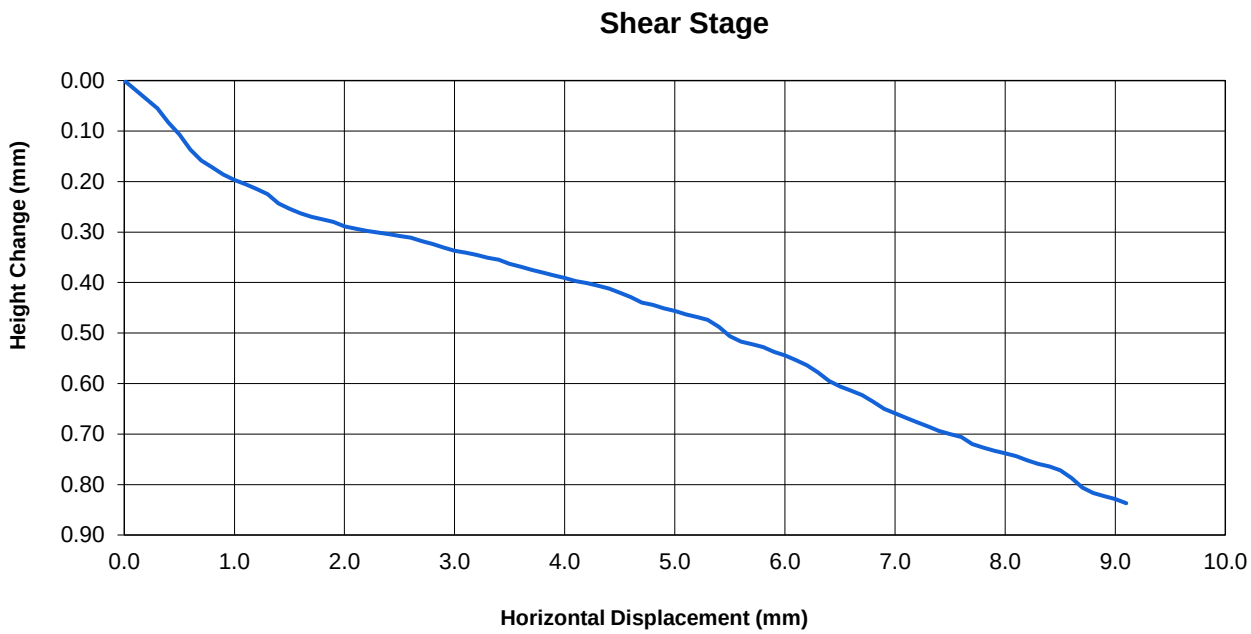
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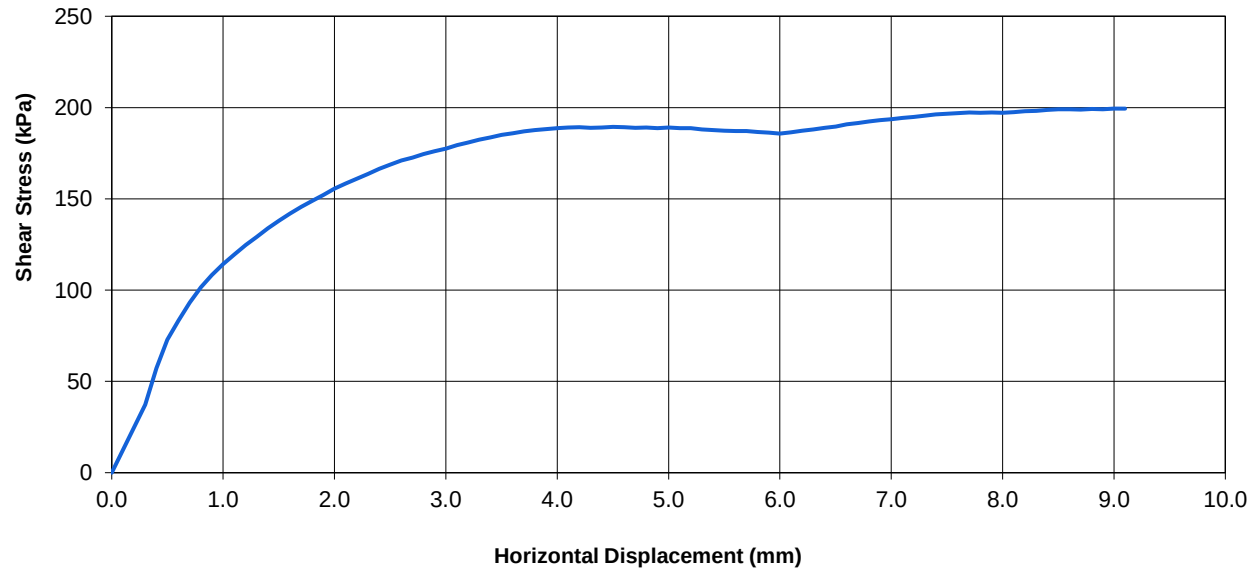
Borehole No	BHSP08
Depth (m)	25.50-25.95
Sample Type	B

Description:

Grey gravelly fine to medium SAND with rare shell fragments.

Specimen: 3





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Project Number:

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Project Name:

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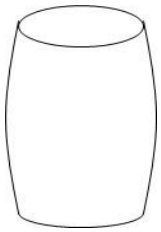
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BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP08	Description: Yellowish brown slightly gravelly SAND. Gravel is fine.
Depth (m): 7.00-7.45	

SPECIMEN DETAILS				
Depth within original sample		NA	Orientation within original sample: NA	
Remarks		Remoulded to a target 10.0 % MC and a target dry density of 1.525 Mg/m³		
TEST DETAILS				
Specimen Type and Preparation		B (Remoulded)		
Cell Preparation		Checks performed in accordance with Clause 3.5		
Specimen Number		**Multistage**		
Initial Diameter	*mm*	69.54		
Initial Length	*mm*	140.19		
Initial Water Content	*%*	10.4		
Initial Wet Density	*Mg/m³*	1.68		
Drainage Conditions		One end only		
SATURATION STAGE		Method: Clause 5.2		
Final Cell Pressure	*kPa*	630		
Final Pore Pressure	*kPa*	615		
Final Pore Pressure Parameter B		1.00		
Duration	*day(s)*	6		
CONSOLIDATION STAGE		**Stage No 1**	**Stage No 2**	**Stage No 3**
Cell Pressure	*kPa*	630	660	720
Back Pressure	*kPa*	600	600	600
Effective Pressure	*kPa*	30	60	120
Final Pore Pressure	*kPa*	600	600	601
Final Pore Pressure Dissipation	*%*	100	100	100
Duration	*day(s)*	1	2	0
SHEARING STAGE				
Cell Pressure	*kPa*	630	660	720
Rate of Axial Displacement	*mm/min*	0.015	0.012	0.015
Initial Pore Pressure	*kPa*	600	600	601
Initial Effective Stress	*kPa*	30	60	119
CONDITIONS AT FAILURE	*criteria*	Maximum deviator stress		
Pore Pressure	*kPa*	600	600	600
Minor Effective Principal Stress	*kPa*	30	60	120
Deviator Stress	*kPa*	131	213	439
Major Effective Principal Stress	*kPa*	161	273	559
Volume Change	*mL*	-2.78	-2.80	-6.95
Volumetric Strain	*%*	-0.5	-0.5	-1.3
Axial Strain	*%*	1.1	3.4	4.1
Membrane correction applied to Deviator Stress	*kPa*	0	0	0
Duration	*day(s)*	1	1	1
Final Water Content	*%*	26.0		
Final Wet Density	*Mg/m³*	1.95		
EFFECTIVE STRESS PARAMETERS				
Cohesion	*kPa*	3.3		
Angle of Shear Resistance	*degrees*	39.5		
FAILURE SKETCH				

Checked and Approved by

P Heritage

P Heritage - Project Manager
05/09/2023

Project Number:

GEO / 38343

Project Name:

ARDERSIER PORT
S23053

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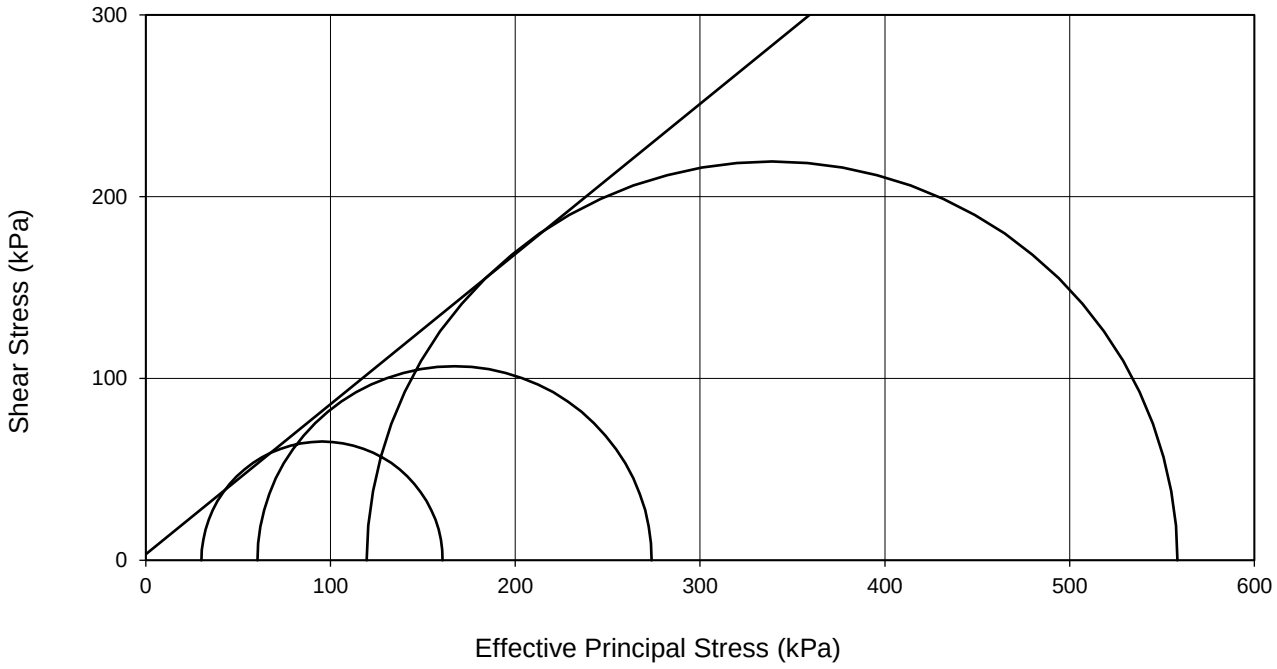
UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP08
Depth (m):	7.00-7.45

Description:
Yellowish brown slightly gravelly SAND. Gravel is fine.



Checked and Approved by

P. Heritage

P Heritage - Project Manager
05/09/2023

Project Number:

GEO / 38343

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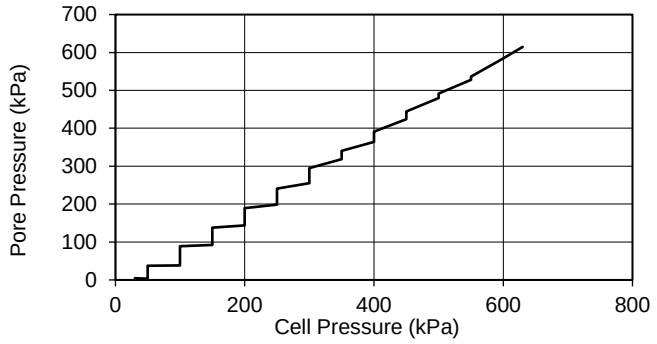
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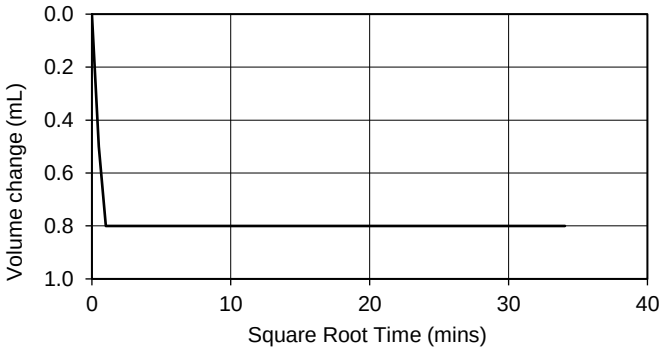
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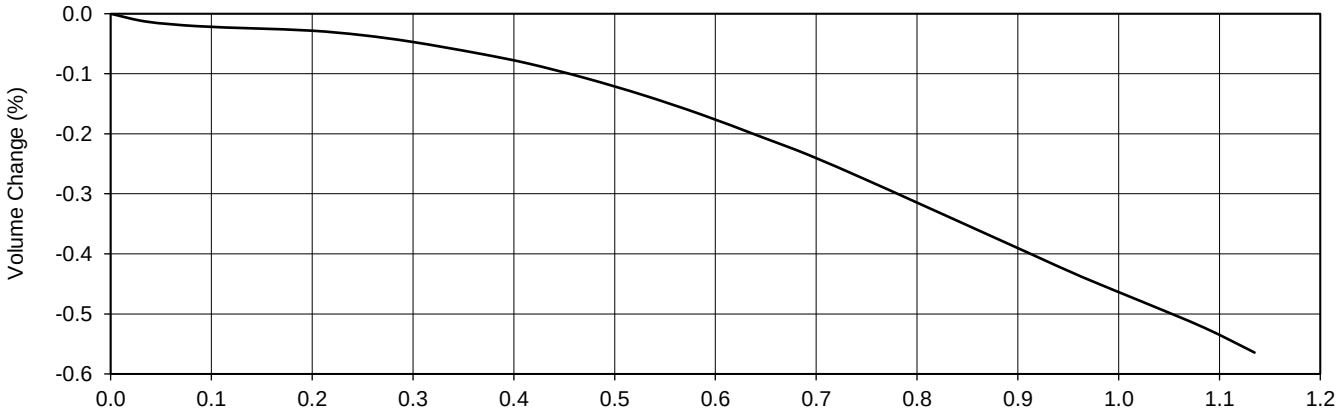
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

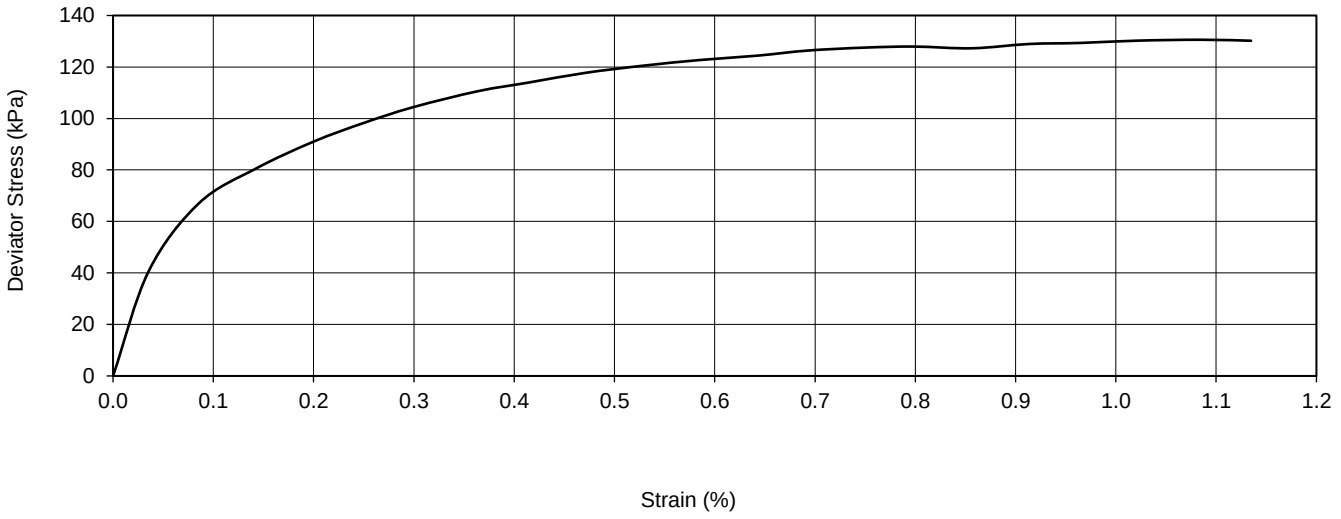
Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP08	**Stage No 1**
Depth (m): 7.00-7.45	









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P Heritage - Project Manager
05/09/2023

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ARDERSIER PORT
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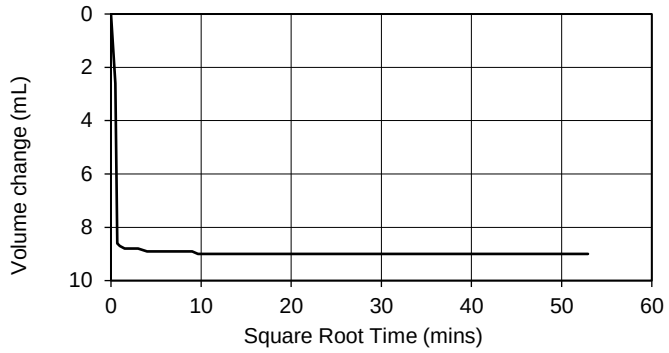
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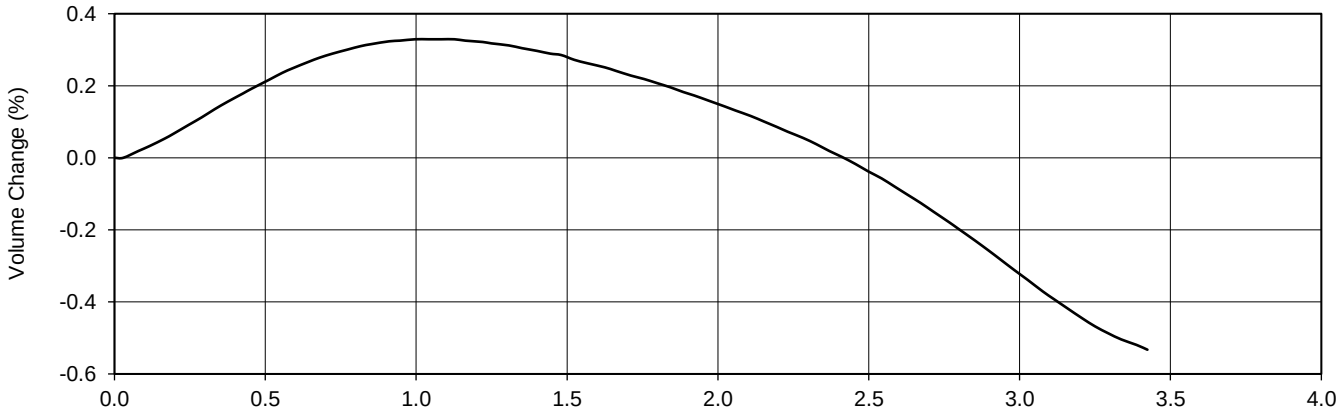
UKAS TESTING 1982

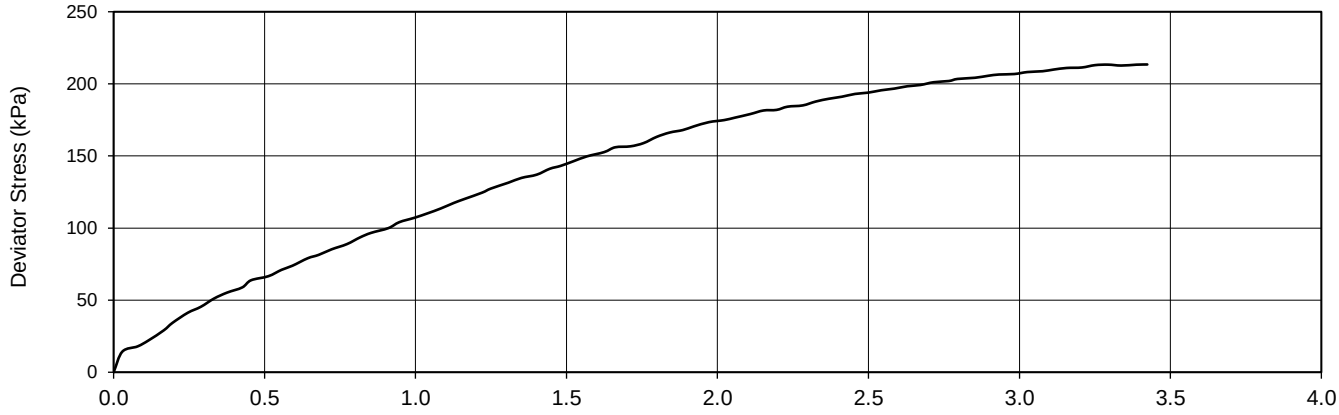
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP08	**Stage No 2**
Depth (m): 7.00-7.45	







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P Heritage - Project Manager
05/09/2023

Project Number:

GEO / 38343

Project Name:

ARDERSIER PORT
S23053

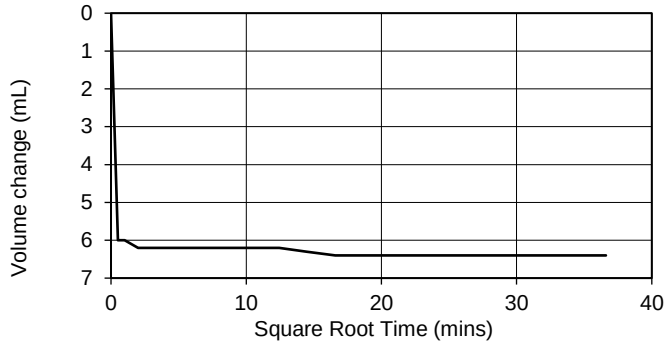
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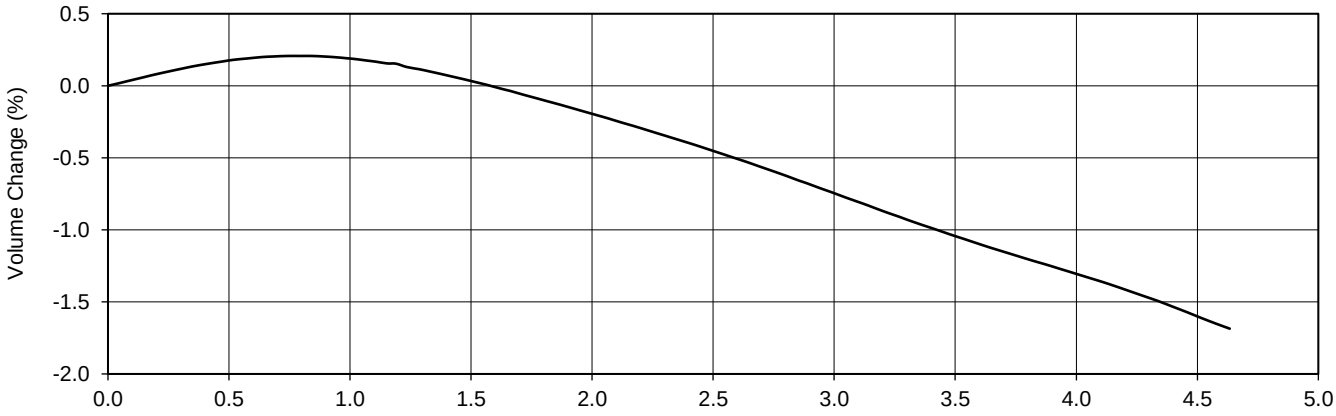
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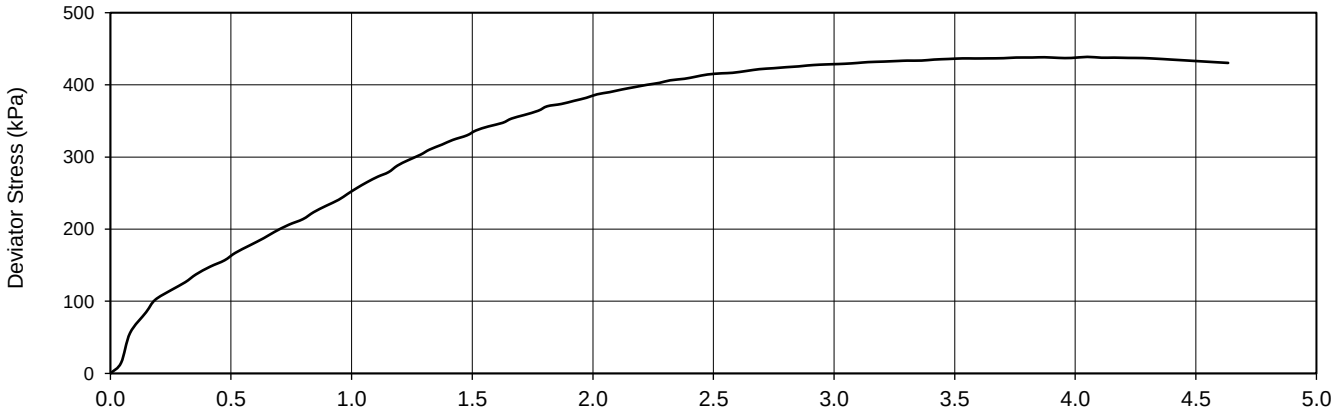
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP08	**Stage No 3**
Depth (m): 7.00-7.45	







Strain (%)

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P Heritage - Project Manager
05/09/2023

Project Number:

GEO / 38343

Project Name:

ARDERSIER PORT
S23053

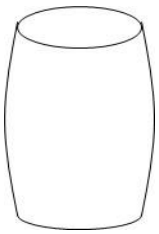
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BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP08	Description: Dark grey slightly gravelly SAND. Gravel is fine.
Depth (m): 18.00-18.45	

SPECIMEN DETAILS				
Depth within original sample		NA	Orientation within original sample: NA	
Remarks		Remoulded to a target 10.0 % MC and a target dry density of 1.373 Mg/m³		
TEST DETAILS				
Specimen Type and Preparation		B (Remoulded)		
Cell Preparation		Checks performed in accordance with Clause 3.5		
Specimen Number		**Multistage**		
Initial Diameter	*mm*	69.54		
Initial Length	*mm*	140.19		
Initial Water Content	*%*	10.5		
Initial Wet Density	*Mg/m³*	1.52		
Drainage Conditions		One end only		
SATURATION STAGE		Method: Clause 5.2		
Final Cell Pressure	*kPa*	660		
Final Pore Pressure	*kPa*	644		
Final Pore Pressure Parameter B		1.00		
Duration	*day(s)*	6		
CONSOLIDATION STAGE		**Stage No 1**	**Stage No 2**	**Stage No 3**
Cell Pressure	*kPa*	660	720	840
Back Pressure	*kPa*	600	600	600
Effective Pressure	*kPa*	60	120	240
Final Pore Pressure	*kPa*	600	600	600
Final Pore Pressure Dissipation	*%*	100	100	100
Duration	*day(s)*	1	1	1
SHEARING STAGE				
Cell Pressure	*kPa*	660	720	840
Rate of Axial Displacement	*mm/min*	0.015	0.015	0.020
Initial Pore Pressure	*kPa*	600	600	600
Initial Effective Stress	*kPa*	60	120	240
CONDITIONS AT FAILURE	*criteria*	Maximum deviator stress		
Pore Pressure	*kPa*	600	600	600
Minor Effective Principal Stress	*kPa*	60	120	240
Deviator Stress	*kPa*	176	339	664
Major Effective Principal Stress	*kPa*	236	459	904
Volume Change	*mL*	-0.20	-1.61	-1.18
Volumetric Strain	*%*	0.0	-0.3	-0.2
Axial Strain	*%*	1.7	2.5	3.5
Membrane correction applied to Deviator Stress	*kPa*	0	0	0
Duration	*day(s)*	1	1	1
Final Water Content	*%*	31.2		
Final Wet Density	*Mg/m³*	1.84		
EFFECTIVE STRESS PARAMETERS				
Cohesion	*kPa*	3.3		
Angle of Shear Resistance	*degrees*	35		
FAILURE SKETCH				

Checked and Approved by

P Heritage

P Heritage - Project Manager
05/09/2023

Project Number:

GEO / 38343

Project Name:

ARDERSIER PORT
S23053

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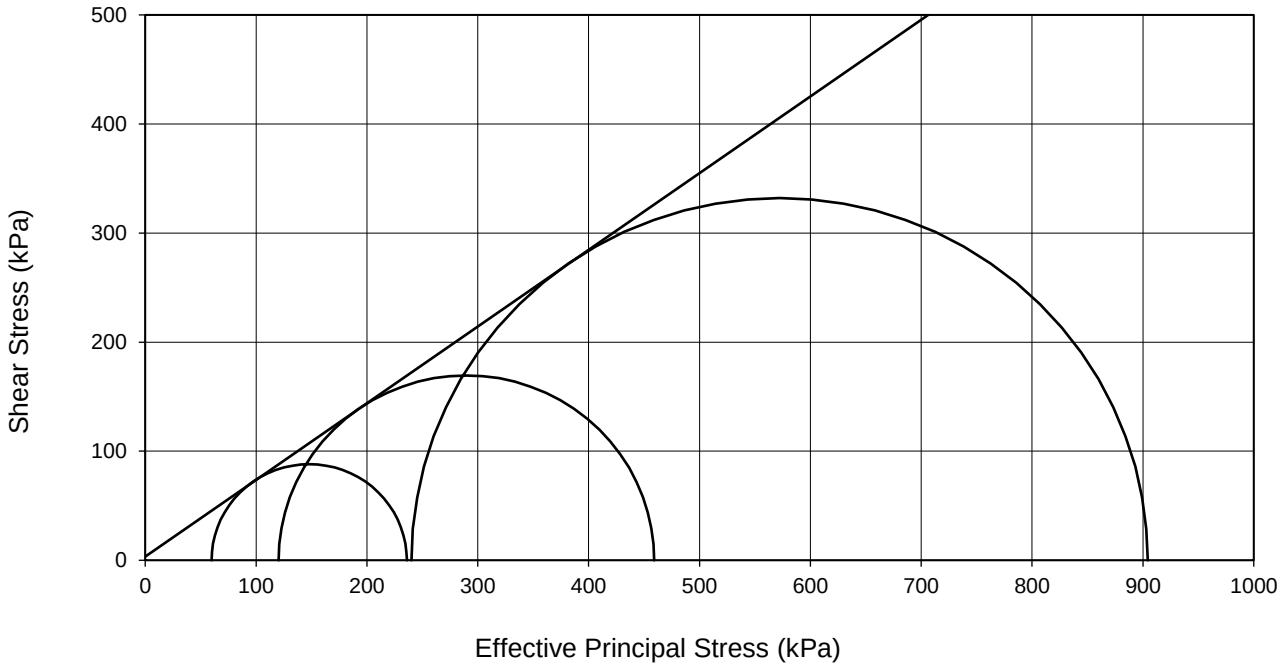
UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP08
Depth (m):	18.00-18.45

Description:
Dark grey slightly gravelly SAND. Gravel is fine.



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P. Heritage

P Heritage - Project Manager
05/09/2023

Project Number:

GEO / 38343

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ARDERSIER PORT
S23053

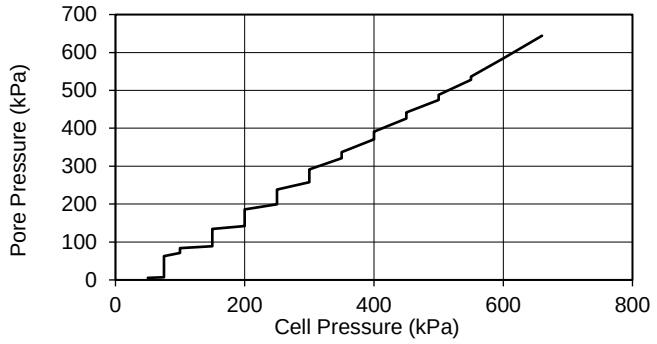
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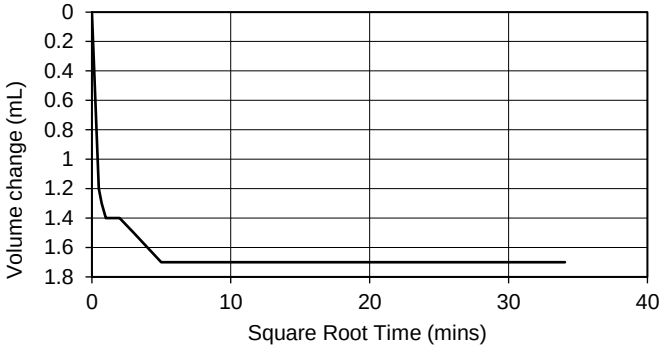
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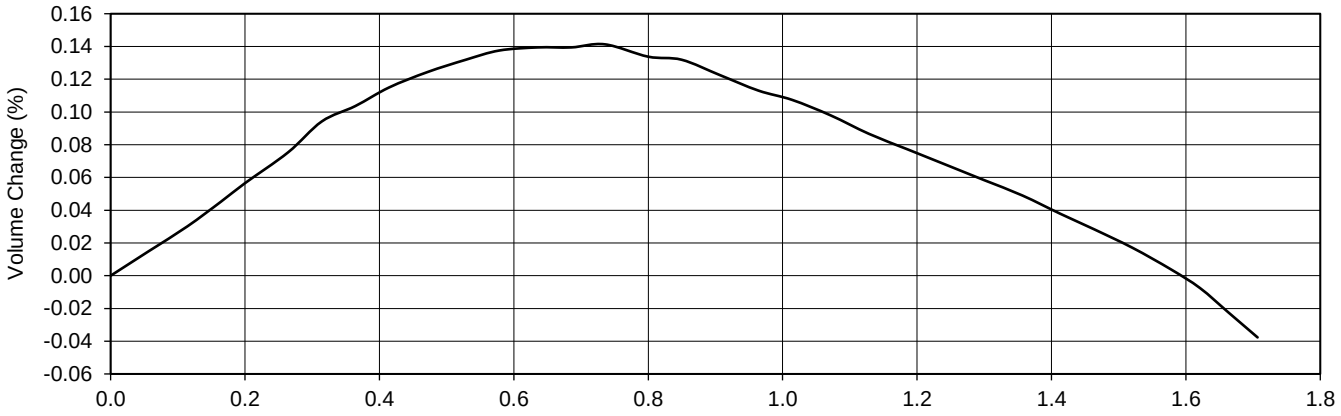
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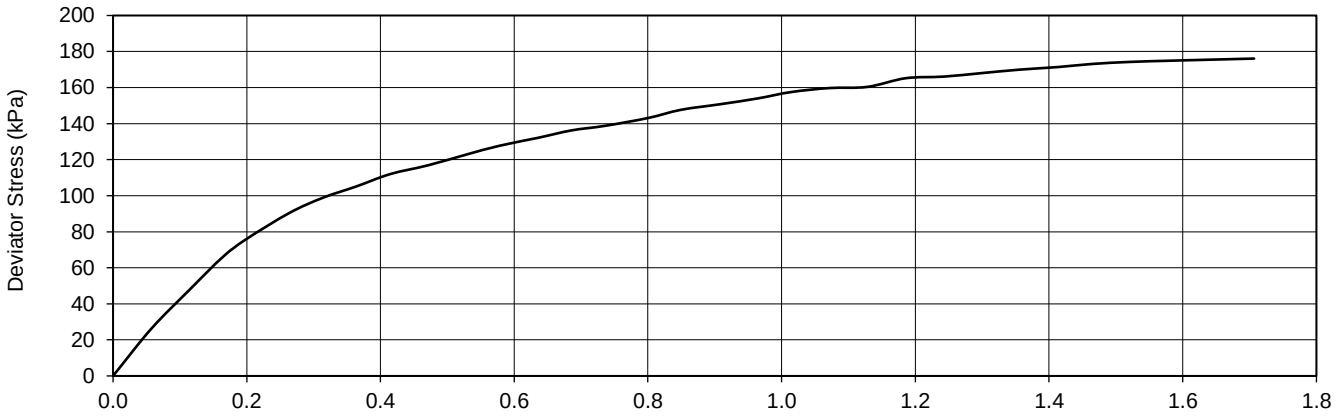
Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP08	**Stage No 1**
Depth (m): 18.00-18.45	









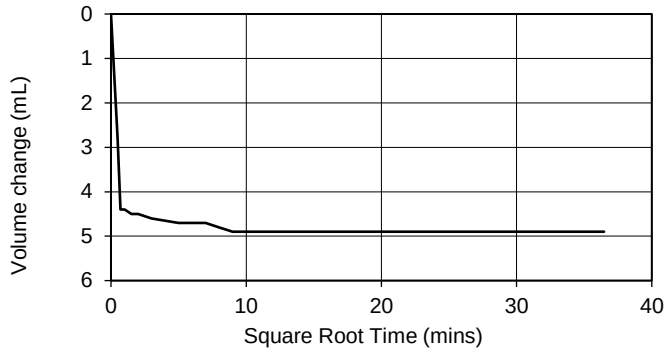
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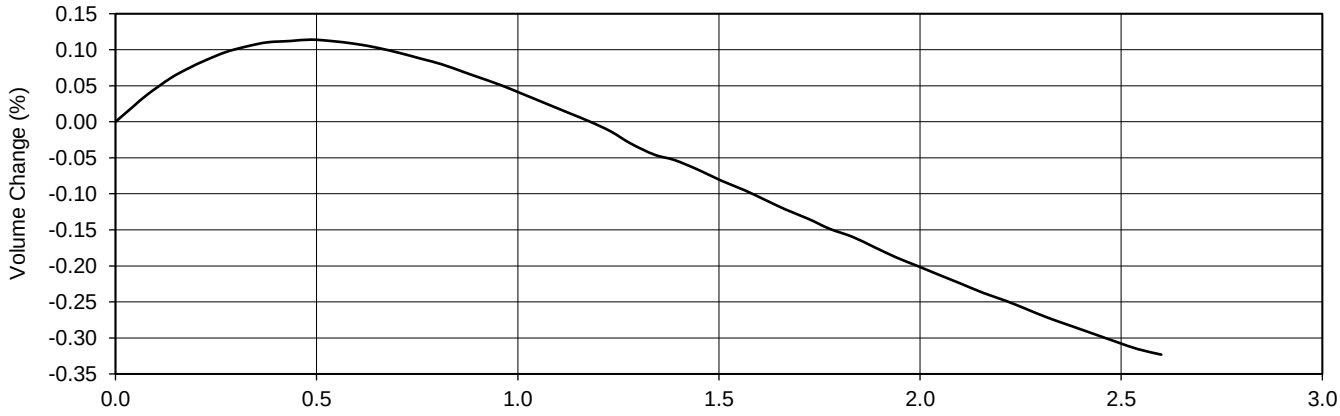
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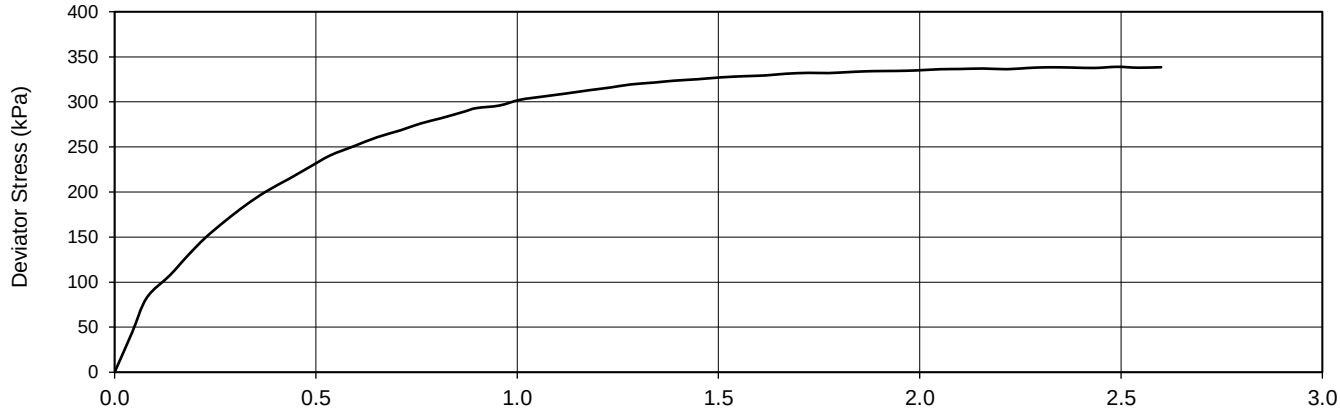
Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP08
Depth (m):	18.00-18.45

Stage No 2







Strain (%)

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P Heritage - Project Manager
05/09/2023

Project Number:

GEO / 38343

Project Name:

ARDERSIER PORT
S23053

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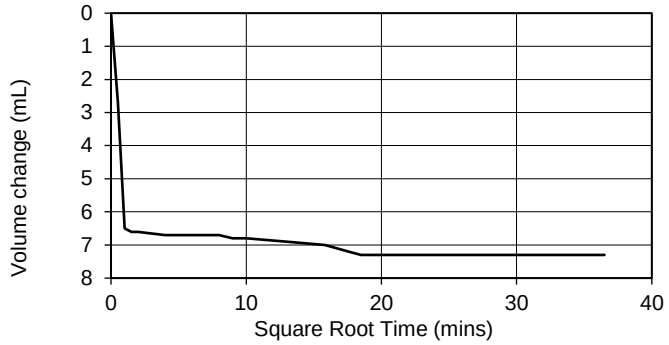
UKAS TESTING 1982

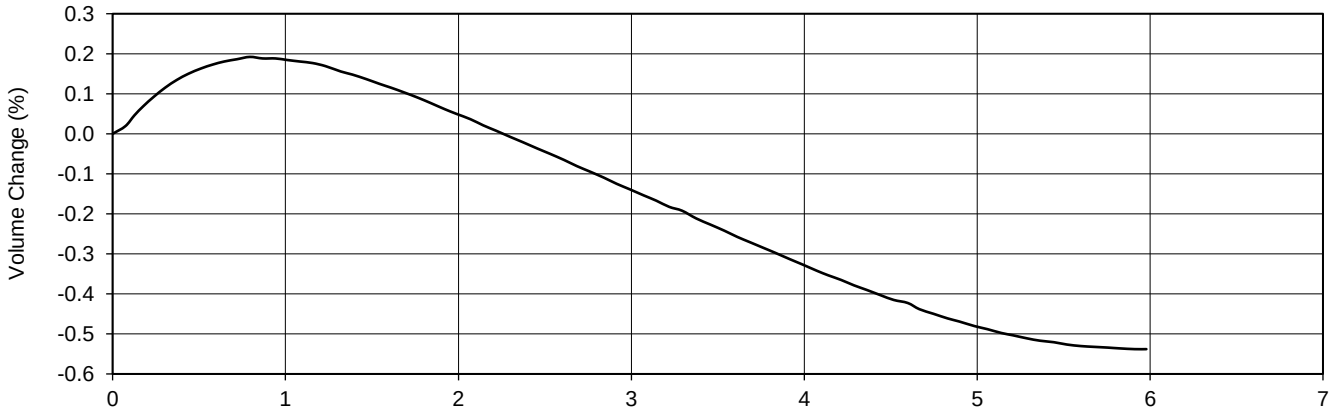
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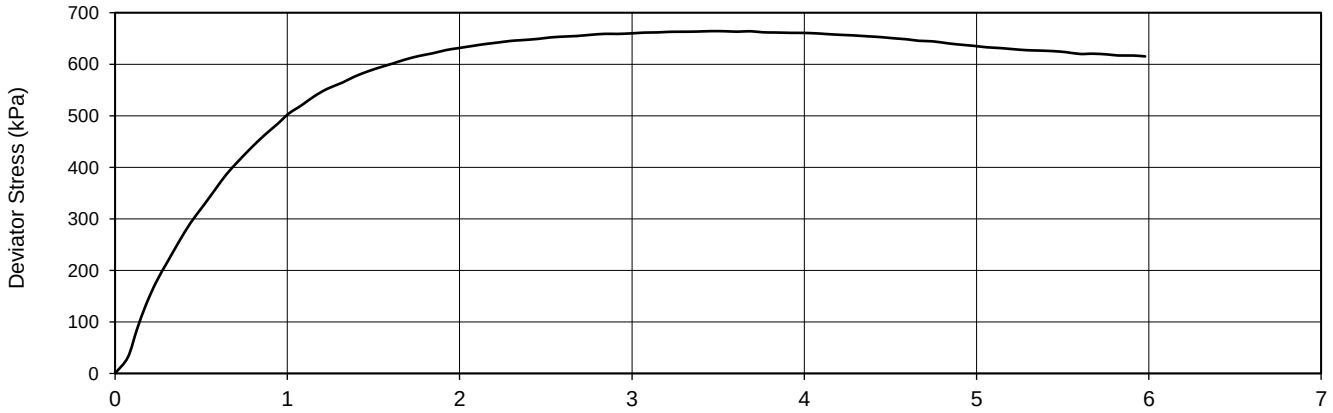
Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP08
Depth (m):	18.00-18.45

Stage No 3







Strain (%)

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P Heritage - Project Manager
05/09/2023

Project Number:

GEO / 38343

Project Name:

ARDERSIER PORT
S23053

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web: www.geolabs.co.uk

Solmek
12 Yarm Road
Stockton-on-Tees
TS18 3NA

06 September 2023
Report No : GEO/38342/01

For the attention of Mr A Cutts

Date samples received	22/06/2023
Date written instructions received	27/06/2023
Date testing commenced	28/06/2023
Date of sample disposal	**04/10/2023**

Our ref **GEO / 38342**
Your Ref **S230503**

Project **ARDERSIER PORT**

Further to your instructions we have pleasure in enclosing the results of the tests you requested in the attached figures.

LABORATORY TEST REPORT

Item No	Test Quantity	Description
1	5	Maximum & Minimum Density
2	3	Shear Strength by Direct Shear
3	2	Isotropic Consolidated Drained Multistage Triaxial Compression (CIDM)

Any opinions or interpretations expressed herein are outside the scope of UKAS accreditation. All results contained in this report are provisional unless signed by an approved signatory. The results contained in this report relate only to samples received in the laboratory and are tested 'as received' unless otherwise stated. This report should not be reproduced, except in full, without the written approval of the laboratory. The results reported are applicable only to the test items received by the laboratory.

All the necessary data required by the documented test procedures has been recorded and will be stored for a period of not less than 6 years. This data will be issued to yourselves at your request. All samples will be disposed of after the date shown above. Written confirmation will be required to retain the samples beyond this period and a storage charge may be applied.

We trust that the above meets your requirements and should you require any further information or assistance, please do not hesitate to contact us.

Yours faithfully
on behalf of **GEOLABS Limited**

S Burke
Senior Technician

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP09
Depth (m)	6.00-6.45
Sample Type	B

Description:

Brown and greyish brown gravelly fine to medium SAND. Gravel is medium to coarse.

Percentage of material retained on the 2 mm test sieve	11.3	%

The fines content was measured to be 3.2 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density 1.65 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.646	g/cm³
Maximum dry density **after** surcharge application	1.658	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.636	g/cm³
Maximum dry density **after** surcharge application	1.649	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density 1.20 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.12	g
	Run		
Mass of sand	1	532.97	g
	2	534.62	g
	3	534.78	g
	4	533.87	g
	5	534.88	g
	Minimum	534.22	g

Checked and Approved by

C F Wallace - Technical Director
19/07/2023

Project Number: **38342**

Project Name: **ARDERSIER PORT S230503**

GEOLABS®

Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP09
Depth (m)	12.00-12.45
Sample Type	B

Description:

Brown and brownish grey slightly silty gravelly fine to medium SAND.

Percentage of material retained on the 2 mm test sieve	12.3	%

The fines content was measured to be 1.7 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density — 1.64 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.607	g/cm³
Maximum dry density **after** surcharge application	1.630	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.627	g/cm³
Maximum dry density **after** surcharge application	1.643	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density — 1.22 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.12	g
	Run		
Mass of sand	1	541.32	g
	2	542.99	g
	3	543.35	g
	4	542.18	g
	5	543.86	g
	Minimum	542.74	g

Checked and Approved by

C F Wallace - Technical Director
19/07/2023

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP09
Depth (m)	15.00-15.45
Sample Type	B

Description:

Brown and greyish brown gravelly fine to medium SAND.

Percentage of material retained on the 2 mm test sieve 11.3 %

The fines content was measured to be 3.2 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density 1.65 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.646	g/cm³
Maximum dry density **after** surcharge application	1.658	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.636	g/cm³
Maximum dry density **after** surcharge application	1.649	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density 1.20 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.12	g
	Run		
Mass of sand	1	532.97	g
	2	534.62	g
	3	534.78	g
	4	533.87	g
	5	534.88	g
	Minimum	534.22	g

Checked and Approved by

C F Wallace - Technical Director
19/07/2023

Project Number: **38342**

Project Name: **ARDERSIER PORT S230503**

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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP09
Depth (m)	21.00-21.45
Sample Type	B

Description:

Grey and greyish brown slightly silty gravelly fine to medium SAND.

Percentage of material retained on the 2 mm test sieve 26.1 % **(please note)**

The fines content was measured to be 2.6 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density 1.71 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.694	g/cm³
Maximum dry density **after** surcharge application	1.710	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.690	g/cm³
Maximum dry density **after** surcharge application	1.705	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density 1.24 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.11	g
	Run		
Mass of sand	1	551.11	g
	2	550.69	g
	3	553.71	g
	4	552.05	g
	5	553.00	g
	Minimum	552.11	g

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C F Wallace - Technical Director
19/07/2023

Project Number:

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Project Name:

ARDERSIER PORT
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Determination of Maximum and Minimum Dry Density of Sands

NGI-Geolabs Recommended Method Statement (As published in 'Development of new robust procedures for the determination of maximum and minimum dry densities of sand' by Knudsen.S et al at ISFOG 2020 {delayed publication})

Location	BHSP09
Depth (m)	23.00
Sample Type	B

Description:

Brownish grey gravelly fine to medium SAND. Gravel is medium to coarse.

Percentage of material retained on the 2 mm test sieve	5.4	%

The fines content was measured to be 2.3 %, so within the 12 % permitted fines

Maximum Dry Density

Mean Maximum Dry Density — 1.60 g/cm³

(after surcharge application)

Determination No 1

Maximum dry density **before** surcharge application	1.590	g/cm³
Maximum dry density **after** surcharge application	1.602	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Determination No 2

Maximum dry density **before** surcharge application	1.590	g/cm³
Maximum dry density **after** surcharge application	1.602	g/cm³
Shaker amplitude setting **before** surcharge application	2	
Shaker amplitude setting **after** surcharge application	2	

Minimum Dry Density

Minimum Dry Density — 1.21 g/cm³

Water calibrated volume of the mould		443.90	cm³
Mass of the mould		897.12	g
	Run		
Mass of sand	1	537.27	g
	2	538.16	g
	3	538.88	g
	4	539.02	g
	5	538.80	g
	Minimum	538.43	g

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C F Wallace - Technical Director
19/07/2023

Project Number: **38342**

Project Name: **ARDERSIER PORT S230503**

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DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

Borehole No	BHSP09
Depth (m)	6.00-6.45
Sample Type	B

Description:

Brown gravelly fine to medium SAND. Gravel is fine.

Specimen Details

Depth within original sample	*m*	n/a
Orientation within original sample		n/a
Test condition		Submerged
Preparation		< 2 mm material remoulded at existing water content to a relative density of 80% [1]
Particle density	*Mg/m³*	2.65 (assumed)

Specimen Number		**1**	**2**	**3**
Length	*mm*	59.94	59.94	59.94
Width	*mm*	60.04	60.04	60.04
Height	*mm*	21.80	21.84	21.92
Initial water content	*%*	7.8	7.8	7.8
Initial bulk density	*Mg/m³*	1.66	1.65	1.65
Initial dry density	*Mg/m³*	1.54	1.53	1.53
Initial voids ratio		0.724	0.727	0.734
Degree of Saturation	*%*	28.6	28.4	28.2

Shearing Stage

Normal stress	*kPa*	25	50	100
Peak Conditions:				
Rate of horizontal displacement	*mm/min*	0.18	0.18	0.18
Maximum shear stress	*kPa*	21.0	41.1	80.7
Horizontal displacement at MSS	*mm*	0.3	0.6	0.7
Vertical Displacement at Peak	*mm*	-0.10	-0.13	-0.13
Final water content	*%*	20.2	19.7	19.5
Duration	*day(s)*	1	1	1

Shear Strength Parameters

		Peak Condition
Apparent Cohesion	*kPa*	**1**
Angle of Shearing Resistance	*degrees*	**38.5**

Notes: *[1] Maximum dry density = 1.65 Mg/m³ and minimum dry density = 1.20 Mg/m³*

Tested by JJR
Checked and Approved by

P Heritage - Project Manager
03/08/2023

Project Number:

GEO / 38342

Project Name:

ARDERSIER PORT
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DIRECT SHEAR TEST – SHEARBOX

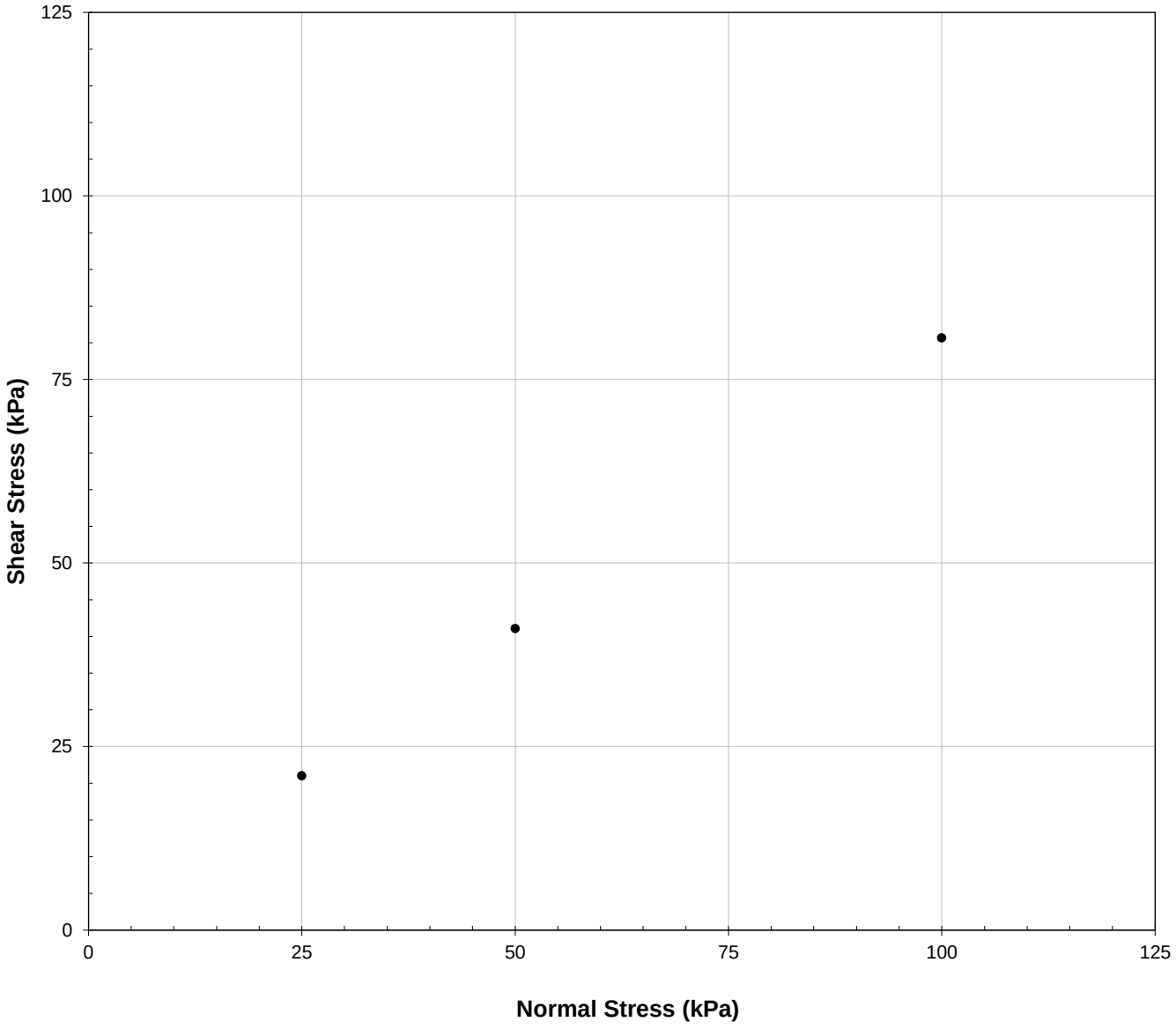
(small shearbox apparatus)

Borehole No	BHSP09
Depth (m)	6.00-6.45
Sample Type	B

Description:

Brown gravelly fine to medium SAND. Gravel is fine.

Shear Stress v Normal Stress



Peak: **c' = 1**

Φ' = 38.5

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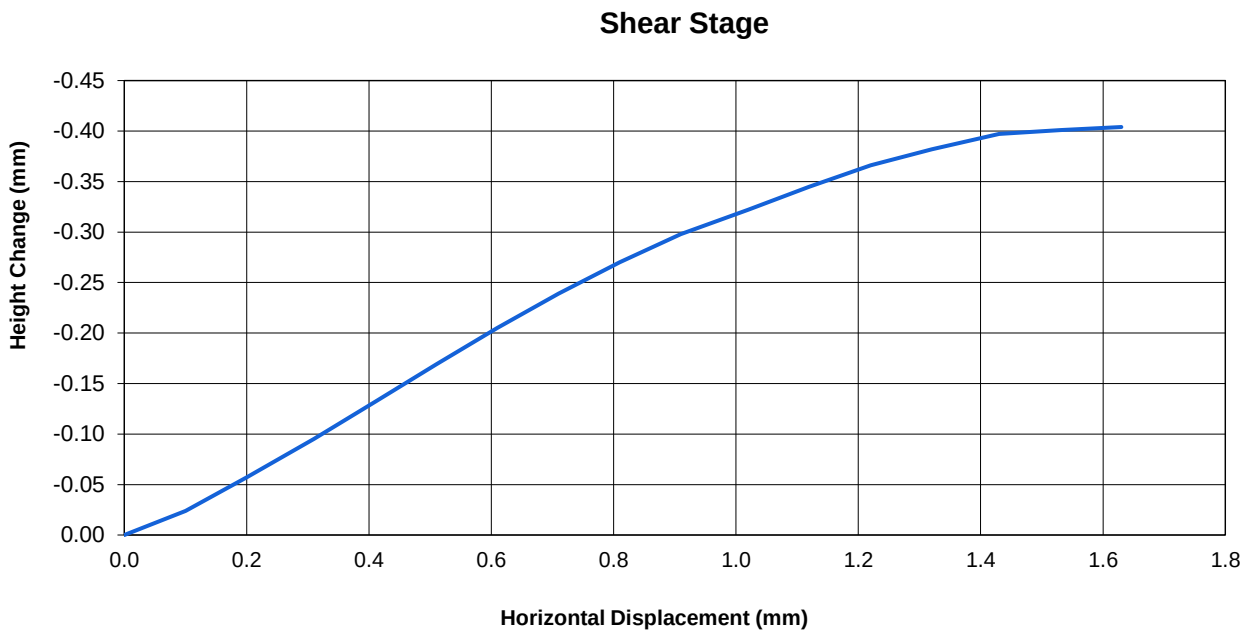
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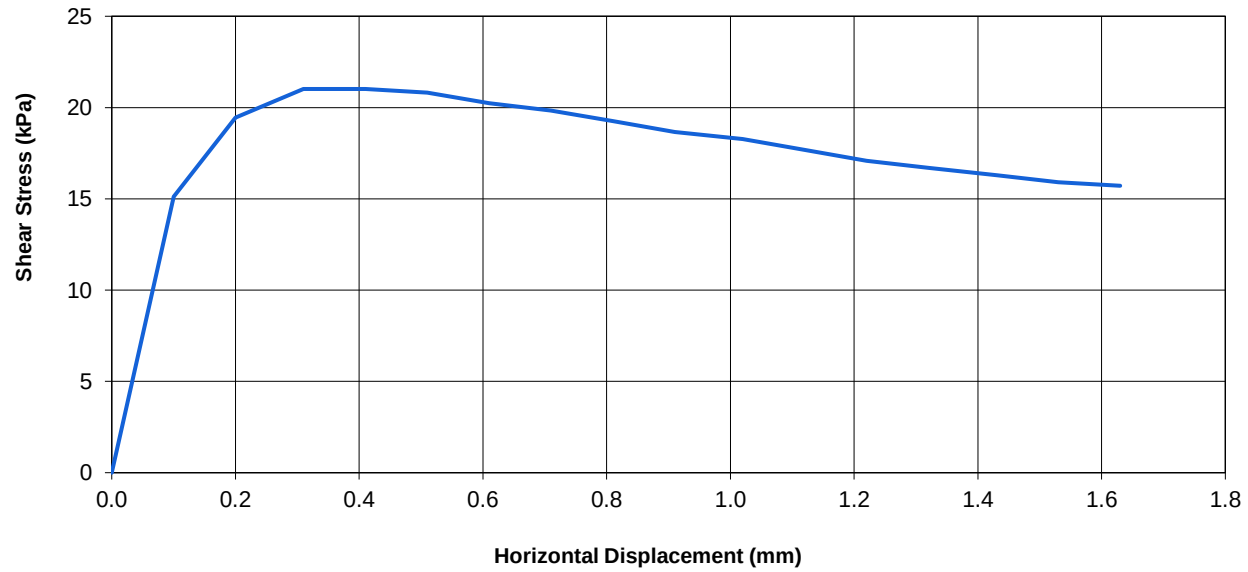
Borehole No	BHSP09
Depth (m)	6.00-6.45
Sample Type	B

Description:

Brown gravelly fine to medium SAND. Gravel is fine.

Specimen: 1





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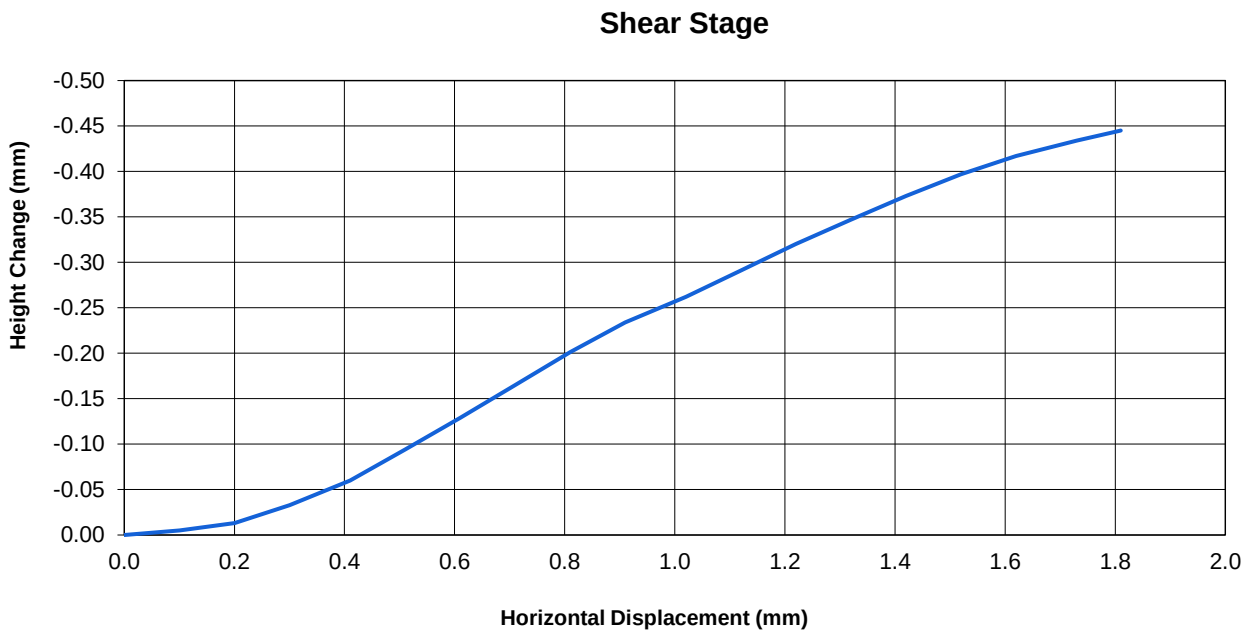
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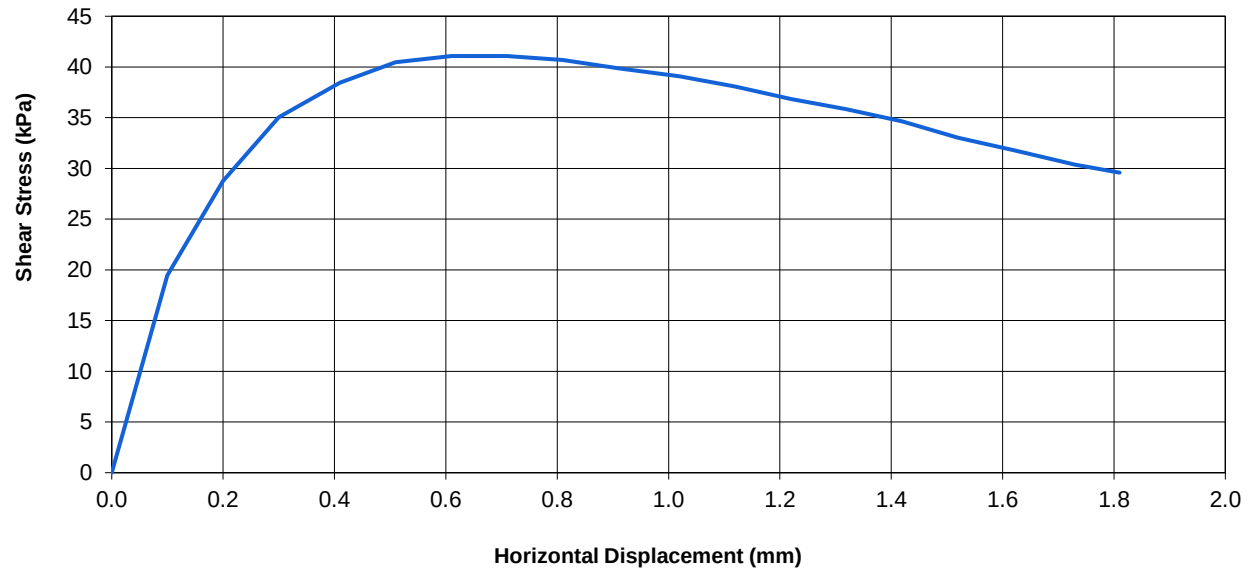
Borehole No	BHSP09
Depth (m)	6.00-6.45
Sample Type	B

Description:

Brown gravelly fine to medium SAND. Gravel is fine.

Specimen: 2





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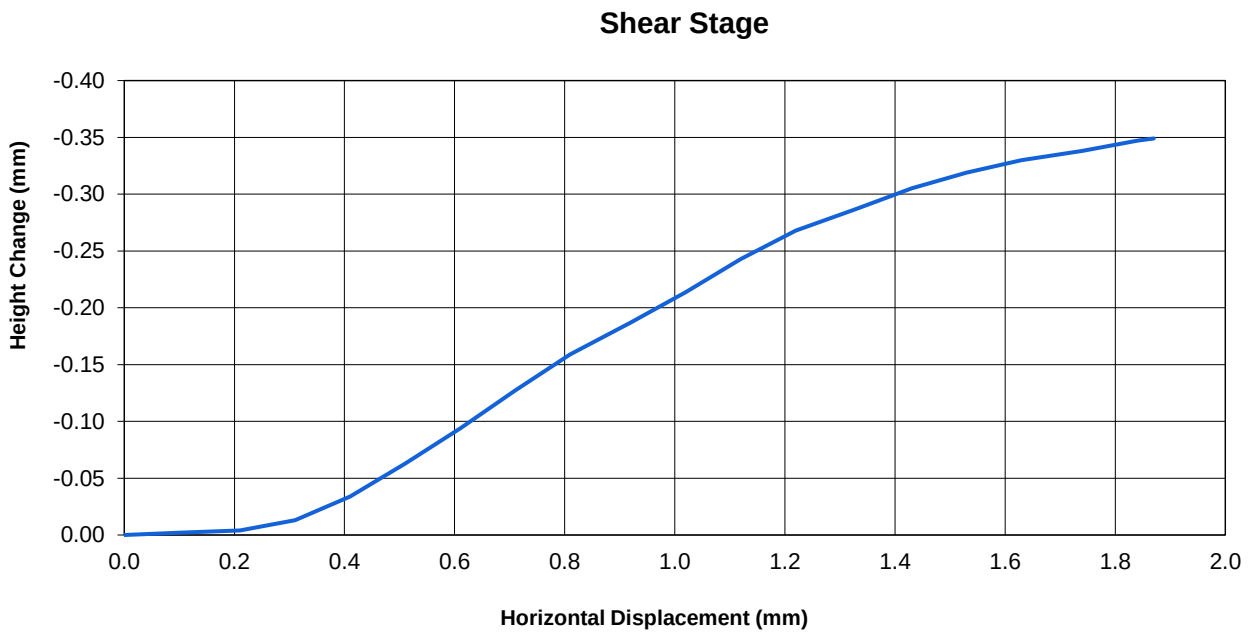
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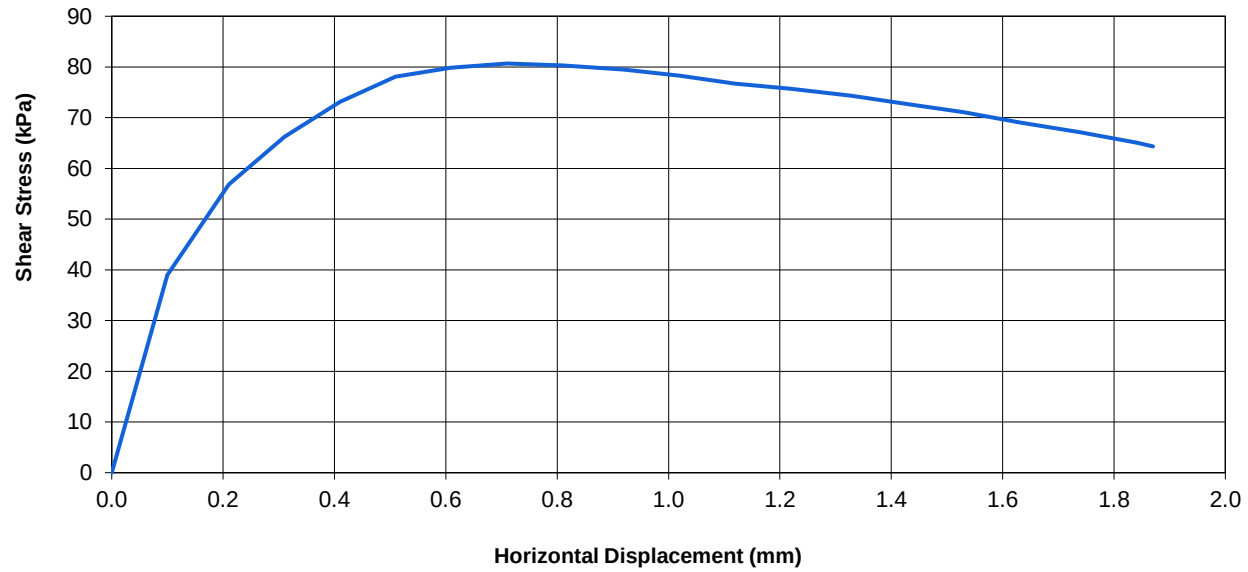
Borehole No	BHSP09
Depth (m)	6.00-6.45
Sample Type	B

Description:

Brown gravelly fine to medium SAND. Gravel is fine.

Specimen: 3





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DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

Borehole No	BHSP09
Depth (m)	15.00-15.45
Sample Type	B

Description:

Greyish brown gravelly fine to medium SAND.

Specimen Details

Depth within original sample	*m*	n/a
Orientation within original sample		n/a
Test condition		Submerged
Preparation		< 2 mm material remoulded at existing water content to a relative density of 75% [1]
Particle density	*Mg/m³*	2.65 (assumed)

Specimen Number		**1**	**2**	**3**
Length	*mm*	60.04	60.05	60.05
Width	*mm*	60.00	60.00	60.01
Height	*mm*	23.10	22.93	23.16
Initial water content	*%*	20.1	20.1	20.1
Initial bulk density	*Mg/m³*	1.80	1.82	1.80
Initial dry density	*Mg/m³*	1.50	1.51	1.50
Initial voids ratio		0.766	0.753	0.771
Degree of Saturation	*%*	69.6	70.8	69.2

Shearing Stage

Normal stress	*kPa*	45	90	180
Peak Conditions:				
Rate of horizontal displacement	*mm/min*	0.18	0.18	0.18
Maximum shear stress	*kPa*	38.7	69.6	130.0
Horizontal displacement at MSS	*mm*	4.2	6.8	3.5
Vertical Displacement at Peak	*mm*	0.02	0.59	0.20
Final water content	*%*	26.1	24.8	25.6
Duration	*day(s)*	1	1	1

Shear Strength Parameters

		Peak Condition
Apparent Cohesion	*kPa*	**9**
Angle of Shearing Resistance	*degrees*	**34.0**

Notes: *[1] Maximum dry density = 1.65 Mg/m³ and minimum dry density = 1.20 Mg/m³*

Tested by JJR
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P Heritage

P Heritage - Project Manager
04/08/2023

Project Number:

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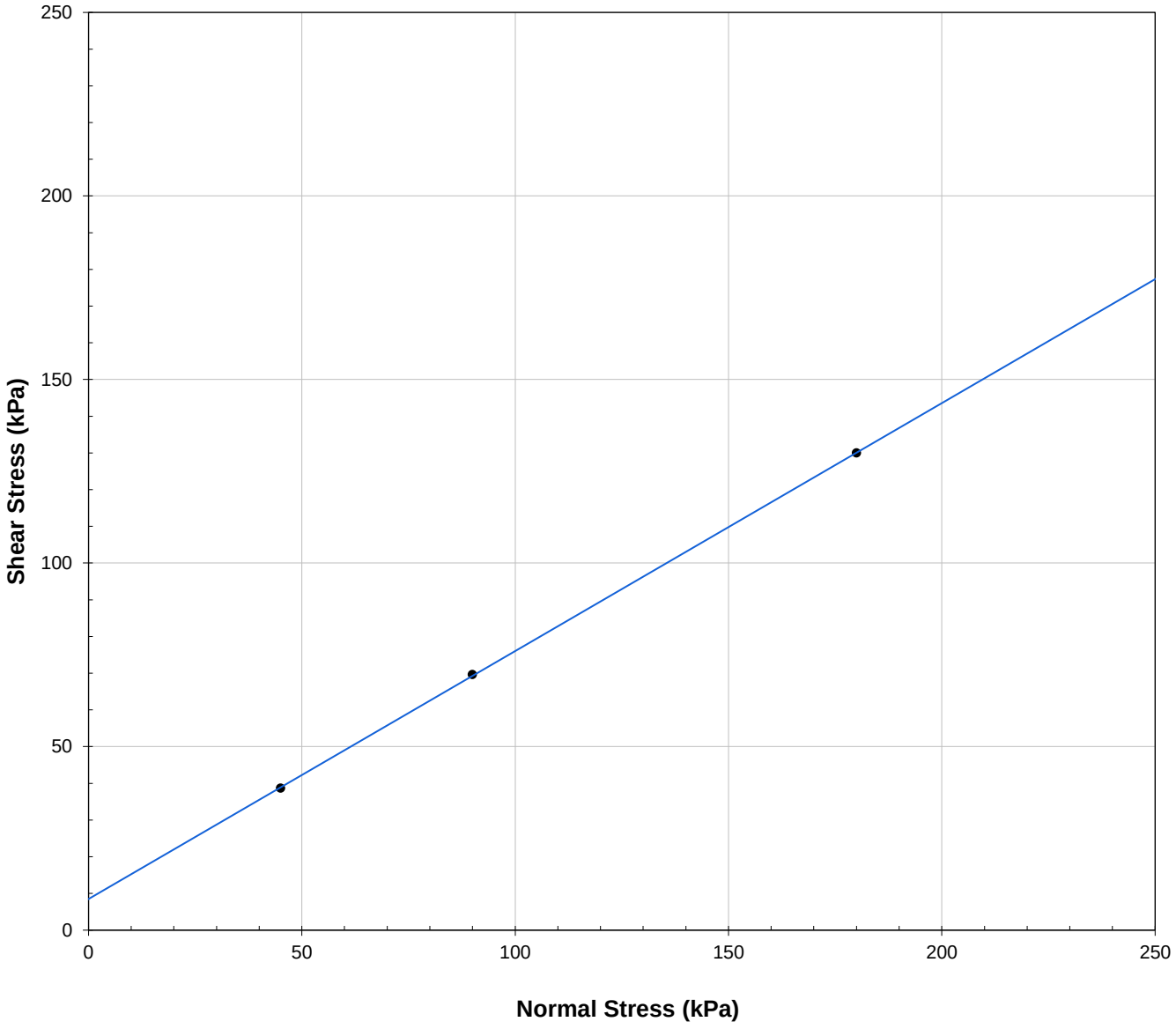
(small shearbox apparatus)

Borehole No	BHSP09
Depth (m)	15.00-15.45
Sample Type	B

Description:

Greyish brown gravelly fine to medium SAND.

Shear Stress v Normal Stress



Peak: **c' = 9**

Φ' = 34.0

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P Heritage - Project Manager
04/08/2023

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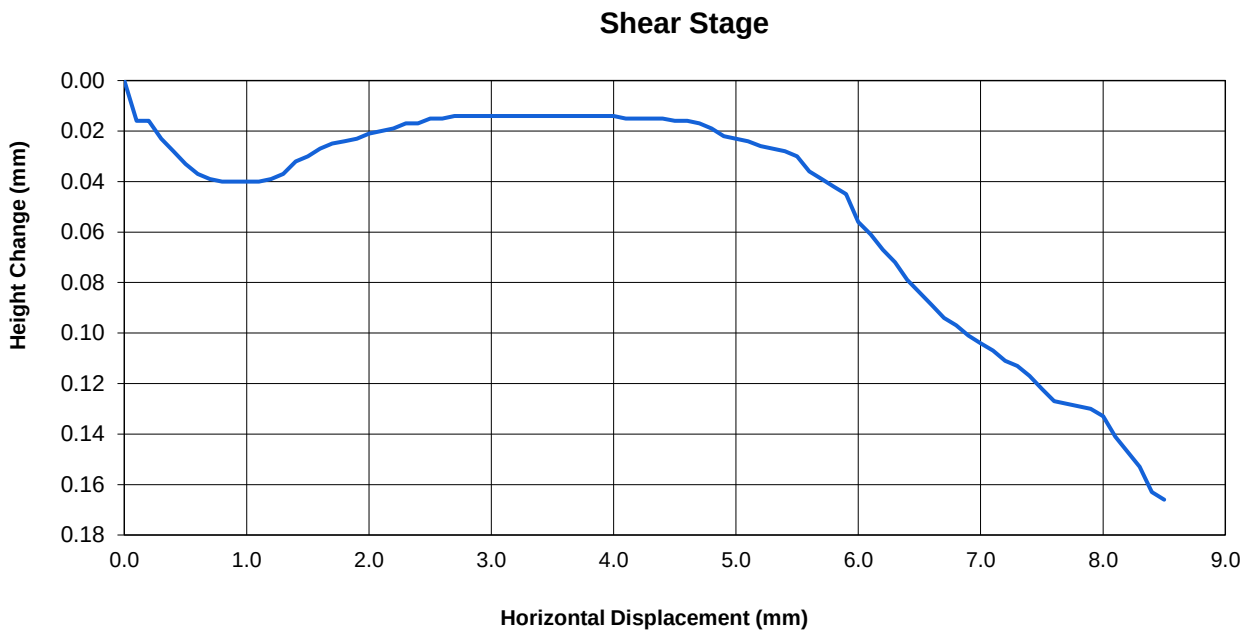
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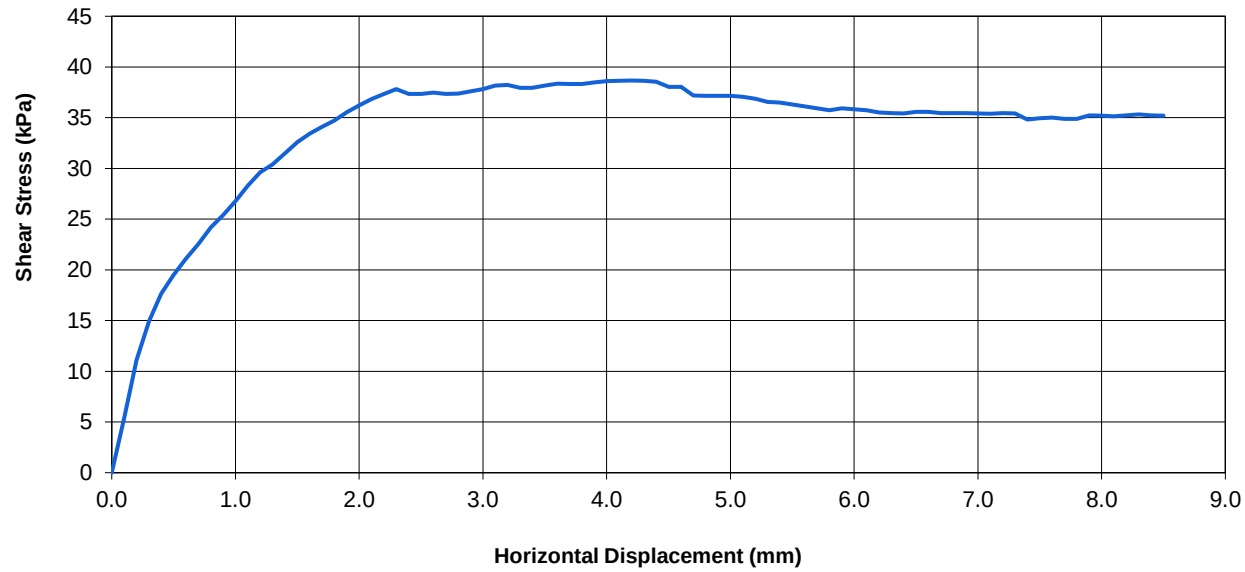
Borehole No	BHSP09
Depth (m)	15.00-15.45
Sample Type	B

Description:

Greyish brown gravelly fine to medium SAND.

Specimen: 1





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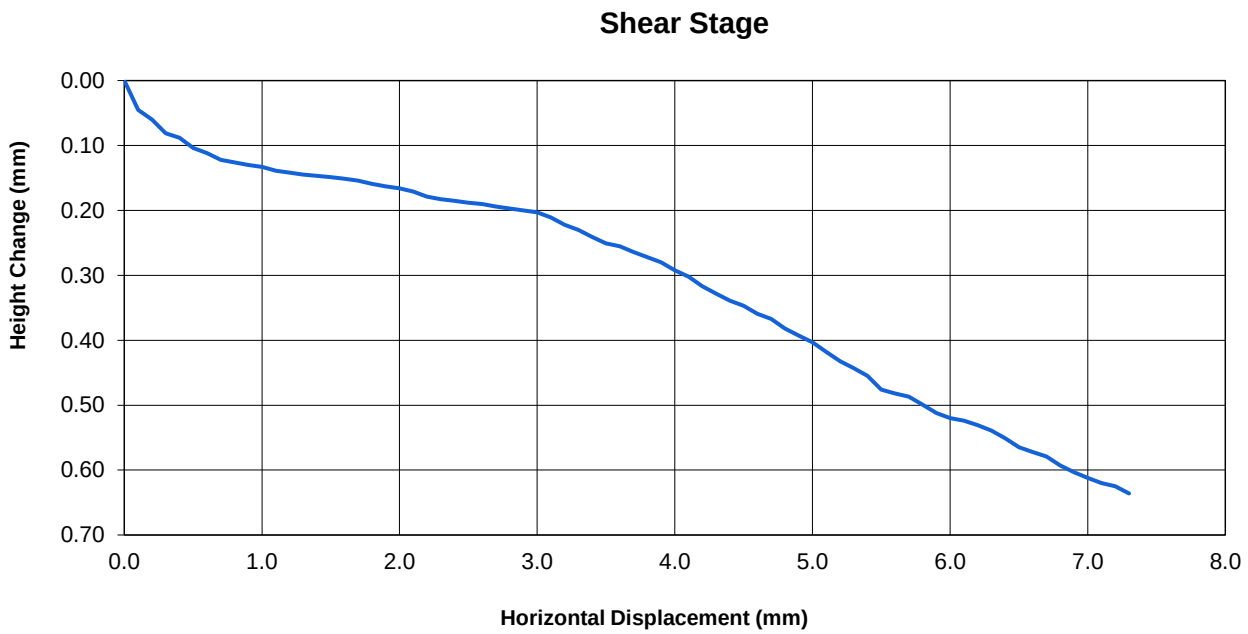
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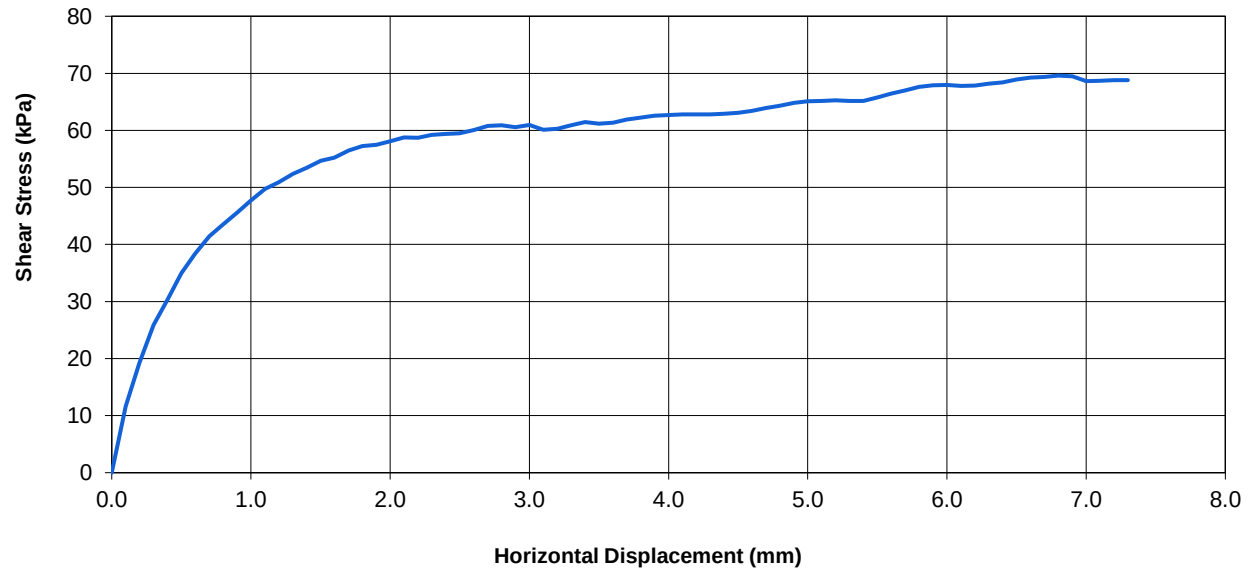
Borehole No	BHSP09
Depth (m)	15.00-15.45
Sample Type	B

Description:

Greyish brown gravelly fine to medium SAND.

Specimen: 2





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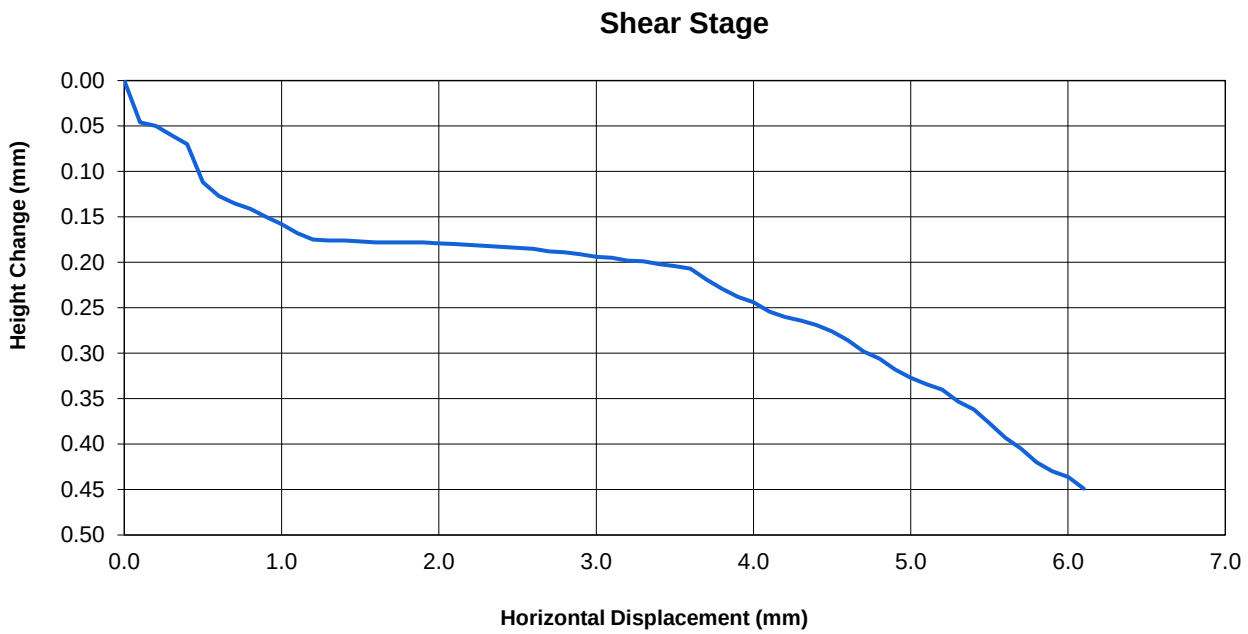
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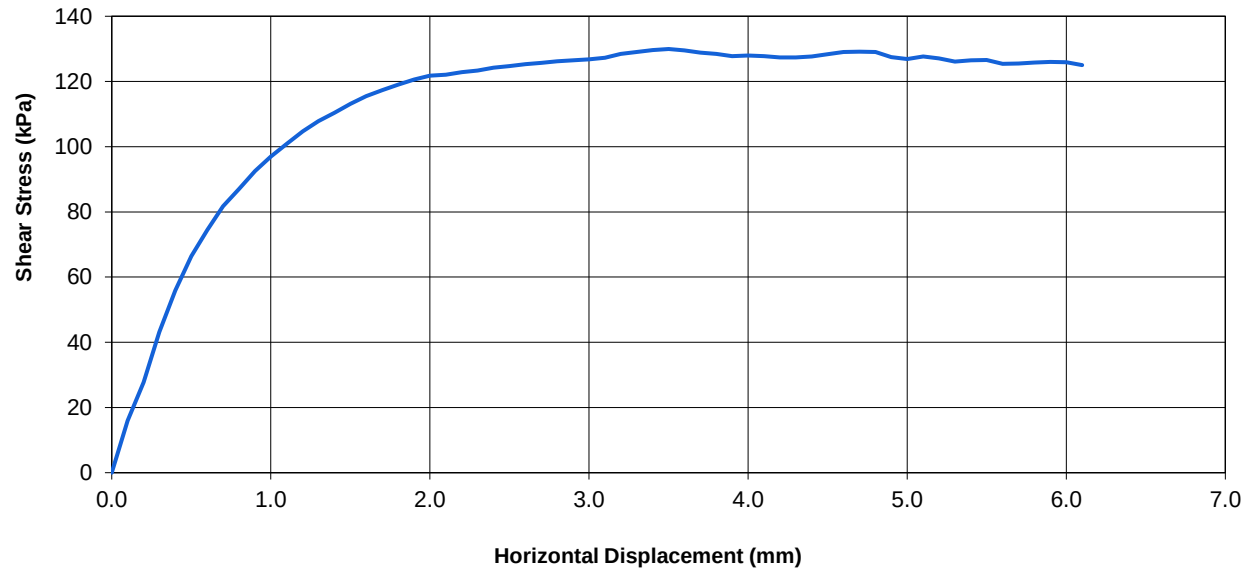
Borehole No	BHSP09
Depth (m)	15.00-15.45
Sample Type	B

Description:

Greyish brown gravelly fine to medium SAND.

Specimen: 3





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Project Number:

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Project Name:

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S230503

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DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

Borehole No	BHSP09
Depth (m)	23.00
Sample Type	B

Description:

Brownish grey gravelly fine SAND. Gravel is medium to coarse.

Specimen Details

Depth within original sample	*m*	n/a
Orientation within original sample		n/a
Test condition		Submerged
Preparation		< 2 mm material remoulded at existing water content to a relative density of 50% [1]
Particle density	*Mg/m³*	2.65 (assumed)

Specimen Number		**1**	**2**	**3**
Length	*mm*	60.05	60.05	60.03
Width	*mm*	60.05	60.03	60.03
Height	*mm*	25.36	25.17	25.32
Initial water content	*%*	19.8	19.8	19.8
Initial bulk density	*Mg/m³*	1.64	1.65	1.64
Initial dry density	*Mg/m³*	1.37	1.38	1.37
Initial voids ratio		0.935	0.921	0.931
Degree of Saturation	*%*	56.1	57.1	56.4

Shearing Stage

Normal stress	*kPa*	60	120	240
Peak Conditions:				
Rate of horizontal displacement	*mm/min*	0.18	0.18	0.18
Maximum shear stress	*kPa*	46.2	94.2	168.5
Horizontal displacement at MSS	*mm*	3.3	5.2	6.2
Vertical Displacement at Peak	*mm*	-0.04	0.23	0.24
Final water content	*%*	24.6	25.2	26.1
Duration	*day(s)*	1	1	1

Shear Strength Parameters

		Peak Condition
Apparent Cohesion	*kPa*	**9**
Angle of Shearing Resistance	*degrees*	**34.0**

Notes: *[1] Maximum dry density = 1.60 Mg/m³ and minimum dry density = 1.21 Mg/m³*

Tested by JJR
Checked and Approved by

P Heritage - Project Manager
04/08/2023

Project Number:

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DIRECT SHEAR TEST – SHEARBOX

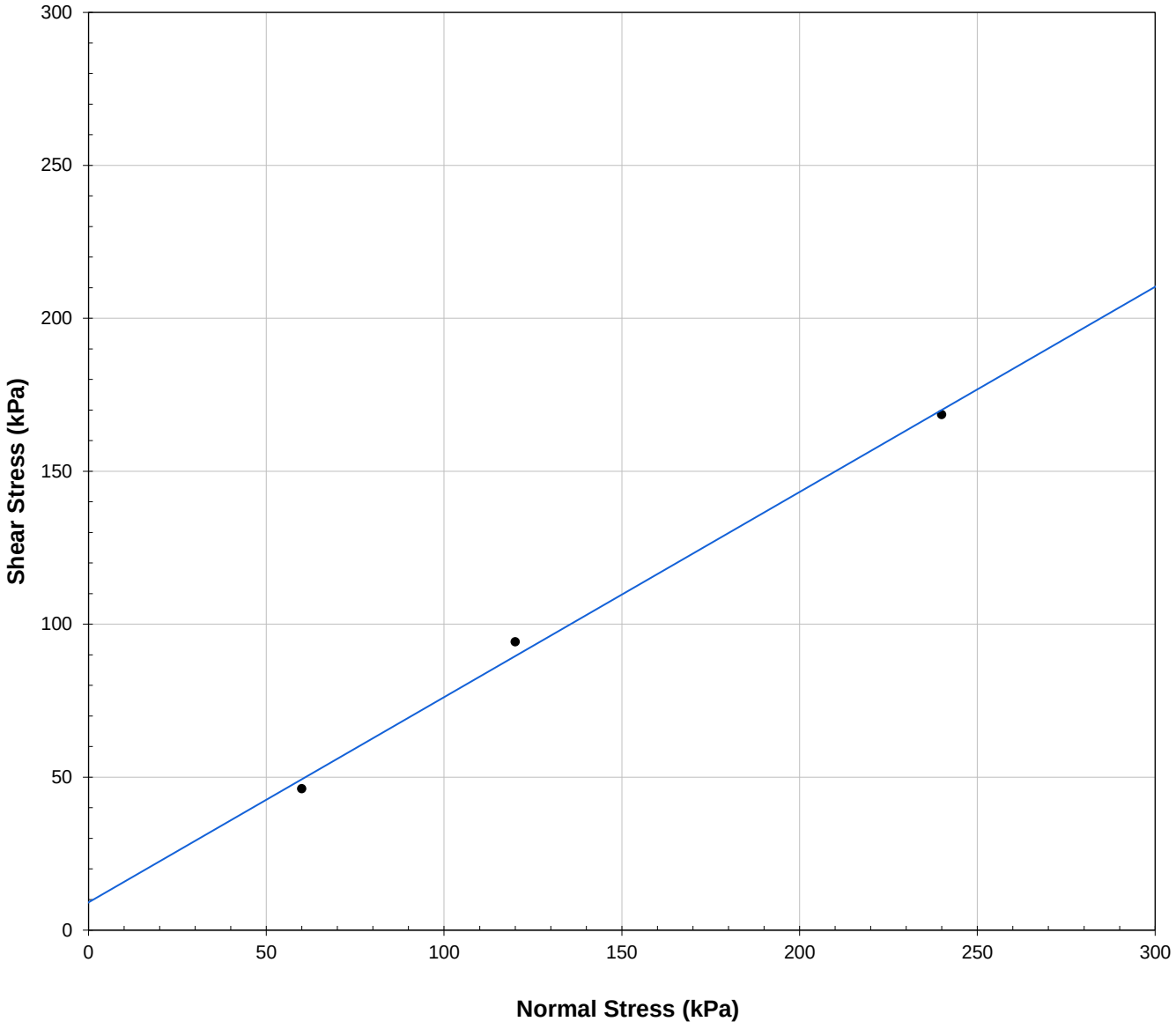
(small shearbox apparatus)

Borehole No	BHSP09
Depth (m)	23.00
Sample Type	B

Description:

Brownish grey gravelly fine SAND. Gravel is medium to coarse.

Shear Stress v Normal Stress



Peak: **c' = 9**

Φ' = 34.0

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P Heritage - Project Manager
04/08/2023

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Project Name:

ARDERSIER PORT
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DIRECT SHEAR TEST – SHEARBOX

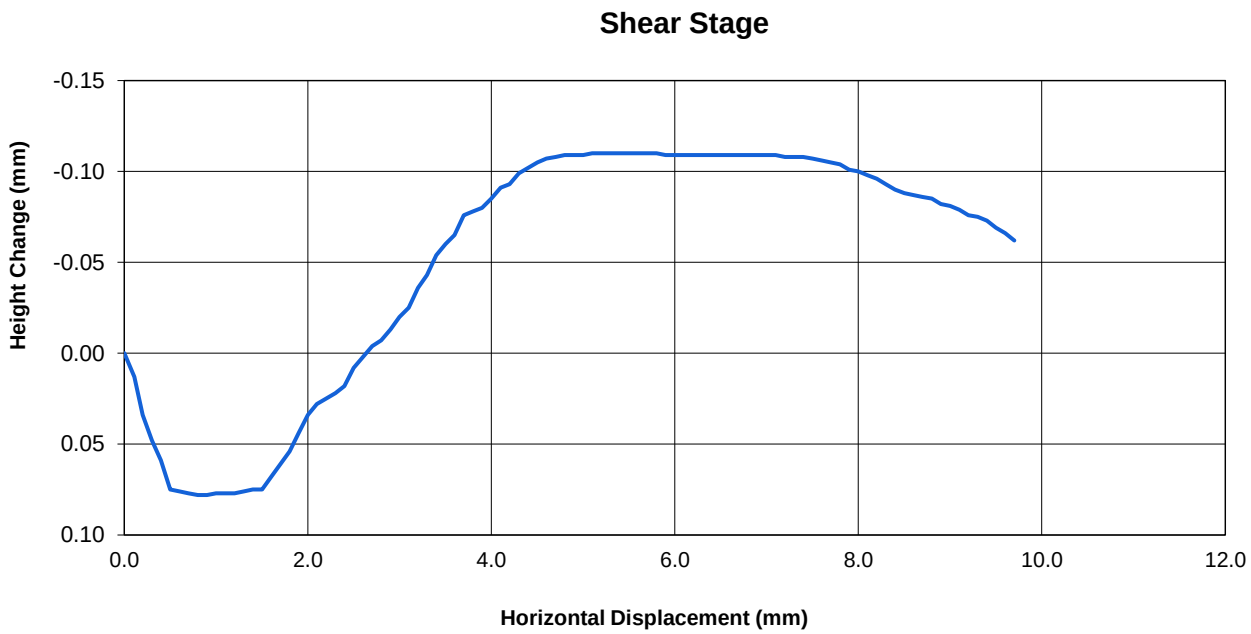
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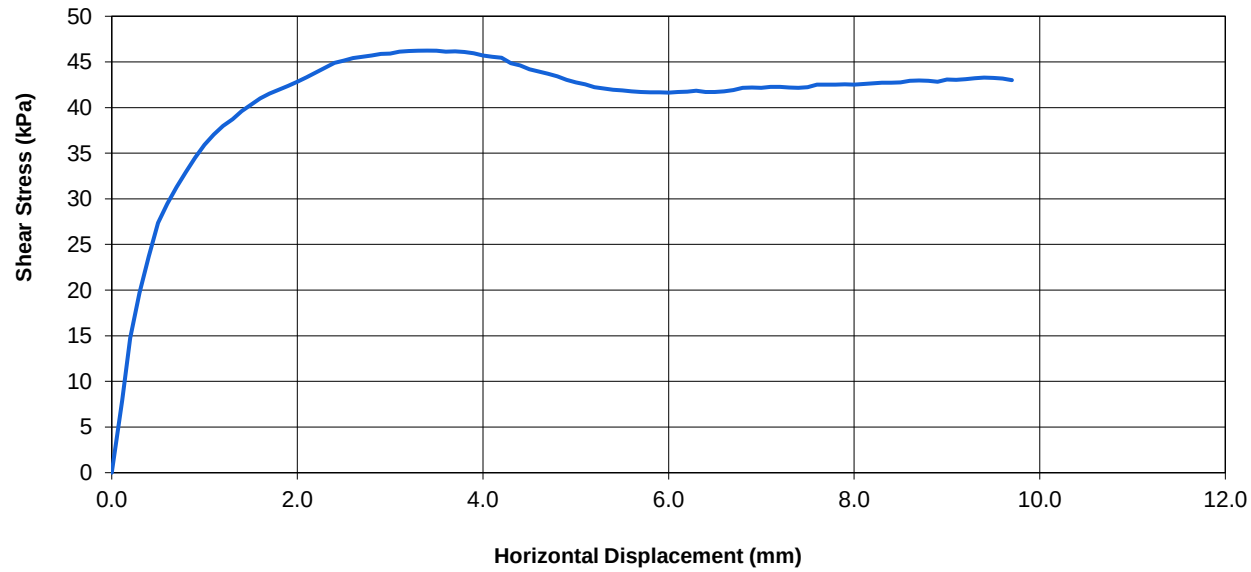
Borehole No	BHSP09
Depth (m)	23.00
Sample Type	B

Description:

Brownish grey gravelly fine SAND. Gravel is medium to coarse.

Specimen: 1





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DIRECT SHEAR TEST – SHEARBOX

(small shearbox apparatus)

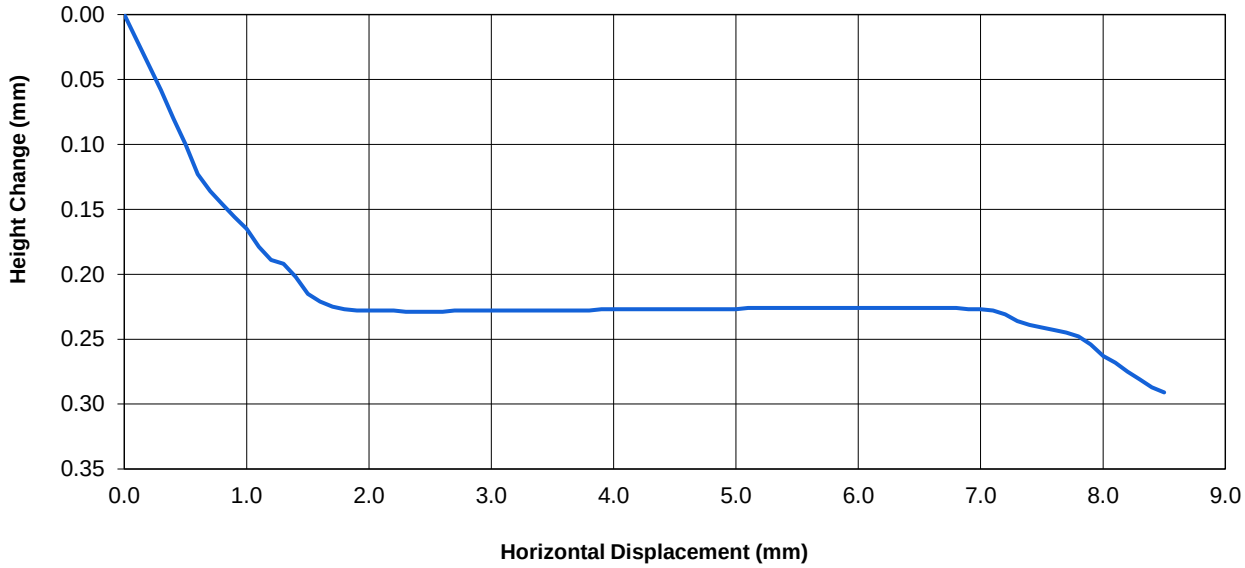
Borehole No	BHSP09
Depth (m)	23.00
Sample Type	B

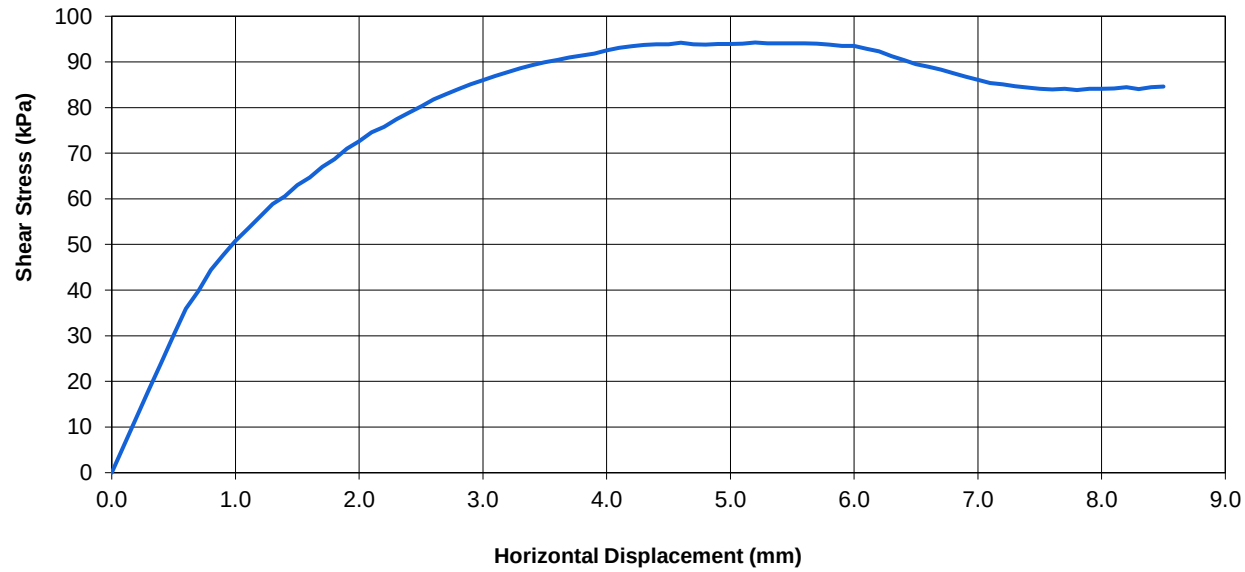
Description:

Brownish grey gravelly fine SAND. Gravel is medium to coarse.

Specimen: 2

Shear Stage





Tested by JJR
Checked and Approved by

P Heritage - Project Manager
04/08/2023

Project Number:

GEO / 38342

Project Name:

ARDERSIER PORT
S230503

BS EN ISO 17892 10:2018

DIRECT SHEAR TEST – SHEARBOX

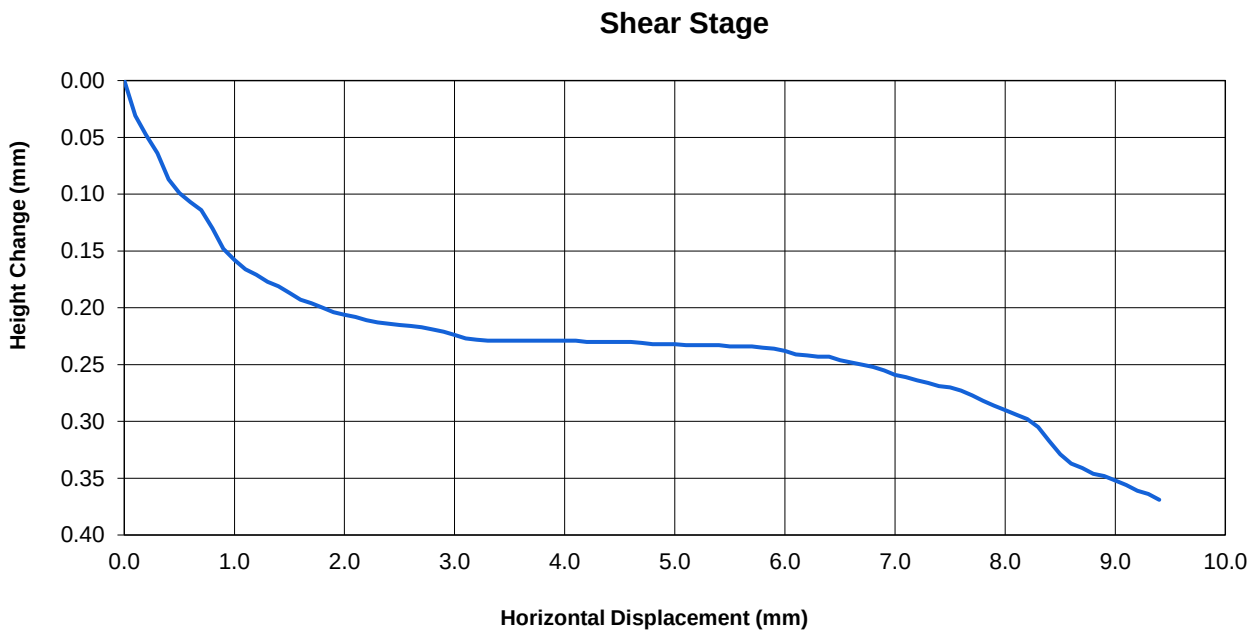
(small shearbox apparatus)

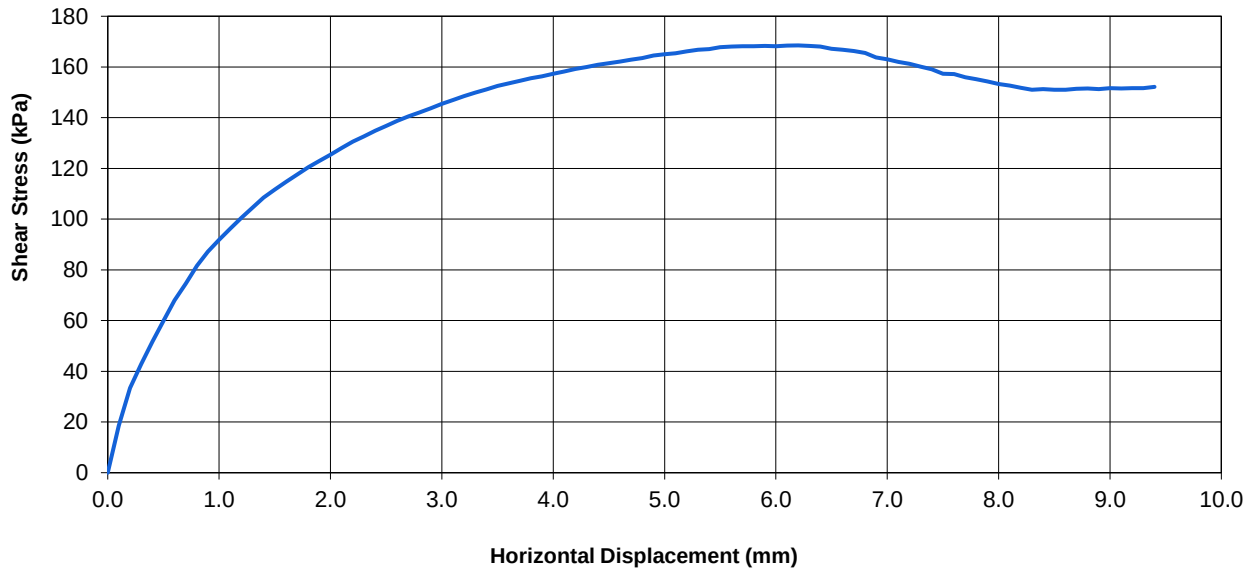
Borehole No	BHSP09
Depth (m)	23.00
Sample Type	B

Description:

Brownish grey gravelly fine SAND. Gravel is medium to coarse.

Specimen: 3





Tested by JJR
Checked and Approved by

P Heritage - Project Manager
04/08/2023

Project Number:

GEO / 38342

Project Name:

ARDERSIER PORT
S230503

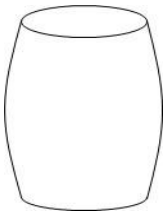
GEOLABS

UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP09	Description: Greyish brown slightly gravelly SAND.
Depth (m): 12.00-12.45	

SPECIMEN DETAILS				
Depth within original sample		NA	Orientation within original sample: NA	
Remarks		Remoulded to a target 10.0 % MC and a target dry density of 1.51 Mg/m³		
TEST DETAILS				
Specimen Type and Preparation		B (Remoulded)		
Cell Preparation		Checks performed in accordance with Clause 3.5		
Specimen Number		**Multistage**		
Initial Diameter	*mm*	69.59		
Initial Length	*mm*	140.22		
Initial Water Content	*%*	10.2		
Initial Wet Density	*Mg/m³*	1.65		
Drainage Conditions		One end only		
SATURATION STAGE		Method: Clause 5.2		
Final Cell Pressure	*kPa*	545		
Final Pore Pressure	*kPa*	536		
Final Pore Pressure Parameter B		0.95		
Duration	*day(s)*	6		
CONSOLIDATION STAGE		**Stage No 1**	**Stage No 2**	**Stage No 3**
Cell Pressure	*kPa*	545	590	680
Back Pressure	*kPa*	500	500	500
Effective Pressure	*kPa*	45	90	180
Final Pore Pressure	*kPa*	500	500	500
Final Pore Pressure Dissipation	*%*	100	100	100
Duration	*day(s)*	1	1	1
SHEARING STAGE				
Cell Pressure	*kPa*	545	590	680
Rate of Axial Displacement	*mm/min*	0.020	0.020	0.020
Initial Pore Pressure	*kPa*	500	500	500
Initial Effective Stress	*kPa*	45	90	180
CONDITIONS AT FAILURE	*criteria*	Maximum deviator stress		
Pore Pressure	*kPa*	500	500	499
Minor Effective Principal Stress	*kPa*	45	90	181
Deviator Stress	*kPa*	159	285	572
Major Effective Principal Stress	*kPa*	204	375	753
Volume Change	*mL*	-1.09	0.00	1.32
Volumetric Strain	*%*	-0.2	0.0	0.3
Axial Strain	*%*	2.0	2.6	6.0
Membrane correction applied to Deviator Stress	*kPa*	0	0	1
Duration	*day(s)*	1	1	1
Final Water Content	*%*	24.6		
Final Wet Density	*Mg/m³*	1.90		
EFFECTIVE STRESS PARAMETERS				
Cohesion	*kPa*	3.6		
Angle of Shear Resistance	*degrees*	37		
FAILURE SKETCH				

Checked and Approved by

P. Heritage

P Heritage - Project Manager
04/09/2023

Project Number:

GEO / 38342

Project Name:

ARDERSIER PORT
S230503

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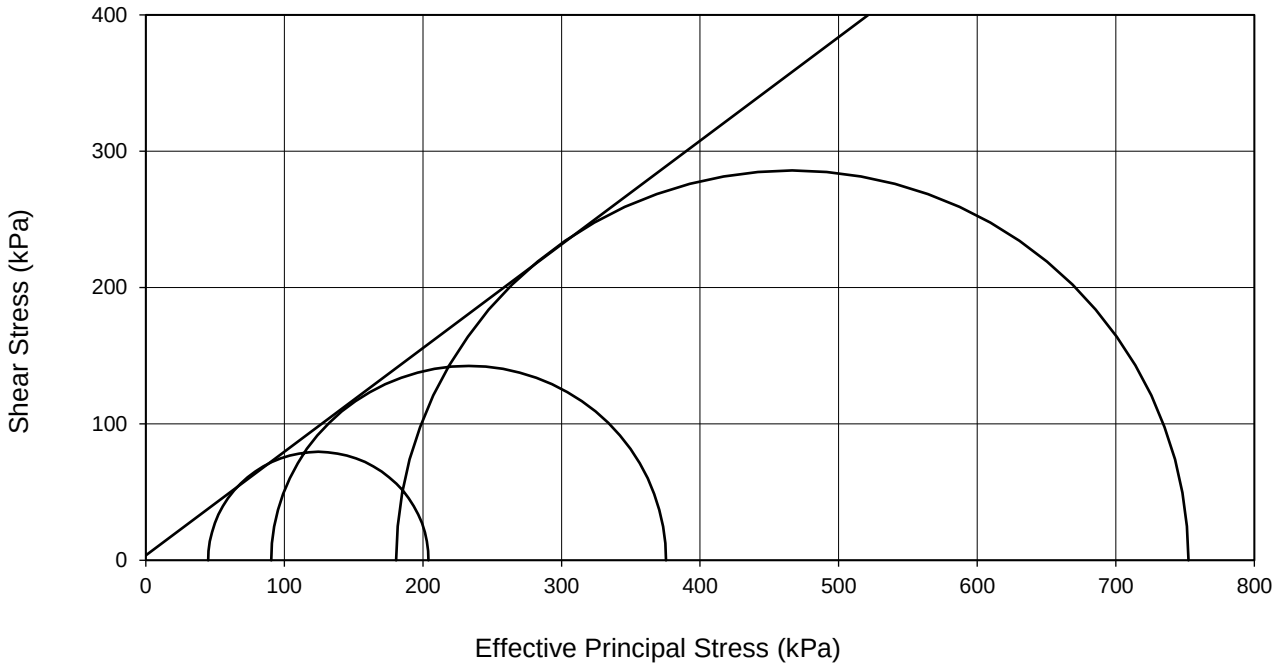
UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP09
Depth (m):	12.00-12.45

Description:
Greyish brown slightly gravelly SAND.



Checked and Approved by

P. Heritage

P Heritage - Project Manager
04/09/2023

Project Number:

GEO / 38342

Project Name:

ARDERSIER PORT
S230503

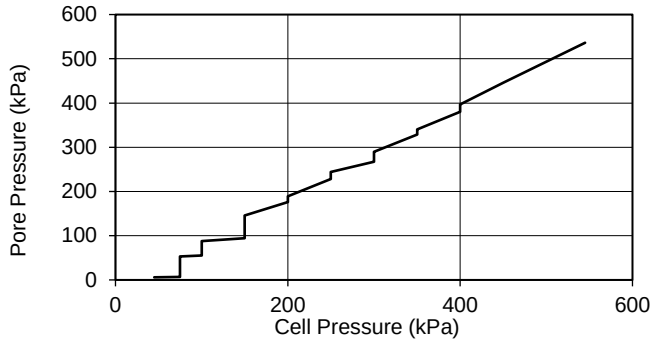
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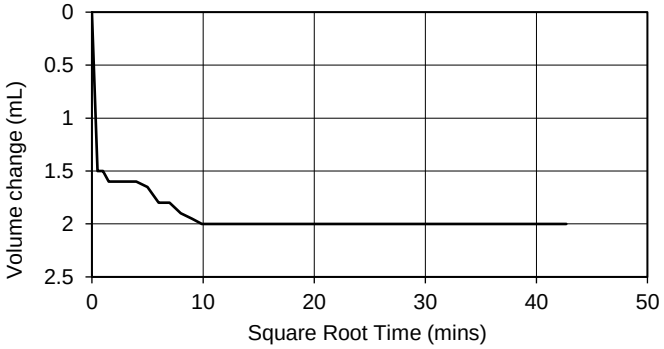
UKAS TESTING 1982

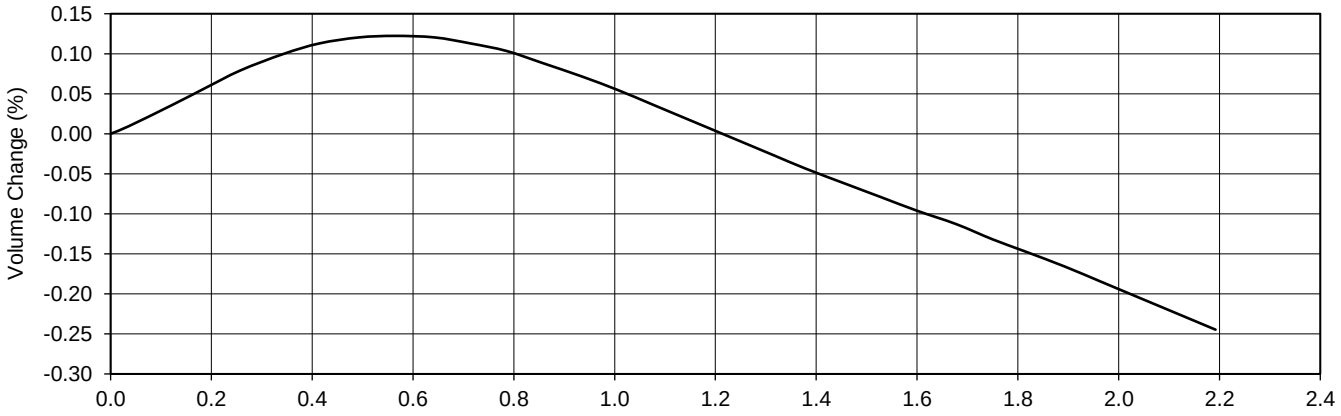
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

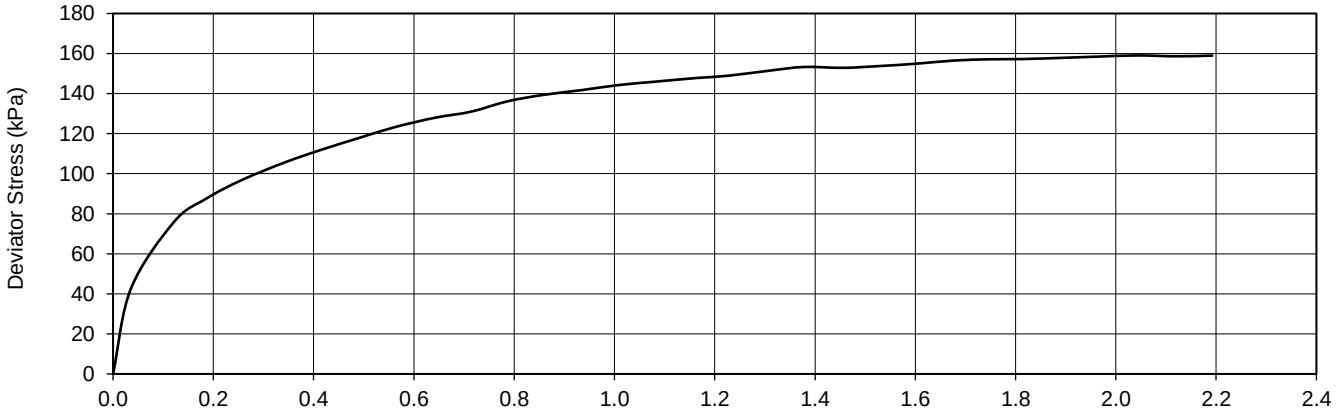
Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP09	**Stage No 1**
Depth (m): 12.00-12.45	









Checked and Approved by

P. Heritage

P Heritage - Project Manager
04/09/2023

Project Number:

GEO / 38342

Project Name:

ARDERSIER PORT
S230503

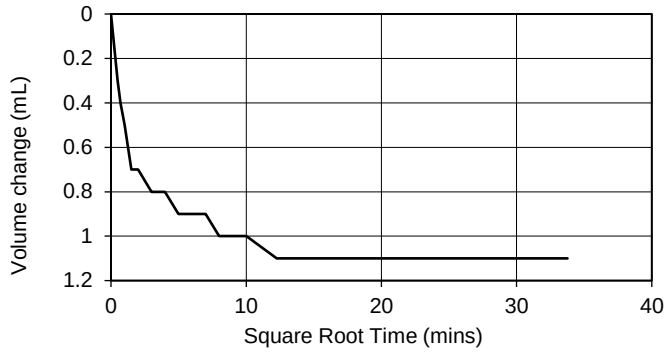
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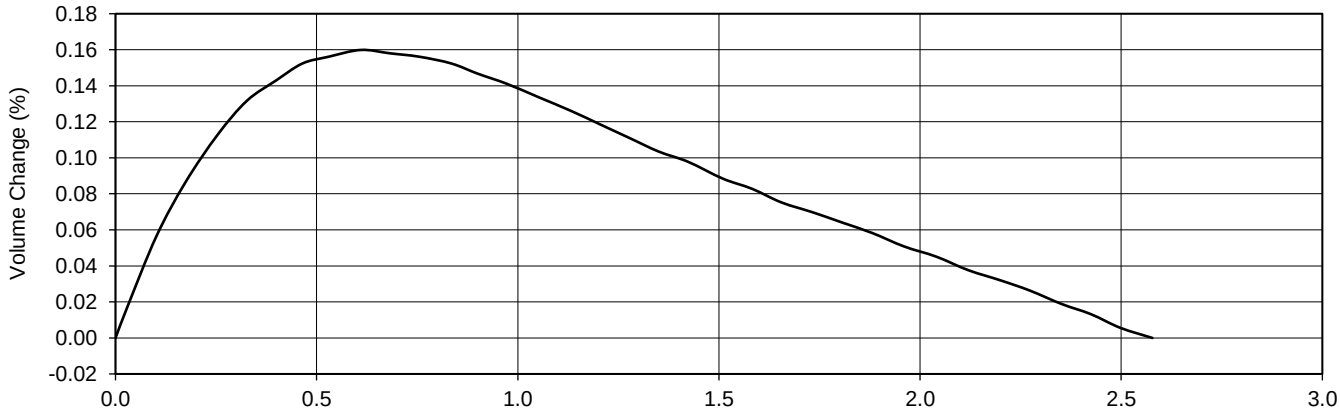
UKAS TESTING 1982

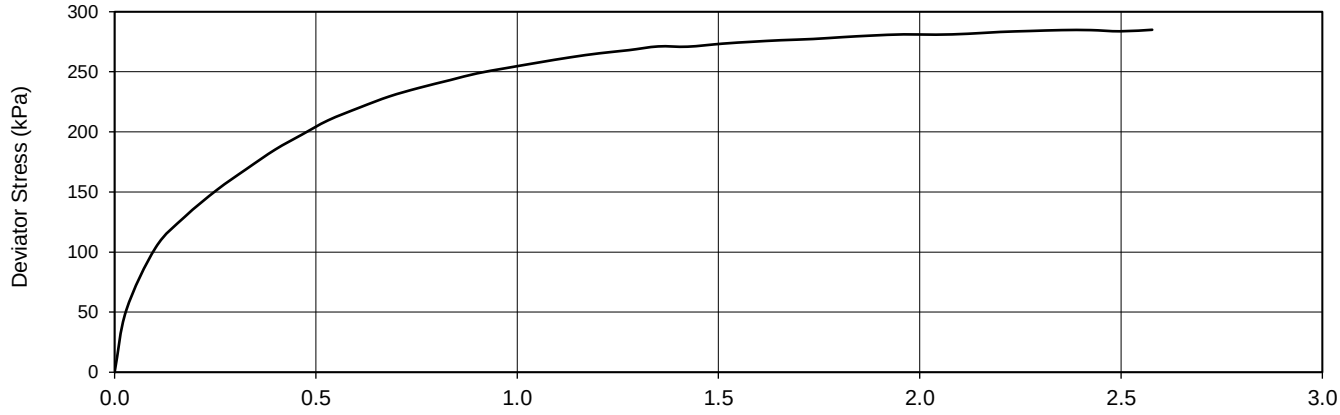
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP09	**Stage No 2**
Depth (m): 12.00-12.45	







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P Heritage

P Heritage - Project Manager
04/09/2023

Project Number:

GEO / 38342

Project Name:

ARDERSIER PORT
S230503

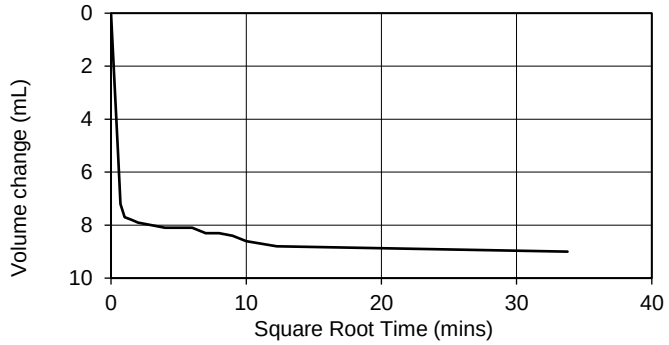
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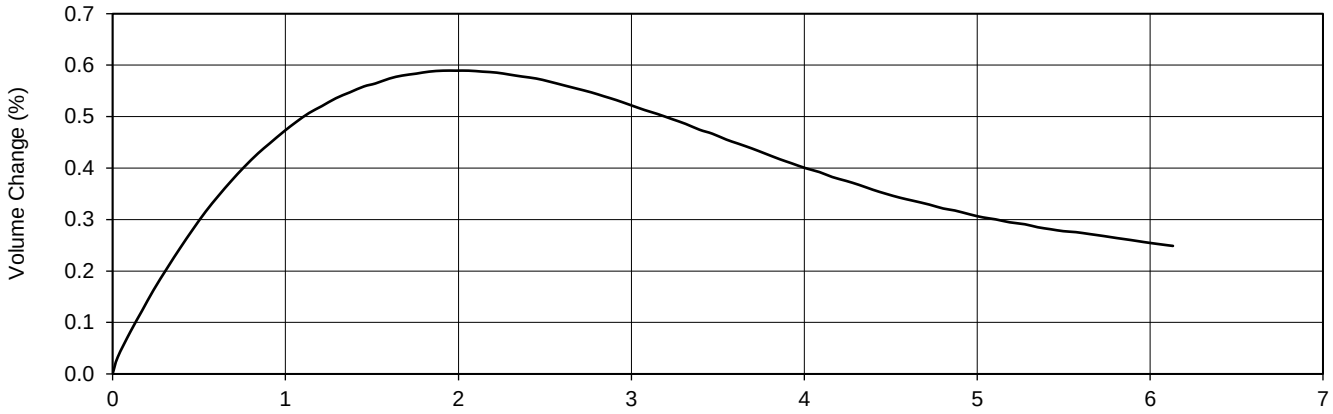
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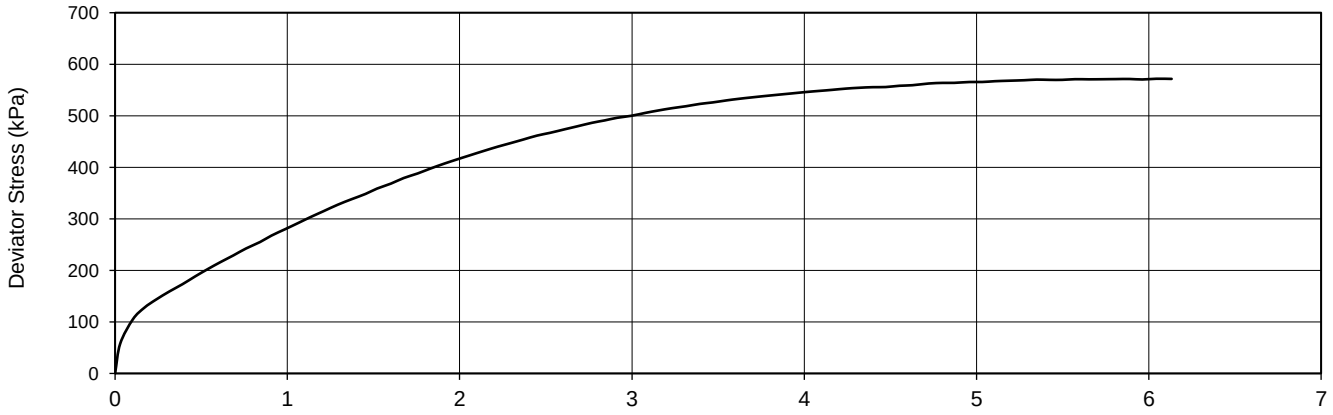
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP09	**Stage No 3**
Depth (m): 12.00-12.45	







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P Heritage

P Heritage - Project Manager
04/09/2023

Project Number:

GEO / 38342

Project Name:

ARDERSIER PORT
S230503

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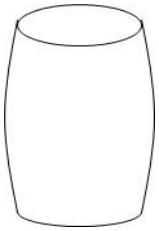
UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP09
Depth (m):	21.00-21.45

Description:
Grey and greyish brown slightly silty gravelly fine to medium SAND.

SPECIMEN DETAILS				
Depth within original sample		NA	Orientation within original sample: NA	
Remarks		Remoulded to a target10.0% MC and a target dry density of 1.44 Mg/m³		
TEST DETAILS				
Specimen Type and Preparation		B (Remoulded)		
Cell Preparation		Checks performed in accordance with Clause 3.5		
Specimen Number		**Multistage**		
Initial Diameter	*mm*	69.26		
Initial Length	*mm*	140.22		
Initial Water Content	*%*	9.7		
Initial Wet Density	*Mg/m³*	1.59		
Drainage Conditions		One end and radial boundary		
SATURATION STAGE		Method: Clause 5.2		
Final Cell Pressure	*kPa*	460		
Final Pore Pressure	*kPa*	448		
Final Pore Pressure Parameter B		0.97		
Duration	*day(s)*	6		
CONSOLIDATION STAGE		**Stage No 1**	**Stage No 2**	**Stage No 3**
Cell Pressure	*kPa*	460	520	640
Back Pressure	*kPa*	400	400	400
Effective Pressure	*kPa*	60	120	240
Final Pore Pressure	*kPa*	400	400	400
Final Pore Pressure Dissipation	*%*	100	100	100
Duration	*day(s)*	1	1	1
SHEARING STAGE				
Cell Pressure	*kPa*	460	520	640
Rate of Axial Displacement	*mm/min*	0.015	0.020	0.020
Initial Pore Pressure	*kPa*	400	400	400
Initial Effective Stress	*kPa*	60	120	240
CONDITIONS AT FAILURE	*criteria*	Maximum deviator stress		
Pore Pressure	*kPa*	400	400	400
Minor Effective Principal Stress	*kPa*	60	120	240
Deviator Stress	*kPa*	114	283	622
Major Effective Principal Stress	*kPa*	174	403	862
Volume Change	*mL*	4.06	1.69	0.55
Volumetric Strain	*%*	0.8	0.3	0.1
Axial Strain	*%*	2.7	3.4	4.1
Membrane & filter correction applied to Deviator Stress	*kPa*	6	5	5
Duration	*day(s)*	1	1	1
Final Water Content	*%*	19.6		
Final Wet Density	*Mg/m³*	1.78		
EFFECTIVE STRESS PARAMETERS				
Cohesion	*kPa*	0		
Angle of Shear Resistance	*degrees*	34		
FAILURE SKETCH				

Checked and Approved by

P. Heritage

P Heritage - Project Manager
04/09/2023

Project Number:

GEO / 38342

Project Name:

ARDERSIER PORT
S230503

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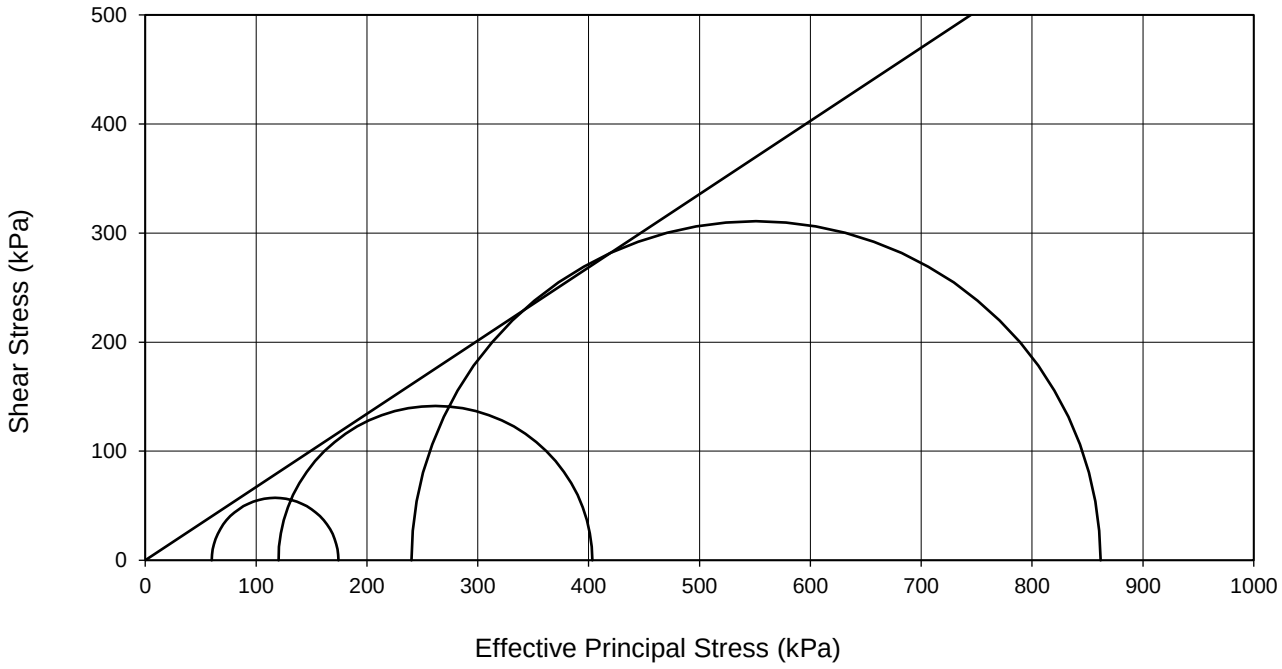
UKAS TESTING 1982

BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.:	BHSP09
Depth (m):	21.00-21.45

Description:
Grey and greyish brown slightly silty gravelly fine to medium SAND.



Checked and Approved by

P. Heritage

P Heritage - Project Manager
04/09/2023

Project Number:

GEO / 38342

Project Name:

ARDERSIER PORT
S230503

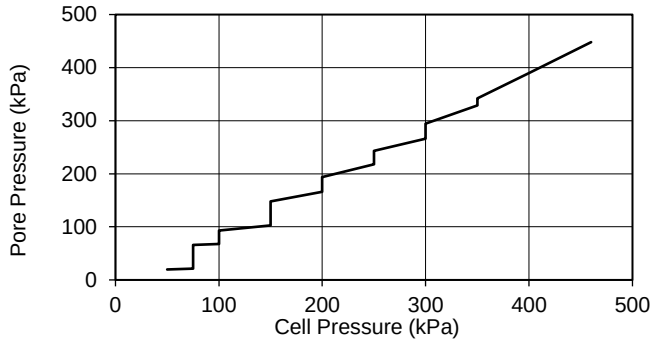
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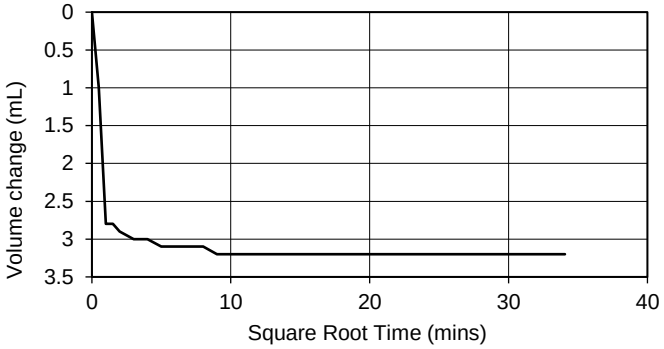
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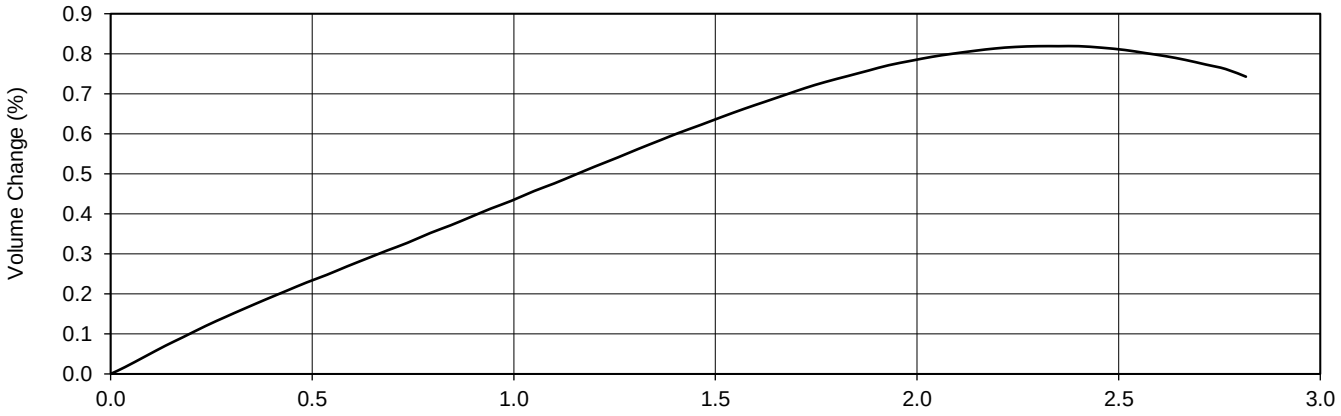
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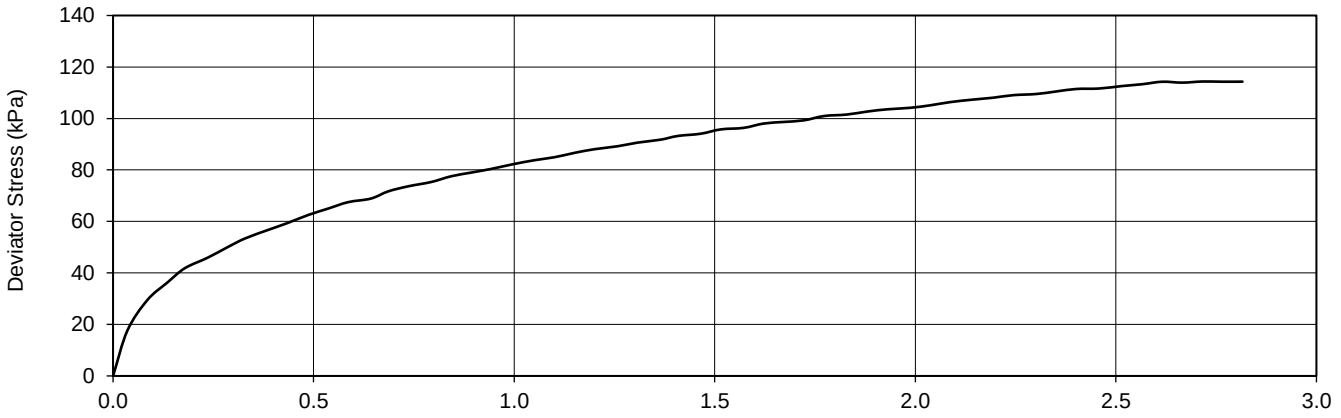
Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP09	**Stage No 1**
Depth (m): 21.00-21.45	







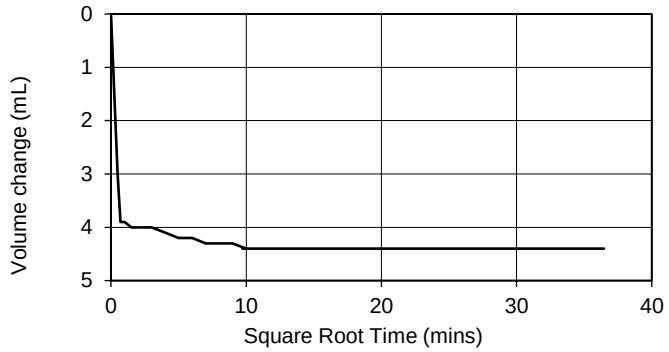


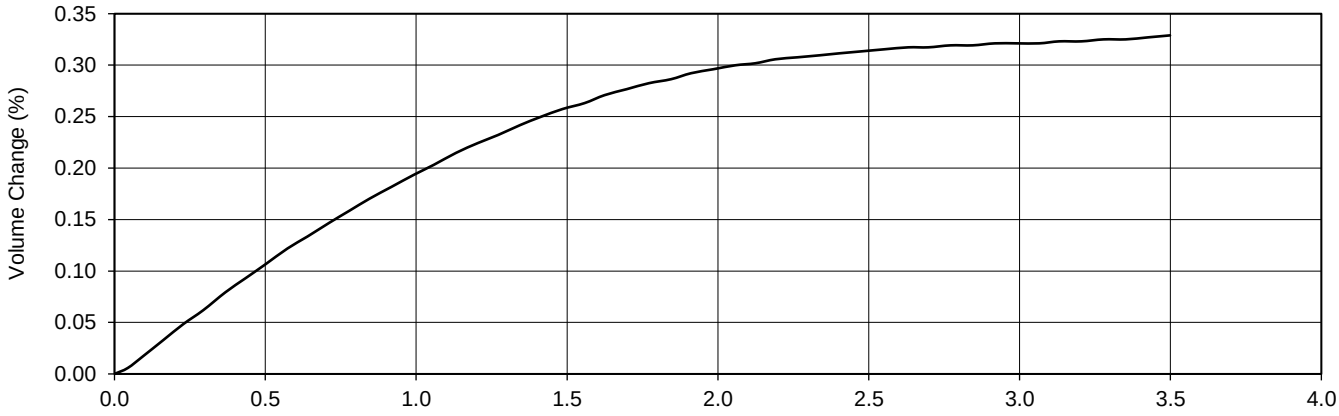
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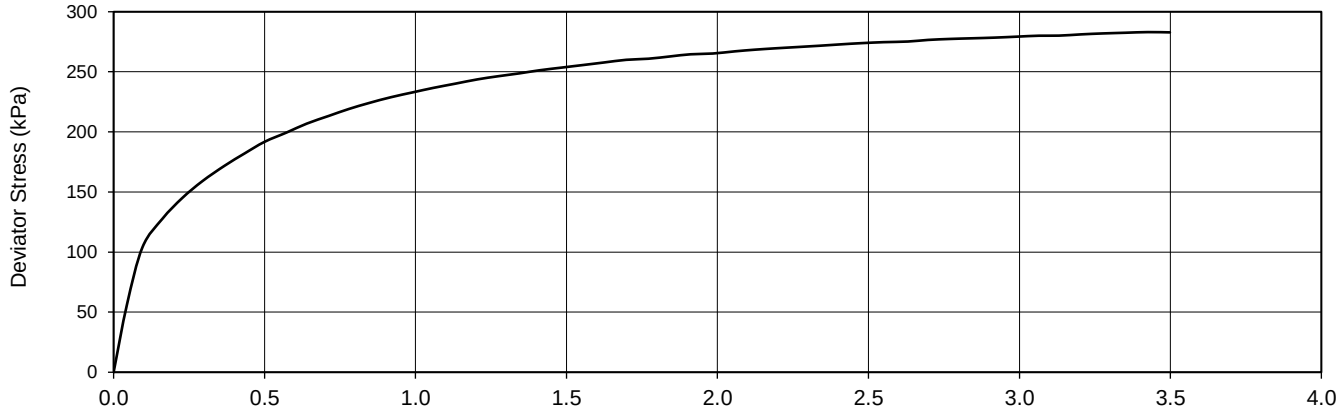
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP09	**Stage No 2**
Depth (m): 21.00-21.45	





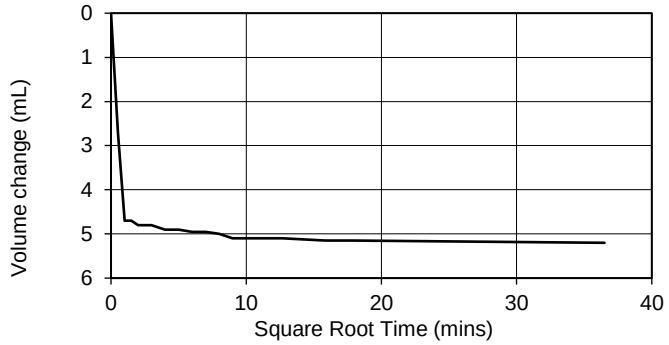


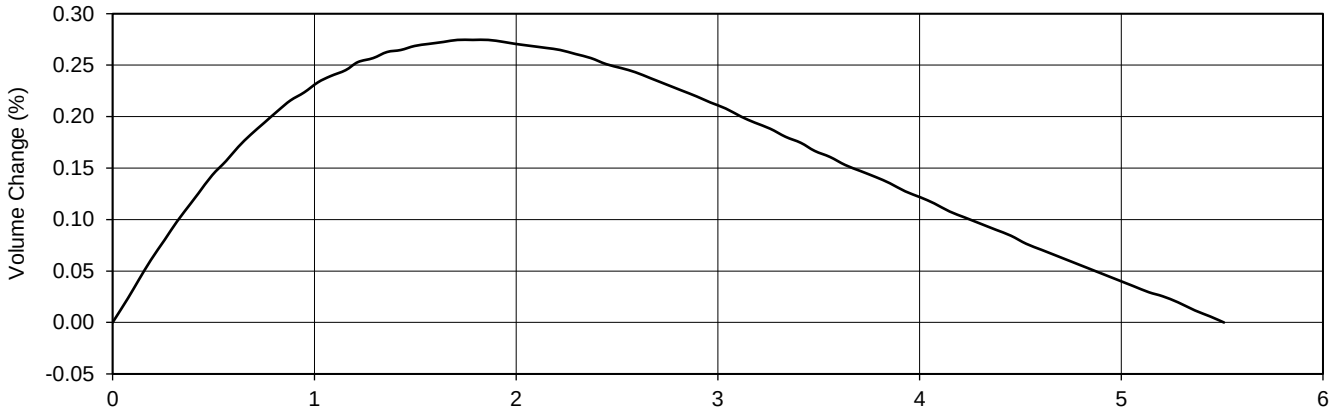
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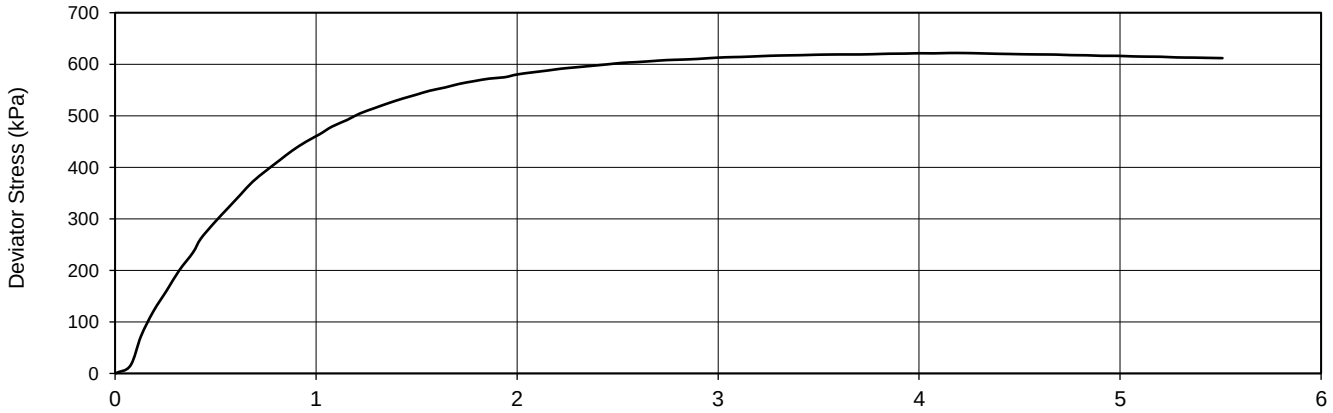
BS1377 : Part 8 : Clause 8 : 1990 and Technical Procedure TP38

Consolidated Drained Multistage Triaxial Compression Test with Measurement of Volume Change

Borehole No.: BHSP09	**Stage No 3**
Depth (m): 21.00-21.45	







Checked and Approved by

P Heritage

P Heritage - Project Manager
04/09/2023

Project Number:

GEO / 38342

Project Name:

ARDERSIER PORT
S230503

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APPENDIX D

SOLMEK

12 Yarm Road • Stockton-on-Tees • TS18 3NA

Tel: 01642 607083 • Email: info@solmek.com

SOIL INFILTRATION RATE

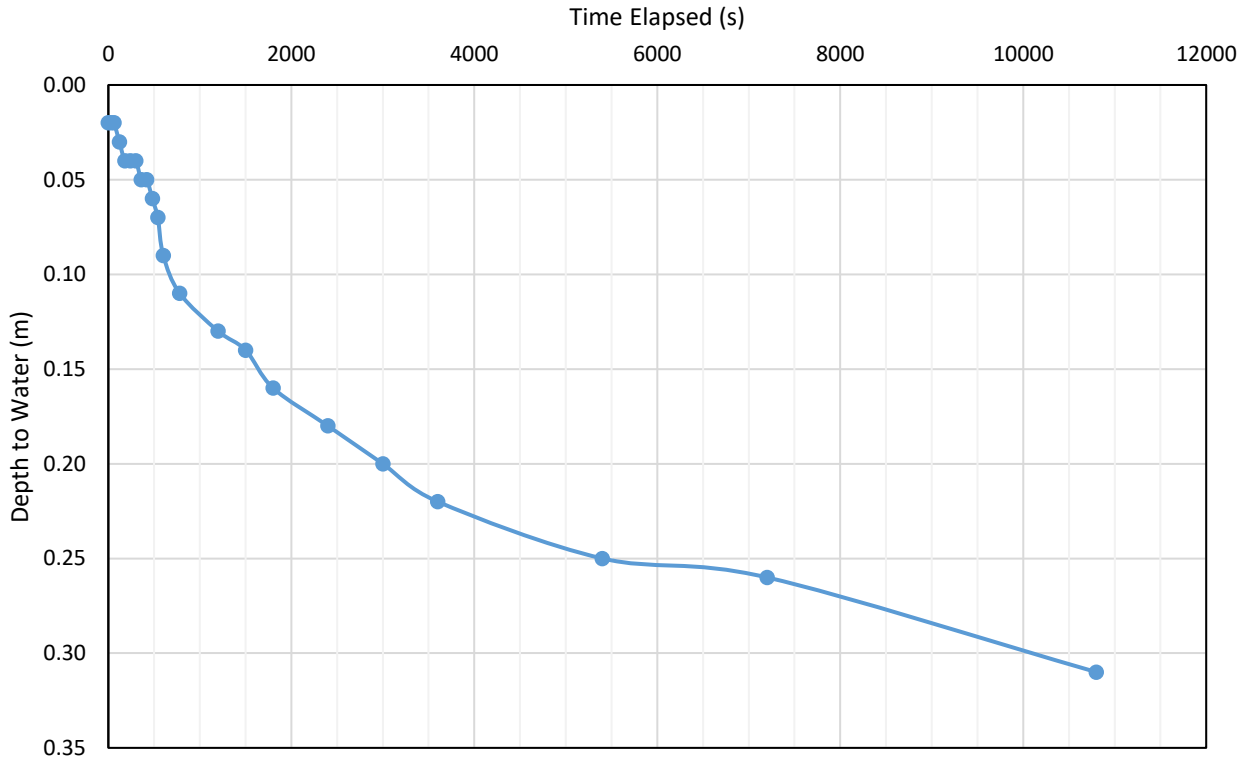
Project: S230503

Project name: Ardersier Port Falling Head RT

Report date: 05/07/2023

Test date: 27/06/2023 **Test location:** BHSP07

Falling Head Test BS22282-1(2012) Geohydraulic Testing



Internal borehole diameter	0.2500	m
Base depth of borehole	10.00	m
Cross-sectional area of borehole	0.0491	m^2
Linear regression slope	3.02E-06	
Shape Factor	14.3385	
Permeability Coefficient (k)	**1.03E-08**	**m/s**

Produced by	Dated	Checked by	Dated
S.MCNIFF	05/07/23	A.CUTTS	12/07/23

SOLMEK

12 Yarm Road • Stockton-on-Tees • TS18 3NA

Tel: 01642 607083 • Email: info@solmek.com

SOIL INFILTRATION RATE

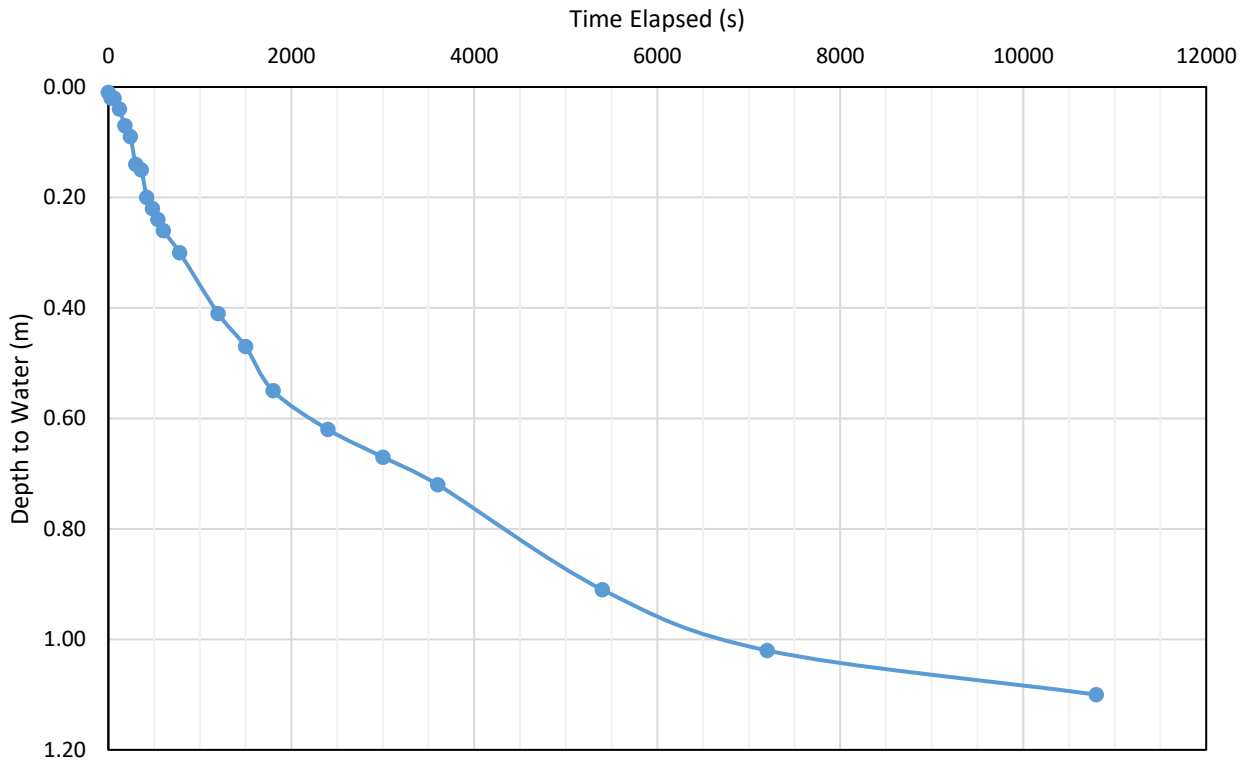
Project: S230503

Project name: Ardersier Port Falling Head Test LT

Report date: 05/07/2023

Test date: 27/06/2023 **Test location:** BHSP07

Falling Head Test BS22282-1(2012) Geohydraulic Testing



Internal borehole diameter	0.2030	m
Base depth of borehole	20.00	m
Cross-sectional area of borehole	0.0324	m^2
Linear regression slope	5.84E-06	
Shape Factor	23.7845	
Permeability Coefficient (k)	**7.95E-09**	**m/s**

Produced by	Dated	Checked by	Dated
S.MCNIFF	05/07/23	A.CUTTS	12/07/23

SOLMEK

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Tel: 01642 607083 • Email: info@solmek.com

SOIL INFILTRATION RATE

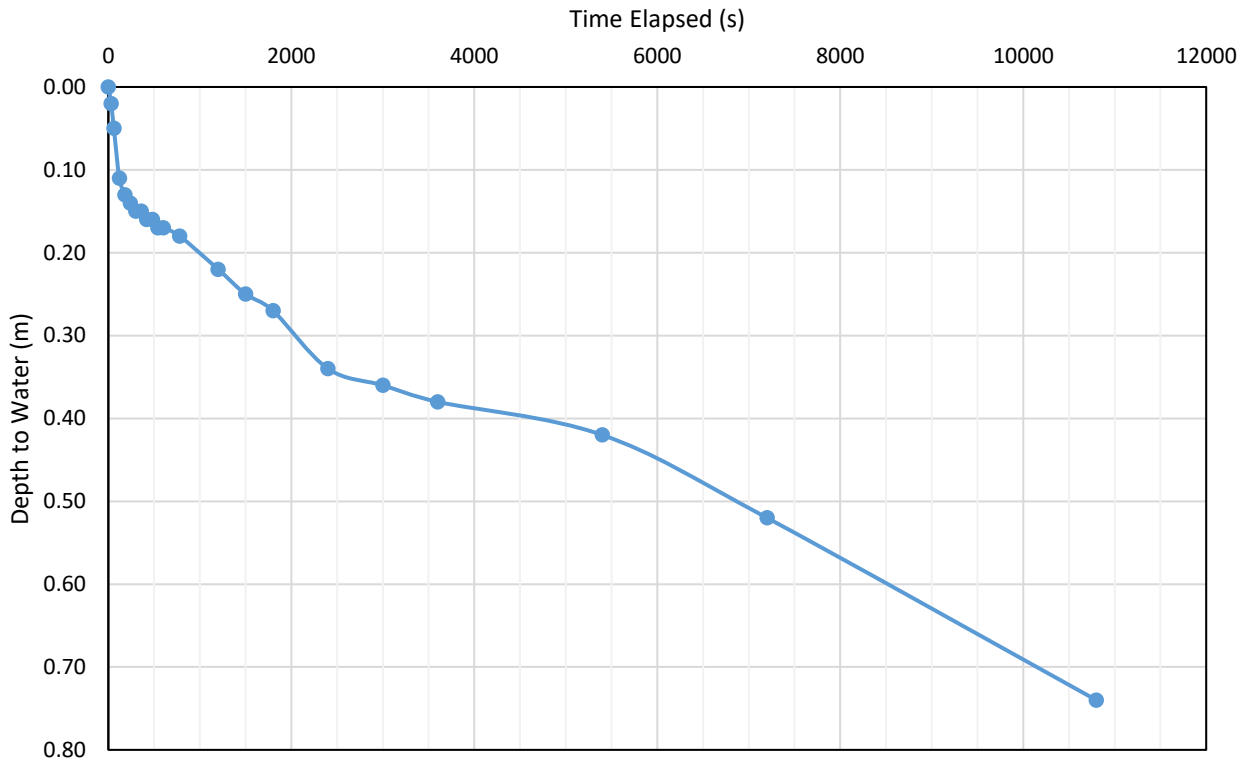
Project: S230503

Project name: Ardersier Port Falling Head Test LT

Report date: 05/07/2023

Test date: 29/06/2023 **Test location:** BHSP07

Falling Head Test BS22282-1(2012) Geohydraulic Testing



Internal borehole diameter	0.1530	m
Base depth of borehole	35.00	m
Cross-sectional area of borehole	0.0184	m^2
Linear regression slope	1.75E-06	
Shape Factor	35.8992	
Permeability Coefficient (k)	**8.95E-10**	**m/s**

Produced by	Dated	Checked by	Dated
S.MCNIFF	05/07/23	A.CUTTS	12/07/23

SOLMEK

12 Yarm Road • Stockton-on-Tees • TS18 3NA

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SOIL INFILTRATION RATE

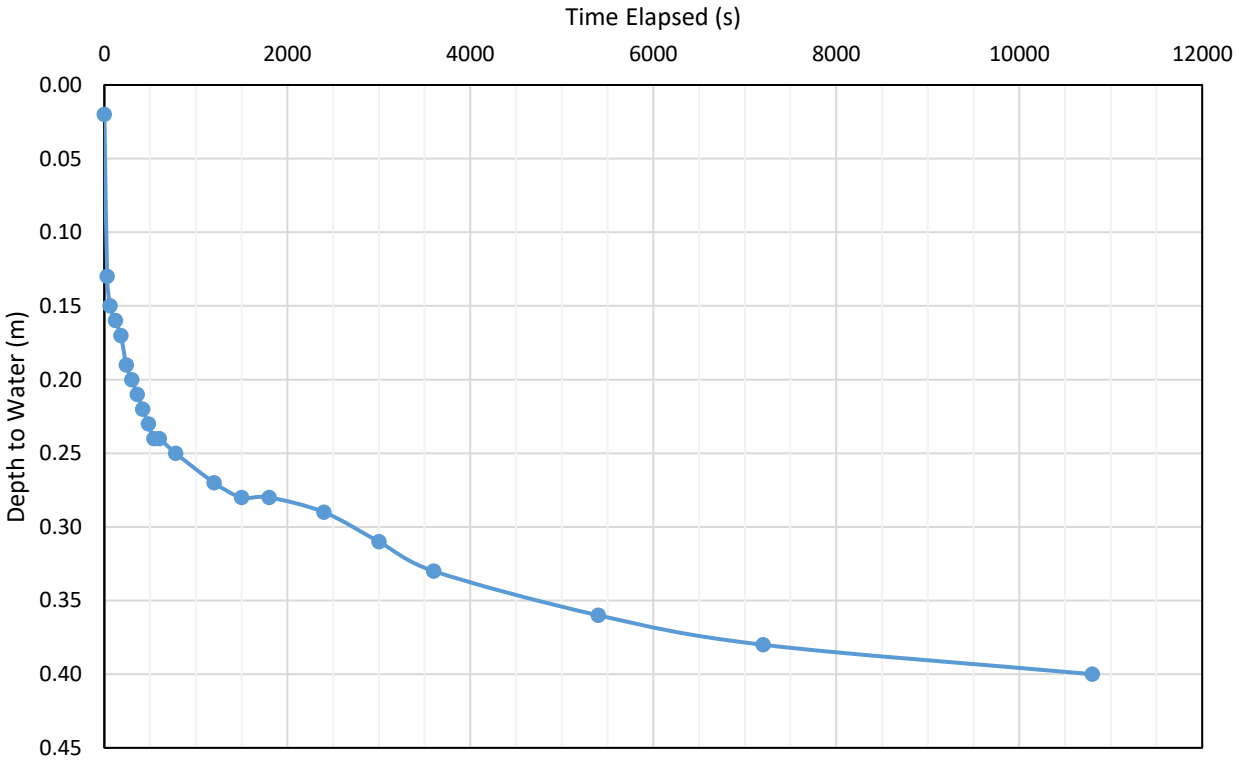
Project: S230503

Project name: Ardersier Port Falling Head Test RTRisi

Report date: 05/07/2023

Test date: 08/06/2023 **Test location:** BHSP08

Falling Head Test BS22282-1(2012) Geohydraulic Testing



Internal borehole diameter	0.2540	m
Base depth of borehole	10.00	m
Cross-sectional area of borehole	0.0507	m^2
Linear regression slope	2.66E-06	
Shape Factor	14.3907	
Permeability Coefficient (k)	**9.35E-09**	**m/s**

Produced by	Dated	Checked by	Dated
S.MCNIFF	05/07/23	A.CUTTS	12/07/23

SOLMEK

12 Yarm Road • Stockton-on-Tees • TS18 3NA

Tel: 01642 607083 • Email: info@solmek.com

SOIL INFILTRATION RATE

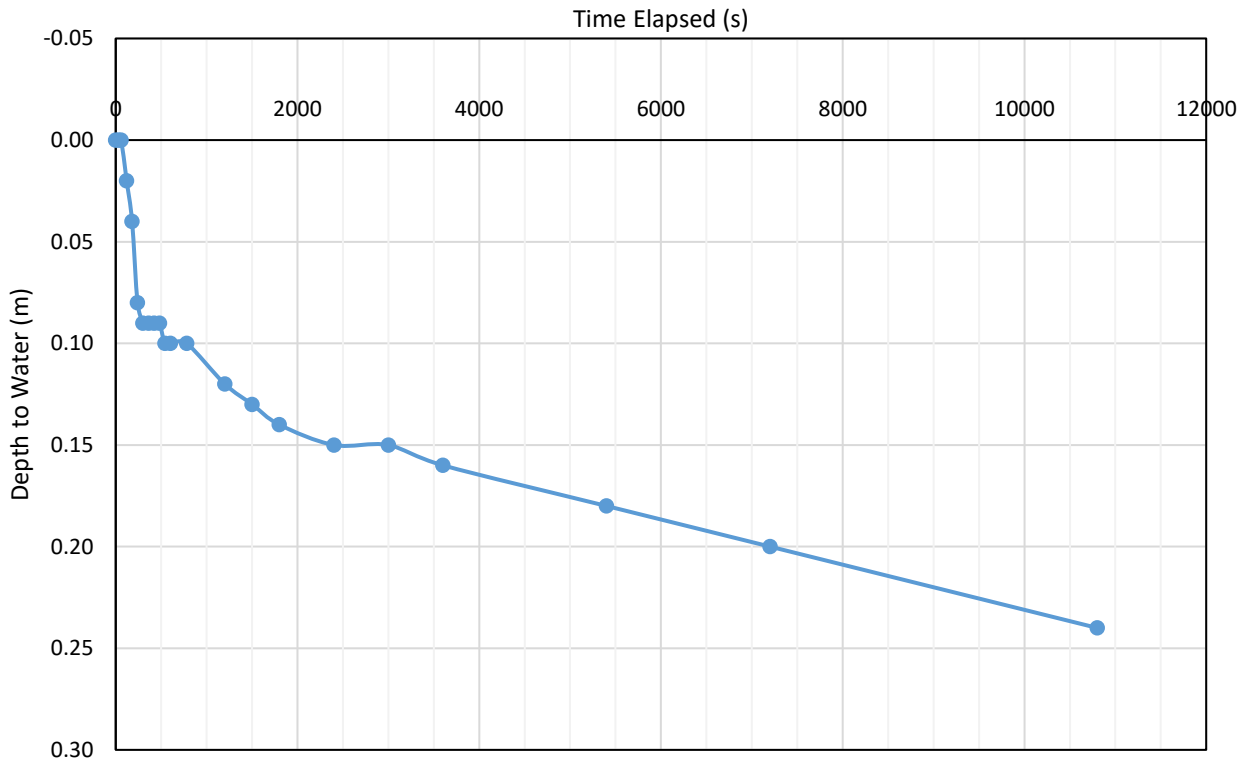
Project: S230503

Project name: Ardersier Port Falling Head Test RT

Report date: 05/07/2023

Test date: 08/06/2023 **Test location:** BHSP08

Falling Head Test BS22282-1(2012) Geohydraulic Testing



Internal borehole diameter	0.2000	m
Base depth of borehole	21.00	m
Cross-sectional area of borehole	0.0314	m^2
Linear regression slope	9.44E-07	
Shape Factor	24.6763	
Permeability Coefficient (k)	**1.20E-09**	**m/s**

Produced by	Dated	Checked by	Dated
S.MCNIFF	05/07/23	A.CUTTS	12/07/23

APPENDIX E

SOLMEK

GROUNDWATER DATA LOGGER SUMMARY 25 October 2023 – 01 February 2024

From 11.00am 25/10/2023 to 11.00am 01/02/2024

BHSP07 GW Data

	Temperature (C)	Pressure (mBar)	Water Level (mbgl)
Min	4.144	955.395	-0.358
Mean	7.466	1005.316	0.95
Max	11.837	1070.959	1.727

BHSP08 GW Data

	Temperature (C)	Pressure (mBar)	Water Level (mbgl)
Min	4.577	955.395	0.24
Mean	8.42	1005.316	1.417
Max	12.524	1070.959	2.275

APPENDIX F

♣Solmek conditions of offer, notes on limitations & basis for contract (ref: version1/2024)

These conditions accompany our tender and supercede any previous conditions issued. Solmek will prepare a report solely for the use of the Client (the party invoiced) and its agent(s). No reliance should be placed on the contents of this report, in whole or in part by 3rd parties. The report, its content and format and associated data are copyright, and the property of Solmek. Photocopying of part or all of the contents, transfer or reproduction of any kind is forbidden without written permission from Solmek. A charge may be levied against such approval, the same to be made at the discretion of Solmek.

Solmek cannot be held liable and do not warrant, or otherwise guarantee the validity of information provided by third parties and subsequently used in our reports. Solmek are not responsible for the action negligent of otherwise of subcontractors or third parties.

Site investigation is a process of sampling. The scope and size of an investigation may be considered proportional to levels of confidence regarding the ground and groundwater conditions. The exploratory holes undertaken investigate only a small volume of the ground in relation to the overall size of the site, and can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions as encountered within each of the exploratory holes. There may be different ground conditions elsewhere on the site which have not been identified by this investigation and which therefore have not been taken into account in this report. Reports are generally subject to the comments of the local authority and Environment Agency. The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that mobile contamination, ground gas levels and groundwater levels may vary owing to seasonal, tidal and/or weather related effects. Solmek cannot be held liable for any unrecorded or unforeseen obstructions between exploratory boreholes and trial pits. This includes instances where previous structures on the site (buried man made structures) or the presence of boulder clay (cobbles and/or boulder obstructions) have been anticipated. All types of piling operations should make allowance for obstructions within the construction budget to accommodate this. Unrecorded ancient mining may occur anywhere where seams that have been worked and influence the rock and soil above. Dissolution cavities can occur where gypsum or chalk is present. Rotary drilling is the recommended technique to prove the integrity of the rock.

Where the scope of the investigation is limited via access to information, time constraints, equipment limitations, testing, interpretation or by the client or his agents budgetary constraints, elements not set out in the proposal and excluded from the report are deemed to be omitted from the scope of the investigation.

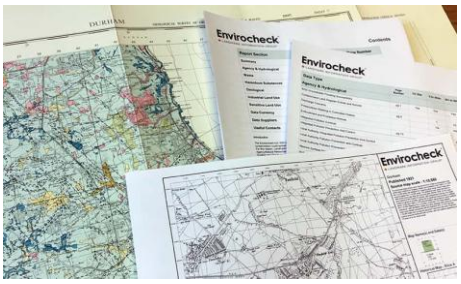
Desk studies are generally prepared in accordance with RICS guidelines. Environmental site investigations are generally undertaken as 'exploratory investigations' in accordance with the definitions provided in paragraph 5.4 of BS 10175:2011 in order to confirm the conceptual assumptions. You are advised to familiarize yourself with the typical scope of such an investigation. No pumping of water will be undertaken unless a licence or facilities/equipment have been arranged by others.

Where the type, number or/and depth of exploratory hole is specified by others, Solmek cannot and will not be responsible for any subsequent shortfall or inadequacy in data, and any consequent shortfall in interpretation of environmental and geotechnical aspects which may be required at a later date in order to facilitate the design of permanent or temporary works.

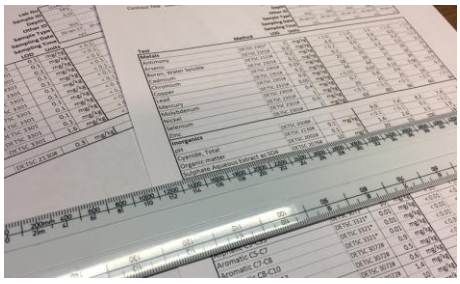
All information acquired by Solmek in the course of investigation is the property of Solmek, and, only also becomes the joint property of the Client only on the complete settlement of all invoices relating to the project. Solmek reserve the right to use the information in commercial tendering and marketing, unless the Client expressly wishes otherwise in writing. The quoted rates do not include VAT, and payment terms are 30 days from dispatch of invoice from our offices. Quotes are subject to a site visit.

We have allowed for 1 mobilisation and normal working hours unless otherwise stated. The scope of the investigation may be reviewed following the desk study and/or fieldwork. The presence or otherwise of Japanese Knotweed or other invasive plants can be difficult to identify especially during winter months. If Japanese Knotweed or other invasive species are suspect, it should be confirmed by an ecologist. We have not allowed for acquiring services information, and cannot be responsible for damage to underground services or pipes not shown to us or not clearly shown on plans. Costs incurred will be passed on to you, and in commissioning Solmek you understand and accept that you/your agent have a contractual relationship with Solmek & you accept this. Our rates assume unobstructed, reasonably level and firm access to the exploratory positions and adequate clear working areas and headroom. We have priced on the basis that you or your client have the necessary permissions, wayleaves and approvals to access land. All boreholes and pits are backfilled with arisings except where gas monitoring pipes are installed with stopcock covers. Solmek are not responsible for any uneven surfaces as a result of siteworks and rutting and backfilled excavations may require re-levelling and/or making good by others after fieldwork is complete, and Solmek has not allowed for this. No price has been provided or requested for a return visit to remove pipework and covers. Hourly rates apply to consultancy only and do not include expenses unless otherwise shown. If warranties are required, legal costs incurred will be passed on to you assuming Solmek agree to complete such warranties, modified or otherwise and you understand and agree to pay all costs.

We reserve the right to pursue full payment of the invoice prior to release of any information including reports. We advise you/your client that we may elect to pursue our statutory rights under late payment legislation, and will apply 8% to the base rate for unreasonably late payments. Solmek are exempt from the CIS Scheme. Solmek offer to undertake work only in strict accordance with conditions covered by our current insurances, which are available for inspection. Solmek are not responsible for acts, negligent or otherwise of subcontractors and as a matter of policy cannot indemnify any other parties. Professional indemnity Insurance is limited to ten times the invoice net total except where stated otherwise by Solmek. Solmek give notice that consequential loss as a direct or indirect result of Solmek's activities or omission of the same are excluded.







Factual Site Investigation

Phase 2 Spit Ground Investigation, Ardersier Port, Inverness

Haventus Ardersier Port

S250403

Solmek Ltd

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Stockton-on-Tees
TS18 3NA
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FACTUAL SITE INVESTIGATION REPORT

PHASE 2 MARINE & LANDSIDE GI

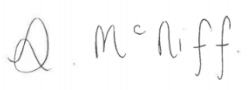
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3 GROUND CONDITIONS 3
4 GEOTECHNICAL TESTING 4

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APPENDICES

Appendix A: Drawings
Appendix B: Sonic Borehole Logs
Appendix C: Contamination Laboratory Results
Appendix D: Geotechnical Laboratory Results
Appendix E: Notes on Limitations & Contamination Guidance

Revision	Date	Prepared by	Signed
Final	March 2026	S. McNiff *Contracts Manager*	
		Checked by	
		R Woods *Managing Director*	
		Approved by	
		R Woods *Managing Director*	

1 INTRODUCTION

1.1 Authorisation

The site investigation described in this report was carried out by Solmek to the instructions of Fairhurst on behalf of Haventus Ardersier Port, on land located to the south of Ardersier Port to the east of Inverness. A site location plan is presented in Appendix A, Figure 1. All borehole co-ordinates and elevations are referenced to Ordnance Datum (AOD).

Sources of information, including previous work undertaken at the site, are detailed below:

- *Blake Geoservices Ltd, Whiteness Yard & Spit Factual Report, 12159-01 (July 2013)*
- *Solmek Phase 2 Site Investigation, Phase 1 Quay Wall, S221111 (June 2023)*
- *Solmek Phase 2 Site Investigation, Marine Scotland Boreholes, S230232 (June 2023)*
- *Solmek Phase 2 Site Investigation, Phase 3 Quay Wall, S231026 (June 2024)*
- *Solmek Phase 2 Site Investigation, Phase 2 Quay Wall, S240936 (February 2025)*
- *Solmek Phase 2 Site Investigation, Launch Pocket Phase 2 Quay Wall, S250401 (August 2025)*
- *Solmek Phase 2 Site Investigation, Phase 2 Onshore GI Areas 1 to 5, S250402 (October 2025)*

Reference should be made to the above report for details of the site's previous ground conditions.

The scope of the site investigation undertaken was set out within Fairhurst: Contract for Phase 2 Marine Development Ground Investigation at Ardersier Port (BIM Ref: APP2-FHT-XX-CHA-SP-G-000001, March 2025).

1.2 Background & Scope of Works

The port is to become an Energy Transition Facility. The proposed development will also include a concrete production plant using dredged sand from the port inlet. This report covers ground investigation works to support the design of wider platform/ lay-down zones.

The following steps may be required in the investigation and remediation of potentially contaminated land:

- Phase 1: Desk Study
- Phase 2: Intrusive Investigation
- Phase 3: Remediation Statement
- Phase 4: Validation Reports

Phases 1 and 2 are generally required in the redevelopment of most sites. Phases 3 and 4 are subject to the findings of the initial stages.

A factual geotechnical report and contamination assessment (Phase 2) was requested. The fieldwork and testing was generally carried out according to:

- BS 5930:2015+A1:2020 Code of Practice for Ground Investigations
- BS 10175:2011+A1:2013 Investigation of Potentially Contaminated Sites – Code of Practice.
- Rock and soil descriptions shall be in accordance with BS EN ISO 14689-1:2003, BS EN ISO 14688-1:2002 and BS EN ISO 14688-2:2004

This report forms part of a Stage 1 Risk Assessment (Generic Quantitative Risk Assessment) with respect to the Environment Agency's guidance document Environment Agency *Land Contamination Risk Management*, which replaced the now-withdrawn *Contaminated Land Report 11 – Model Procedures for the Management of Land Contamination (2004)*.

The information provided in this report is based on the investigation fieldwork and is subject to the comments and approval of the various regulatory authorities. There may be other conditions prevailing on the site which have not been disclosed by this investigation, and which have not been considered by this report. Solmek, reserve the right to alter conclusions and recommendations should further information be available or

provided.

Any schematic representation or opinion of the possible configuration of ground conditions between exploratory holes is conjectural and given for guidance only and confirmation of intermediate ground conditions should be considered if deemed necessary.

2 SITE DESCRIPTION AND FIELDWORK

An initial site inspection, as recommended in BS 5930 and BS 10175, was undertaken on 23rd April 2025.

The site is approximately centred at Ordnance Survey Co-ordinates 280829E, 857204N and lies south adjacent to current Ardersier Port boundaries. Ardersier Port is situated around an inlet at the mouth of the Moray Firth. The site comprises the dock area and a stretch of water separated by a sand spit.

The area of the proposed development is generally triangular with a mostly flat and even topography. The site generally comprises an area of mature forestry. Across central areas, a small farmstead is present with land designated to crop cultivation and rearing of livestock (pheasants and ducks). Several smaller residential premises are also located within central and southern areas of the site. Trending roughly north-south across the site there is a clearing in which overhead power lines run.

2.1 Fieldwork

The drilling fieldwork was carried out between September and October 2025. The extent of the investigation was:

- 8no. cable percussive boreholes to a maximum depth of 30.00mbgl (-26.20m CD).
- Groundwater monitoring standpipes were installed in CP-101, 102, 104, 201 & 202.
    - Downhole dataloggers (divers) have been used to monitor groundwater levels.
- The boreholes were positioned by Fairhurst
- In-situ testing in the boreholes as Standard Penetration Tests (SPTs) throughout the entire borehole depth.
- Retrieval of disturbed and undisturbed samples for geotechnical testing.

The boreholes were backfilled with bentonite grout upon completion or installed with a groundwater piezometer.

Descriptions of the strata encountered in the boreholes together with details of sampling and groundwater are presented in Appendix B of this report.

3 GROUND CONDITIONS

A summary of the ground conditions encountered is given below.

3.1 Made Ground Deposits

Made ground was absent across all exploratory locations

3.2 Superficial Deposits

The superficial deposits generally comprised SAND with varying levels of secondary constituents of gravel, silt and clay. The sand was recorded as medium dense to dense.

3.3 Bedrock

Not proven.

3.4 Groundwater

Groundwater strikes on the landside boreholes are shown in Table 1 below.

TABLE 1: GROUNDWATER RECORDS FROM BOREHOLES DURING FIELDWORK

Location	Depth of Strike (mCD)	Stratum
BH-101	1.80	SAND
BH-102	1.50	SAND
CP-101	2.10	SAND
CP-102	1.94	SAND
CP-103	2.00	SAND
CP-104	1.40	SAND
CP-201	1.23	SAND
CP-202	1.45	SAND

The results from the downhole water monitoring are presented as a separate excel file to this report. Please note that due to the fault on the barometer no data was obtained from CP-202.

4 GEOTECHNICAL TESTING

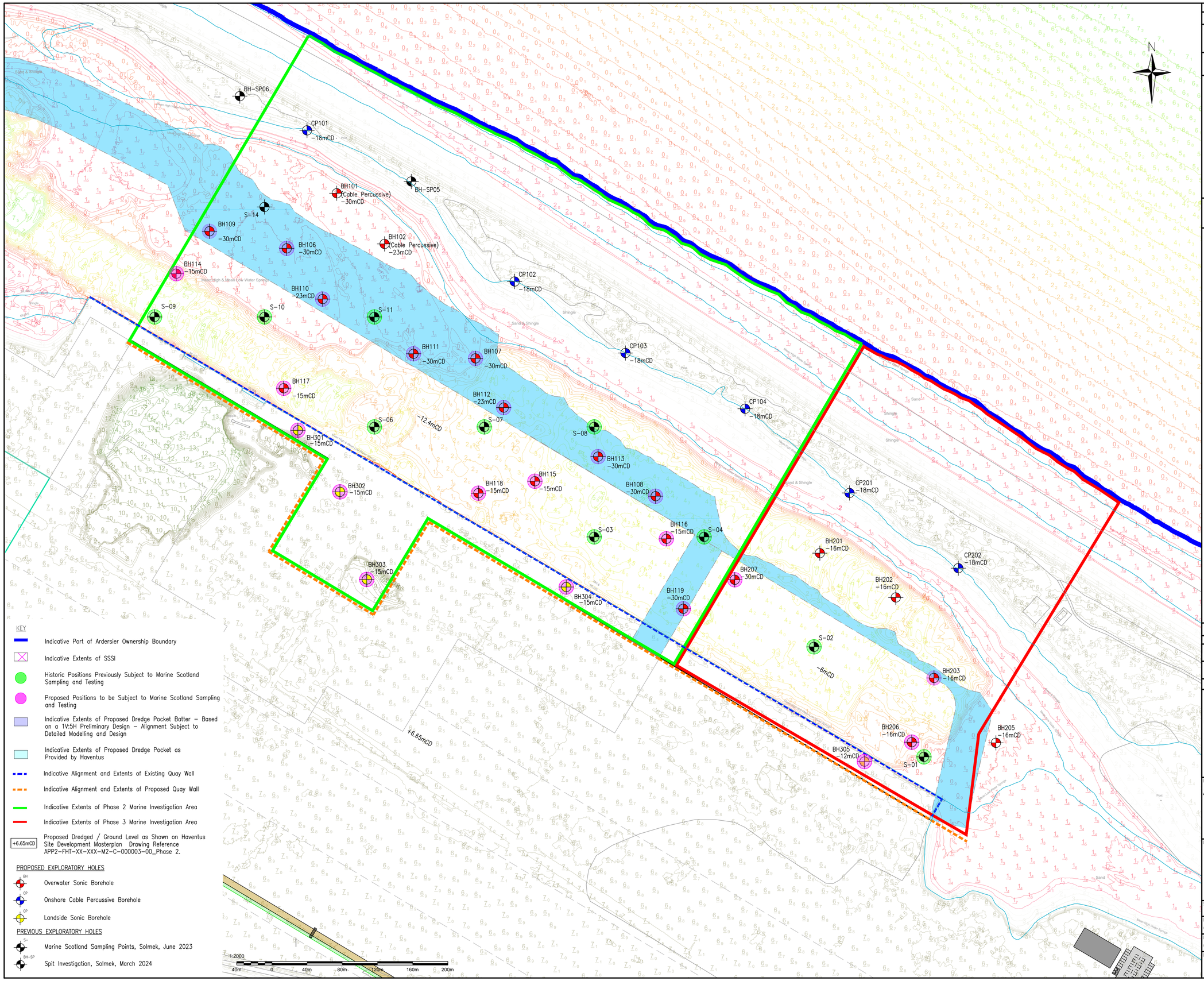
Samples taken from the boreholes underwent a series of geotechnical tests to aid platform design and soil description. In addition, insitu Standard Penetration Tests (SPTs) were undertaken at regular intervals across the entire borehole depth.

4.1 Laboratory Testing

The laboratory testing (requested and scheduled by Fairhurst) is presented in Appendix D (Geotechnical).

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APPENDIX A



KEY

- Indicative Port of Ardersier Ownership Boundary
- Indicative Extents of SSSI
- Historic Positions Previously Subject to Marine Scotland Sampling and Testing
- Proposed Positions to be Subject to Marine Scotland Sampling and Testing
- Indicative Extents of Proposed Dredge Pocket Batter – Based on a 1V:5H Preliminary Design – Alignment Subject to Detailed Modelling and Design
- Indicative Extents of Proposed Dredge Pocket as Provided by Haventus
- Indicative Alignment and Extents of Existing Quay Wall
- Indicative Alignment and Extents of Proposed Quay Wall
- Indicative Extents of Phase 2 Marine Investigation Area
- Indicative Extents of Phase 3 Marine Investigation Area
- +6.65mCD — Proposed Dredged / Ground Level as Shown on Haventus Site Development Masterplan Drawing Reference APP2–FHT–XX–XXX–M2–C–000003–00_Phase 2.

PROPOSED EXPLORATORY HOLES

- BH — Overwater Sonic Borehole
- CP — Onshore Cable Percussive Borehole
- CP — Landside Sonic Borehole

PREVIOUS EXPLORATORY HOLES

- SC — Marine Scotland Sampling Points, Solmek, June 2023
- SH–SP — Spit Investigation, Solmek, March 2024

Do not scale from this drawing.

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARD/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING RISKS AND INFORMATION.

RISKS LISTED HERE ARE NOT EXHAUSTIVE. REFER TO DESIGN ASSESSMENT FORM NO. 162855/DAF/01 – ISSUE 3

SITE INVESTIGATION

- Services and overhead cables
- Contamination (including hydrocarbons and asbestos)
- Adjacent activities and client operations
- Restricted site
- Ground instability
- Working at height
- Overwater works
- Working near to waterways
- Tidal working
- Inundation
- UXO
- Working within a protected area
- Working behind quay wall – Potential presence of tie rods/anchors

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

NOTES

1. Site plan is based on the Haventus Site Development Masterplan Drawing Reference APP2–FHT–XX–XXX–M2–C–000003–00_Phase 2.
2. No boreholes are to be positioned above Mean High Water Springs without Regulatory agreement.
3. Proposed scope of ground investigation is subject to receipt of relevant permissions, to be applied for by the Client team. This is not within Fairhurst's scope of works.
4. Exploratory hole positions and depths are subject to change to suit site conditions and constraints. Any changes are first to be agreed with the Engineer and Client.
5. Exploratory hole positions are provisional until such a time as utility information, to be procured by the Contractor, is provided for review by the Engineer.
6. Borehole positions at the crest or mid–slope are based on a 1V:5H preliminary design. Actual slope alignment is subject to detailed design.
7. All sediment sampling and sub–sampling in the dredge pocket and associated batters for the purposes of informing material suitability for offshore disposal is to be undertaken in accordance with the requirements of Marine Scotland. The Contractor is to review and comply fully with these requirements.
8. Scope of sediment sampling for offshore disposal is subject to an agreed sampling plan with Marine Scotland.
9. Testing laboratory used must be ISO17025 accredited for marine sediment analysis and take part in comparison exercises such as QUASIMEME. The laboratory should also meet the LOD and sensitivity requirements set out in CSEMP Green Book.
10. The Contractor is responsible for clearing services at all exploratory hole locations.
11. The Contractor is responsible for protection of the existing quay wall. All exploratory holes are to be cleared for associated infrastructure (i.e tie rods, anchor piles etc.).
12. The Contractor is responsible for all setting out and must record as build coordinates and levels as per the Ground Investigation Specification.

Rev.	Date	Description	Drwn.	Chkd.	Appd.
D	07/08/25	BH101 and BH102 updated to be cable percussive. BH108 and BH203 moved.	LB	AH	AKF
C	06/08/25	BH113, 108 and 205 moved.	LB	AH	AKF
B	31/07/25	BHs 101 & 102 moved to estimated mean high water springs line following spitreinstatement and depths updated. BH 103, 104, 105 & 204 removed. BH 105, 113 & 203 moved.	JD	AH	AKF
A	16/06/25	REVISED TO REFLECT CLIENT COMMENTS	OAU	CM	DD

FAIRHURST
1 Arngrove Court
Barrack Road,
Newcastle–upon–Tyne
NE4 6DB
Tel: 0191 221 0505
Fax: 0844 381 4412

Client: Haventus

Project Title:
Ardersier Port Redevelopment

Drawing Title:
MARINE INVESTIGATION
EXPLORATORY HOLE LOCATION PLAN
PHASE 2 AND PHASE 3

Scale at A1:	Status:	
1:2000	Tender	
Drawn: OAU	Checked: CM/CL	Approved: JMM
Date: 06/06/25	Date: 06/06/25	Date: 06/06/25

Drawing No.: APP2–FHT–DD–CHA–DR–G–009106 Revision: D

APPENDIX B

SOLMEK
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 607083
info@solmek.com

Borehole Log

Scale 1:50 Sheet 1 of 4

BH-101

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	29/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	02/10/2025
Method:	Cable Percussive			**Backfilled:**	02/10/2025

GL (AOD):	1.73m	
Easting:	280742	
Northing:	858456	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Light brown, slightly gravelly SAND. Sand is fine grained. Gravel is sub-rounded, to well-rounded, fine to coarse of siltstone, sandstone, granite and quartz.	0.03 - 0.13	D	
					0.13 - 0.63	B	
					1.03 - 1.13	D	
					1.53 - 1.98	SPT (S)	N=6 (1,1/2,1,1,2)
					1.53 - 1.98	D	
					1.63 - 2.13	B	
					2.03 - 2.13	D	
		2.63	1.20	Medium dense greyish brown slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-rounded, to rounded, fine to medium of siltstone, granite, micro granite and quartz. Note: locally greyish black organic silty lenses noted.	3.03 - 3.48	SPT (S)	N=17 (2,3/4,4,4,5)
					3.03 - 3.13	D	
		3.33	0.50		3.03 - 3.48	D	
				Medium dense dark grey silty SAND. Sand is fine to medium grained. Occasional organic insertions noted, seeds, timber fragments.	3.13 - 3.63	B	
					4.03 - 4.13	D	
					4.53 - 4.98	SPT (S)	N=5 (1,2/1,1,1,2)
					4.53 - 4.98	D	
					4.63 - 5.13	B	
					5.03 - 5.13	B	
		5.83	-2.00	Medium dense dark grey, locally black silty (very silty) SAND. Sand is fine to medium grained. Organic odour on recovery.	6.03 - 6.48	SPT (S)	N=26 (5,5/6,5,7,8)
					6.03 - 6.13	D	
					6.03 - 6.48	D	
					6.13 - 6.63	B	
					7.03 - 7.13	D	
		7.23	-3.40		7.23 - 7.33	D	
		7.43	-3.60	Dark grey and black slightly clayey, sandy SILT. Sand is fine to medium grained. Organic odour on recovery.	7.53 - 7.98	SPT (S)	N=20 (2,3/3,4,6,7)
					7.53 - 7.98	D	
		7.83	-4.00		7.63 - 8.03	B	
				Medium dense dark grey, locally black silty (very silty) SAND. Sand is fine to medium grained. Orgnaic odur on recovery.	8.03 - 8.13	D	
				Medium dense dark grey silty SAND. Sand is fine to medium grained.	9.03 - 9.48	SPT (S)	N=25 (3,3/4,4,7,10)
					9.03 - 9.13	D	
					9.03 - 9.48	D	
		9.53	-5.70	Medium dense light brown gravelly SAND. Sand is fine to medium grained. Gravel is sub-rounded, to well-rounded, fine to coarse of mixed lithologies.	9.13 - 9.63	B	

Hole Diameter

Depth Base (m)	Diameter (mm)
10.95	203
34.00	153

Casing Depths

Depth Base (m)	Diameter (mm)
10.50	203
33.00	153

General Remarks

Groundwater encountered at 1.80mCD.
Starting elevation 3.83CD.
Depths are reported in mbgl.
Ground Level MCD is 3.83m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
1.80	2.00		20	2.20

SOLMEK
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 607083
info@solmek.com

Borehole Log

Scale 1:50 Sheet 2 of 4

BH-101

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	29/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	02/10/2025
Method:	Cable Percussive			**Backfilled:**	02/10/2025

GL (AOD):	1.73m	
Easting:	280742	
Northing:	858456	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense light brown gravelly SAND. Sand is fine to medium grained. Gravel is sub-rounded, to well-rounded, fine to coarse of mixed lithologies.	10.03 - 10.13	D	
					10.63 - 11.13	B	
					11.03 - 11.13	D	
		11.83	-8.00	Medium dense to very dense dark grey silty SAND. Sand is fine to medium grained. Note: Local shell traces present throughout.	12.03 - 12.48	SPT (S)	N=29 (3,5/6,7,8,8)
					12.03 - 12.13	D	
					12.03 - 12.48	D	
					12.13 - 12.63	B	
					13.03 - 13.13	D	
					13.13 - 13.63	B	
					13.53 - 13.98	SPT (S)	N=22 (1,3/6,5,5,6)
					13.53 - 13.98	D	
					14.03 - 14.13	D	
					15.03 - 15.48	SPT (S)	N=22 (1,3/6,5,5,6)
					15.03 - 15.48	D	
					15.13 - 15.63	B	
					16.03 - 16.13	D	
					16.53 - 16.98	SPT (S)	N=28 (3,6/7,6,7,8)
					16.53 - 16.98	D	
					16.63 - 17.13	B	
					17.03 - 17.13	D	
					18.03 - 18.48	SPT (S)	N=31 (3,3/5,7,9,10)
					18.03 - 18.13	D	
					18.03 - 18.48	B	
					18.13 - 18.63		
					19.03 - 19.13	D	
					19.53 - 19.98	SPT (S)	N=22 (2,3/5,5,6,6)
					19.53 - 19.98	B	
					19.63 - 20.13		

Hole Diameter

Depth Base (m)	Diameter (mm)
10.95	203
34.00	153

Casing Depths

Depth Base (m)	Diameter (mm)
10.50	203
33.00	153

General Remarks

Groundwater encountered at 1.80mCD.
Starting elevation 3.83CD.
Depths are reported in mbgl.
Ground Level MCD is 3.83m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
1.80	2.00		20	2.20

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Borehole Log

Scale 1:50 Sheet 3 of 4

BH-101

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	29/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	02/10/2025
Method:	Cable Percussive			**Backfilled:**	02/10/2025

GL (AOD):	1.73m	
Easting:	280742	
Northing:	858456	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to very dense dark grey silty SAND. Sand is fine to medium grained. Note: Local shell traces present throughout.	20.03 - 20.13	D	
					21.03 - 21.48	SPT (S)	N=12 (2,3/4,3,2,3)
					21.03 - 21.13	D	
					21.13 - 21.48	B	
					21.13 - 21.63	D	
					22.03 - 22.13	D	
					22.53 - 22.98	SPT (S)	N=41 (4,6/8,10,12,11)
					22.53 - 22.98	D	
					22.63 - 24.48		
					23.03 - 23.13	B	
					24.03 - 24.48	SPT (S)	N=44 (6,8/9,12,11,12)
					24.03 - 24.13	D	
					24.13 - 24.63	B	
					25.03 - 25.13	D	
					25.53 - 25.98	SPT (S)	N=31 (2,4/5,8,8,10)
					25.53 - 25.98	D	
					25.63 - 26.13		
					26.03 - 26.13	B	
					27.03 - 27.48	SPT (S)	N=50+
					27.03 - 27.13	D	(4,8/10,15,15,10)
					27.13 - 27.63	B	
					28.03 - 28.13	D	
		28.23	-24.40	Dense greyish brown slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-rounded to rounded, fine to medium of siltstone, sandstone, micro granite and quartz.	28.53 - 28.98	SPT (S)	N=37 (1,5/6,8,10,13)
					28.53 - 28.98	B	
					28.63 - 29.13		
					29.03 - 29.13	D	
		30.00	-26.17				

Hole Diameter

Depth Base (m)	Diameter (mm)
10.95	203
34.00	153

Casing Depths

Depth Base (m)	Diameter (mm)
10.50	203
33.00	153

General Remarks

Groundwater encountered at 1.80mCD.
Starting elevation 3.83CD.
Depths are reported in mbgl.
Ground Level MCD is 3.83m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
1.80	2.00		20	2.20

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Borehole Log

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BH-101

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	29/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	02/10/2025
Method:	Cable Percussive			**Backfilled:**	02/10/2025

GL (AOD):	1.73m	
Easting:	280742	
Northing:	858456	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				End of Borehole at 30.000m			

Hole Diameter

Depth Base (m)	Diameter (mm)
10.95	203
34.00	153

Casing Depths

Depth Base (m)	Diameter (mm)
10.50	203
33.00	153

General Remarks

Groundwater encountered at 1.80mCD.
Starting elevation 3.83CD.
Depths are reported in mbgl.
Ground Level MCD is 3.83m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
1.80	2.00		20	2.20

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Borehole Log

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Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	13/10/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	17/10/2025
Method:	Cable Percussive			**Backfilled:**	17/10/2025

GL (AOD):	1.55m
Easting:	280783
Northing:	858424
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense Brown to beige, gravelly SAND. Sand is fine to medium grained. Gravel is fine to coarse grained, well-rounded to rounded of mudstone, sandstone and limestone.	0.05 - 0.15	D	
					0.15 - 0.65	B	
					1.05 - 1.15	D	
					1.50 - 1.95	SPT (S)	N=9 (1,1/2,2,2,3)
					1.65 - 2.15	B	
					2.15 - 2.25	D	
		2.25	-1.40	Medium dense Dark grey, silty, slightly gravelly SAND with low cobble content. Sand is fine to medium grained. Gravel is coarse grained, well-rounded to rounded of mudstone, sandstone and limestone. Cobbles are well-rounded to sub-angular of limestone and granite. Frequent coarse sand grained to fine gravel grained shell fragments.	3.00 - 3.45	SPT (S)	N=11 (1,2/2,3,3,3)
					3.05 - 3.15	D	
					3.15 - 3.65	B	
					4.15 - 4.25	D	
					4.50 - 4.95	SPT (S)	N=9 (1,2/2,2,3,2)
					4.65 - 5.15	B	
					5.15 - 5.25	D	
					6.00 - 6.45	SPT (S)	N=20 (3,3/4,5,5,6)
					6.05 - 6.15	D	
					6.15 - 6.65	B	
		6.45	-2.80	Medium dense to dense Dark grey, silty SAND. Sand is fine to medium grained. Occasional coarse sand grained shell fragments.	7.15 - 7.25	D	
					7.50 - 7.95	SPT (S)	N=17 (2,3/3,4,5,5)
					7.65 - 8.15	B	
					8.15 - 8.25	D	
					9.00 - 9.45	SPT (S)	N=24 (3,5/5,6,7,6)
					9.05 - 9.15	D	
					9.15 - 9.65	B	

Hole Diameter

Depth Base (m)	Diameter (mm)
7.95	203
27.45	153

Casing Depths

Depth Base (m)	Diameter (mm)
7.50	203
27.00	153

General Remarks

Groundwater encountered 1.50mCD.
Starting elevation 3.65mCD.
Depths are reported in mbgl.
Ground Level MCD is 3.65m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
1.50	1.50		20	1.70

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Borehole Log

Scale 1:50 Sheet 2 of 3

BH-102

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	13/10/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	17/10/2025
Method:	Cable Percussive			**Backfilled:**	17/10/2025

GL (AOD):	1.55m	
Easting:	280783	
Northing:	858424	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to dense Dark grey, silty SAND. Sand is fine to medium grained. Occasional coarse sand grained shell fragments.	10.15 - 10.25	D	
					10.50 - 10.95	SPT (S)	N=23 (3,4/5,5,6,7)
					10.65 - 11.15	B	
					11.15 - 11.25	D	
					12.00 - 12.45	SPT (S)	N=25 (3,5/6,6,6,7)
					12.00 - 12.45	D	
					12.05 - 12.15	D	
					12.15 - 12.65	B	
					13.05 - 13.15	D	
					13.50 - 13.95	SPT (S)	N=24 (3,4/5,6,6,7)
					13.65 - 14.15	B	
					14.15 - 14.25	D	
					15.00 - 15.45	SPT (S)	N=28 (3,6/7,6,7,8)
					15.05 - 15.15	D	
					15.65 - 16.15	B	
					16.15 - 16.25	D	
					16.50 - 16.95	SPT (S)	N=31 (3,3/5,7,9,10)
					17.05 - 17.15	D	
					17.15 - 17.65	B	
					18.00 - 18.45	SPT (S)	N=26 (2,3/5,5,7,9)
					18.05 - 18.15	D	
					18.65 - 19.15	B	
					19.15 - 19.25	D	
					19.50 - 19.95	SPT (S)	N=36 (4,5/7,7,10,12)

Hole Diameter

Depth Base (m)	Diameter (mm)
7.95	203
27.45	153

Casing Depths

Depth Base (m)	Diameter (mm)
7.50	203
27.00	153

General Remarks

Groundwater encountered 1.50mCD.
Starting elevation 3.65mCD.
Depths are reported in mbgl.
Ground Level MCD is 3.65m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
1.50	1.50		20	1.70

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Borehole Log

Scale 1:50 Sheet 3 of 3

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Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	13/10/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	17/10/2025
Method:	Cable Percussive			**Backfilled:**	17/10/2025

GL (AOD):	1.55m		
Easting:	280783		
Northing:	858424		
Logged:	SM		
Status:	DRAFT		

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to dense Dark grey, silty SAND. Sand is fine to medium grained. Occasional coarse sand grained shell fragments.	20.05 - 20.15	D	
					20.65 - 21.15	B	
					21.00 - 21.45	SPT (S)	N=33 (3,6/7,8,8,10)
					21.15 - 21.25	D	
					22.05 - 22.15	D	
					22.15 - 22.65	B	
					22.50 - 22.95	SPT (S)	N=50+ (6,8/9,12,14,16)
					23.05 - 23.15	D	
					23.65 - 24.15	B	
					24.00 - 24.45	SPT (S)	N=50+ (6,8/9,12,14,16)
					24.15 - 24.25	D	
					25.05 - 25.15	D	
					25.15 - 25.65	B	
					25.50 - 25.95	SPT (S)	N=45 (4,7/10,10,12,13)
					26.05 - 26.15	D	
					26.65 - 27.15	B	
					27.00 - 27.45	SPT (S)	N=47 (5,6/8,11,13,15)
					27.15 - 27.25	D	
		27.45	-23.80	End of Borehole at 27.450m			

Hole Diameter		Casing Depths	
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)
7.95	203	7.50	203
27.45	153	27.00	153

General Remarks

Groundwater encountered 1.50mCD.
Starting elevation 3.65mCD.
Depths are reported in mbgl.
Ground Level MCD is 3.65m.

Chiselling		
From (m)	To (m)	Time (hr)

Ground Water				
Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
1.50	1.50		20	1.70

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Cable Percussive Log

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CP-101

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	04/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	08/09/2025
Method:	Cable Percusisve			**Backfilled:**	08/09/2025

GL (AOD):	2.48m		
Easting:	280680		
Northing:	858527		
Logged:	AS		
Status:	DRAFT		

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense, light brown, gravelly SAND. Sand is fine to coarse grained. Gravel is fine to coarse grained, very rounded to rounded of siltstone, sandstone, granite and quartz.	0.01 - 0.49	B	
		0.49	4.09		0.49 - 0.59	B	
				Medium dense, brown, very gravelly SAND. Sand is fine to coarse grained. Gravel is fine to coarse grained, very rounded to rounded of mudstone, sandstone, siltstone, micro granite and quartz and limestone.	0.49 - 0.99	D	
		0.99	3.59		0.99 - 1.49	B	
			2.89	Medium dense, brown, gravelly SAND. Sand is fine to coarse grained. Gravel is fine to coarse grained, very rounded to rounded of mudstone, siltstone, sandstone, granite and quartz.	1.49 - 1.94	SPT (S)	N=27 (2,3/5,7,7,8)
		1.59			1.49 - 1.59	D	
					1.49 - 1.94	D	
				Medium dense, brown, slightly gravelly SAND. Sand is fine to coarse grained. Gravel is fine grained, very rounded to rounded of mudstone, sandstone, siltstone, micro granite and quartz and limestone.			
					2.49 - 2.59	B	
					2.49 - 2.99	D	
		2.99	1.59	Medium dense, brown SAND. Sand is fine to medium grained. Rare shell fragments noted.	2.99 - 3.44	SPT (S)	N=13 (1,1/2,3,4,4)
					2.99 - 3.44	D	
		3.49	1.09	Medium dense, brown SAND. Sand is fine to medium grained.	3.49 - 3.59	D	
					3.99 - 4.49	B	
G					4.49 - 4.94	SPT (S)	N=17 (0,2/3,4,5,5)
					4.49 - 4.59	D	
					4.49 - 4.94	D	
					5.49 - 5.59	B	
					5.49 - 5.99	D	
					5.99 - 6.44	SPT (S)	N=22 (1,2/3,3,7,9)
					5.99 - 6.44	D	
					6.49 - 6.59	D	
					6.99 - 7.49	B	
		7.49	-2.91	Dense, brown SAND. Sand is fine to medium grained.	7.49 - 7.94	SPT (S)	N=38 (3,6/7,9,10,12)
					7.49 - 7.59	D	
					7.49 - 7.94	D	
					8.49 - 8.59	B	
					8.49 - 8.99	D	
					8.49 - 9.59	D	
		8.99	-4.41	Medium dense, brown SAND. Sand is fine to medium grained.	8.99 - 9.44	SPT (S)	N=24 (2,3/3,5,7,9)
					8.99 - 9.44	D	
					9.99 - 10.49	B	

Hole Diameter		Casing Depths		General Remarks
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	
7.94	203	7.50	203	Groundwater encountered at 2.50mbgl.
22.95	153	22.50	153	Starting elevation 4.60mCD.
				Depths are reported in mbgl.
				Ground Level MCD is 4.58m.

Chiselling		
From (m)	To (m)	Time (hr)

Ground Water				
Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
2.50	2.30		20	1.70

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Cable Percussive Log

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CP-101

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	04/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	08/09/2025
Method:	Cable Percusisve			**Backfilled:**	08/09/2025

GL (AOD):	2.48m	
Easting:	280680	
Northing:	858527	
Logged:	AS	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense, brown SAND. Sand is fine to medium grained.	10.49 - 10.94	SPT (S)	N=30 (2,4/6,6,8,10)
					10.49 - 10.59	D	
					10.49 - 10.94	D	
					11.49 - 11.59	B	
					11.49 - 11.99	D	
					11.99 - 12.44	SPT (S)	N=32 (3,3/4,7,10,11)
		12.09	-7.51		11.99 - 12.44	D	
				Medium dense, dark grey silty SAND. Sand is fine to medium grained. Rare shell fragments.	12.49 - 12.59	D	
					12.99 - 13.49	B	
					13.49 - 13.94	SPT (S)	N=18 (1,2/4,4,5,5)
					13.49 - 13.59	D	
					13.49 - 13.94	D	
		14.49	-9.95		14.49 - 14.59	B	
				Medium dense, dark grey silty SAND. Sand is fine to medium grained.	14.49 - 14.99	D	
					14.99 - 15.44	SPT (S)	N=20 (1,1/4,5,5,6)
					14.99 - 15.44	D	
					15.49 - 15.59	D	
					15.99 - 16.49	B	
					16.49 - 16.94	SPT (S)	N=14 (2,2/3,4,3,4)
					16.49 - 16.59	D	
					16.49 - 16.94	D	
					17.49 - 17.59	B	
					17.49 - 17.99	D	
					17.99 - 18.44	SPT (S)	N=16 (1,2/3,4,4,5)
					17.99 - 18.44	D	
					18.49 - 18.59	D	
					18.99 - 19.49	B	
					19.49 - 19.94	SPT (S)	N=20 (3,3/4,4,6,6)
					19.49 - 19.59	D	
					19.49 - 19.94	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
7.94	203
22.95	153

Casing Depths

Depth Base (m)	Diameter (mm)
7.50	203
22.50	153

General Remarks

Groundwater encountered at 2.50mbgl.
Starting elevation 4.60mCD.
Depths are reported in mbgl.
Ground Level MCD is 4.58m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
2.50	2.30		20	1.70

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Cable Percussive Log

Scale 1:50 Sheet 3 of 3

CP-101

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	04/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	08/09/2025
Method:	Cable Percusisve			**Backfilled:**	08/09/2025

GL (AOD):	2.48m	
Easting:	280680	
Northing:	858527	
Logged:	AS	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense, dark grey silty SAND. Sand is fine to medium grained.			
					20.49 - 20.59	B	
					20.49 - 20.99	D	
					20.99 - 21.44	SPT (S)	N=19 (2,3/3,4,5,7)
					20.99 - 21.44	D	
					21.49 - 21.59	D	
					21.99 - 22.49	B	
					22.49 - 22.94	SPT (S)	N=23 (3,4/4,6,7,6)
					22.49 - 22.59	D	
					22.49 - 22.94	D	
		22.95	-18.37	End of Borehole at 22.950m			

Hole Diameter		Casing Depths		General Remarks
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	
7.94	203	7.50	203	Groundwater encountered at 2.50mbgl.
22.95	153	22.50	153	Starting elevation 4.60mCD.
				Depths are reported in mbgl.
				Ground Level MCD is 4.58m.

Chiselling		
From (m)	To (m)	Time (hr)

Ground Water				
Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
2.50	2.30		20	1.70

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Borehole Log

Scale 1:50 Sheet 1 of 3

CP-102

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
Client:	HAVENTUS/ FAIRHURST			**Plant used:**	Dando 2000
Method:	Cable Percussive			**Started:**	09/09/2025
				Ended:	11/09/2025
				Backfilled:	11/09/2025

GL (AOD):	2.26m	
Easting:	280913	
Northing:	858347	
Logged:	AS	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Brown, very sandy GRAVEL. Sand is fine to medium grained. Gravel is fine to coarse grained, very rounded to rounded of siltstone, sandstone and quartz. Rare shell fragments.	0.00 - 0.50	B	
					0.50 - 0.60	D	
		1.00	3.36	Medium dense, brown, gravelly SAND. Sand is fine to medium grained. Gravel is fine to coarse grained, very rounded to rounded of mudstone, siltstone, micro granite and quartz. Rare shell fragments.	1.50 - 1.95	SPT (S)	N=27 (3,3/5,6,8,8)
					1.50 - 1.60	B	
					1.50 - 1.95	D	
					1.50 - 2.00	D	
					2.50 - 2.60	D	
		2.80	1.56	Medium dense, brown SAND. Sand is fine to medium grained.	3.00 - 3.45	SPT (S)	N=25 (2,2/4,6,7,8)
					3.00 - 3.45	B	
					3.00 - 3.50	D	
					3.50 - 3.60	D	
					4.50 - 4.95	SPT (S)	N=24 (1,2/4,6,7,7)
					4.50 - 4.60	B	
					4.50 - 4.95	D	
					4.50 - 5.00	D	
					5.50 - 5.60	D	
		6.00	-1.64	Medium dense, brown slightly gravelly SAND. Sand is fine to medium grained. Gravel is fine to medium grained, very rounded to rounded of siltstone, sandstone and quartz. Rare shell fragments.	6.00 - 6.45	SPT (S)	N=18 (2,2/3,4,5,6)
					6.00 - 6.45	B	
					6.00 - 6.50	D	
					6.50 - 6.60	D	
		7.50	-3.14	Medium dense, brown SAND. Sand is fine to medium grained.	7.50 - 7.95	SPT (S)	N=15 (0,2/3,3,4,5)
					7.50 - 7.60	B	
					7.50 - 7.95	D	
					7.50 - 8.00	D	
					8.50 - 8.60	D	
					9.00 - 9.45	SPT (S)	N=28 (3,5/6,7,7,8)
					9.00 - 9.45	B	
					9.00 - 9.50	D	
					9.50 - 9.60	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
7.95	203
22.95	153

Casing Depths

Depth Base (m)	Diameter (mm)
7.50	203
22.50	153

General Remarks

Groundwater encountered at 2.46mbgl.
Starting elevation 4.40mCD.
Depths are reported in mbgl.
Ground Level MCD is 4.36m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
2.46	1.50		20	2.30

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Borehole Log

Scale 1:50 Sheet 2 of 3

CP-102

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	09/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	11/09/2025
Method:	Cable Percussive			**Backfilled:**	11/09/2025

GL (AOD):	2.26m	
Easting:	280913	
Northing:	858347	
Logged:	AS	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense, brown SAND. Sand is fine to medium grained.	10.50 - 10.95	SPT (S)	N=29 (3,4/6,7,8,8)
					10.50 - 10.60	B	
					10.50 - 10.95	D	
					10.50 - 11.00	D	
					11.50 - 11.60	D	
		12.00	-7.64		12.00 - 12.45	SPT (S)	N=31 (5,6/6,7,8,10)
				Medium dense, brown SAND. Sand is fine to medium grained. Rare shell fragments.	12.00 - 12.45	B	
					12.00 - 12.50	D	
					12.50 - 12.60	D	
					13.50 - 13.95	SPT (S)	N=14 (2,2/3,3,4,4)
					13.50 - 13.60	B	
					13.50 - 13.95	D	
					13.50 - 14.00	D	
		14.50	-10.14		14.50 - 14.60	D	
				Medium dense, brown to grey, silty SAND. Sand is fine to medium grained.			
		15.00	-10.64		15.00 - 15.45	SPT (S)	N=20 (2,3/4,5,5,6)
				Medium dense, brown to grey, silty SAND. Sand is fine to medium grained. Rare shell fragments.	15.00 - 15.45	B	
					15.00 - 15.50	D	
					15.50 - 15.60	D	
					16.50 - 16.95	SPT (S)	N=26 (3,4/6,6,7,7)
					16.50 - 16.60	B	
					16.50 - 16.95	D	
					16.50 - 17.00	D	
					17.50 - 17.60	D	
		18.00	-13.64		18.00 - 18.45	SPT (S)	N=13 (1,2/2,3,4,4)
				Medium dense, brown to grey, silty SAND. Sand is fine to medium grained.	18.00 - 18.45	B	
					18.00 - 18.50	D	
					18.50 - 18.60	D	
					19.50 - 19.95	SPT (S)	N=15 (1,2/3,3,4,5)
					19.50 - 19.60	B	
					19.50 - 19.95	D	
					19.50 - 20.00	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
7.95	203
22.95	153

Casing Depths

Depth Base (m)	Diameter (mm)
7.50	203
22.50	153

General Remarks

Groundwater encountered at 2.46mbgl.
Starting elevation 4.40mCD.
Depths are reported in mbgl.
Ground Level MCD is 4.36m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
2.46	1.50		20	2.30

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Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	09/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	11/09/2025
Method:	Cable Percussive			**Backfilled:**	11/09/2025

GL (AOD):	2.26m	
Easting:	280913	
Northing:	858347	
Logged:	AS	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense, brown to grey, silty SAND. Sand is fine to medium grained.	20.50 - 20.60	D	
		21.00	-16.64	Medium dense, brown to grey, silty SAND. Sand is fine to medium grained.	21.00 - 21.45	SPT (S)	N=33 (5,6/7,8,8,10)
					21.00 - 21.45	B	
					21.00 - 21.50	D	
					21.50 - 21.60	D	
		22.50	-18.14	End of Borehole at 22.500m	22.50 - 22.95	SPT (S)	N=28 (2,4/5,6,7,10)
					22.50 - 22.60	B	
					22.50 - 22.95	D	
					22.50 - 23.00	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
7.95	203
22.95	153

Casing Depths

Depth Base (m)	Diameter (mm)
7.50	203
22.50	153

General Remarks

Groundwater encountered at 2.46mbgl.
Starting elevation 4.40mCD.
Depths are reported in mbgl.
Ground Level MCD is 4.36m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
2.46	1.50		20	2.30

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Borehole Log

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CP-103

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
Client:	HAVENTUS/ FAIRHURST			**Plant used:**	Dando 2000
Method:	Cable Percussive			**Started:**	11/09/2025
				Ended:	23/09/2025
				Backfilled:	23/09/2025

GL (AOD):	2.09m
Easting:	281042
Northing:	858273
Logged:	AS
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense, brown, gravelly SAND. Sand is fine to medium grained. Gravel is fine to coarse grained of very rounded to rounded mudstone, sandstone and limestone. Rare fishing net fibres.	0.00 - 0.50	B	
		0.50	3.69	Medium dense, brown, slightly gravelly SAND. Sand is fine to medium grained. Gravel is fine to coarse grained of very rounded to rounded mudstone, sandstone and limestone.	0.50 - 0.60	D	
		1.50	2.69	Medium dense, brown, slightly gravelly SAND. Sand is fine to medium grained. Gravel is fine grained of very rounded to rounded mudstone, sandstone and limestone. Rare shell fragments	1.50 - 1.95 1.50 - 1.60 1.50 - 1.95 1.50 - 2.00	SPT (S) B D D	N=12 (1,2/2,3,3,4)
					2.50 - 2.60	D	
					3.00 - 3.45 3.00 - 3.45 3.00 - 3.50 3.50 - 3.60	SPT (S) B D D	N=10 (1,0/1,2,3,4)
		4.50	-0.31	Medium dense, brown SAND. Sand is fine to medim grained. Rare shell fragments.	4.50 - 4.95 4.50 - 4.60 4.50 - 4.95 4.50 - 5.00	SPT (S) B D D	N=29 (2,4/5,7,7,10)
					5.50 - 5.60	D	
					6.00 - 6.45 6.00 - 6.45 6.00 - 6.50 6.50 - 6.60	SPT (S) B D D	N=30 (3,5/6,6,8,10)
					7.50 - 7.95 7.50 - 7.60 7.50 - 7.95 7.50 - 8.00	SPT (S) B D D	N=22 (0,1/3,6,6,7)
					8.50 - 8.60	D	
					9.00 - 9.45 9.00 - 9.50	SPT (S) B	N=14 (1,1/2,3,4,5)
					9.50 - 9.60	D	

Hole Diameter		Casing Depths	
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)
7.95	203	7.50	203
22.95	153	22.50	153

General Remarks

Groundwater encountered 2.20m.
Starting elevation 4.20mCD.
Depths are reported in mbgl.
Ground Level MCD is 4.19m.

Chiselling		
From (m)	To (m)	Time (hr)

Ground Water				
Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
2.20	2.00		20	2.00

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Borehole Log

Scale 1:50 Sheet 2 of 3

CP-103

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	11/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	23/09/2025
Method:	Cable Percussive			**Backfilled:**	23/09/2025

GL (AOD):	2.09m	
Easting:	281042	
Northing:	858273	
Logged:	AS	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense, brown SAND. Sand is fine to medim grained. Rare shell fragments.	10.50 - 10.95	SPT (S)	N=20 (2,3/4,4,5,7)
					10.50 - 10.60	B	
					10.50 - 11.00	D	
					11.50 - 11.60	D	
		11.70	-7.51	Medium dense, grey, silty SAND. Sand is fine to medim grained. Rare shell fragments.	12.00 - 12.45	SPT (S)	N=22 (2,3/3,4,6,9)
					12.00 - 12.50	B	
					12.50 - 12.60	D	
					13.50 - 13.95	SPT (S)	N=23 (1,2/4,6,6,7)
					13.50 - 13.60	B	
					13.50 - 14.00	D	
					14.50 - 14.60	D	
					15.00 - 15.45	SPT (S)	N=18 (2,2/3,4,5,6)
					15.00 - 15.45	B	
					15.00 - 15.50	D	
					15.50 - 15.60	D	
					16.50 - 16.95	SPT (S)	N=31 (1,2/5,6,10,10)
					16.50 - 16.60	B	
					16.50 - 16.95	D	
					16.50 - 17.00	D	
					17.50 - 17.60	D	
					18.00 - 18.45	SPT (S)	N=13 (1,1/2,3,3,5)
					18.00 - 18.45	B	
					18.00 - 18.50	D	
					18.50 - 18.60	D	
					19.50 - 19.95	SPT (S)	N=17 (1,0/2,4,5,6)
					19.50 - 19.60	B	
					19.50 - 19.95	D	
					19.50 - 20.00	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
7.95	203
22.95	153

Casing Depths

Depth Base (m)	Diameter (mm)
7.50	203
22.50	153

General Remarks

Groundwater encountered 2.20m.
Starting elevation 4.20mCD.
Depths are reported in mbgl.
Ground Level MCD is 4.19m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
2.20	2.00		20	2.00

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Borehole Log

Scale 1:50 Sheet 3 of 3

CP-103

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	11/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	23/09/2025
Method:	Cable Percussive			**Backfilled:**	23/09/2025

GL (AOD):	2.09m	
Easting:	281042	
Northing:	858273	
Logged:	AS	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense, grey, silty SAND. Sand is fine to medim grained. Rare shell fragments.			
					20.50 - 20.60	D	
					21.00 - 21.45	SPT (S)	N=30 (3,4/6,6,8,10)
					21.00 - 21.45	B	
					21.00 - 21.50	D	
					21.50 - 21.60	D	
					22.50 - 22.95	SPT (S)	N=5 (1,0/0,0,2,3)
					22.50 - 22.95	D	
		22.95	-18.76	End of Borehole at 22.950m			

Hole Diameter		Casing Depths		General Remarks
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	
7.95	203	7.50	203	Groundwater encountered 2.20m.
22.95	153	22.50	153	Starting elevation 4.20mCD.
				Depths are reported in mbgl.
				Ground Level MCD is 4.19m.

Chiselling		
From (m)	To (m)	Time (hr)

Ground Water				
Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
2.20	2.00		20	2.00

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Borehole Log

Scale 1:50 Sheet 1 of 3

CP-104

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
Client:	HAVENTUS/ FAIRHURST			**Plant used:**	Dando 2000
Method:	Cable Percussive			**Started:**	24/09/2025
				Ended:	26/09/2025
				Backfilled:	26/09/2025

GL (AOD):	1.93m	
Easting:	281178	
Northing:	858210	
Logged:	AS	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense light brown to beige, very gravelly SAND. Sand is fine to medium grained. Gravel is fine to coarse grained, well-rounded to rounded of sandstone, limestone and mudstone. Occasional, coarse sand grained to fine gravel grained shell fragments.	0.00 - 0.50	B	
					0.50 - 0.60	D	
		1.50	2.53	Medium dense to dense light brown to beige, slightly gravelly SAND. Sand is fine to medium grained. Gravel is fine to medium grained, well-rounded to rounded of mudstone, sandstone and limestone. Rare cobbles, rounded to sub-angular of sandstone.	1.50 - 1.95	SPT (S)	N=15 (2,3/3,3,4,5)
					1.50 - 1.60	B	
					1.50 - 1.95	D	
					1.50 - 2.00	D	
					2.50 - 2.60	D	
		3.00	1.03	Brown to beige SAND. Sand is fine to medium grained. Rare, coarse grained sand and shell fragments.	3.00 - 3.45	SPT (S)	N=31 (2,4/6,8,8,9)
					3.00 - 3.50	B	
					3.50 - 3.60	D	
		4.50	-0.47	Medium dense brown to beige, slightly gravelly SAND. Sand is fine to medium grained. Gravel is fine to medium grained, well-rounded to rounded of mudstone, sandstone, siltstone and granite. Rare, coarse grained sand and shell fragments.	4.50 - 4.95	SPT (S)	N=14 (1,1/2,3,4,5)
					4.50 - 4.60	B	
					4.50 - 5.00	D	
					5.50 - 5.60	D	
					6.00 - 6.45	SPT (S)	N=26 (1,2/5,6,7,8)
					6.00 - 6.50	B	
		6.50	-2.47	Brown to beige SAND. Sand is fine to medium grained. Rare, coarse sand grained shell fragments.	6.50 - 6.60	D	
					7.50 - 7.95	SPT (S)	N=35 (2,4/6,8,10,11)
					7.50 - 7.60	B	
					7.50 - 8.00	D	
					8.50 - 8.60	D	
					9.00 - 9.45	SPT (S)	N=29 (3,4/6,6,8,9)
					9.00 - 9.50	B	
					9.50 - 9.60	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
9.45	203
22.95	153

Casing Depths

Depth Base (m)	Diameter (mm)
9.00	203
22.50	153

General Remarks

Groundwater encountered 2.60m.
Starting elevation 4.00mCD.
Depths are reported in mbgl.
Ground Level MCD is 4.03m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
2.60	2.00		20	2.30

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Borehole Log

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Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	24/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	26/09/2025
Method:	Cable Percussive			**Backfilled:**	26/09/2025

GL (AOD):	1.93m	
Easting:	281178	
Northing:	858210	
Logged:	AS	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Brown to beige SAND. Sand is fine to medium grained. Rare, coarse sand grained shell fragments.	10.50 - 10.95	SPT (S)	N=20 (2,2/4,5,5,6)
					10.50 - 10.60	B	
					10.50 - 11.00	D	
					11.50 - 11.60	D	
					12.00 - 12.45	SPT (S)	N=12 (1,1/0,2,4,6)
					12.00 - 12.45	B	
					12.00 - 12.50	D	
		12.50	-8.47		12.50 - 12.60	D	
				Medium dense to dense light brown to beige, slightly gravelly SAND. Sand is fine to medium grained. Gravel is fine grained, well-rounded to rounded of mudstone, sandstone and limestone. Frequent, coarse grained sand to fine gravel shell fragments. Rare cobbles, well-rounded to rounded of siltstone.			
		13.50	-9.47		13.50 - 13.95	SPT (S)	N=23 (1,3/4,6,6,7)
				Medium dense Brown to grey SAND. Sand is fine to medium grained. Occasional, coarse grained sand and shell fragments.	13.50 - 13.60	B	
					13.50 - 14.00	D	
		14.00	-9.97				
				Medium dense to dense Grey, silty SAND. Sand is fine to medium grained. Rare, coarse grained sand and shell fragments.	14.50 - 14.60	D	
					15.00 - 15.45	SPT (S)	N=15 (1,0/1,3,5,6)
					15.00 - 15.50	B	
					15.50 - 15.60	D	
					16.50 - 16.95	SPT (S)	N=26 (1,2/5,6,7,8)
					16.50 - 16.60	B	
					16.50 - 17.00	D	
					17.50 - 17.60	D	
					18.00 - 18.45	SPT (S)	N=31 (1,1/4,7,10,10)
					18.00 - 18.45	B	
					18.00 - 18.50	D	
					18.50 - 18.60	D	
					19.50 - 19.95	SPT (S)	N=15 (1,1/3,3,4,5)
					19.50 - 19.60	B	
					19.50 - 20.00	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
9.45	203
22.95	153

Casing Depths

Depth Base (m)	Diameter (mm)
9.00	203
22.50	153

General Remarks

Groundwater encountered 2.60m.
Starting elevation 4.00mCD.
Depths are reported in mbgl.
Ground Level MCD is 4.03m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
2.60	2.00		20	2.30

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01642 607083
info@solmek.com

Borehole Log

Scale 1:50 Sheet 3 of 3

CP-104

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	24/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	26/09/2025
Method:	Cable Percussive			**Backfilled:**	26/09/2025

GL (AOD):	1.93m	
Easting:	281178	
Northing:	858210	
Logged:	AS	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to dense Grey, silty SAND. Sand is fine to medium grained. Rare, coarse grained sand and shell fragments.	20.50 - 20.60	D	
					21.00 - 21.45	SPT (S)	N=32 (3,5/7,7,8,10)
					21.00 - 21.50	B	
					21.50 - 21.60	D	
					22.50 - 22.95	SPT (S)	N=35 (3,5/6,8,10,11)
		22.95	-18.92	End of Borehole at 22.950m			

Hole Diameter

Depth Base (m)	Diameter (mm)
9.45	203
22.95	153

Casing Depths

Depth Base (m)	Diameter (mm)
9.00	203
22.50	153

General Remarks

Groundwater encountered 2.60m.
Starting elevation 4.00mCD.
Depths are reported in mbgl.
Ground Level MCD is 4.03m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
2.60	2.00		20	2.30

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Borehole Log

Scale 1:50 Sheet 1 of 3

CP-201

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	06/10/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	08/10/2025
Method:	Cable Percussive			**Backfilled:**	08/10/2025

GL (AOD):	1.56m
Easting:	281297
Northing:	858116
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense Brown to beige, gravelly SAND. Sand is fine to medium grained. Gravel is fine to coarse grained, well-rounded to rounded of mudstone, sandstone and limestone.	0.10 - 0.60	B	
					0.60 - 0.70	D	
					1.50 - 1.95	SPT (S)	N=10 (1,2/2,2,3,3)
					1.60 - 1.70	B	
					1.60 - 2.10	D	
					2.60 - 2.70	D	
					3.00 - 3.45	SPT (S)	N=9 (1,1/2,2,2,3)
		3.10	0.56	Medium dense Brown to beige SAND. Sand is fine to medium grained.	3.10 - 3.60	B	
					3.60 - 3.70	D	
					4.50 - 4.95	SPT (S)	N=9 (1,2/1,1,3,4)
					4.60 - 4.70	B	
					4.60 - 5.10	D	
					5.60 - 5.70	D	
					6.00 - 6.45	SPT (S)	N=8 (1,1/1,2,2,3)
					6.10 - 6.60	B	
					6.60 - 6.70	D	
					7.50 - 7.95	SPT (S)	N=11 (1,2/3,2,3,3)
					7.60 - 7.70	B	
					7.60 - 8.10	D	
					8.60 - 8.70	D	
					9.00 - 9.45	SPT (S)	N=15 (1,2/2,3,5,5)
					9.10 - 9.60	B	
					9.60 - 9.70	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
6.45	203
22.95	153

Casing Depths

Depth Base (m)	Diameter (mm)
6.00	203
22.50	153

General Remarks

Groundwater encountered 1.23mCD.
Starting elevation 3.63mCD.
Depths are reported in mbgl.
Ground Level MCD is 3.66m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
1.23	1.43		20	1.30

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Borehole Log

Scale 1:50 Sheet 2 of 3

CP-201

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	06/10/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	08/10/2025
Method:	Cable Percussive			**Backfilled:**	08/10/2025

GL (AOD):	1.56m	
Easting:	281297	
Northing:	858116	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense Brown to beige SAND. Sand is fine to medium grained.	10.50 - 10.95	SPT (S)	N=20 (1,2/4,5,5,6)
					10.60 - 10.70	B	
					10.60 - 11.10	D	
					11.60 - 11.70	D	
					12.00 - 12.45	SPT (S)	N=24 (2,3/4,5,7,8)
					12.00 - 12.45	D	
		12.10	-8.44		12.10 - 12.60	B	
				Medium dense Dark grey, silty, slightly gravelly SAND with low cobble content. Sand is fine to medium grained. Gravel is coarse grained, well-rounded to rounded of mudstone, sandstone and limestone. Cobbles are well-rounded to sub-angular of limestone and granite. Frequent coarse sand grained to fine gravel grained shell fragments.	12.60 - 12.70	D	
					13.50 - 13.95	SPT (S)	N=30 (3,5/6,7,8,9)
					13.60 - 13.70	B	
		13.60	-9.94		13.60 - 14.10	D	
				Medium dense Dark grey, silty SAND. Sand is fine to medium grained. Occasional coarse sand grained shell fragments.	14.60 - 14.70	D	
					15.00 - 15.45	SPT (S)	N=29 (3,4/4,7,8,10)
					15.10 - 15.60	B	
		15.10	-11.44		15.60 - 15.70	D	
				Medium dense to dense Dark grey, silty SAND. Sand is fine to medium grained. Rare coarse sand grained shell fragments.	16.50 - 16.95	SPT (S)	N=29 (3,4/5,7,7,10)
					16.60 - 16.70	B	
					16.60 - 17.10	D	
					17.60 - 17.70	D	
					18.00 - 18.45	SPT (S)	N=23 (2,4/5,5,6,7)
					18.10 - 18.60	B	
					18.60 - 18.70	D	
		19.35	-15.69		19.50 - 19.95	SPT (S)	N=36 (3,5/7,8,10,11)
					19.60 - 19.70	B	
					19.60 - 20.10	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
6.45	203
22.95	153

Casing Depths

Depth Base (m)	Diameter (mm)
6.00	203
22.50	153

General Remarks

Groundwater encountered 1.23mCD.
Starting elevation 3.63mCD.
Depths are reported in mbgl.
Ground Level MCD is 3.66m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
1.23	1.43		20	1.30

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Borehole Log

Scale 1:50 Sheet 3 of 3

CP-201

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	06/10/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	08/10/2025
Method:	Cable Percussive			**Backfilled:**	08/10/2025

GL (AOD):	1.56m	
Easting:	281297	
Northing:	858116	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
					20.60 - 20.70	D	
					21.00 - 21.45	SPT (S)	N=37 (5,6/8,8,10,11)
					21.10 - 21.60	B	
					21.60 - 21.70	D	
					22.50 - 22.95	SPT (S)	N=39 (4,6/9,8,9,13)
				End of Borehole at 22.950m			

Hole Diameter

Depth Base (m)	Diameter (mm)
6.45	203
22.95	153

Casing Depths

Depth Base (m)	Diameter (mm)
6.00	203
22.50	153

General Remarks

Groundwater encountered 1.23mCD.
Starting elevation 3.63mCD.
Depths are reported in mbgl.
Ground Level MCD is 3.66m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
1.23	1.43		20	1.30

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Borehole Log

Scale 1:50 Sheet 1 of 3

CP-202

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	08/10/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	13/10/2025
Method:	Cable Percussive			**Backfilled:**	13/10/2025

GL (AOD):	1.65m
Easting:	281420
Northing:	858031
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense Brown to beige, gravelly SAND. Sand is fine to medium grained. Gravel is fine to coarse grained, well-rounded to rounded of mudstone, sandstone and limestone.	0.05 - 0.15	D	
					0.25 - 0.75	B	
					1.05 - 1.15	D	
					1.50 - 1.95	SPT (S)	N=8 (1,1/2,2,2,2)
					1.75 - 2.25	B	
					2.05 - 2.15	D	
G					3.00 - 3.45	SPT (S)	N=9 (2,1/2,2,2,3)
					3.05 - 3.15	D	
					3.25 - 3.75	B	
					4.05 - 4.15	D	
					4.50 - 4.95	SPT (S)	N=11 (1,2/3,3,2,3)
					4.75 - 5.25	B	
		4.95	-1.20	Medium dense Brown to beige SAND. Sand is fine to medium grained.	5.05 - 5.15	D	
					6.00 - 6.45	SPT (S)	N=20 (2,3/4,5,5,6)
					6.05 - 6.15	D	
					6.25 - 6.75	B	
					7.05 - 7.15	D	
					7.50 - 7.95	SPT (S)	N=14 (2,3/3,4,3,4)
					7.75 - 8.25	B	
					8.05 - 8.15	D	
					9.00 - 9.45	SPT (S)	N=19 (2,3/4,4,5,6)
					9.05 - 9.15	D	
					9.25 - 9.75	B	

Hole Diameter

Depth Base (m)	Diameter (mm)
6.45	203
21.45	153

Casing Depths

Depth Base (m)	Diameter (mm)
6.00	203
21.00	153

General Remarks

Groundwater encountered at 1.45mCD.
Starting elevation 3.75mCD.
Depths are reported in mbgl.
Ground Level MCD is 3.75m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
1.45	1.55		20	1.65

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Borehole Log

Scale 1:50 Sheet 2 of 3

CP-202

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	08/10/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	13/10/2025
Method:	Cable Percussive			**Backfilled:**	13/10/2025

GL (AOD):	1.65m	
Easting:	281420	
Northing:	858031	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
		10.10	-6.35	Medium dense Brown to beige SAND. Sand is fine to medium grained.	10.05 - 10.15	D	
				Medium dense Dark grey, silty, slightly gravelly SAND with low cobble content. Sand is fine to medium grained. Gravel is coarse grained, well-rounded to rounded of mudstone, sandstone and limestone. Cobbles are well-rounded to sub-angular of limestone and granite. Frequent coarse sand grained to fine gravel grained shell fragments.	10.50 - 10.95	SPT (S)	N=19 (2,3/4,4,5,6)
					10.75 - 11.25	B	
					11.05 - 11.15	D	
					12.00 - 12.45	SPT (S)	N=22 (2,4/4,5,6,7)
					12.05 - 12.15	D	
					12.25 - 12.75	B	
					13.05 - 13.15	D	
					13.50 - 13.95	SPT (S)	N=24 (3,3/4,5,7,8)
					13.50 - 13.95	D	
					13.75 - 14.25	B	
					14.05 - 14.15	D	
					15.00 - 15.45	SPT (S)	N=32 (4,6/7,7,8,10)
					15.00 - 15.45	D	
					15.05 - 15.15	D	
					15.25 - 15.75	B	
		16.00	-12.25	Medium dense Dark grey slightly clayey slightly gravelly SAND with low cobble content. Sand is fine to medium grained. Gravel is coarse grained, well-rounded to rounded of mudstone, sandstone and limestone. Cobbles are well-rounded to sub-angular of limestone and granite.	16.05 - 16.15	D	
					16.50 - 16.95	SPT (S)	N=32 (3,5/7,7,8,10)
					16.50 - 16.95	D	
					16.75 - 17.25	B	
					17.05 - 17.15	D	
		17.70	-13.95		18.00 - 18.45	SPT (S)	N=45 (4,6/8,10,12,15)
					18.05 - 18.15	D	
					18.25 - 18.75	B	
					19.05 - 19.15	D	
					19.50 - 19.95	SPT (S)	N=31 (1,1/4,7,10,10)
		19.65	-15.90	Medium dense to dense dark grey slightly clayey sandy SILT. Sand fine to medium.	19.50 - 19.95	D	
					19.75 - 20.25	B	
					19.95 - 20.05	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
6.45	203
21.45	153

Casing Depths

Depth Base (m)	Diameter (mm)
6.00	203
21.00	153

General Remarks

Groundwater encountered at 1.45mCD.
Starting elevation 3.75mCD.
Depths are reported in mbgl.
Ground Level MCD is 3.75m.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
1.45	1.55		20	1.65

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Borehole Log

Scale 1:50 Sheet 3 of 3

CP-202

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	L&A Drilling Ltd
				Plant used:	Dando 2000
				Started:	08/10/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	13/10/2025
Method:	Cable Percussive			**Backfilled:**	13/10/2025

GL (AOD):	1.65m	
Easting:	281420	
Northing:	858031	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
					21.00 - 21.45 21.00 - 21.45	SPT (S) D	N=7 (1,1/2,2,1,2)
				End of Borehole at 21.450m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
6.45 21.45	203 153	6.00 21.00	203 153	Groundwater encountered at 1.45mCD. Starting elevation 3.75mCD. Depths are reported in mbgl. Ground Level MCD is 3.75m.				1.45	1.55		20	1.65

APPENDIX C

Laboratory Report Front Sheet

Site name	Job number
Marine GI - Ardersier Port	S250403

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Client details:

Reference:	S250403
Name:	Solmek
Address:	12 Yarm Road, Stockton-on-tees, TS18 3NA
Telephone:	01642 607083
Email:	rwoods@solmek.com
FAO:	Richard Woods

Samples received: 08/09/2025

Date commenced: 15/09/2025

Date reported: 19/02/2026

Observations and interpretations are outside of the UKAS Accreditiation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Samples will be held at the laboratory for a period of 4 weeks after the report date. After the above reporting date the samples will be disposed of. Should further testing be required then the office should be informed before the above date.

Signature:	Approved Signitories:
[Redacted]	☐ D.Anderson (Managing Director) ☑ J. Brischuk (Laboratory Manager) ☐

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BH-101	-0.70		D	28	105									
BH-101	-2.20		D	28	105	28	100	0					NP	Tested in natural condition
BH-101	-2.30		D	24	105									
BH-101	-3.40		D	47	50	47	100	0	57-f	41	16	0.375	MH	Tested in natural condition
BH-102	-1.00		B	23	105									
BH-102	3.50		B	19	105									
BH-102	-4.50		D	19	105									
BH-102	-12.50		D	23	105									
BH-106	-7.91		D	23	105									
BH-106	-12.91		D	15	105									
BH-106	-13.91		D	21	105									
BH-106	-16.91		D	19	105									
BH-107	-0.10		B	23	105									
BH-107	-5.40		D	23	105									
BH-107	-10.40		D	18	105									
BH-107	-17.40		D	24	105									
BH-107	-19.40		D	20	105									
BH-107	-24.40		D	22	105									
BH-108	-4.80		D	23	105								NP	Tested after washing to remove >425µm
BH-108	-11.10		D	22	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicated

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	18/11/2025 15:31
Date report generated	
Report Number	

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BH-108	-14.10		D	25	105									
BH-108	-19.10		D	23	105									
BH-108	-29.10		D	24	105									
BH-109	-10.10		D	20	105									
BH-109	-13.20		B	27	105									
BH-109	-16.20		B	27	105									
BH-109	-25.10		D	27	105									
BH-110	-11.60		D	27	105									
BH-110	-13.60		D	22	105									
BH-110	-18.60		D	17	105									
BH-111	-10.10		D	15	105									
BH-111	-11.70		B	17	105									
BH-111	-16.10		D	22	105									
BH-111	-19.20		B	21	105									
BH-111	-24.10		D	26	105	26	100	0					NP	Tested in natural condition
BH-112	-4.15		D	24	105	24	100	0					NP	Tested in natural condition
BH-112	-10.20		D	17	105	17	100	0					NP	Tested in natural condition
BH-112	-12.50		D	21	105	21	100	0					NP	Tested in natural condition
BH-112	-17.50		D	18	105	18	100	0					NP	Tested in natural condition
BH-113	-7.58		D	32	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicate

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	08/10/2025 14:11
Date report generated	
Report Number	

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BH-113	-16.58		D	24	105									
BH-113	-24.08		D	23	105									
BH-113	-28.70		D	29	105	29	100	0	32-f	19	13	0.769	CL	Tested after >425µm removed by hand
BH-114	-2.60		D	24	105	24	100	0					NP	Tested in natural condition
BH-114	-4.60		D	23	105	23	100	0					NP	Tested in natural condition
BH-114	-4.70		B	28	105									
BH-114	-8.60		D	21	105	21	100	0					NP	Tested in natural condition
BH-114	-12.60		D	21	105									
BH-115	-12.50		D	25	105									
BH-116	-5.20		D	22	105									
BH-116	-6.20		D	23	105									
BH-116	-7.20		D	24	105									
BH-116	-12.20		D	22	105									
BH-117	-13.10		D	25	105									
BH-118	-11.60		B	20	105									
BH-119	-6.20		D	23	105									
BH-119	-9.30		B	25	105									
BH-119	-12.20		D	20	105									
BH-119	-19.20		D	22	105									
BH-119	-21.20		D	27	105	27	99	1	28-f	20	8	0.875	CL	Tested after >425µm removed by hand

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicate

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	03/11/2025 11:03
Date report generated	
Report Number	

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BH-201	-4.70		D	91	105	91	100	0	86-f	42	44	1.114	MV	Tested in natural condition
BH-201	-6.50		B	21	105									
BH-201	-11.00		B	29	105									
BH-201	-12.50		B	21	105									
BH-202	-4.10		D	29	105	29	100	0					NP	Tested in natural condition
BH-202	-10.20		B	21	105									
BH-202	-13.10		D	21	105	21	99	1	28-f	20	8	0.125	CL	Tested after >425µm removed by hand
BH-203	-6.60		D	22	105									
BH-203	-10.40		D	13	105									
BH-203	-15.60		D	17	105									
BH-205	-0.08		D	22	105									
BH-205	-1.08		D	17	105									
BH-205	-6.08		D	21	105									
BH-205	-11.08		D	25	105									
BH-205	-17.00		D	17	105	22	76	24	19-f	12	7	1.429	CL	Tested after >425µm removed by hand
BH-205	-17.12		U	11	105									
BH-206	-6.10		D	19	105									
BH-206	-11.10		D	21	105									
BH-207	-6.30		D	17	105									
BH-207	-12.30		D	23	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicate

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	03/11/2025 10:43
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Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BH-207	-20.10		D	23	105									
BH-207	-24.30		D	20	105									
BH-207	-26.10		D	27	105	27	100	0	28-f	22	6	0.833	ML	Tested in natural condition
BH-207	-27.30		D	28	105									
BH-207	-28.24		U	27	105									
BH-207	-28.30		D	16	105									
BH-207	-29.10		D	28	105	28	100	0	31-f	19	12	0.750	CL	Tested in natural condition
CP-101	-0.90		D	24	105									
CP-101	2.10		D	27	105									
CP-101	3.10		D	21	105									
CP-101	-5.90		D	25	105									
CP-101	-9.90		D	29	105									
CP-101	-17.90		D	27	105									
CP-102	1.40		B	23	105									
CP-102	-1.60		B	22	105									
CP-102	2.90		D	25	105									
CP-102	-9.10		D	27	105									
CP-102	-13.60		D	25	105									
CP-103	-0.30		D	22	105									
CP-103	-2.70		D	24	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicate

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

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Approval date	06/10/2025 08:57
Date report generated	
Report Number	

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	Depth Top m	Depth Base m	Type	w %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
CP-103	-6.30		D	25	105									
CP-103	-9.30		D	27	105									
CP-103	-16.80		D	23	105	23	100	0					NP	Tested in natural condition
CP-103	-18.30		D	27	105	27	100	0					NP	Tested in natural condition
CP-104	-0.50		D	21	105									
CP-104	2.50		D	26	105									
CP-104	-8.00		D	22	105									
CP-104	-15.30		D	24	105									
CP-201	-1.00		D	5.8	105									
CP-201	-2.00		D	23	105									
CP-201	-8.40		D	24	105									
CP-201	-13.00		D	27	105									
CP-202	1.70		D	18	105									
CP-202	-4.30		D	23	105									
CP-202	-7.30		D	27	105									
CP-202	-13.30		D	20	105									
CP-202	-15.75		D	19	105	19	100	0					NP	Tested in natural condition

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicate

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	19/11/2025 11:24
Date report generated	
Report Number	

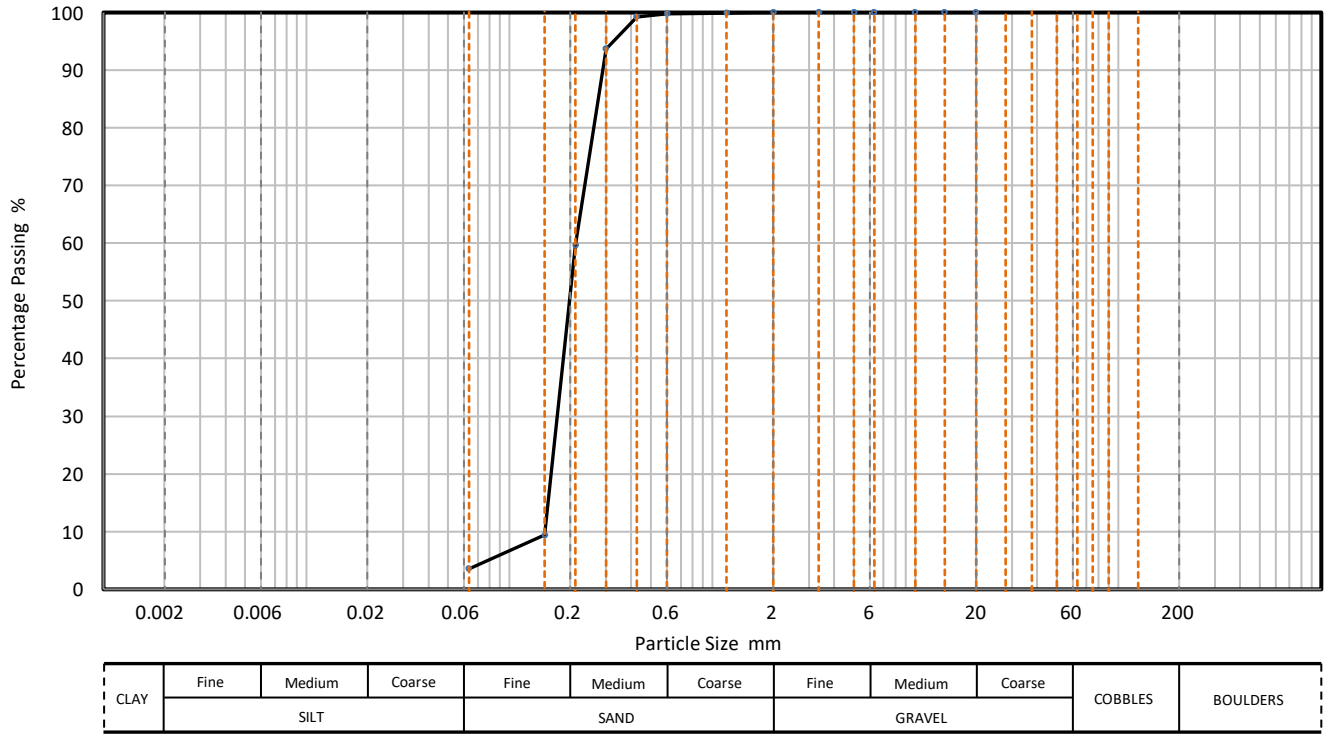
PARTICLE SIZE DISTRIBUTION

G2M Testing (Stockton)
12-16 Yarm Road
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-101	Lab sample ID	G2MT2025110532
Depth (Top) m	-0.80	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	94		
0.212	60		
0.15	9		
0.063	4		

Dry Mass of sample, g	563

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	96.4
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.213
D30	mm	0.173
D10	mm	0.151
Uniformity Coefficient		1.4
Curvature Coefficient		0.93

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:54

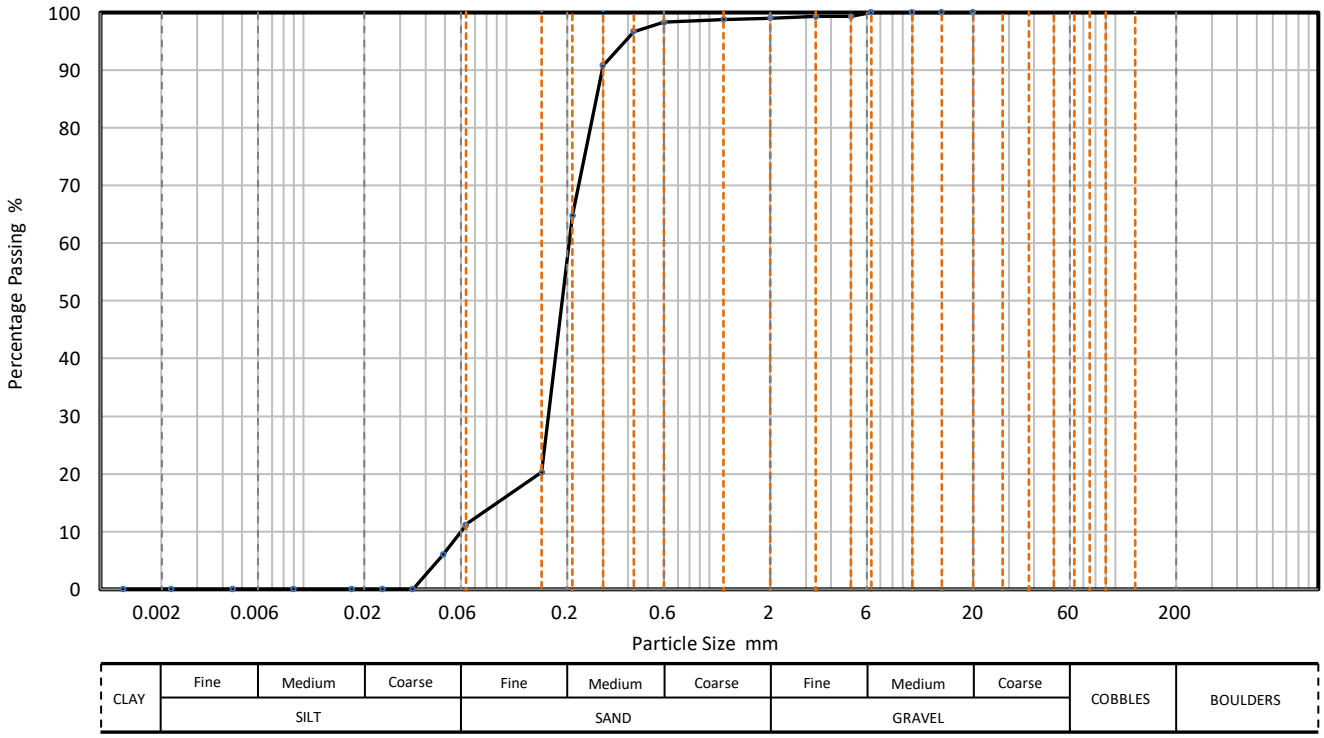
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G2M Testing (Stockton)
12-16 Yarm Road
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info@g2mtesting.co.uk

UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-101	Lab sample ID	G2MT2025110530
Depth (Top) m	-2.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	11
		0.0489	6
		0.0347	0
		0.0245	0
		0.0173	0
		0.0090	0
		0.0045	0
20	100	0.0022	0
14	100	0.0013	0
10	100		
6.3	100		
5	99		
3.35	99		
2	99		
1.18	99		
0.6	98	Particle density (assumed)	
0.425	97	2.65	Mg/m3
0.3	91		
0.212	65		
0.15	20		
0.063	11		

Dry Mass of sample, g: 708

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.0
Sand	87.8
Silt	11.2
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.204
D30	mm	0.162
D10	mm	0.0597
Uniformity Coefficient		3.4
Curvature Coefficient		2.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/11/2025 08:47

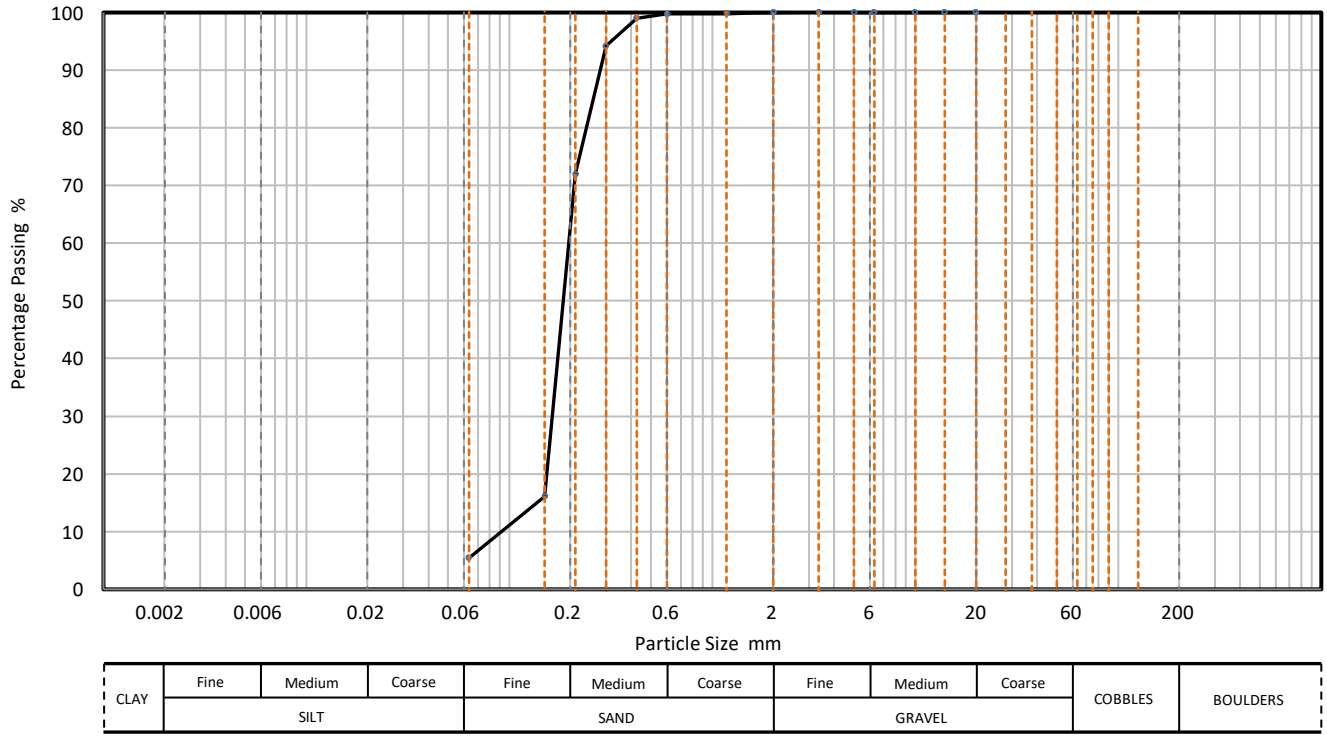
PARTICLE SIZE DISTRIBUTION

G2M Testing (Stockton)
12-16 Yarm Road
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-101	Lab sample ID	G2MT2025110534
Depth (Top) m	-2.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	94		
0.212	72		
0.15	16		
0.063	6		

Dry Mass of sample, g: 855

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	94.5
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.197
D30	mm	0.163
D10	mm	0.0909
Uniformity Coefficient		2.2
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:47

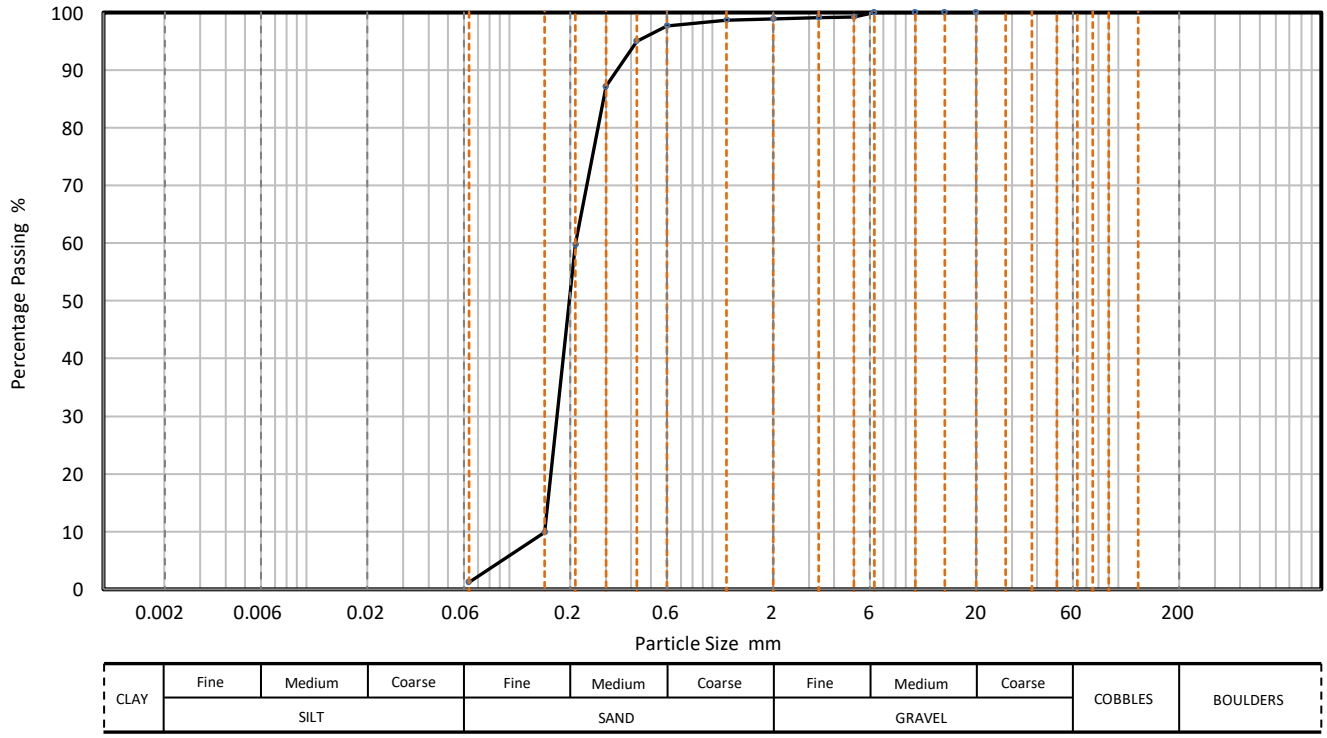
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12-16 Yarm Road
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-101	Lab sample ID	G2MT2025110528
Depth (Top) m	3.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	99		
2	99		
1.18	99		
0.6	98		
0.425	95		
0.3	87		
0.212	60		
0.15	10		
0.063	1		

Dry Mass of sample, g	948

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.1
Sand	97.5
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.213
D30	mm	0.172
D10	mm	0.15
Uniformity Coefficient		1.4
Curvature Coefficient		0.93

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:09

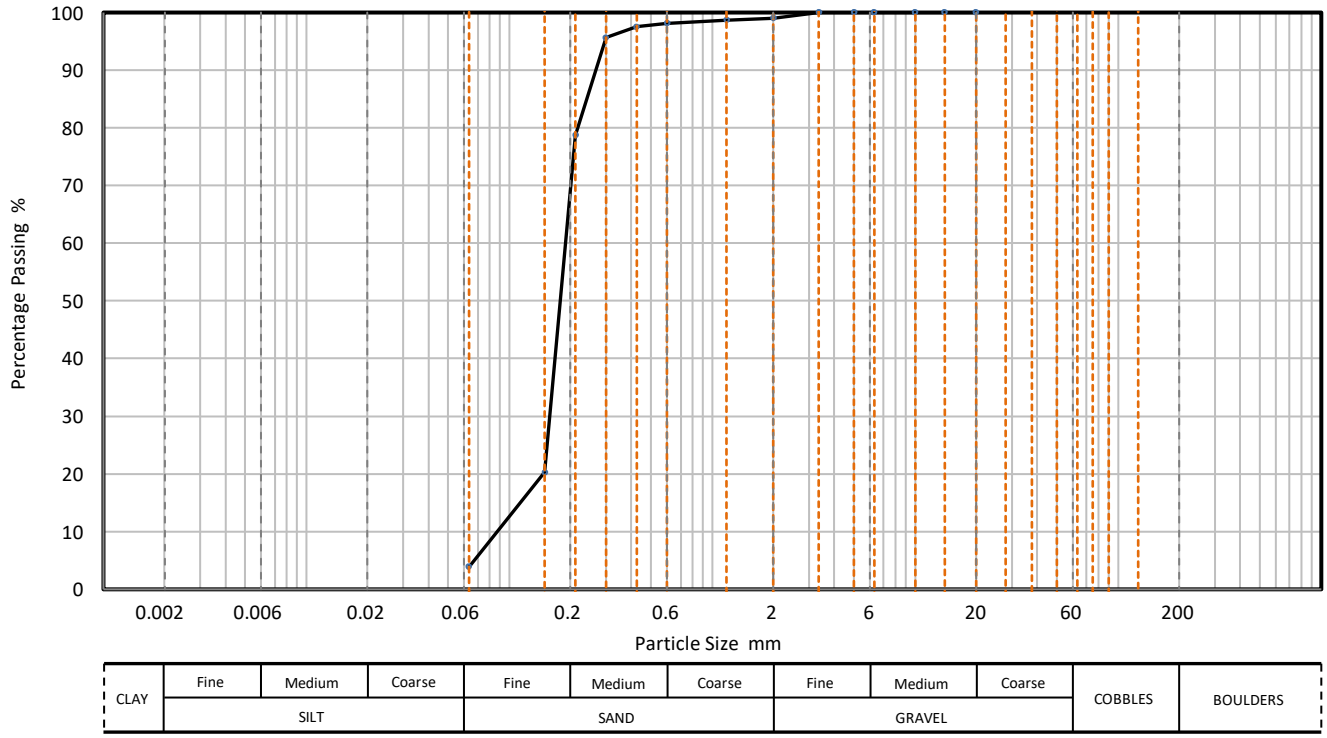
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-101	Lab sample ID	G2MT2025110536
Depth (Top) m	5.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Sligtly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	98		
0.425	98		
0.3	96		
0.212	79		
0.15	20		
0.063	4		

Dry Mass of sample, g	966

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.0
Sand	95.0
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.19
D30	mm	0.159
D10	mm	0.0869
Uniformity Coefficient		2.2
Curvature Coefficient		1.5

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:56

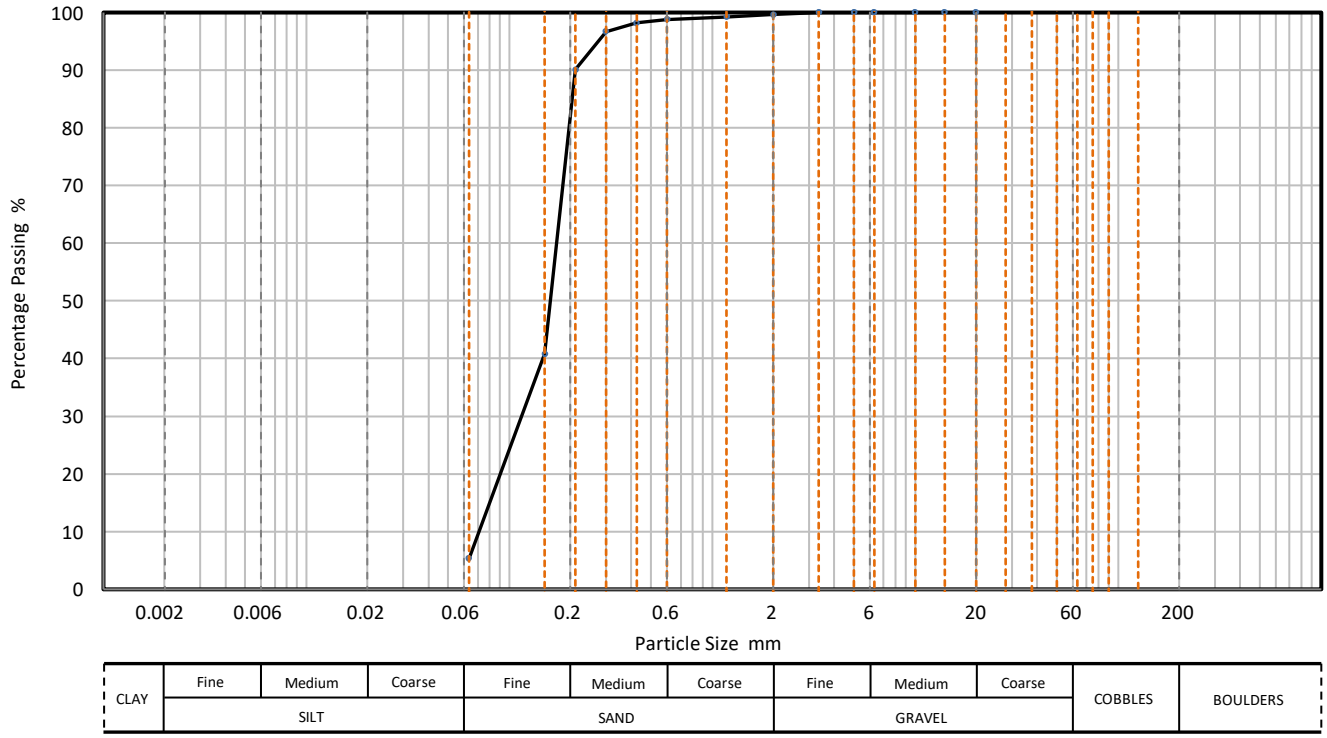
PARTICLE SIZE DISTRIBUTION

G2M Testing (Stockton)
12-16 Yarm Road
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info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-101	Lab sample ID	G2MT2025110537
Depth (Top) m	-9.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	99		
0.425	98		
0.3	97		
0.212	90		
0.15	41		
0.063	5		

Dry Mass of sample, g	862

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.4
Sand	94.1
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.172
D30	mm	0.115
D10	mm	0.0705
Uniformity Coefficient		2.4
Curvature Coefficient		1.1

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:25

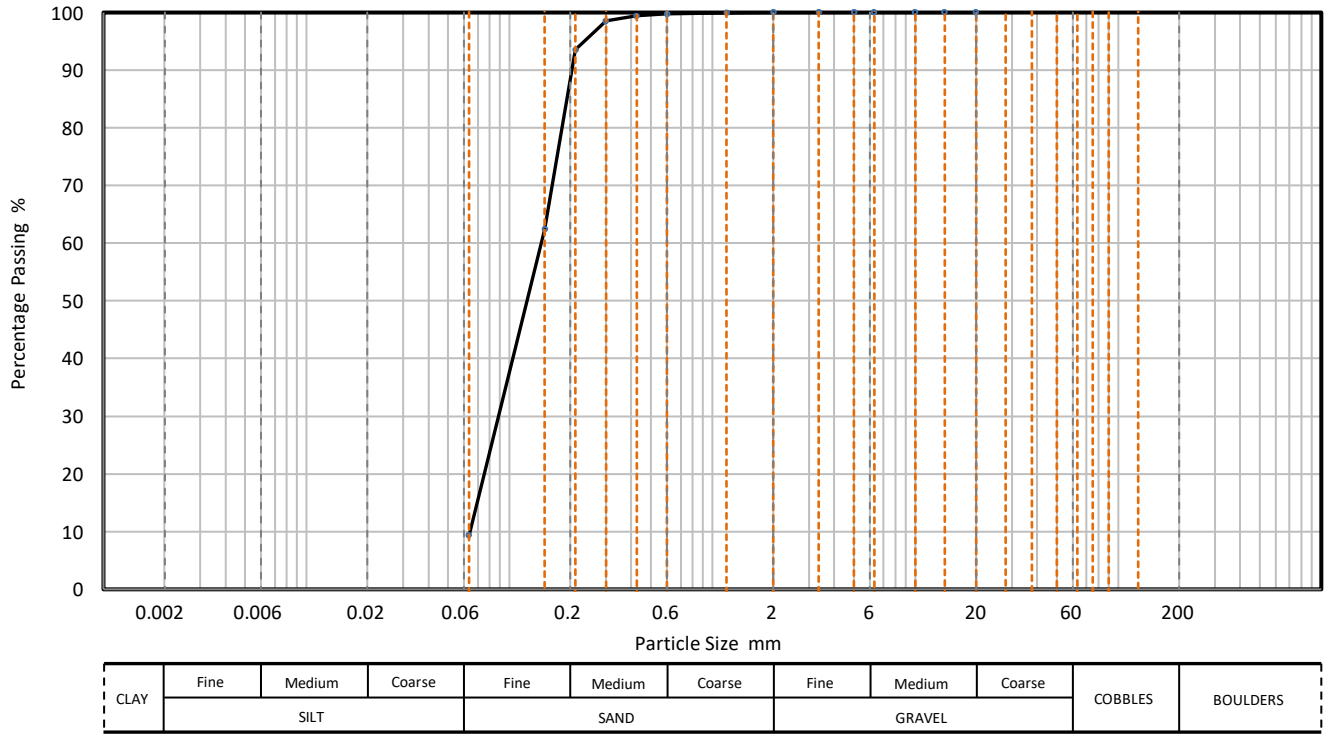
PARTICLE SIZE DISTRIBUTION

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
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info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-101	Lab sample ID	G2MT2025110538
Depth (Top)	m	-17.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	94		
0.15	62		
0.063	9		

Dry Mass of sample, g	809

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	90.5
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.144
D30	mm	0.0882
D10	mm	0.0636
Uniformity Coefficient		2.3
Curvature Coefficient		0.85

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:27

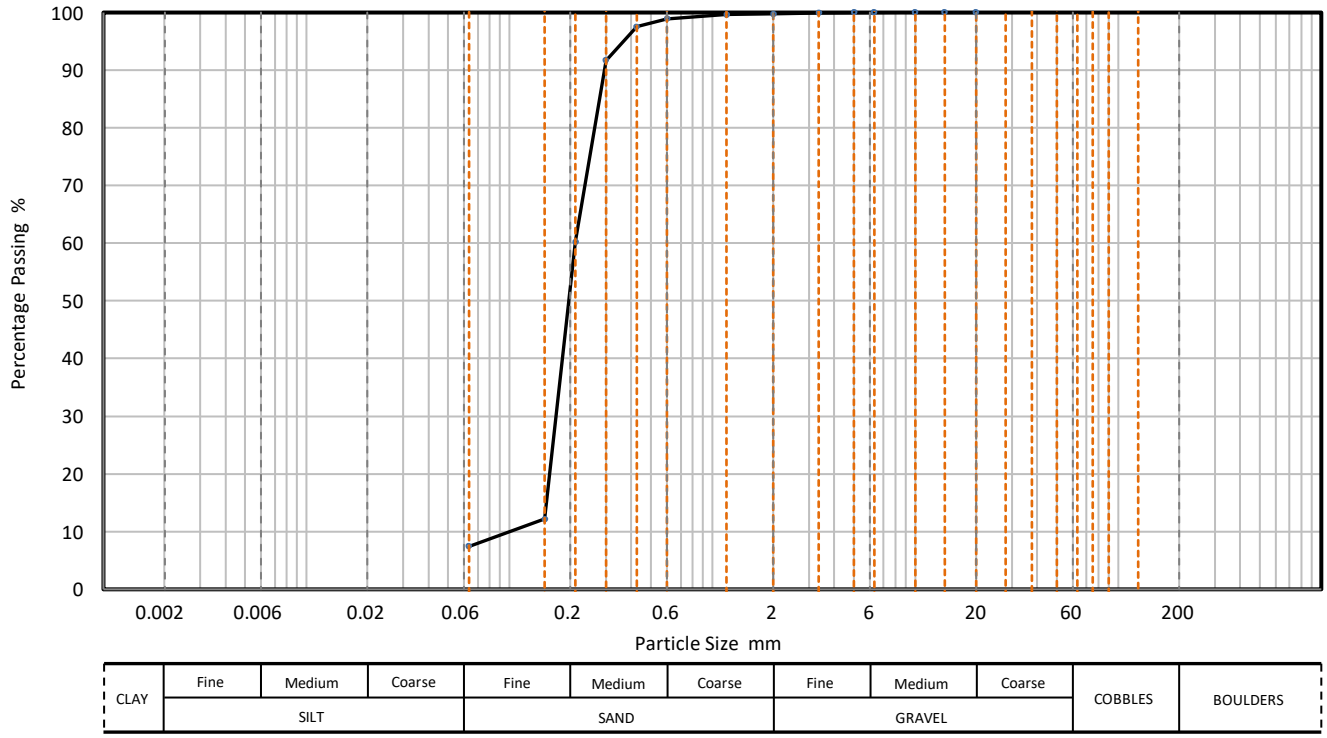
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-102	Lab sample ID	G2MT2025110560
Depth (Top) m	-1.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, Slightly Silty, SAND
Sample type	D		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	92		
0.212	60		
0.15	12		
0.063	8		

Dry Mass of sample, g	322

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	92.3
Fines <0.063mm	7.0

Grading Analysis		
D100	mm	
D60	mm	0.212
D30	mm	0.171
D10	mm	0.1
Uniformity Coefficient		2.1
Curvature Coefficient		1.4

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	24/11/2025 13:29

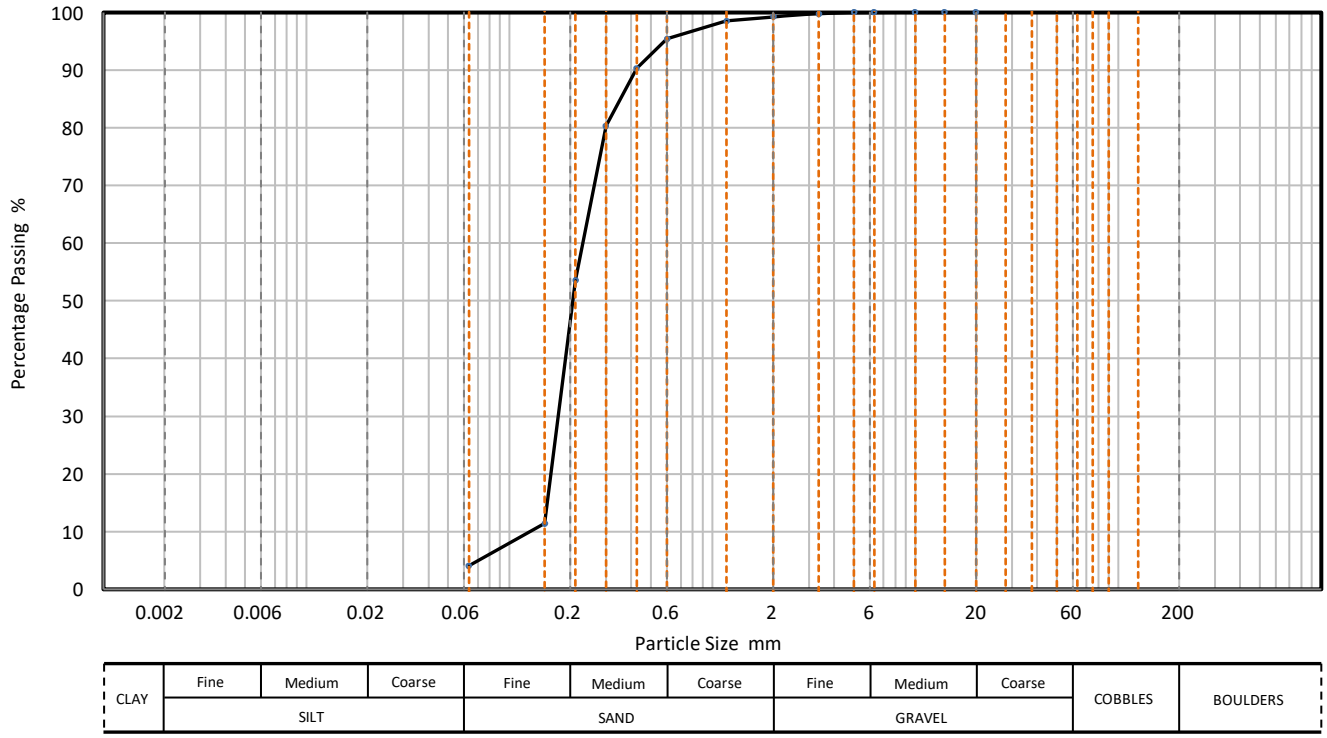
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-102	Lab sample ID	G2MT2025110558
Depth (Top) m	3.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly,slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	95		
0.425	90		
0.3	80		
0.212	54		
0.15	11		
0.063	4		

Dry Mass of sample, g	916

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	95.2
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.231
D30	mm	0.175
D10	mm	0.127
Uniformity Coefficient		1.8
Curvature Coefficient		1

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:59

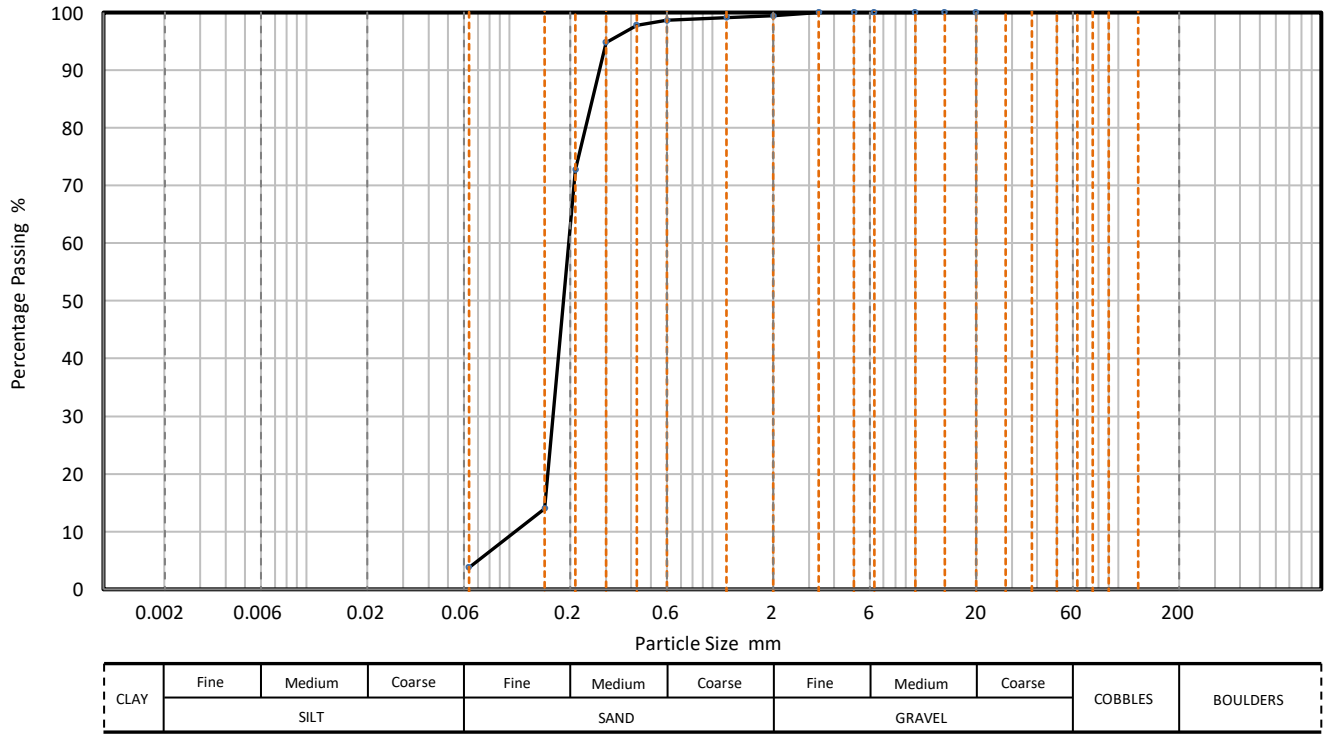
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-102	Lab sample ID	G2MT2025110561
Depth (Top) m	-4.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	99		
0.425	98		
0.3	95		
0.212	73		
0.15	14		
0.063	4		

Dry Mass of sample, g	841

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.6
Sand	95.6
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.197
D30	mm	0.165
D10	mm	0.106
Uniformity Coefficient		1.8
Curvature Coefficient		1.3

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	24/11/2025 14:30

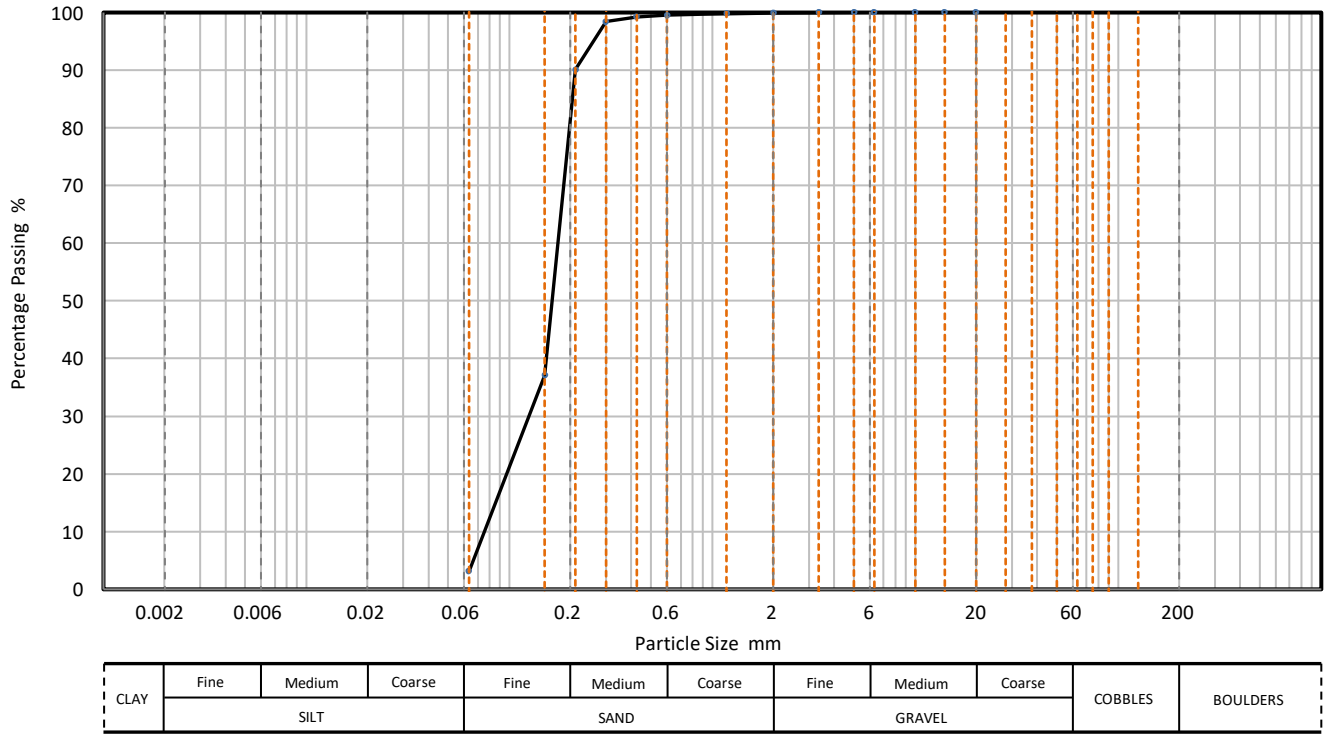
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-102	Lab sample ID	G2MT2025110564
Depth (Top) m	-12.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	90		
0.15	37		
0.063	3		

Dry Mass of sample, g	800

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	96.7
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.174
D30	mm	0.125
D10	mm	0.0749
Uniformity Coefficient		2.3
Curvature Coefficient		1.2

Remarks

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Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:00

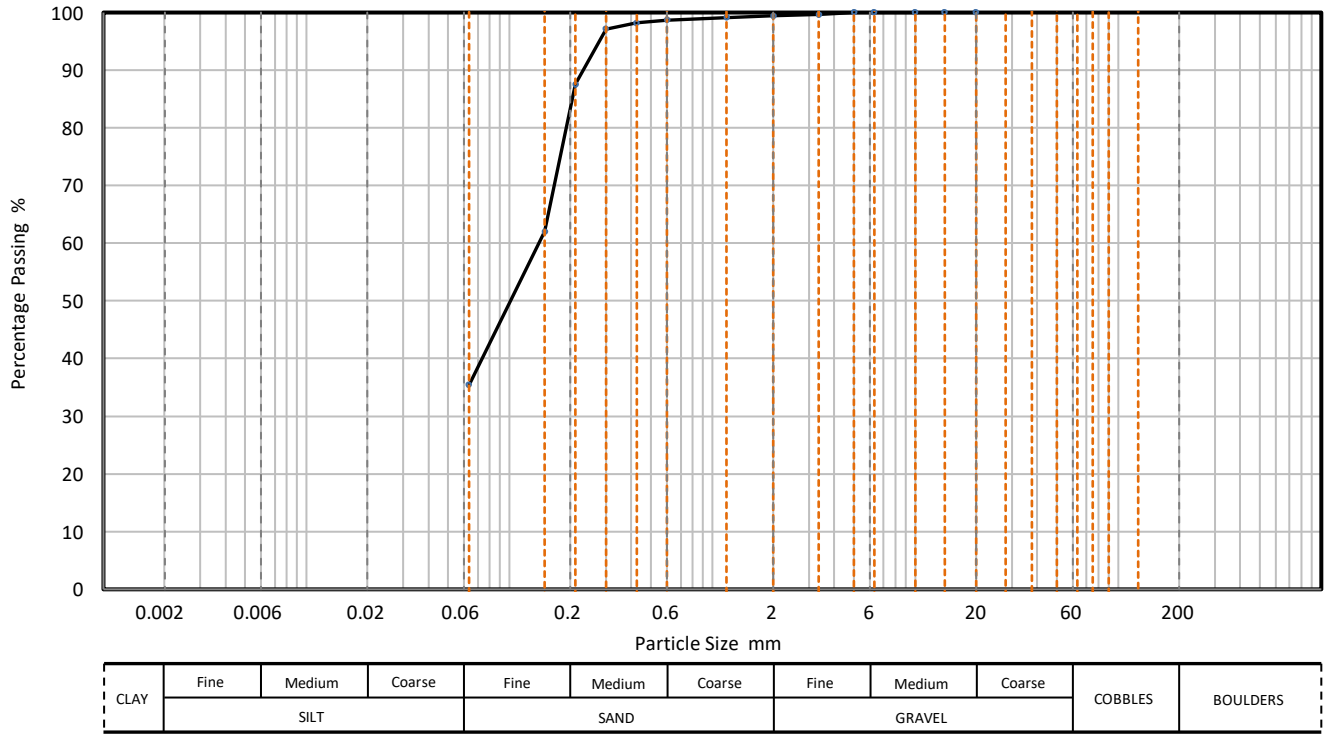
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-106	Lab sample ID	G2MT2025101467
Depth (Top) m	-7.91	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Very Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	99		
0.425	98		
0.3	97		
0.212	88		
0.15	62		
0.063	35		

Dry Mass of sample, g	1194

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.6
Sand	64.0
Fines <0.063mm	35.0

Grading Analysis		
D100	mm	
D60	mm	0.141
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	13/01/2026 12:53

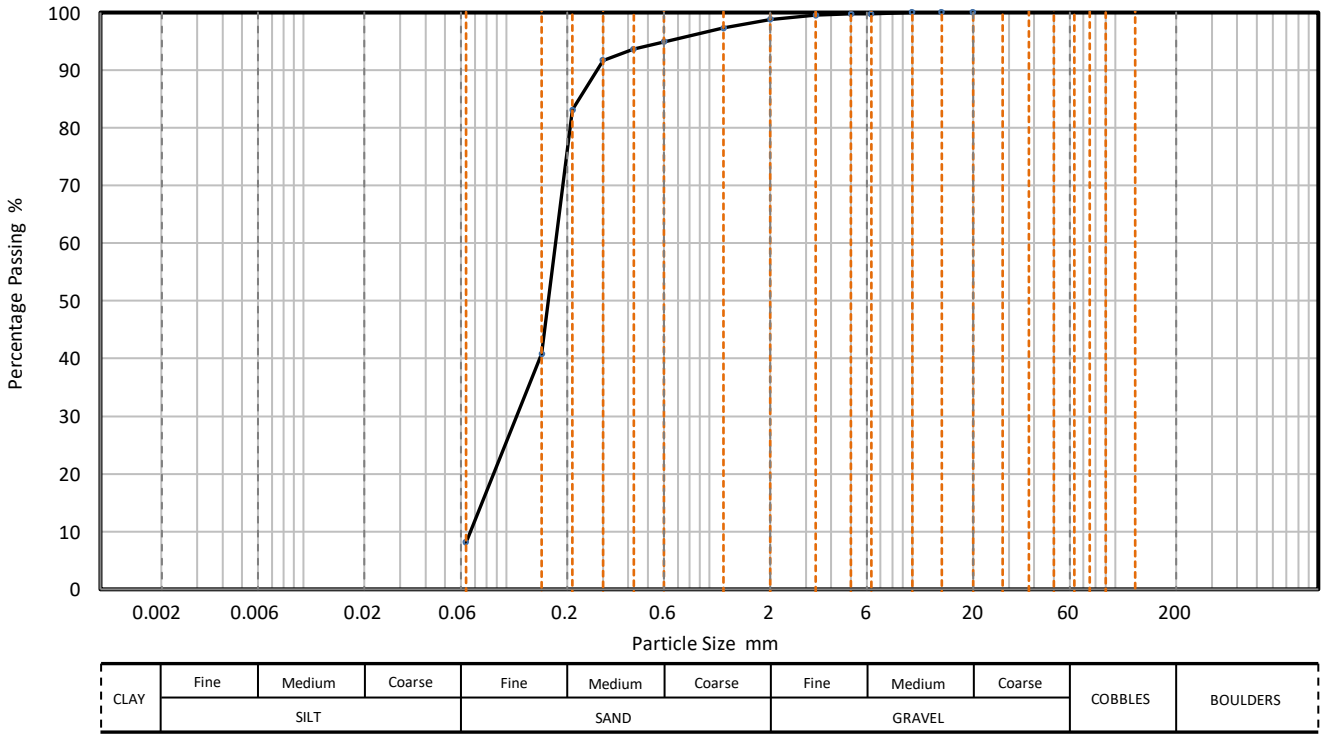
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-106	Lab sample ID	G2MT2025101468
Depth (Top)	m	-12.41	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	97		
0.6	95		
0.425	94		
0.3	92		
0.212	83		
0.15	41		
0.063	8		

Dry Mass of sample, g	756

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.2
Sand	90.6
Fines <0.063mm	8.0

Grading Analysis		
D100	mm	
D60	mm	0.176
D30	mm	0.113
D10	mm	0.0662
Uniformity Coefficient		2.7
Curvature Coefficient		1.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	03/11/2025 11:31

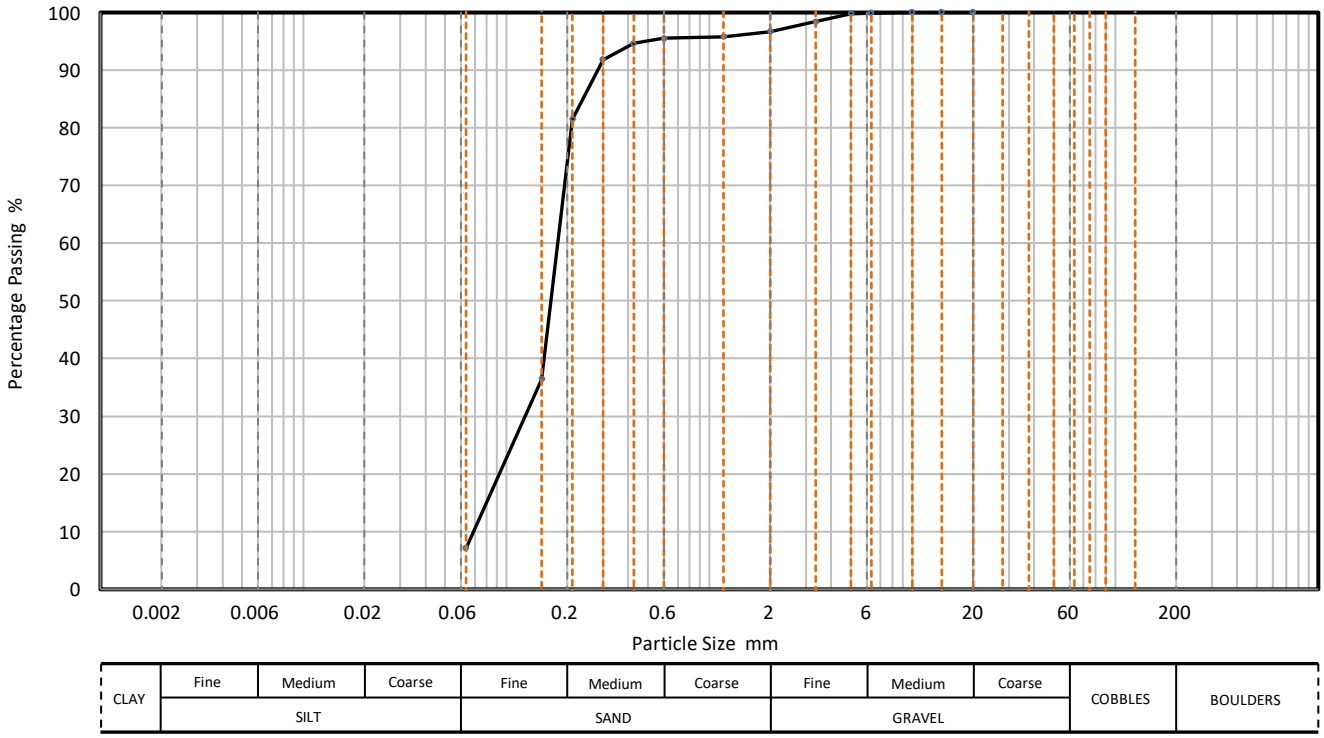
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-106	Lab sample ID	G2MT2025101469
Depth (Top)	m	-13.91	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	98		
2	97		
1.18	96		
0.6	96		
0.425	95		
0.3	92		
0.212	82		
0.15	36		
0.063	7		

Dry Mass of sample, g	931

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	3.3
Sand	89.5
Fines <0.063mm	7.0

Grading Analysis		
D100	mm	
D60	mm	0.18
D30	mm	0.124
D10	mm	0.0685
Uniformity Coefficient		2.6
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 11:39

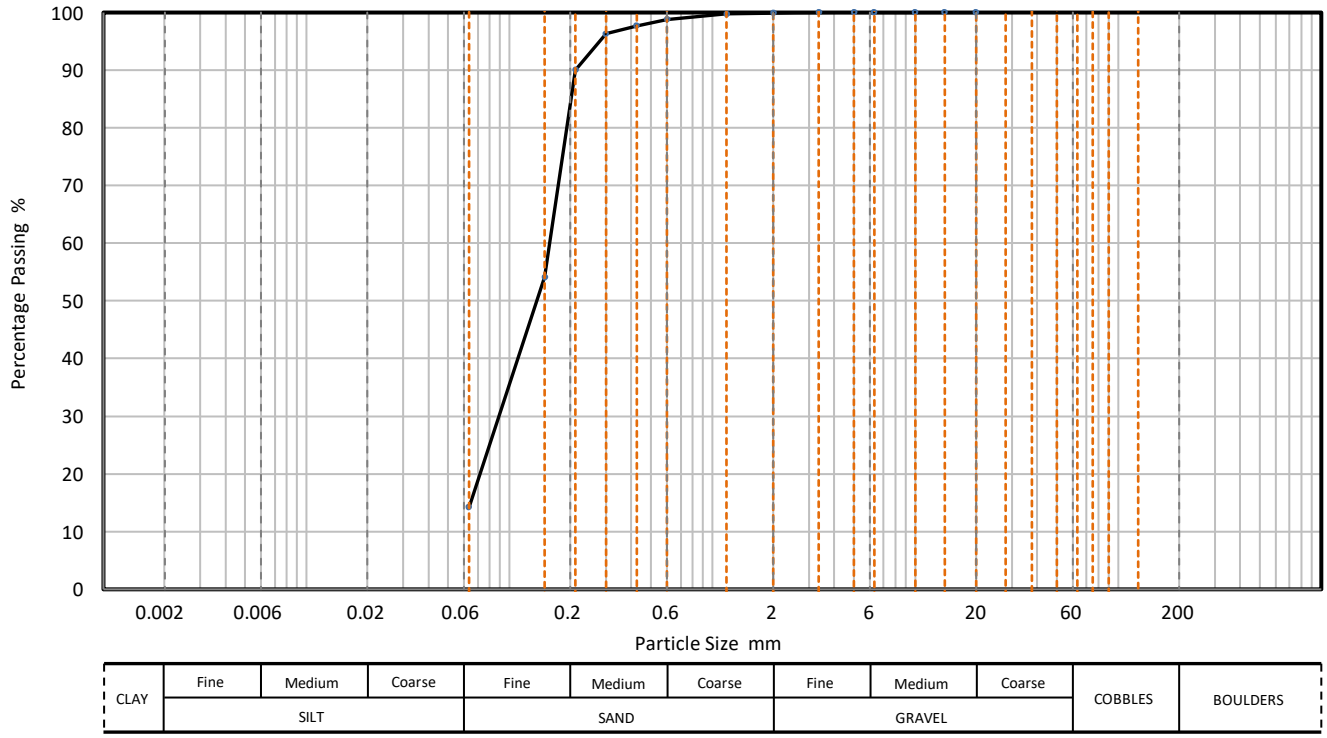
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-106	Lab sample ID	G2MT2025101470
Depth (Top) m	-16.91	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	96		
0.212	90		
0.15	54		
0.063	14		

Dry Mass of sample, g	795

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	85.6
Fines <0.063mm	14.0

Grading Analysis		
D100	mm	
D60	mm	0.159
D30	mm	0.0887
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	13/01/2026 12:53

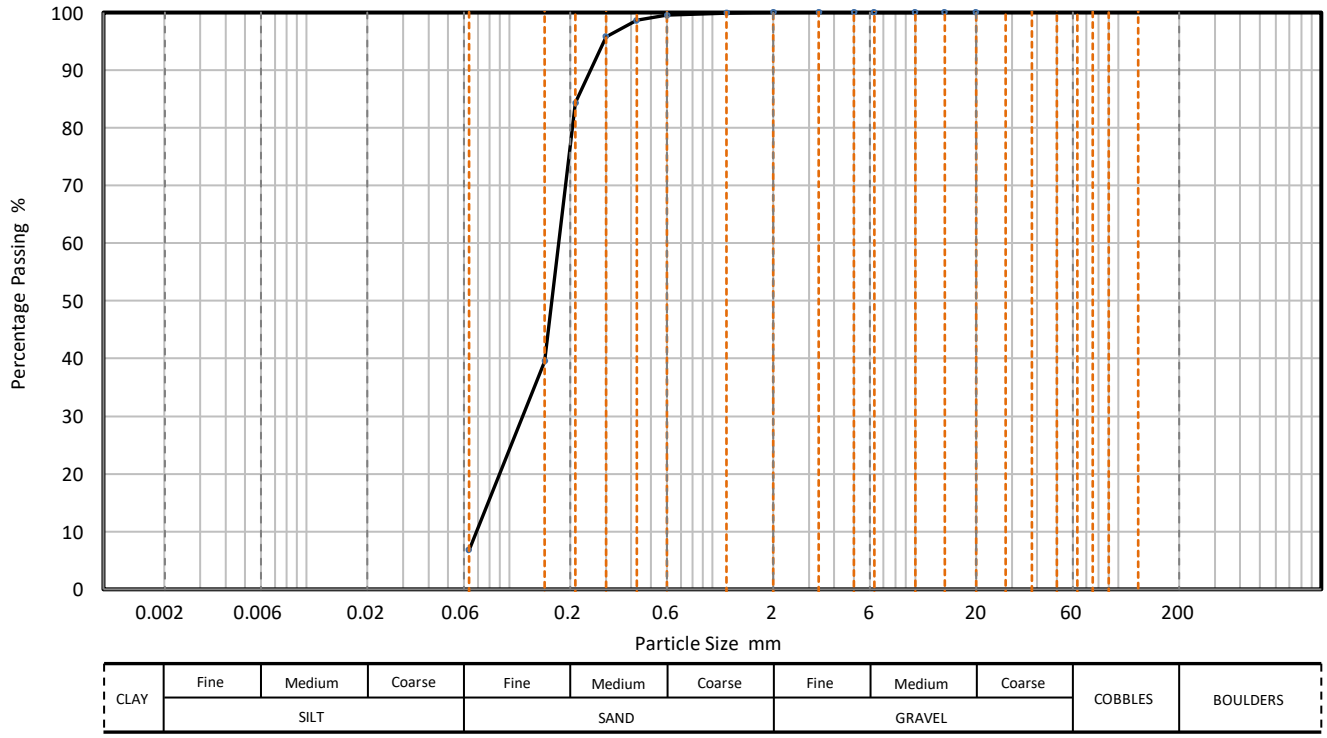
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-106	Lab sample ID	G2MT2025101471
Depth (Top) m	-21.41	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	96		
0.212	84		
0.15	40		
0.063	7		

Dry Mass of sample, g: 872

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	93.2
Fines <0.063mm	7.0

Grading Analysis		
D100	mm	
D60	mm	0.176
D30	mm	0.117
D10	mm	0.0685
Uniformity Coefficient		2.6
Curvature Coefficient		1.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 10:15

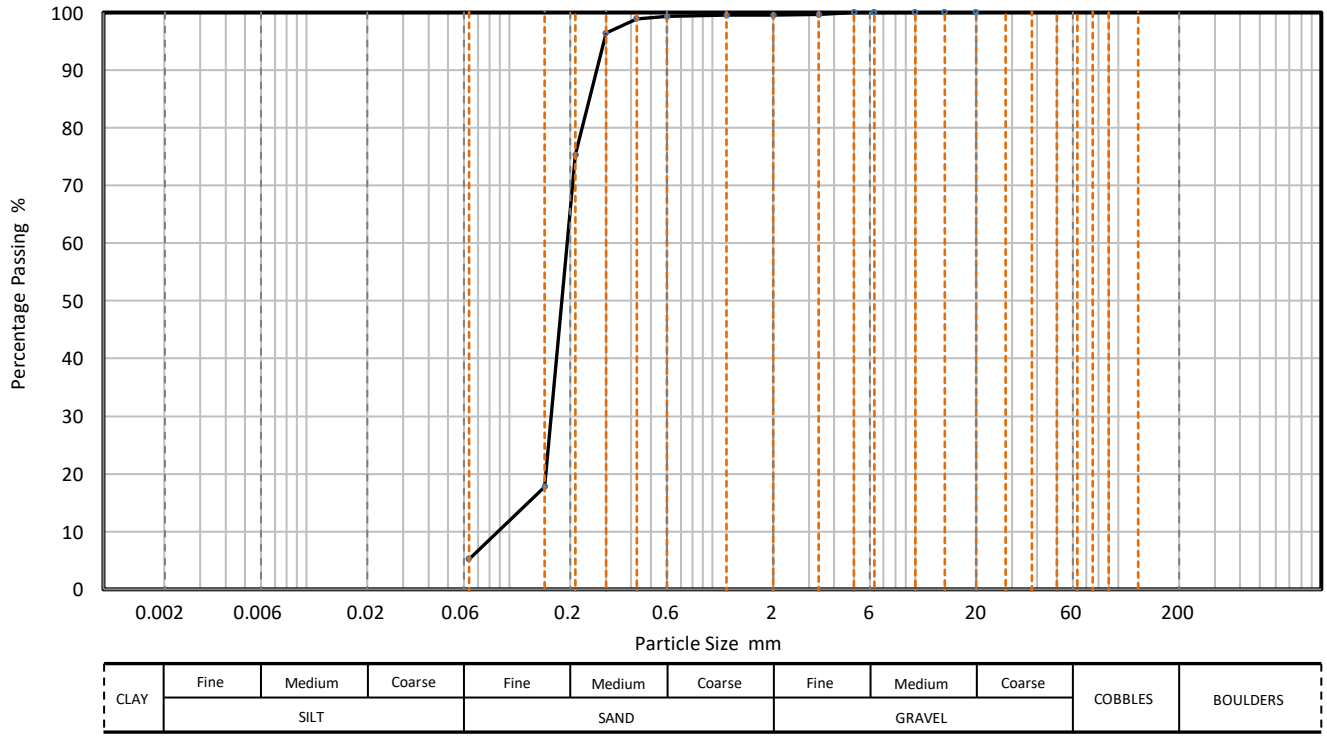
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-107	Lab sample ID	G2MT2025101457
Depth (Top) m	-0.10	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	96		
0.212	75		
0.15	18		
0.063	5		

Dry Mass of sample, g	997

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.5
Sand	94.3
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.193
D30	mm	0.161
D10	mm	0.0875
Uniformity Coefficient		2.2
Curvature Coefficient		1.5

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/10/2025 10:24

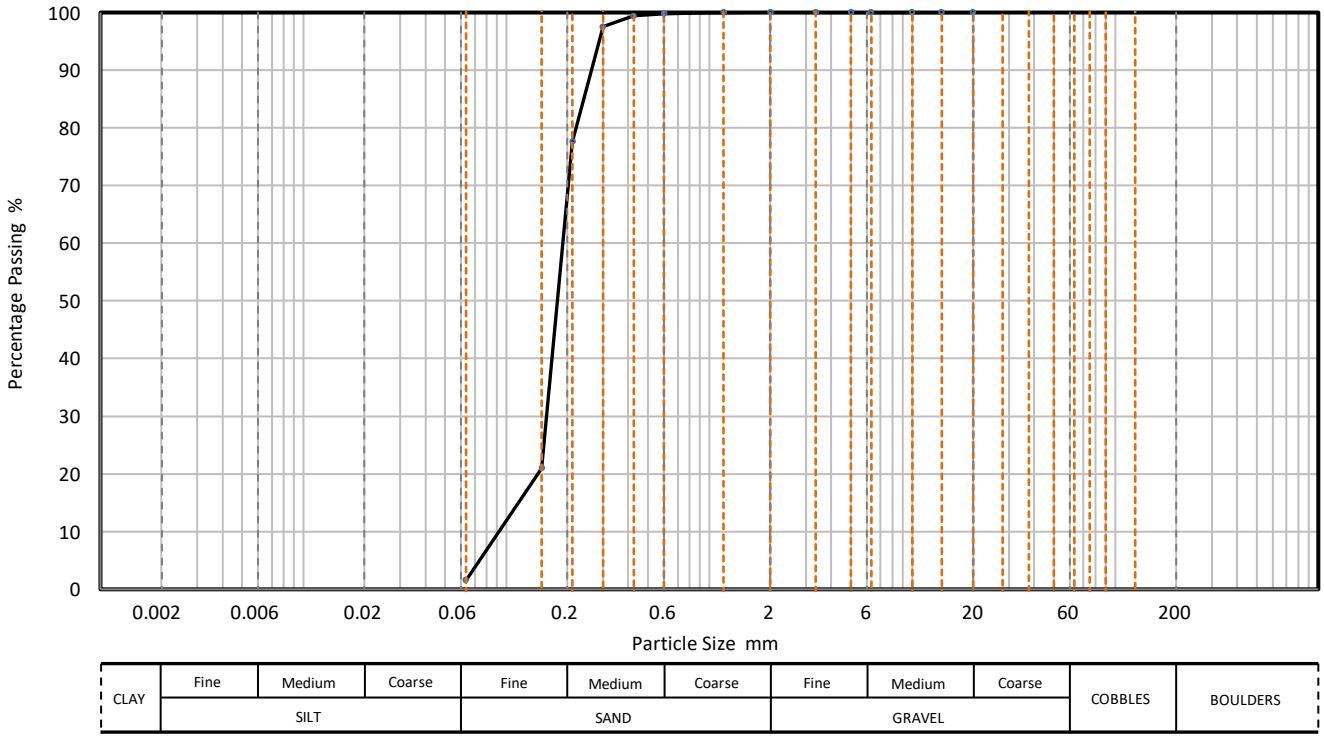
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-107	Lab sample ID	G2MT2025101458
Depth (Top) m	-5.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	78		
0.15	21		
0.063	2		

Dry Mass of sample, g	1152

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	98.4
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.19
D30	mm	0.158
D10	mm	0.0916
Uniformity Coefficient		2.1
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/10/2025 10:26

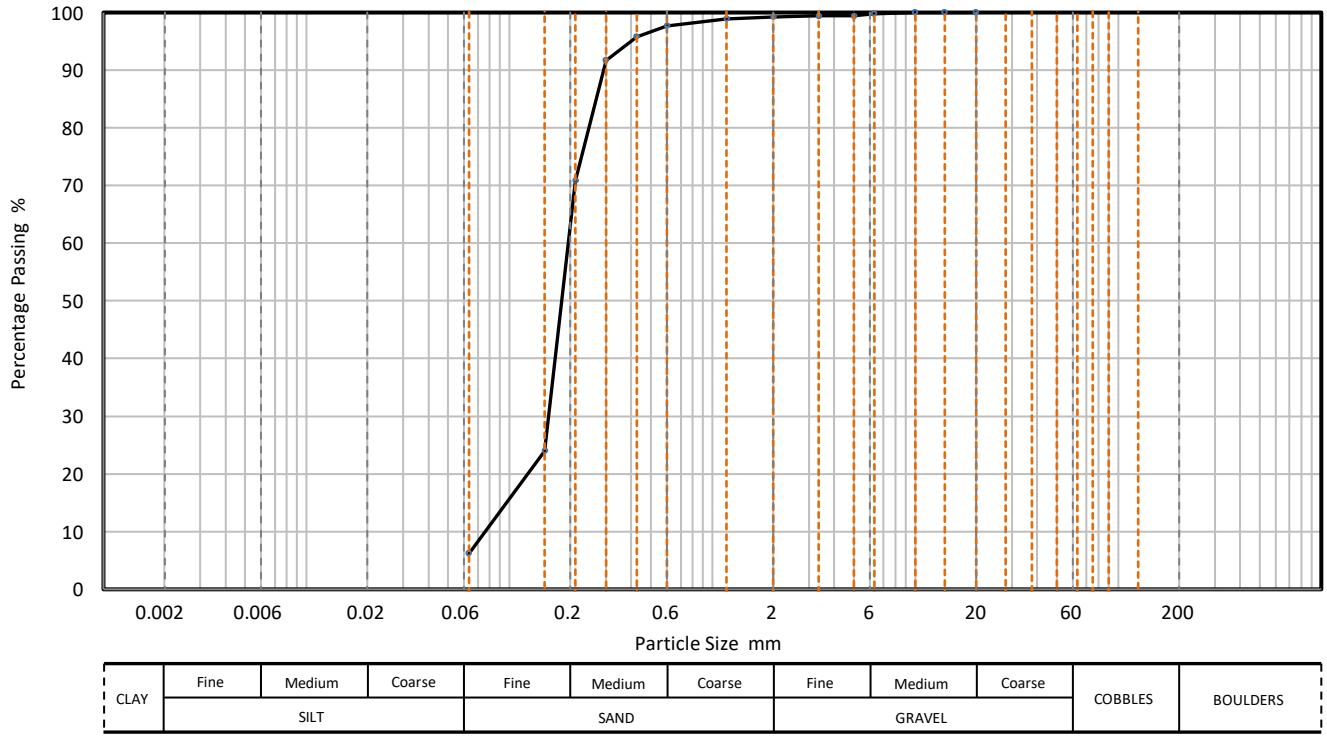
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-107	Lab sample ID	G2MT2025101459
Depth (Top) m	-10.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	99		
2	99		
1.18	99		
0.6	98		
0.425	96		
0.3	92		
0.212	71		
0.15	24		
0.063	6		

Dry Mass of sample, g	811

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	92.9
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.196
D30	mm	0.157
D10	mm	0.0754
Uniformity Coefficient		2.6
Curvature Coefficient		1.7

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 11:26

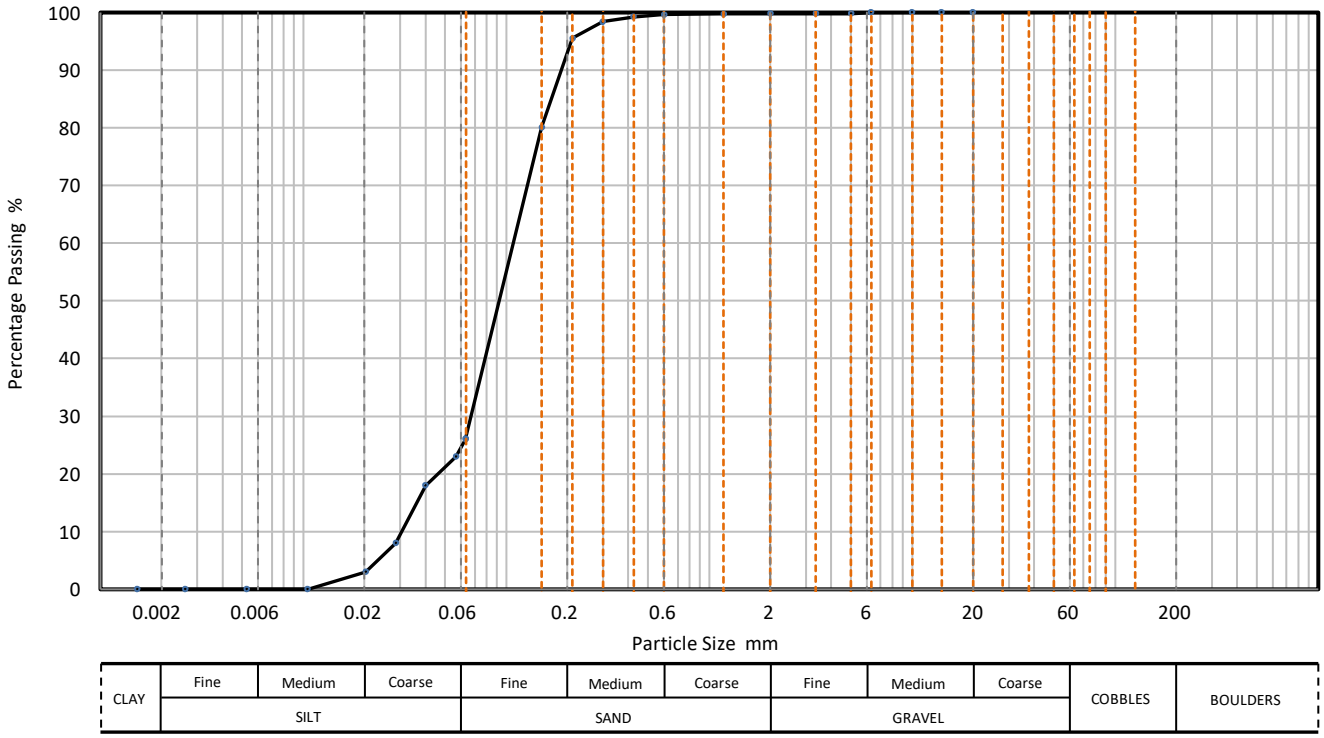
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-107	Lab sample ID	G2MT2025101460
Depth (Top) m	-17.50	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, very Silty,SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	26
		0.0565	23
		0.0401	18
		0.0286	8
		0.0203	3
		0.0105	0
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	98		
0.212	96		
0.15	80		
0.063	26		

Dry Mass of sample, g	661

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	73.7
Silt	26.1
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.109
D30	mm	0.0671
D10	mm	0.0307
Uniformity Coefficient		3.5
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:44

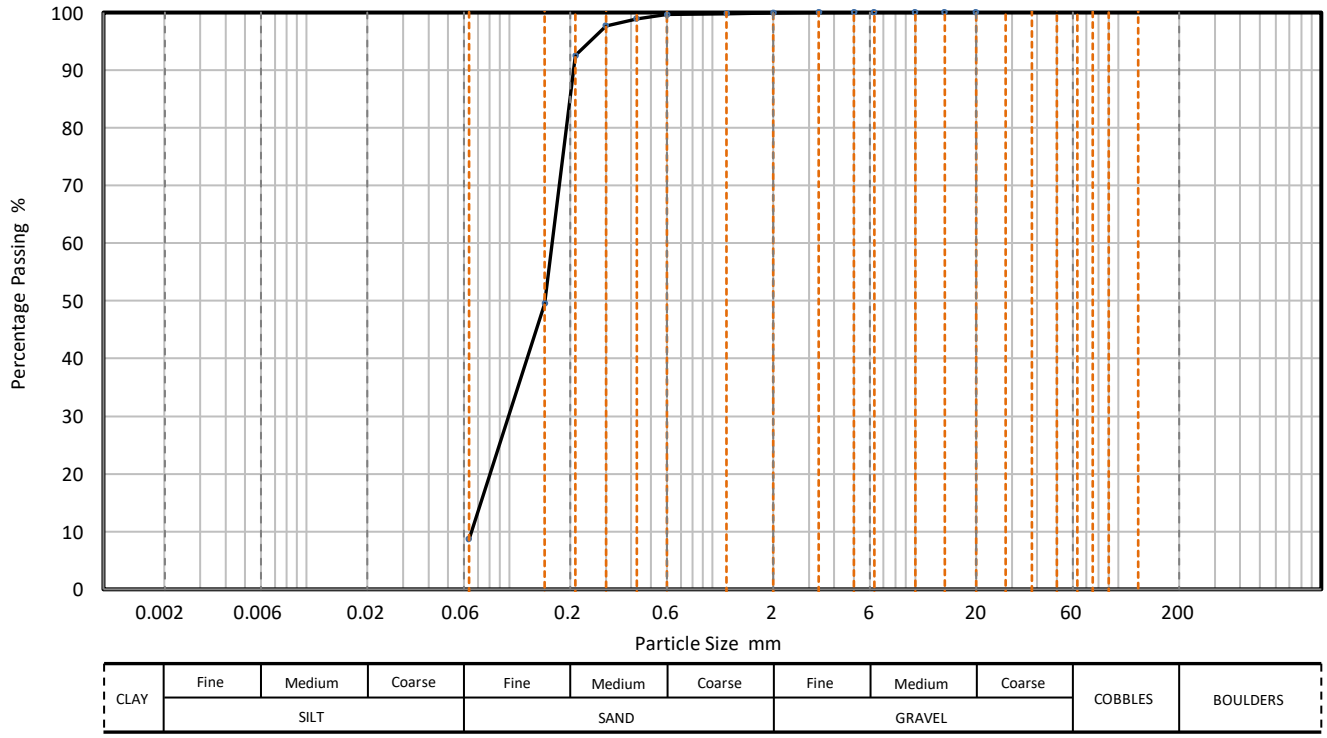
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-107	Lab sample ID	G2MT2025101461
Depth (Top) m	-19.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	93		
0.15	50		
0.063	9		

Dry Mass of sample, g: 816

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	91.1
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.163
D30	mm	0.0991
D10	mm	0.0647
Uniformity Coefficient		2.5
Curvature Coefficient		0.93

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 11:49

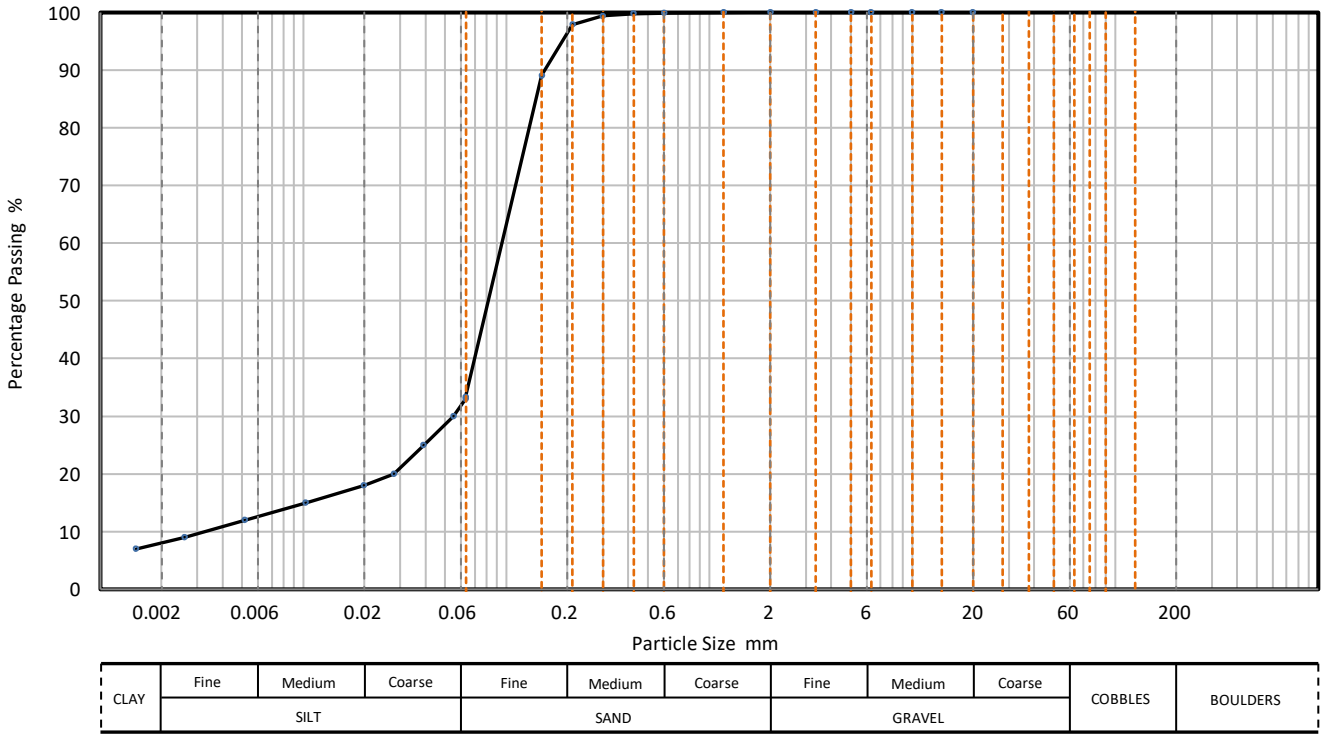
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-107	Lab sample ID	G2MT2025101462
Depth (Top) m	-24.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, very Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	33
		0.0550	30
		0.0392	25
		0.0280	20
		0.0198	18
		0.0103	15
		0.0052	12
20	100	0.0026	9
14	100	0.0015	7
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	98		
0.15	89		
0.063	33		

Dry Mass of sample, g: 772

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	66.7
Silt	25.3
Clay	8.0

Grading Analysis		
D100	mm	
D60	mm	0.0954
D30	mm	0.0536
D10	mm	0.00355
Uniformity Coefficient		27
Curvature Coefficient		8.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:51

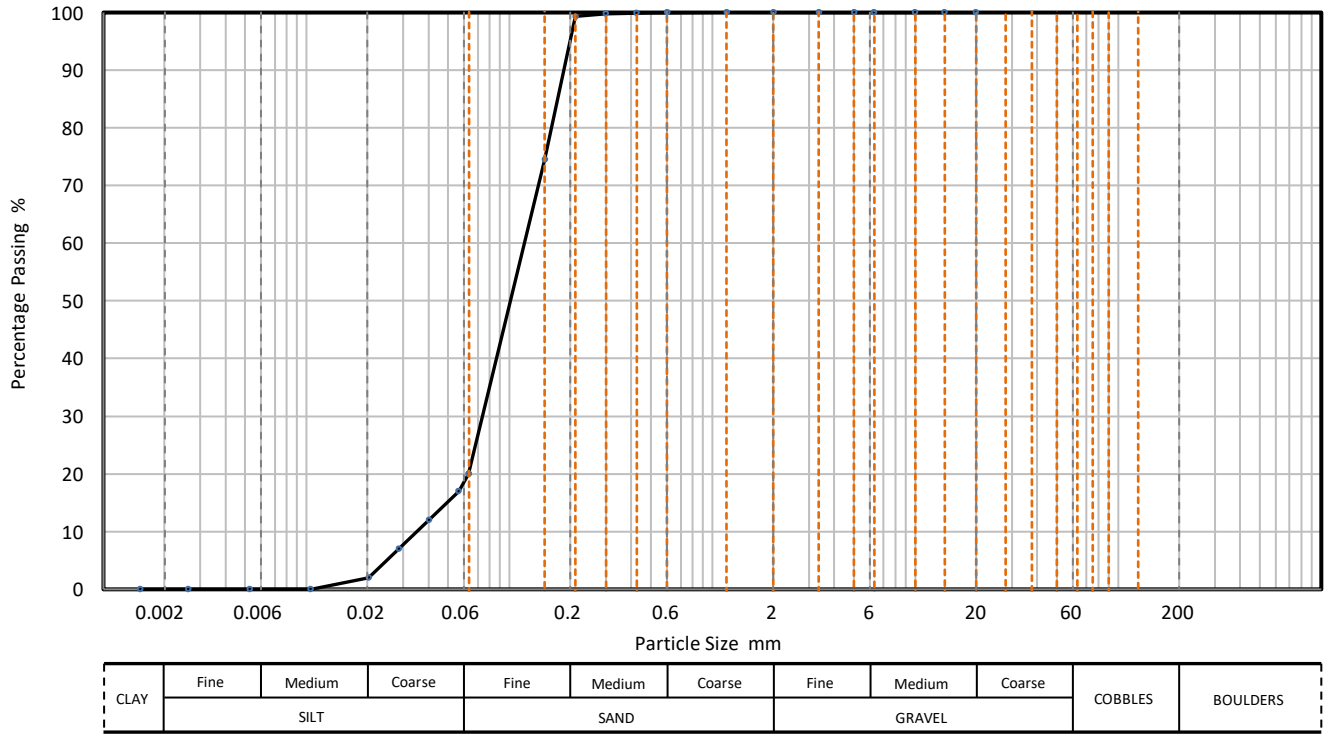
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-108	Lab sample ID	G2MT2025091998
Depth (Top) m	-11.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	20
		0.0565	17
		0.0402	12
		0.0286	7
		0.0203	2
		0.0105	0
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	99		
0.15	75		
0.063	20		

Dry Mass of sample, g	702

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	80.0
Silt	20.0
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.119
D30	mm	0.0739
D10	mm	0.0351
Uniformity Coefficient		3.4
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 13:19

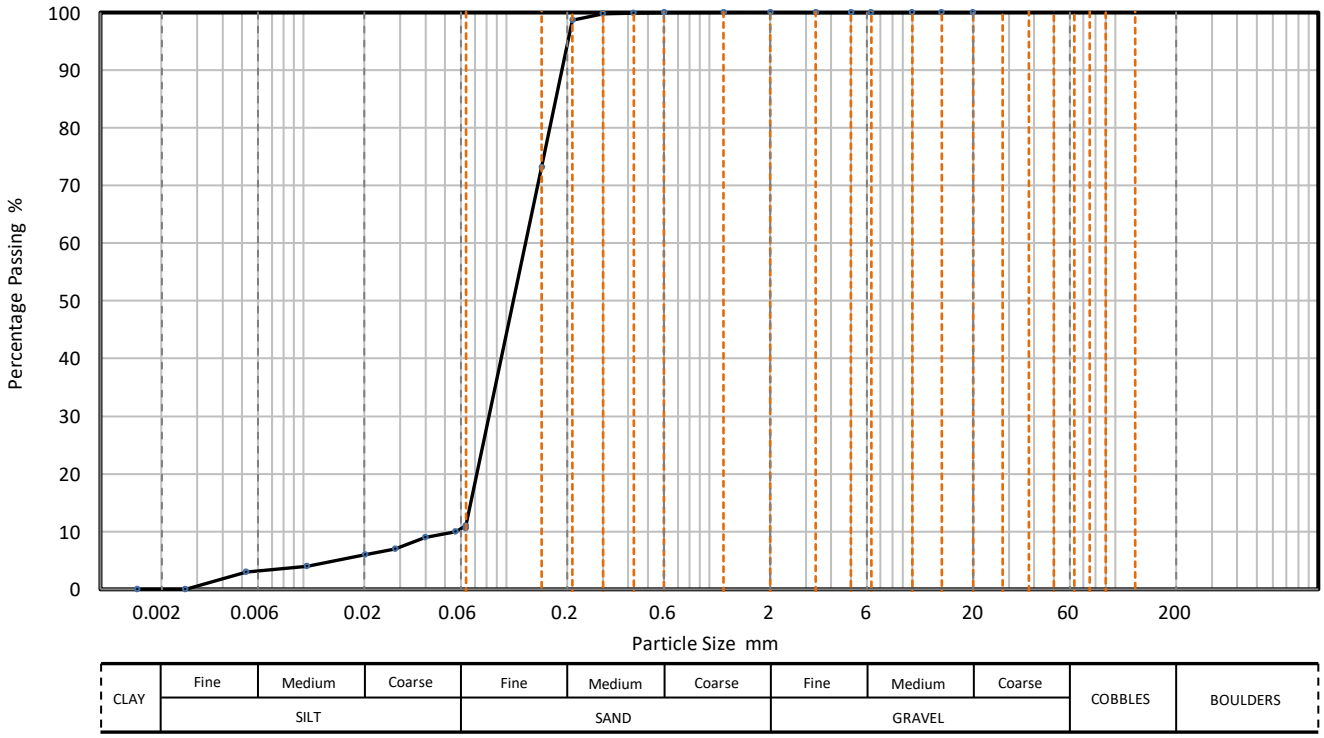
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-108	Lab sample ID	G2MT20250919100
Depth (Top) m	-14.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	11
		0.0564	10
		0.0400	9
		0.0284	7
		0.0201	6
		0.0104	4
		0.0052	3
20	100	0.0026	0
14	100	0.0015	0
10	100		0
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	99		
0.15	73		
0.063	11		

Dry Mass of sample, g	816

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	89.4
Silt	10.6
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 13:05

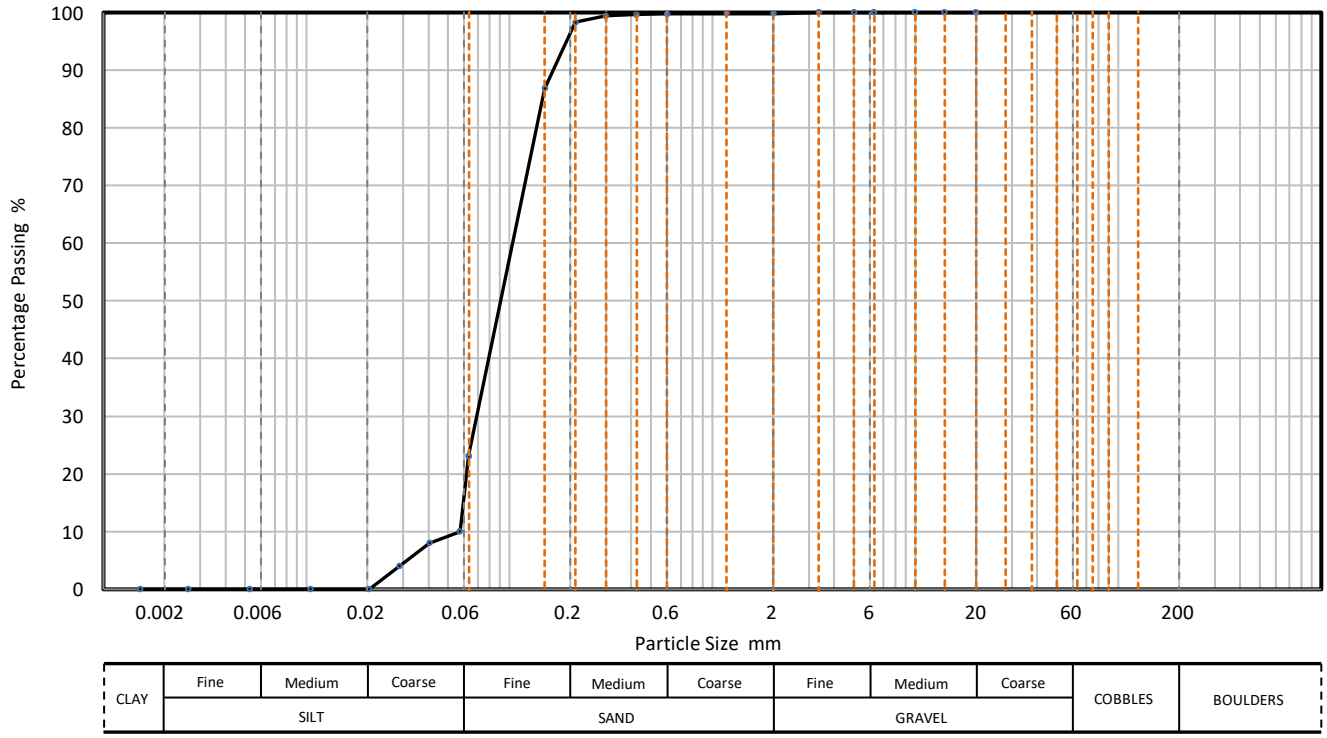
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-108	Lab sample ID	G2MT20250919101
Depth (Top) m	-18.70	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	23
		0.0573	10
		0.0405	8
		0.0287	4
		0.0204	0
		0.0105	0
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	98		
0.15	87		
0.063	23		

Dry Mass of sample, g: 675

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	76.7
Silt	23.1
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.104
D30	mm	0.0692
D10	mm	0.0574
Uniformity Coefficient		1.8
Curvature Coefficient		0.8

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 13:18

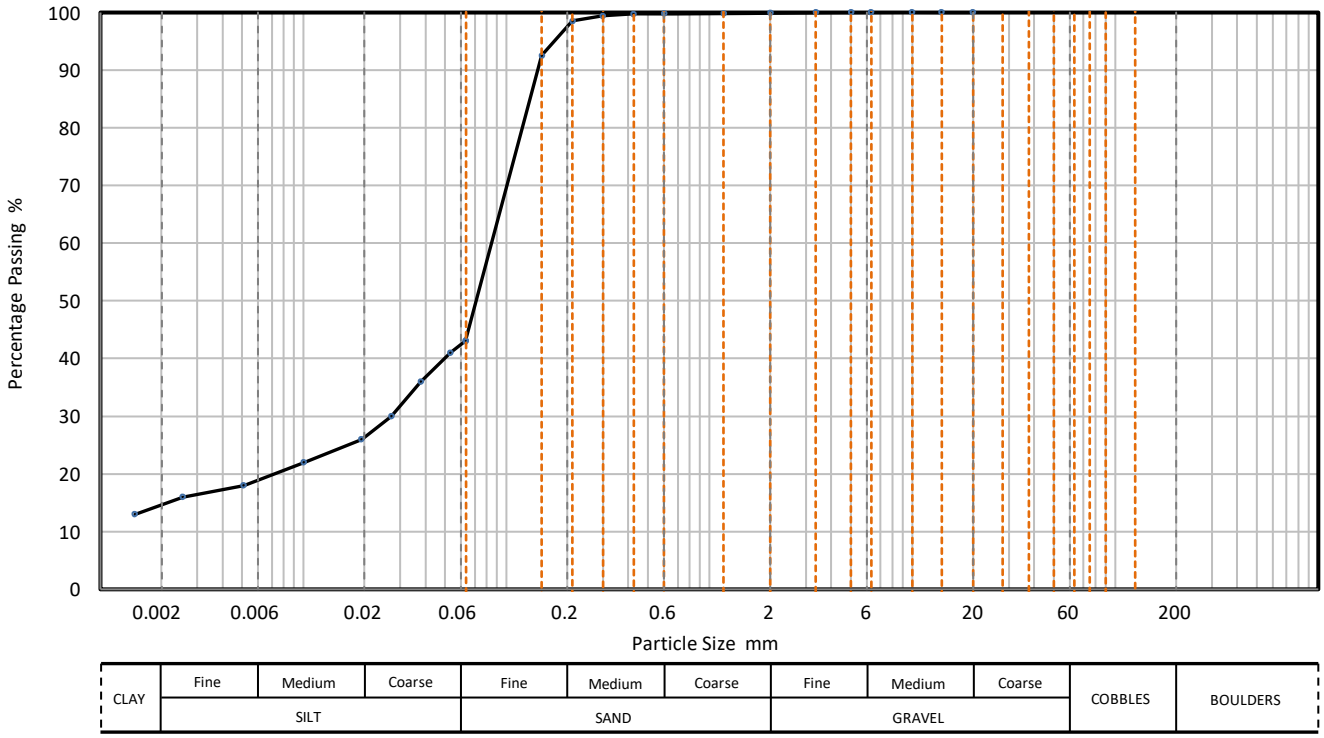
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-108	Lab sample ID	G2MT20250919104
Depth (Top) m	-29.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Clayey, very Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	43
		0.0531	41
		0.0379	36
		0.0272	30
		0.0194	26
		0.0101	22
		0.0051	18
20	100	0.0026	16
14	100	0.0015	13
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	99		
0.15	93		
0.063	43		

Dry Mass of sample, g: 856

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	56.8
Silt	28.6
Clay	14.5

Grading Analysis		
D100	mm	
D60	mm	0.0848
D30	mm	0.0274
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 13:13

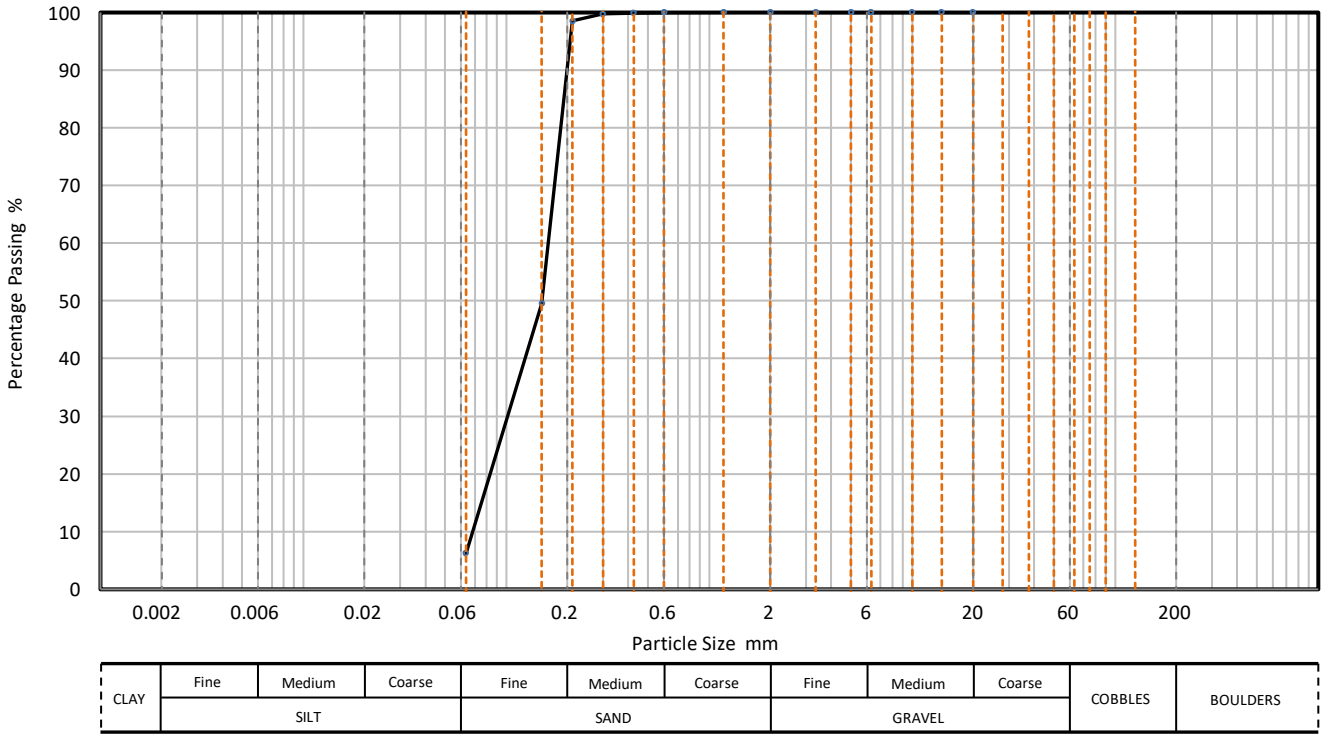
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-109	Lab sample ID	G2MT2025101423
Depth (Top) m	-10.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	99		
0.15	50		
0.063	6		

Dry Mass of sample, g	1050

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	93.7
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.162
D30	mm	0.101
D10	mm	0.0678
Uniformity Coefficient		2.4
Curvature Coefficient		0.94

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 10:06

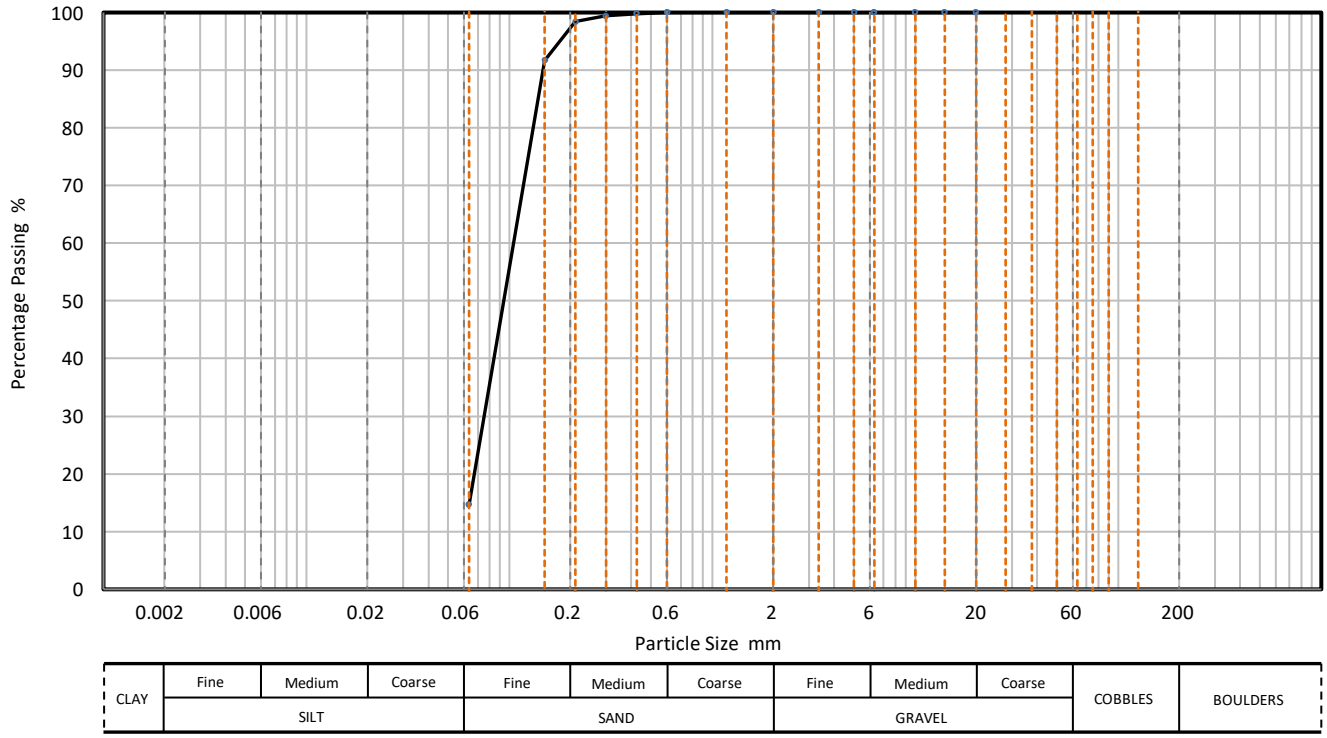
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-109	Lab sample ID	G2MT2025101424
Depth (Top) m	-13.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	98		
0.15	92		
0.063	15		

Dry Mass of sample, g: 1232

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	85.3
Fines <0.063mm	15.0

Grading Analysis		
D100	mm	
D60	mm	0.105
D30	mm	0.0749
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	13/01/2026 12:53

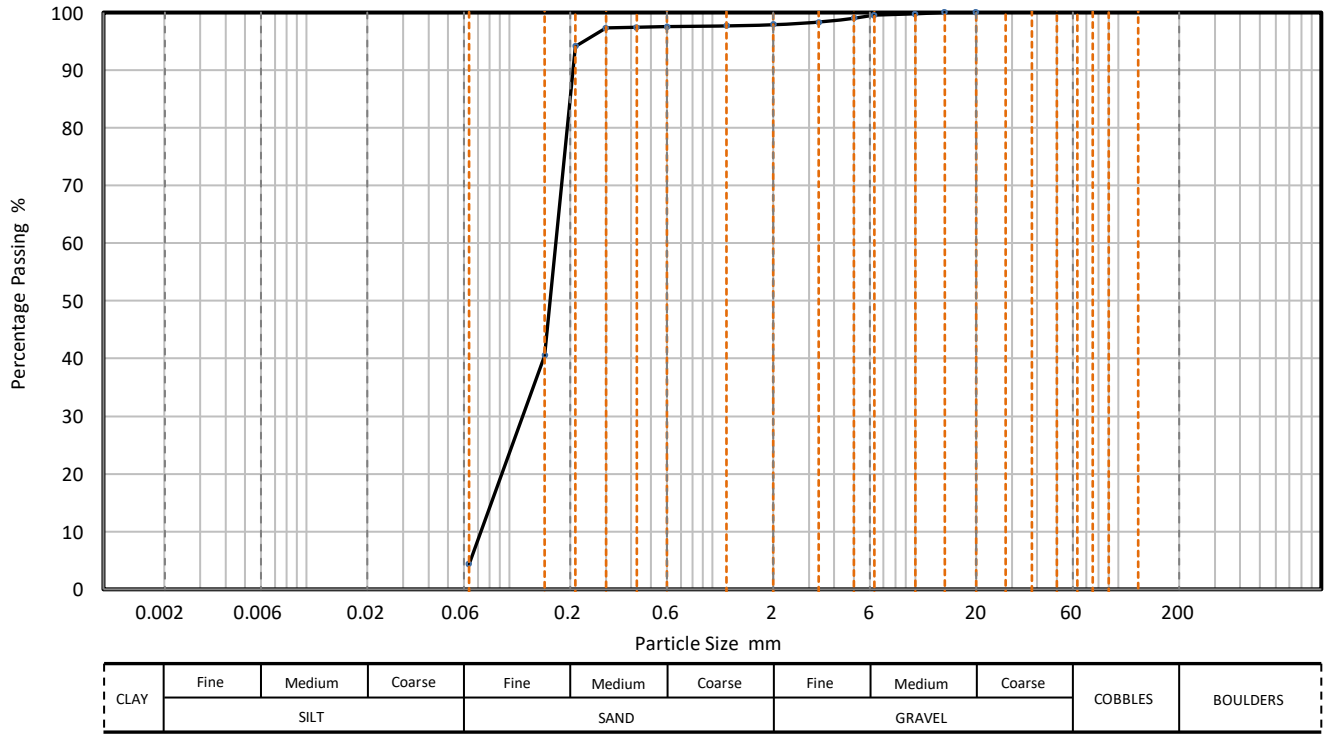
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-109	Lab sample ID	G2MT2025101425
Depth (Top)	m	-16.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	98		
2	98		
1.18	98		
0.6	98		
0.425	97		
0.3	97		
0.212	94		
0.15	41		
0.063	4		

Dry Mass of sample, g	784

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	2.1
Sand	93.5
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.17
D30	mm	0.117
D10	mm	0.0721
Uniformity Coefficient		2.4
Curvature Coefficient		1.1

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 11:42

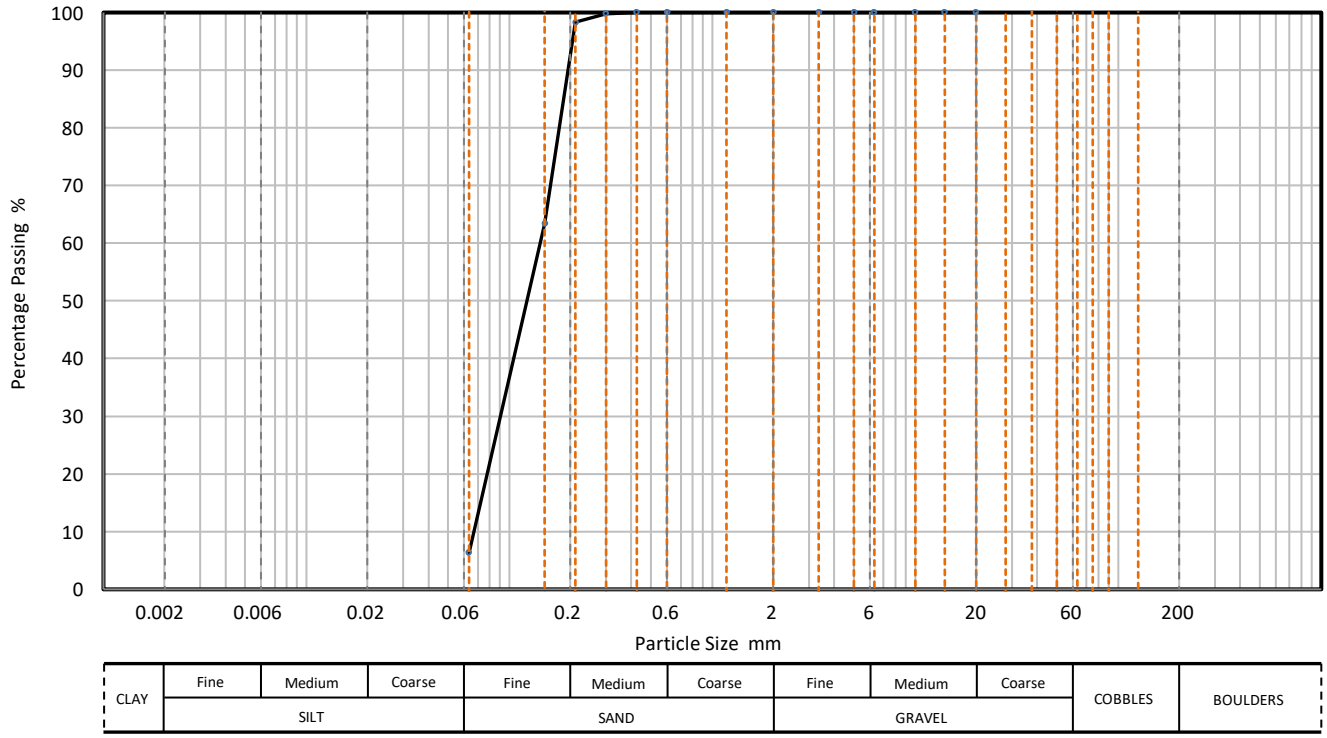
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-109	Lab sample ID	G2MT2025101427
Depth (Top) m	-25.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slighttly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	98		
0.15	63		
0.063	6		

Dry Mass of sample, g: 861

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	93.6
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.142
D30	mm	0.0903
D10	mm	0.0666
Uniformity Coefficient		2.1
Curvature Coefficient		0.86

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 09:40

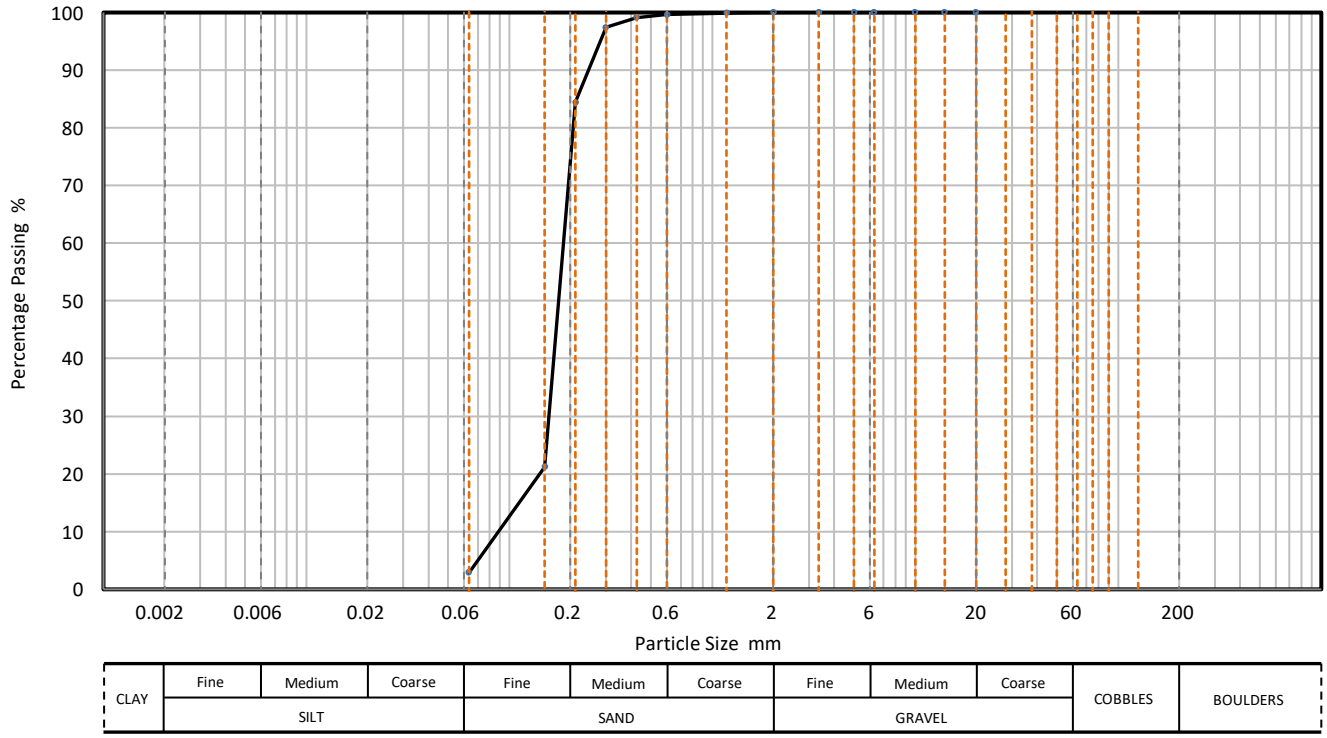
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-110	Lab sample ID	G2MT2025101475
Depth (Top) m	-11.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	97		
0.212	84		
0.15	21		
0.063	3		

Dry Mass of sample, g: 1080

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.1
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.185
D30	mm	0.157
D10	mm	0.0883
Uniformity Coefficient		2.1
Curvature Coefficient		1.5

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 09:49

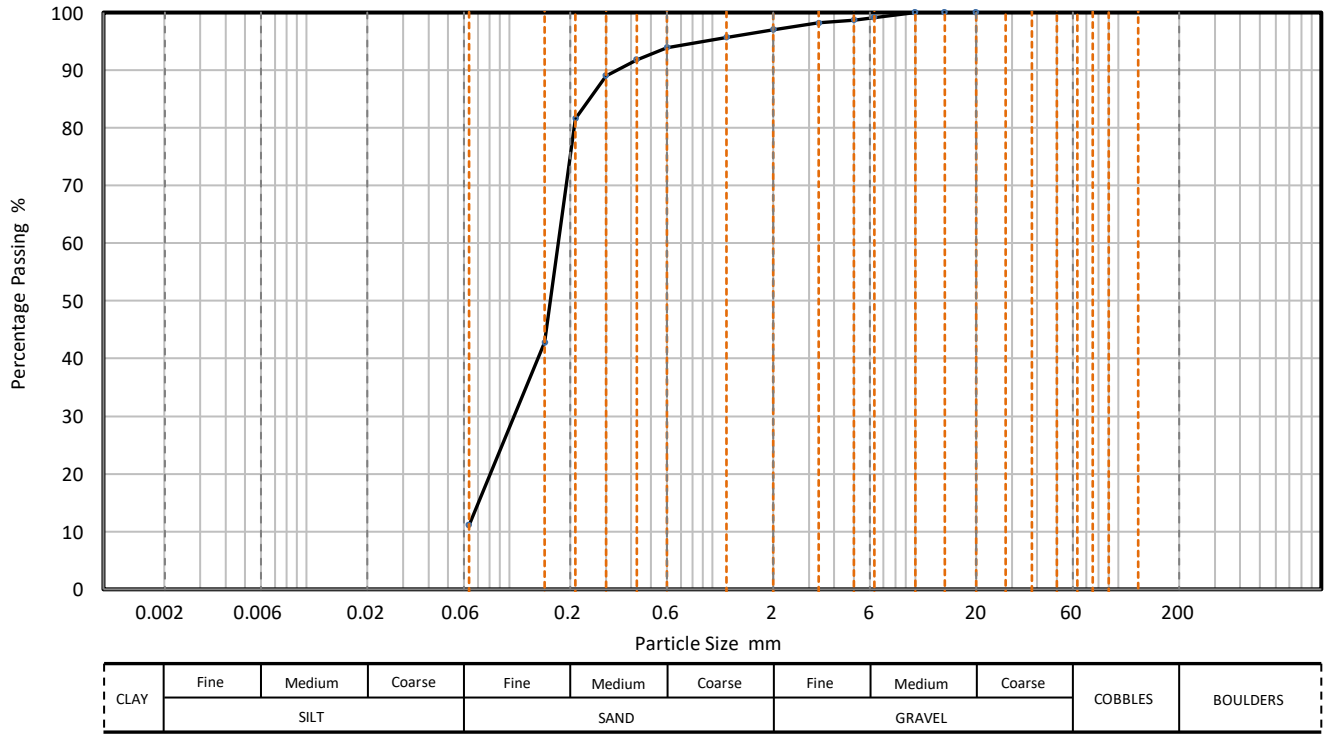
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-110	Lab sample ID	G2MT2025101476
Depth (Top) m	-12.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	98		
2	97		
1.18	96		
0.6	94		
0.425	92		
0.3	89		
0.212	82		
0.15	43		
0.063	11		

Dry Mass of sample, g: 875

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	3.0
Sand	85.9
Fines <0.063mm	11.0

Grading Analysis		
D100	mm	
D60	mm	0.175
D30	mm	0.106
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	13/01/2026 12:53

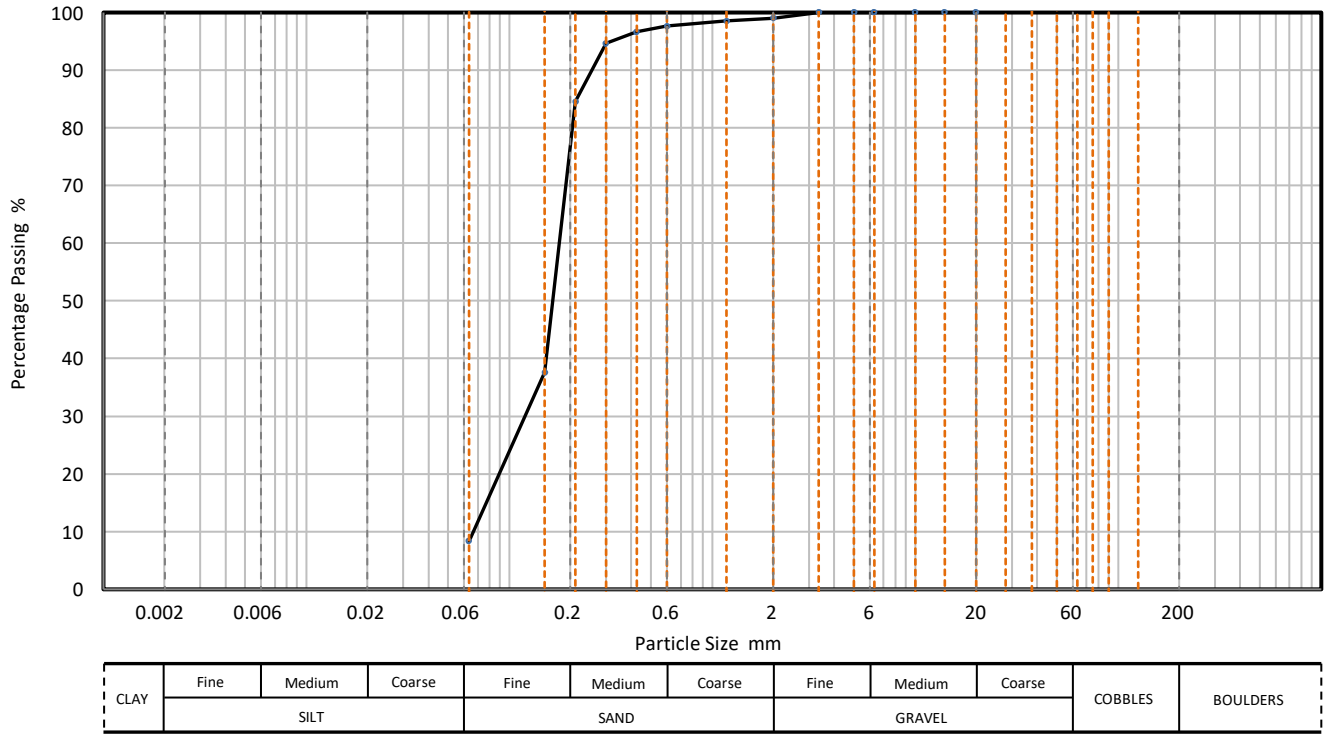
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UKAS TESTING
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-110	Lab sample ID	G2MT2025101477
Depth (Top)	m	-14.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	98		
0.425	97		
0.3	95		
0.212	85		
0.15	38		
0.063	8		

Dry Mass of sample, g	1154

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.0
Sand	90.6
Fines <0.063mm	8.0

Grading Analysis		
D100	mm	
D60	mm	0.177
D30	mm	0.12
D10	mm	0.066
Uniformity Coefficient		2.7
Curvature Coefficient		1.2

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 09:57

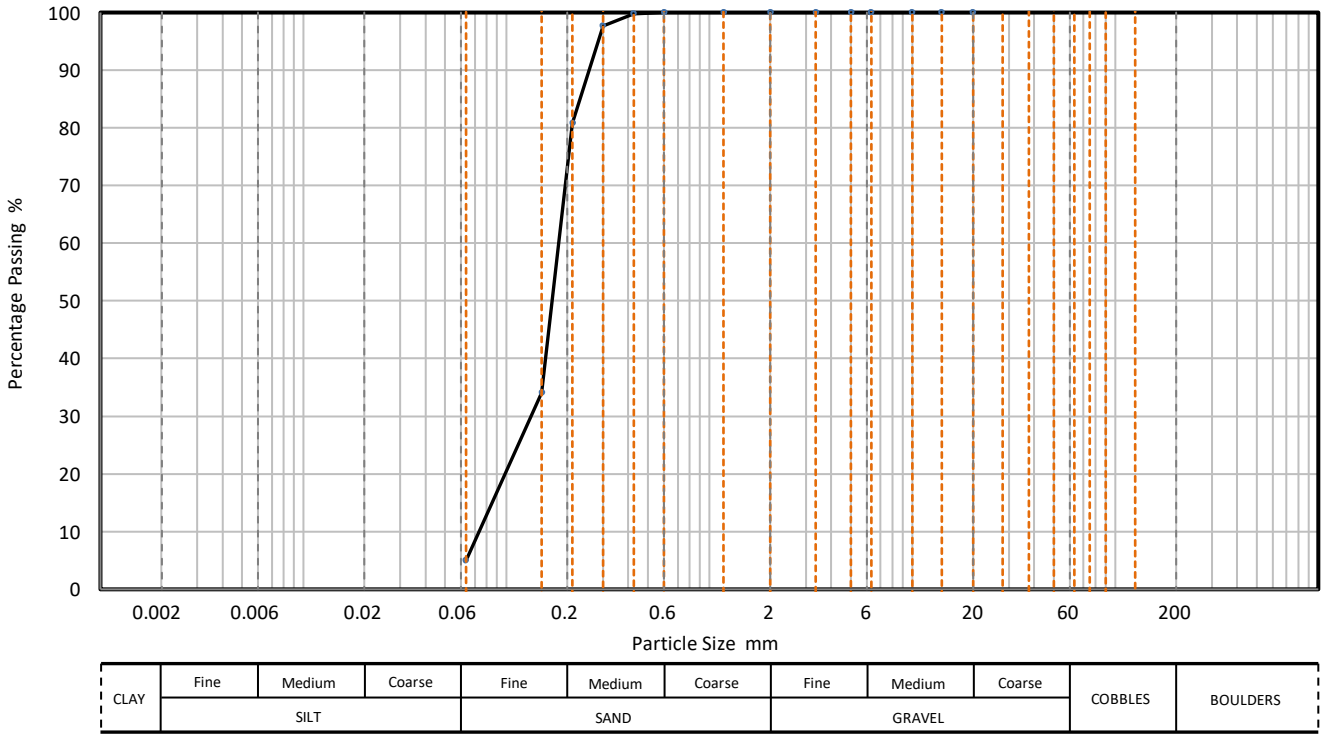
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-110	Lab sample ID	G2MT2025101478
Depth (Top) m	-18.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	98		
0.212	81		
0.15	34		
0.063	5		

Dry Mass of sample, g: 706

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	95.0
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.182
D30	mm	0.133
D10	mm	0.0731
Uniformity Coefficient		2.5
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 10:17

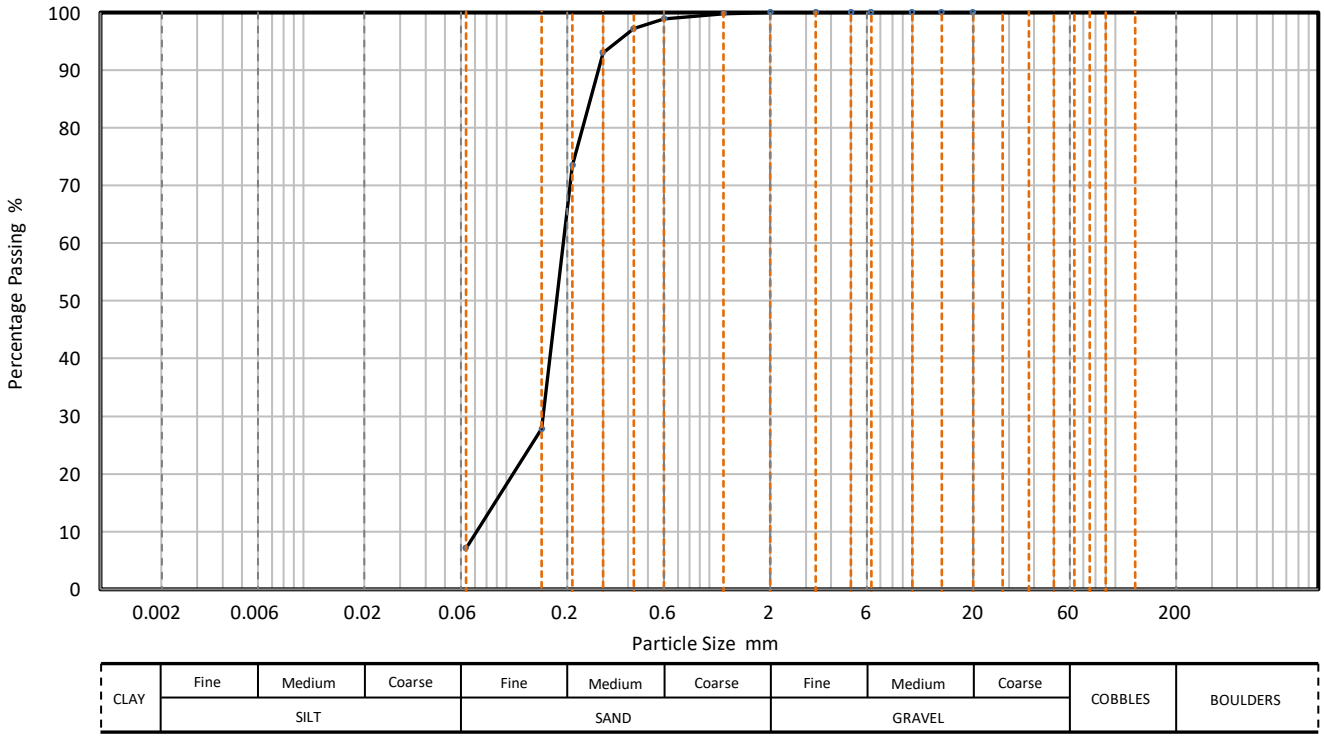
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-111	Lab sample ID	G2MT2025101482
Depth (Top) m	-11.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	97		
0.3	93		
0.212	74		
0.15	28		
0.063	7		

Dry Mass of sample, g: 1264

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	92.8
Fines <0.063mm	7.0

Grading Analysis		
D100	mm	
D60	mm	0.191
D30	mm	0.153
D10	mm	0.0709
Uniformity Coefficient		2.7
Curvature Coefficient		1.7

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/10/2025 10:32

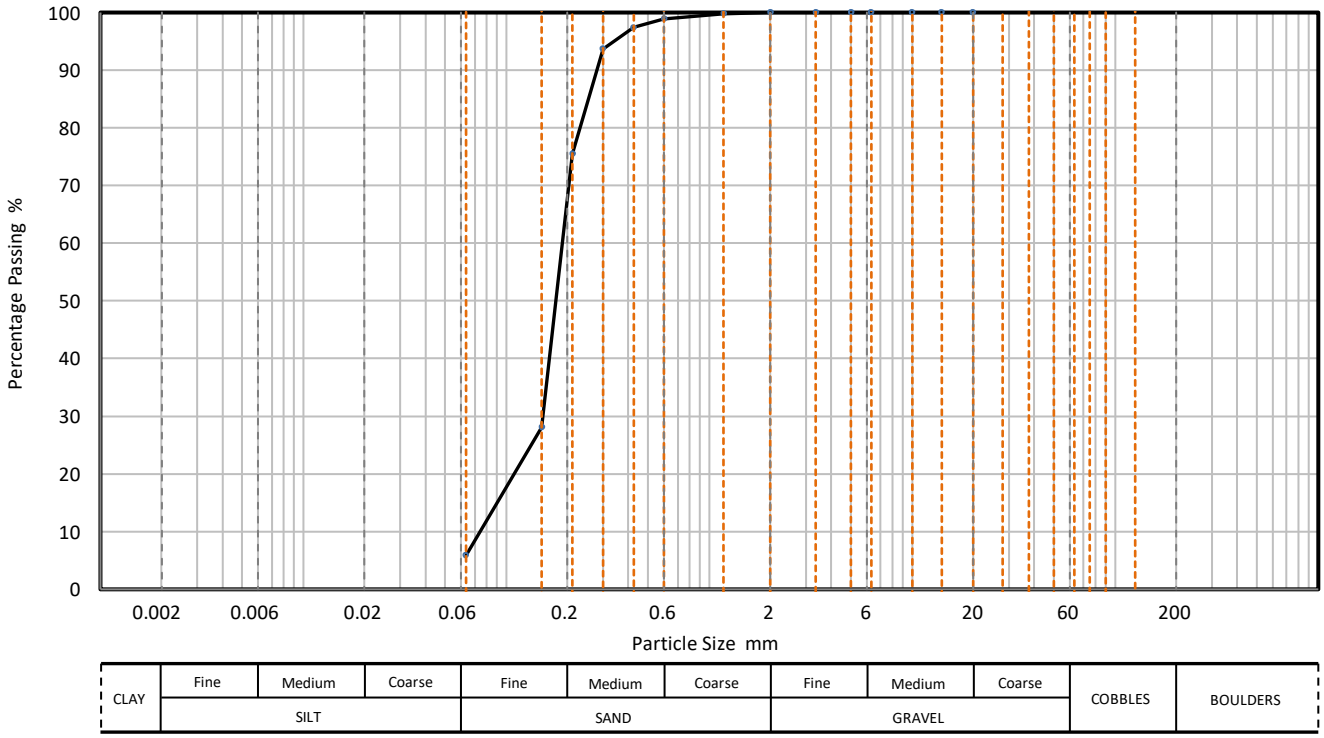
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-111	Lab sample ID	G2MT2025101483
Depth (Top) m	-16.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	97		
0.3	94		
0.212	76		
0.15	28		
0.063	6		

Dry Mass of sample, g: 752

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	94.0
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.189
D30	mm	0.152
D10	mm	0.0739
Uniformity Coefficient		2.6
Curvature Coefficient		1.7

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 11:43

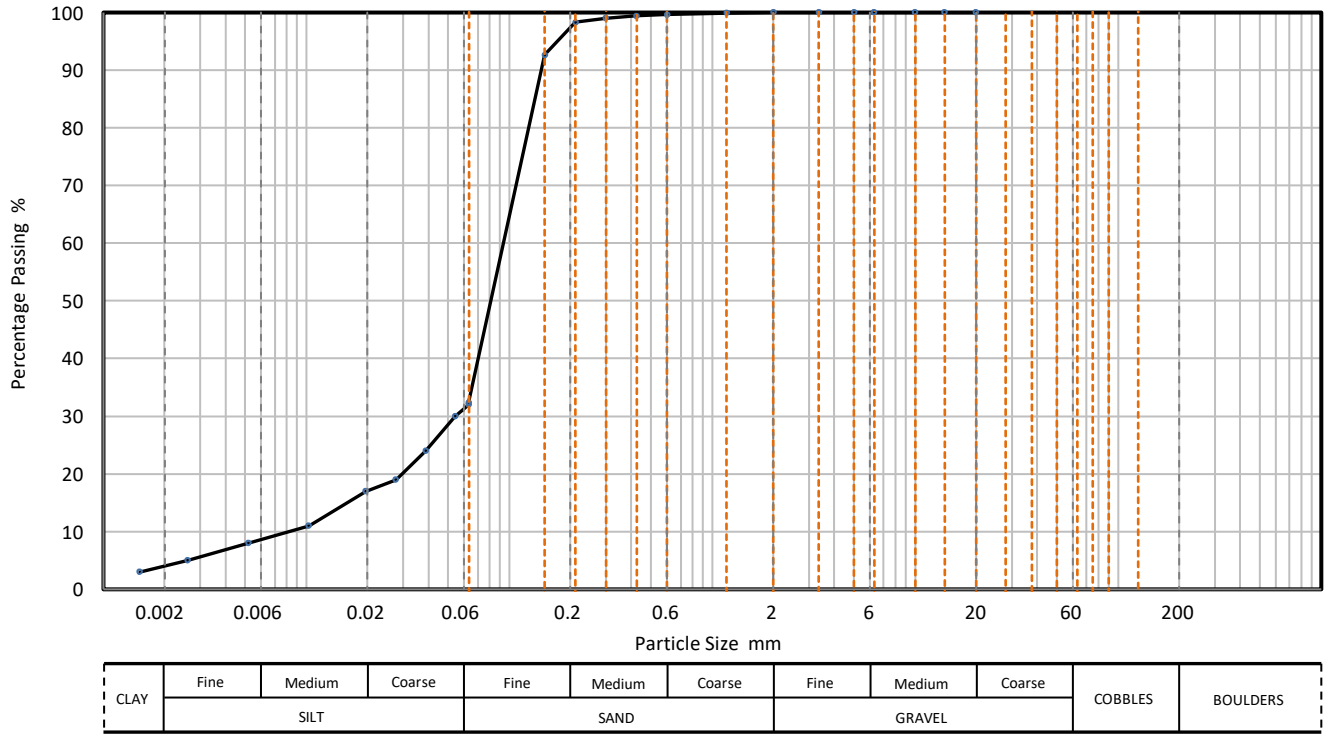
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-111	Lab sample ID	G2MT2025101484
Depth (Top) m	-19.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, very Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	32
		0.0542	30
		0.0388	24
		0.0277	19
		0.0197	17
		0.0103	11
		0.0052	8
20	100	0.0026	5
14	100	0.0015	3
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	99		
0.212	98		
0.15	93		
0.063	32		

Dry Mass of sample, g	859

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	67.7
Silt	28.2
Clay	4.1

Grading Analysis		
D100	mm	
D60	mm	0.0938
D30	mm	0.0554
D10	mm	0.0078
Uniformity Coefficient		12
Curvature Coefficient		4.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:47

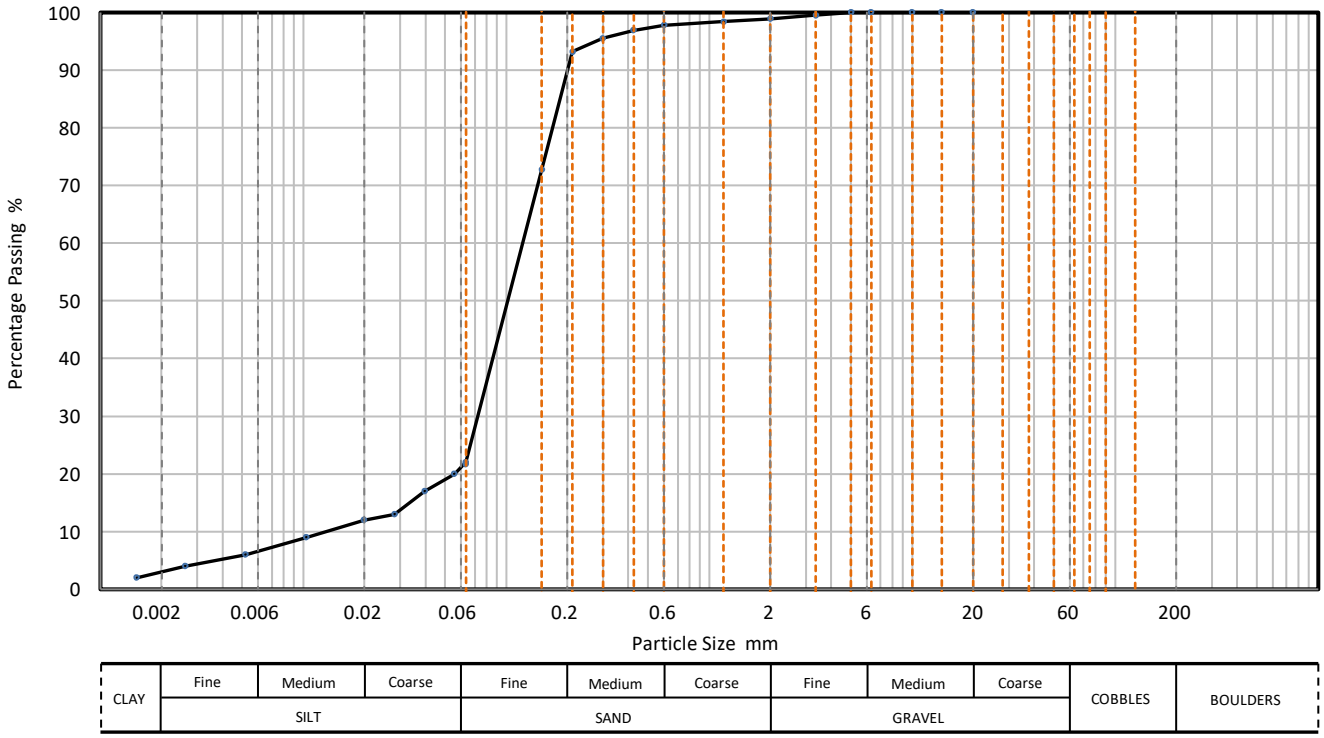
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-111	Lab sample ID	G2MT2025101485
Depth (Top) m	-23.70	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Clayey, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	22
		0.0556	20
		0.0396	17
		0.0282	13
		0.0200	12
		0.0104	9
		0.0052	6
20	100	0.0026	4
14	100	0.0015	2
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	98		
0.6	98	Particle density	(assumed)
0.425	97	2.65	Mg/m3
0.3	96		
0.212	93		
0.15	73		
0.063	22		

Dry Mass of sample, g: 889

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.1
Sand	77.2
Silt	18.9
Clay	2.8

Grading Analysis		
D100	mm	
D60	mm	0.121
D30	mm	0.0725
D10	mm	0.0137
Uniformity Coefficient		8.8
Curvature Coefficient		3.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:49

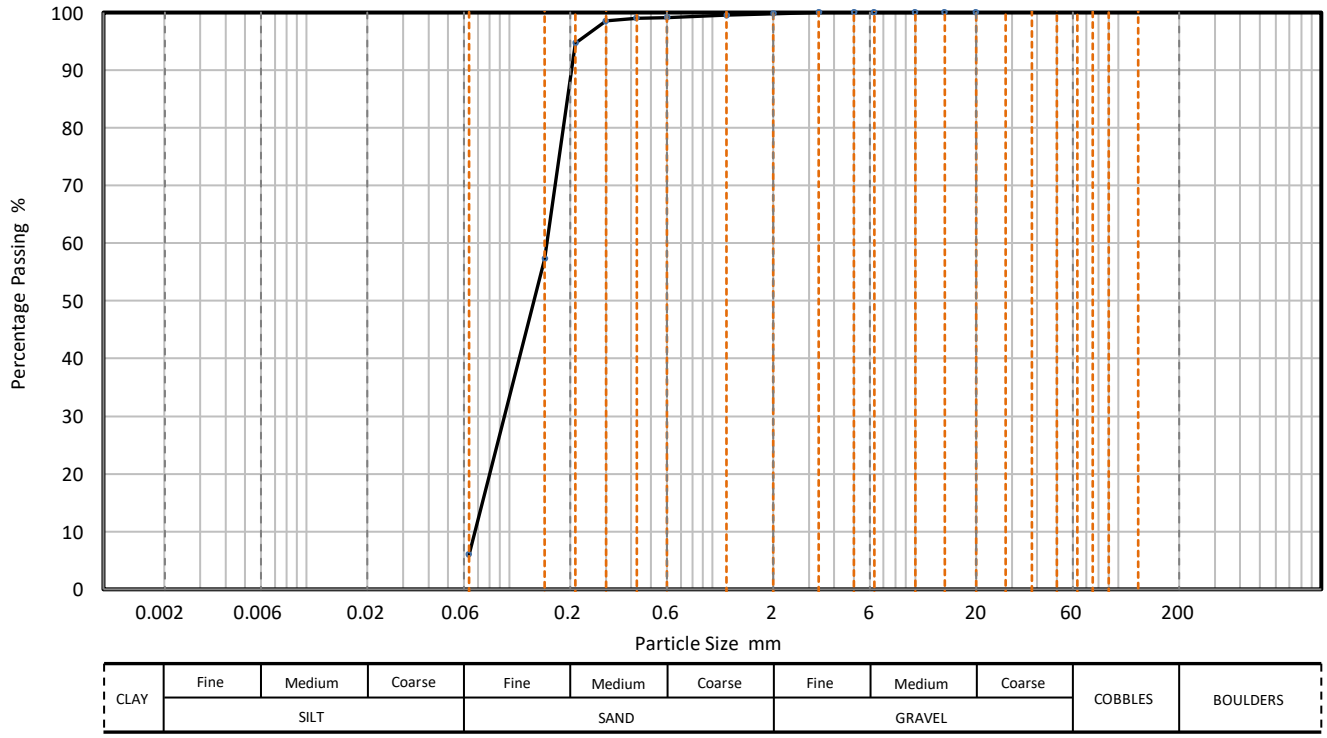
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-112	Lab sample ID	G2MT2025091531
Depth (Top) m	-12.60	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	99		
0.212	95		
0.15	57		
0.063	6		

Dry Mass of sample, g	677

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	93.8
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.154
D30	mm	0.0945
D10	mm	0.0674
Uniformity Coefficient		2.3
Curvature Coefficient		0.86

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:30

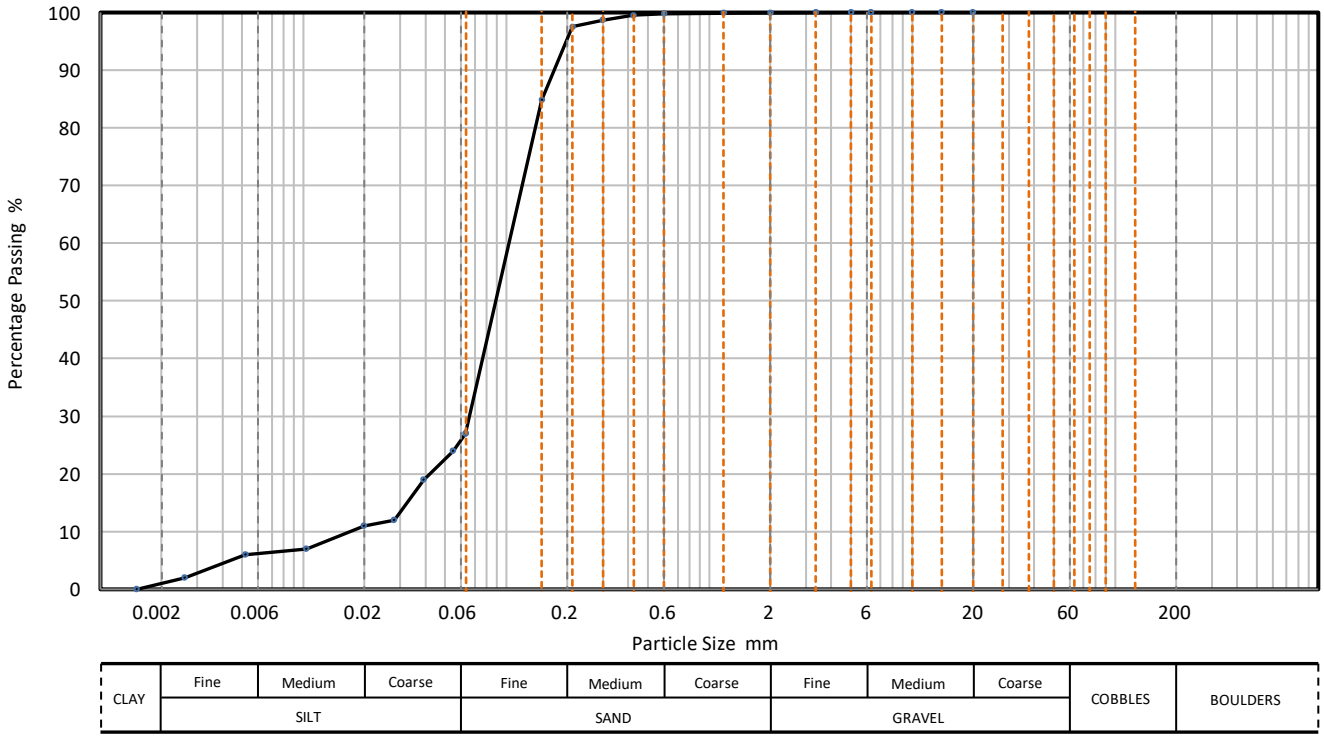
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-112	Lab sample ID	G2MT2025091532
Depth (Top) m	-17.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly,slightly Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	27
		0.0548	24
		0.0391	19
		0.0281	12
		0.0199	11
		0.0104	7
		0.0052	6
20	100	0.0026	2
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	98		
0.15	85		
0.063	27		

Dry Mass of sample, g: 999

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	73.0
Silt	25.7
Clay	1.2

Grading Analysis		
D100	mm	
D60	mm	0.103
D30	mm	0.0659
D10	mm	0.0179
Uniformity Coefficient		5.8
Curvature Coefficient		2.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:22

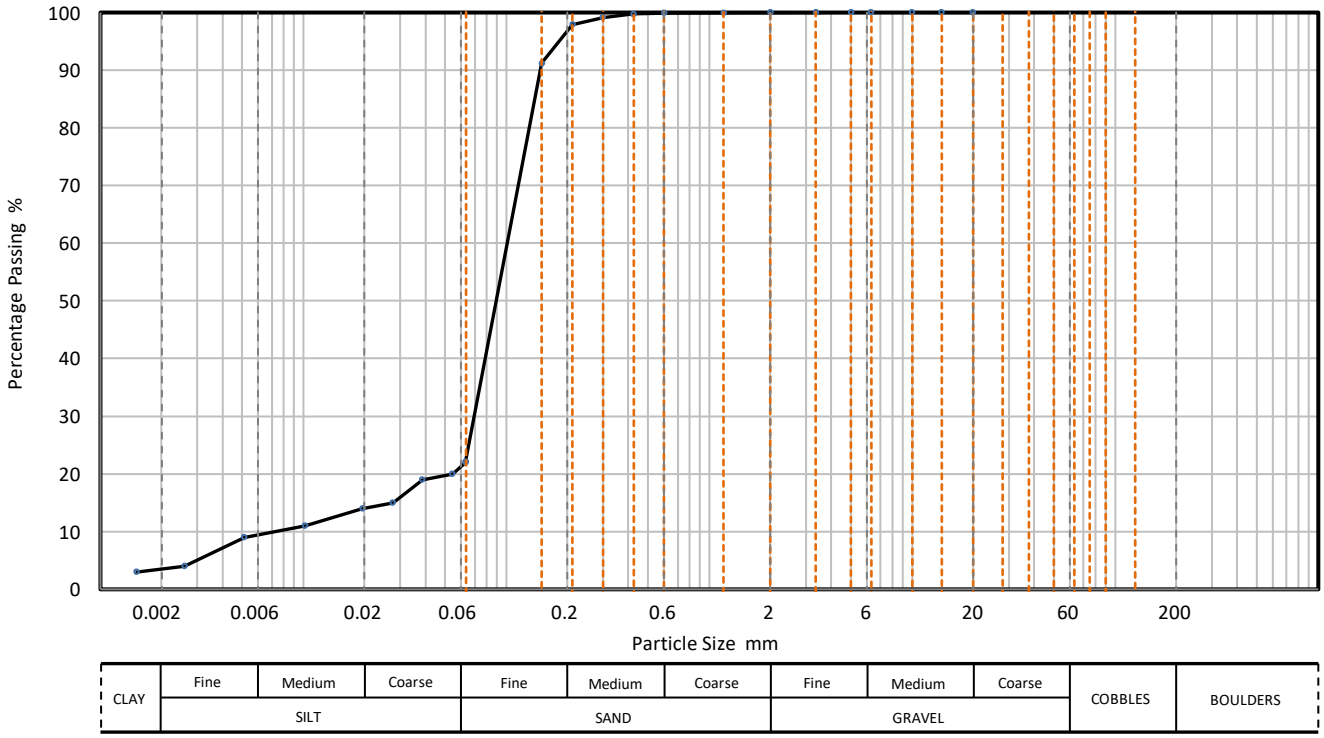
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-112	Lab sample ID	G2MT2025091534
Depth (Top) m	-20.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	22
		0.0544	20
		0.0387	19
		0.0276	15
		0.0196	14
		0.0102	11
		0.0051	9
20	100	0.0026	4
14	100	0.0015	3
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	98		
0.15	91		
0.063	22		

Dry Mass of sample, g: 867

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	77.8
Silt	18.8
Clay	3.4

Grading Analysis		
D100	mm	
D60	mm	0.101
D30	mm	0.0695
D10	mm	0.00768
Uniformity Coefficient		13
Curvature Coefficient		6.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:24

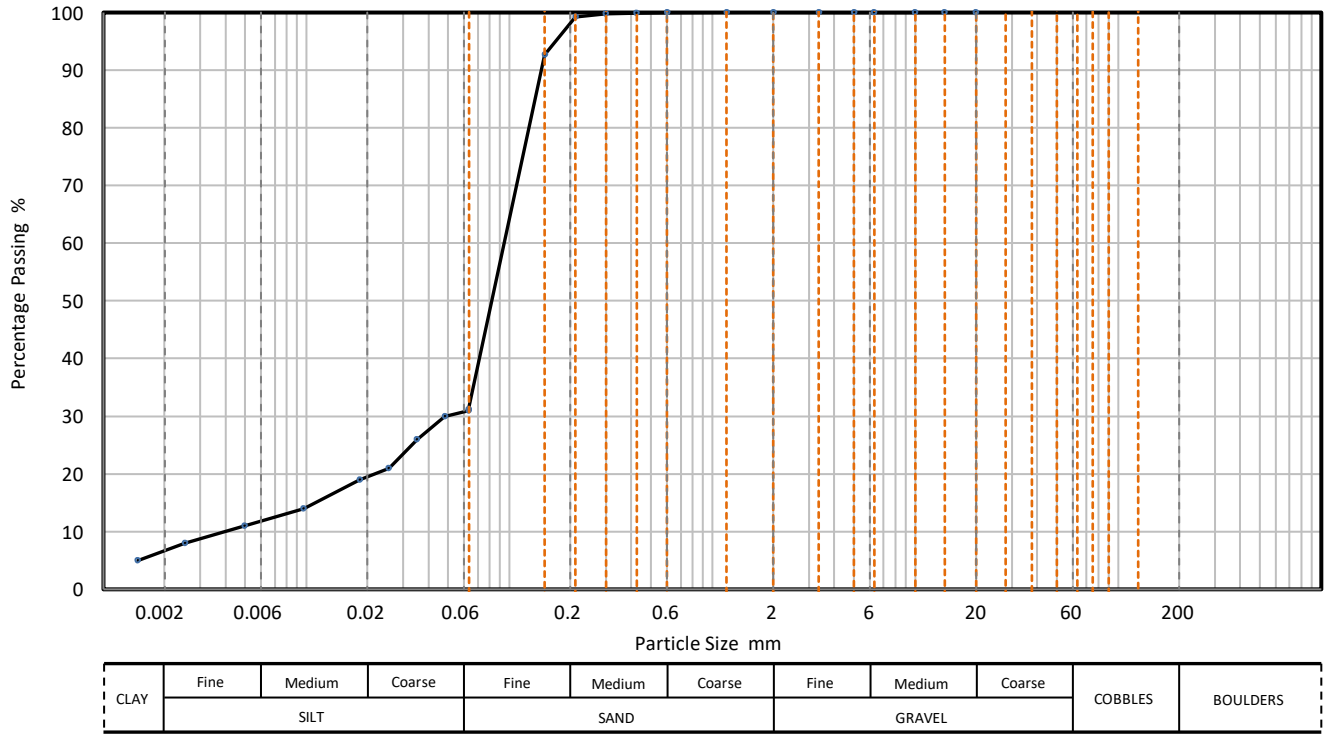
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-112	Lab sample ID	G2MT2025091535
Depth (Top) m	-23.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, very Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	31
		0.0483	30
		0.0351	26
		0.0256	21
		0.0184	19
		0.0097	14
		0.0050	11
20	100	0.0025	8
14	100	0.0015	5
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	99		
0.15	93		
0.063	31		

Dry Mass of sample, g: 843

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	68.8
Silt	24.6
Clay	6.6

Grading Analysis		
D100	mm	
D60	mm	0.0946
D30	mm	0.0495
D10	mm	0.00433
Uniformity Coefficient		22
Curvature Coefficient		6

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:13

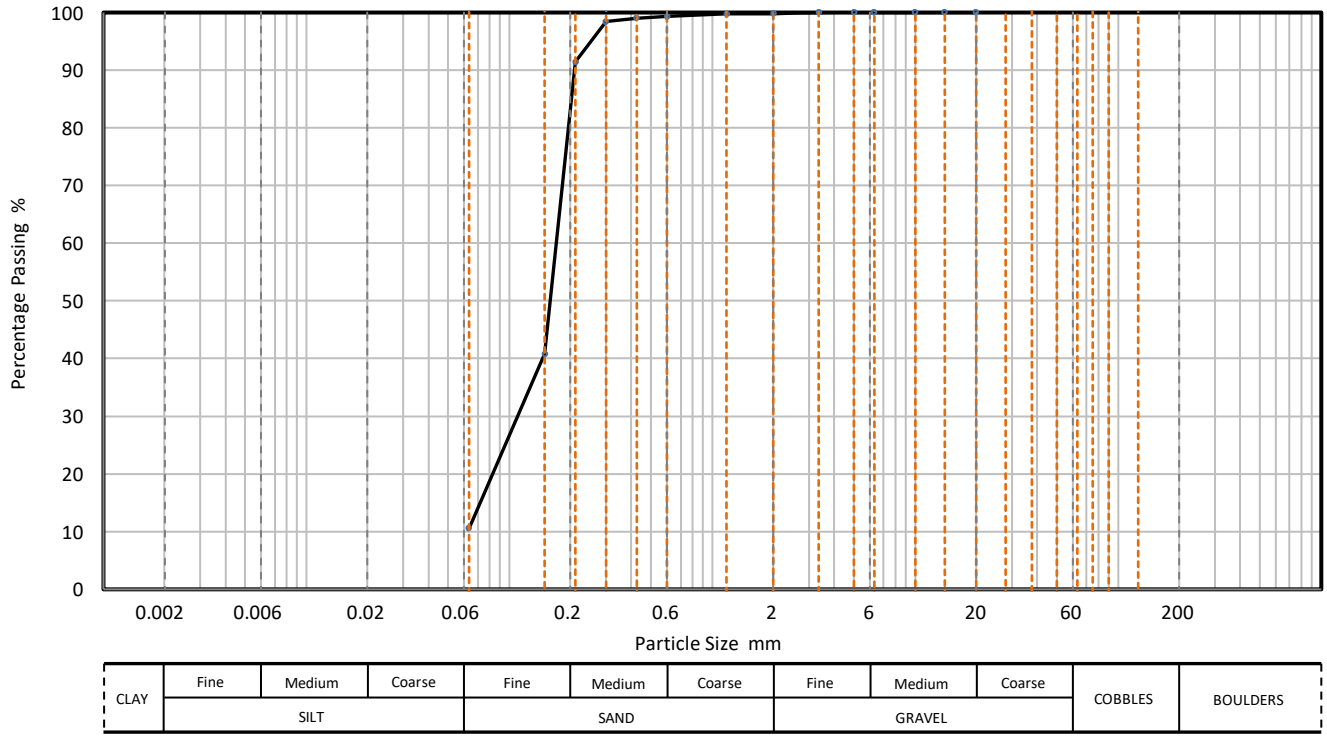
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091536
Depth (Top) m	-7.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	98		
0.212	91		
0.15	41		
0.063	11		

Dry Mass of sample, g	860

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	89.2
Fines <0.063mm	11.0

Grading Analysis		
D100	mm	
D60	mm	0.171
D30	mm	0.11
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 08:18

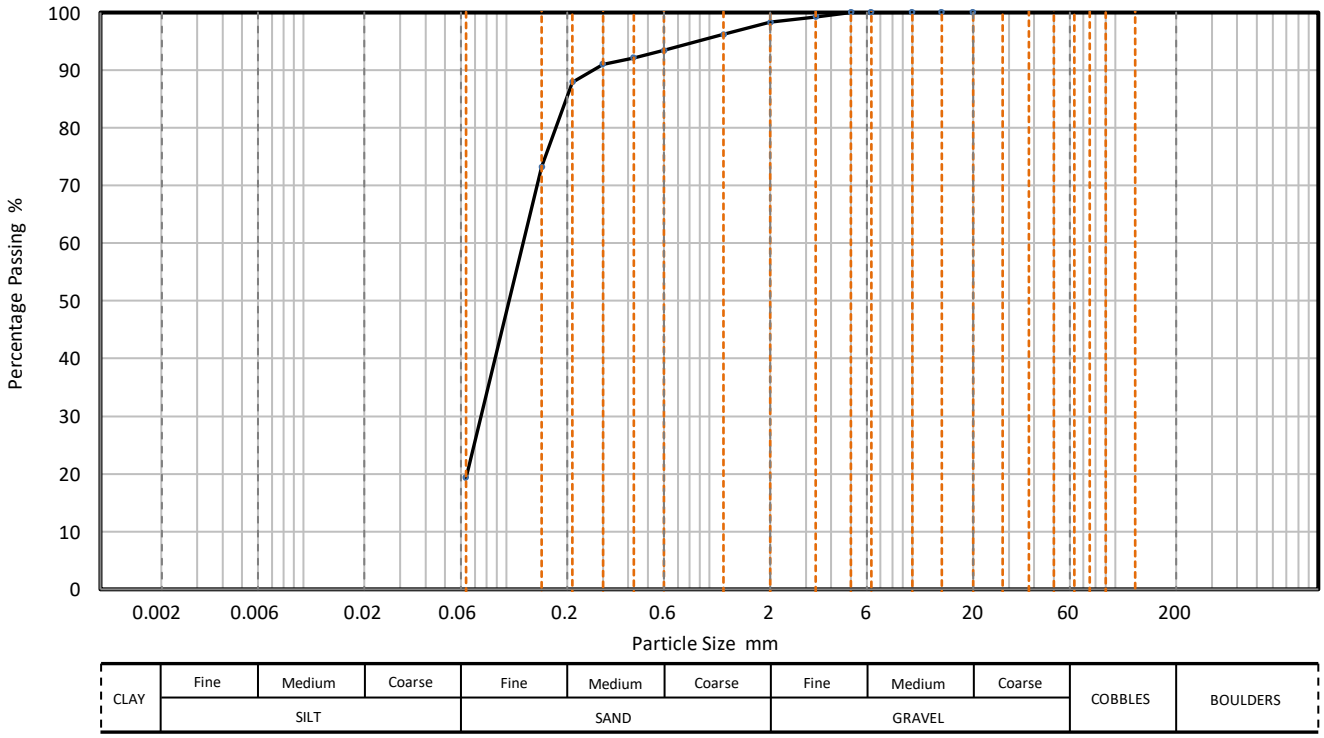
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10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091538
Depth (Top) m	-9.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	98		
1.18	96		
0.6	93		
0.425	92		
0.3	91		
0.212	88		
0.15	73		
0.063	19		

Dry Mass of sample, g: 1063

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.7
Sand	78.9
Fines <0.063mm	19.0

Grading Analysis		
D100	mm	
D60	mm	0.121
D30	mm	0.0747
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	17/09/2025 14:22

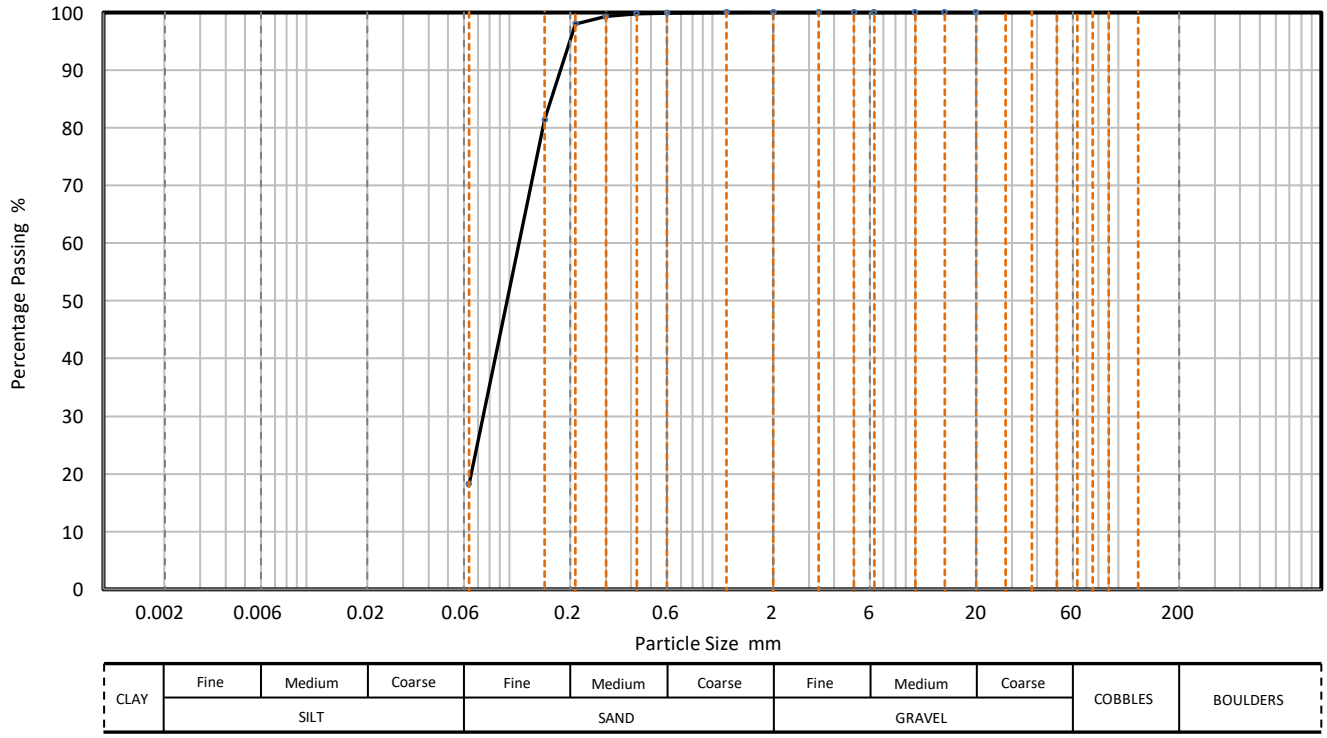
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091539
Depth (Top) m	-15.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	98		
0.15	81		
0.063	18		

Dry Mass of sample, g: 1006

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	81.7
Fines <0.063mm	18.0

Grading Analysis		
D100	mm	
D60	mm	0.112
D30	mm	0.074
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	17/09/2025 14:23

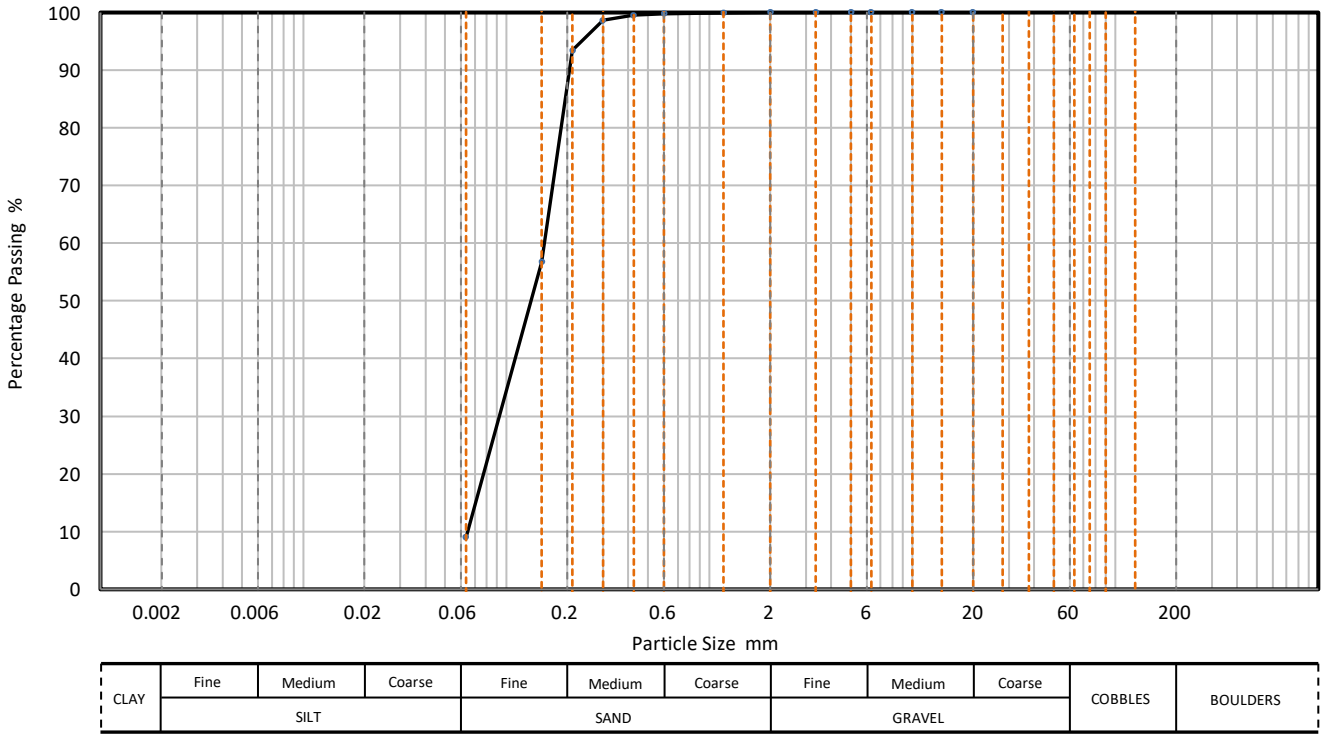
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091541
Depth (Top) m	-20.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	93		
0.15	57		
0.063	9		

Dry Mass of sample, g	966

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	91.0
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.155
D30	mm	0.0924
D10	mm	0.0642
Uniformity Coefficient		2.4
Curvature Coefficient		0.86

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 08:18

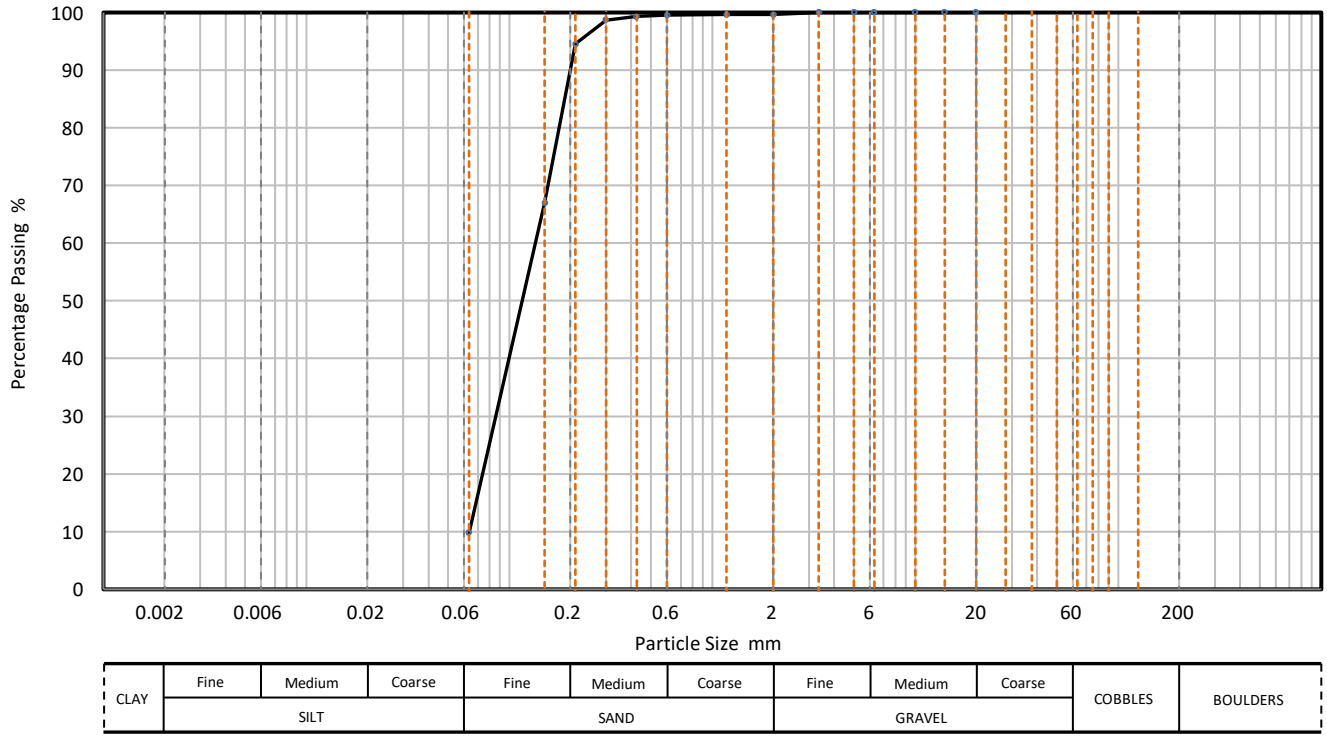
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091544
Depth (Top) m	-24.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	95		
0.15	67		
0.063	10		

Dry Mass of sample, g	827

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.4
Sand	89.8
Fines <0.063mm	10.0

Grading Analysis		
D100	mm	
D60	mm	0.135
D30	mm	0.0856
D10	mm	0.0632
Uniformity Coefficient		2.1
Curvature Coefficient		0.86

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	19/09/2025 08:20

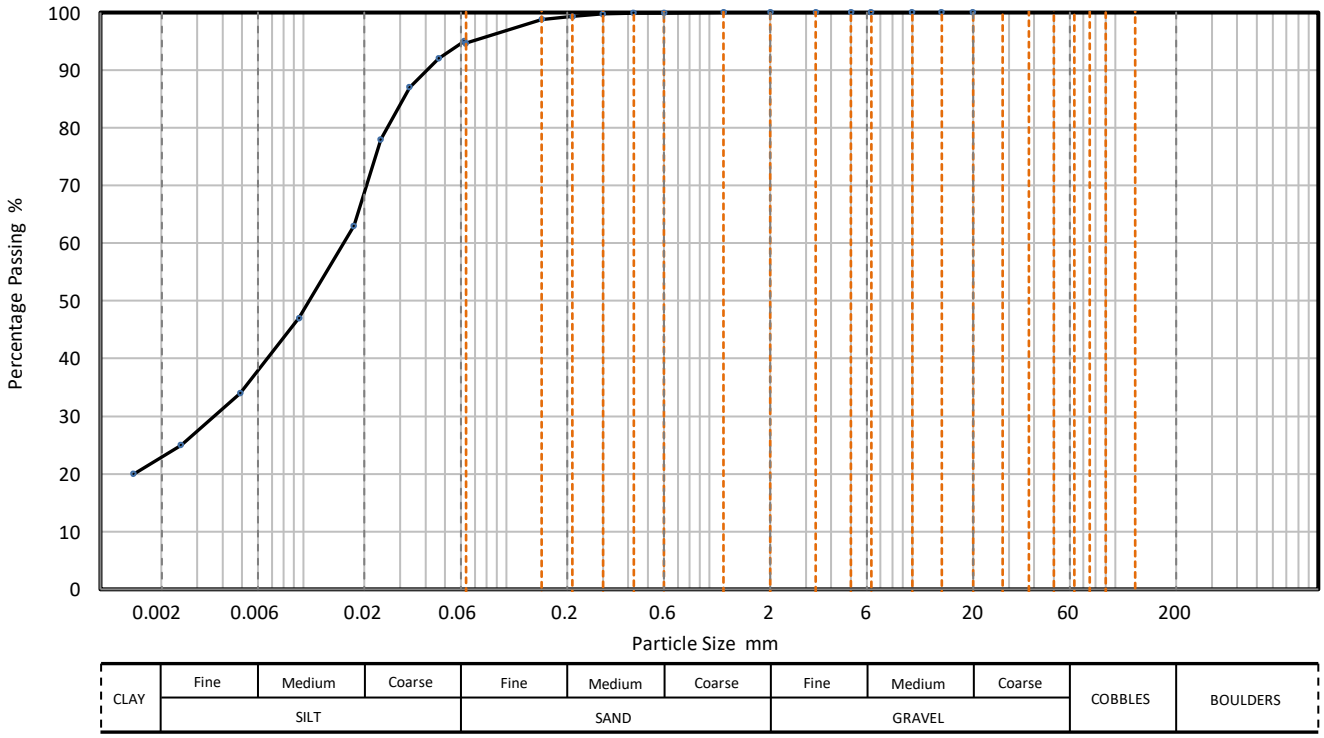
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091545
Depth (Top) m	-27.50	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, very Clayey, SILT
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0621	95
		0.0465	92
		0.0334	87
		0.0241	78
		0.0177	63
		0.0095	47
		0.0049	34
20	100	0.0025	25
14	100	0.0015	20
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	99		
0.15	99		
0.063	95		

Dry Mass of sample, g: 626

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	5.4
Silt	71.3
Clay	23.3

Grading Analysis		
D100	mm	
D60	mm	0.0159
D30	mm	0.00358
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:26

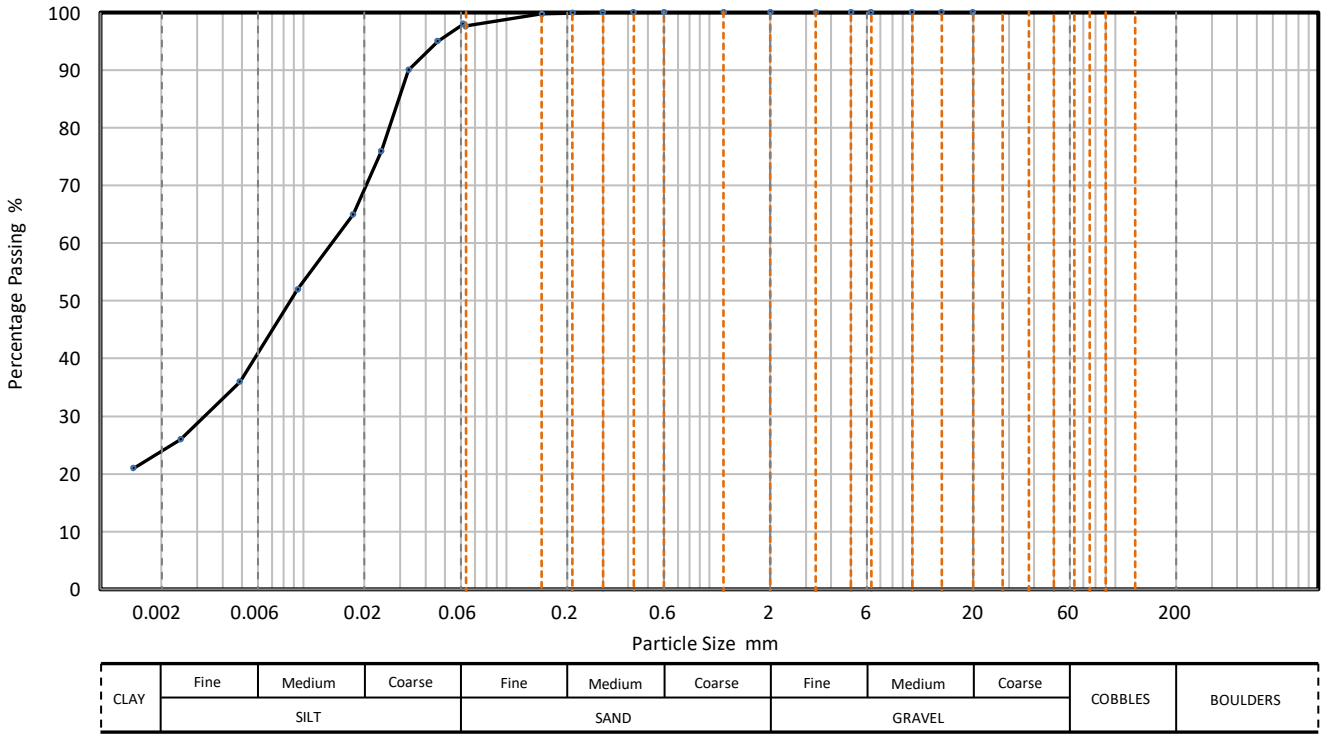
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091547
Depth (Top) m	-29.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Sandy, very Clayey, SILT
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0614	98
		0.0459	95
		0.0330	90
		0.0242	76
		0.0176	65
		0.0094	52
		0.0049	36
20	100	0.0025	26
14	100	0.0015	21
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	100		
0.15	100		
0.063	98		

Dry Mass of sample, g	796

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	2.4
Silt	73.9
Clay	23.7

Grading Analysis		
D100	mm	
D60	mm	0.0137
D30	mm	0.00332
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:17

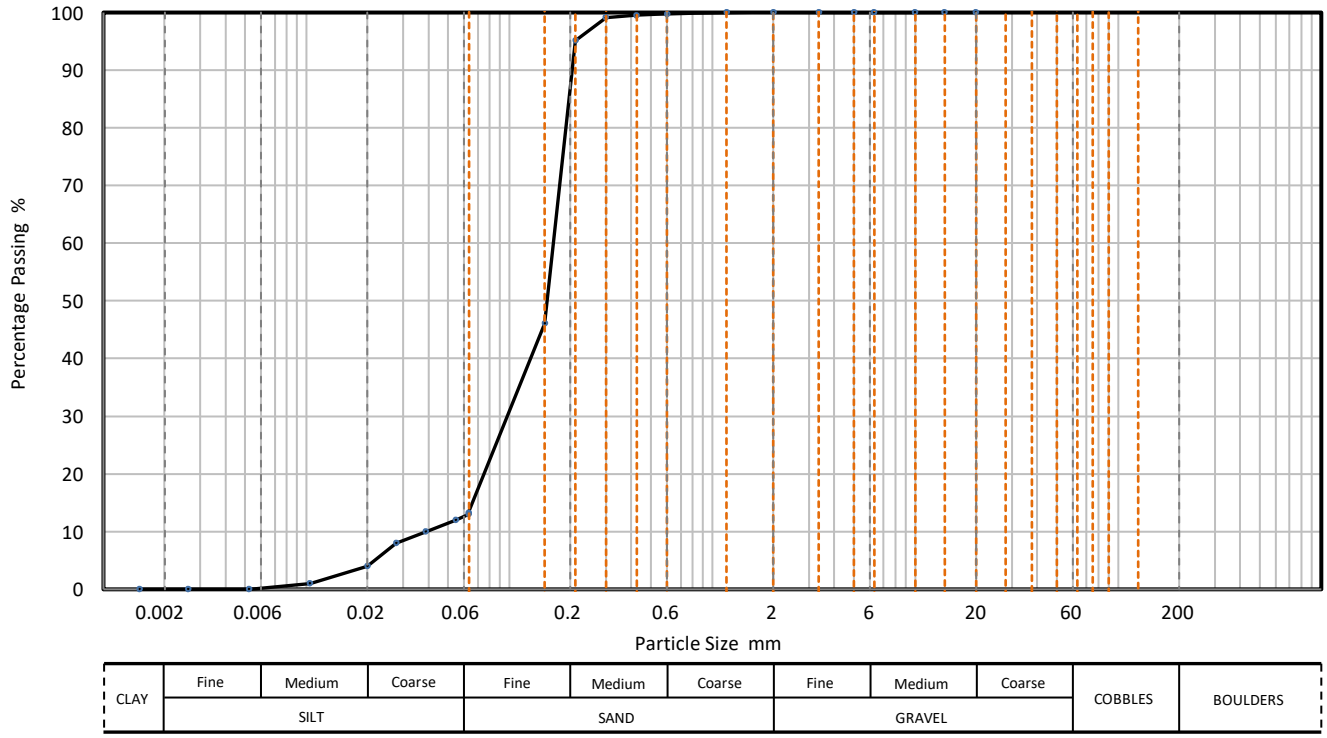
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-114	Lab sample ID	G2MT2025091515
Depth (Top) m	-3.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	13
		0.0545	12
		0.0390	10
		0.0278	8
		0.0200	4
		0.0104	1
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	95		
0.15	46		
0.063	13		

Dry Mass of sample, g	737

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	86.7
Silt	13.3
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.165
D30	mm	0.098
D10	mm	0.0398
Uniformity Coefficient		4.2
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 09:27

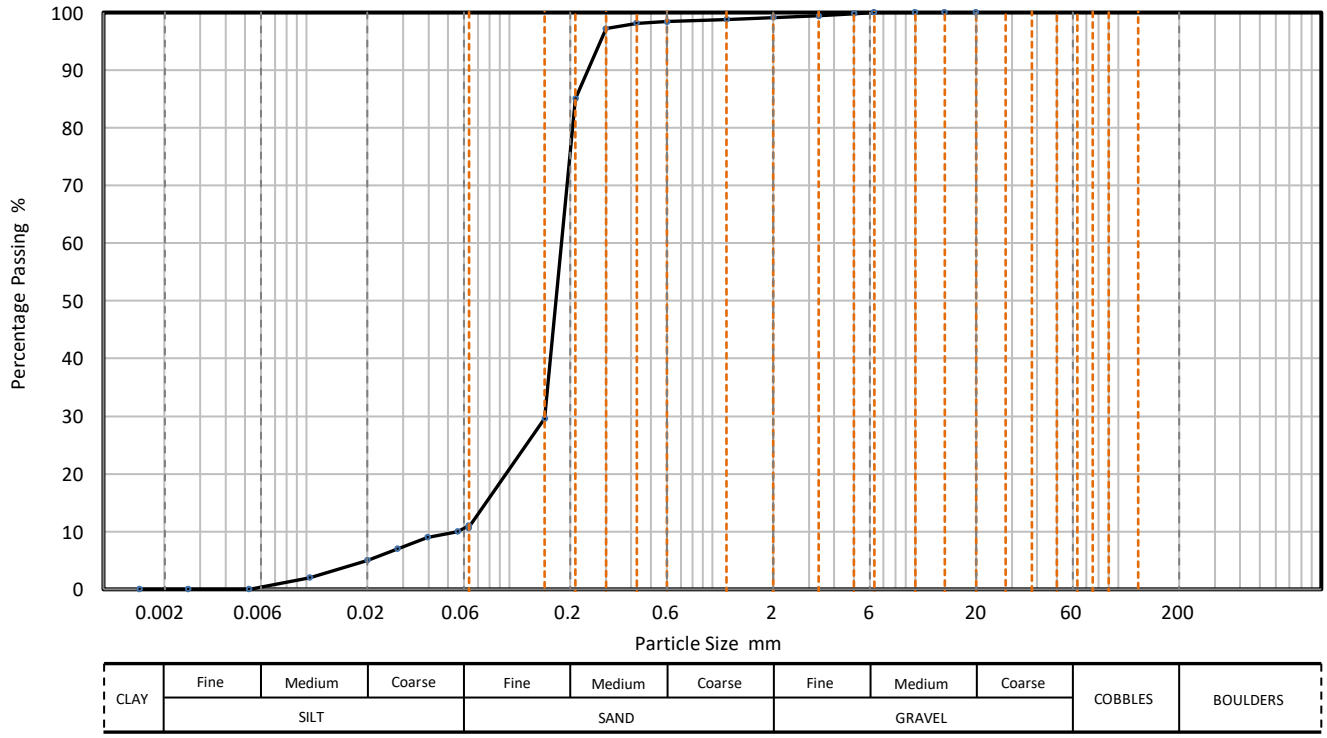
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-114	Lab sample ID	G2MT2025091518
Depth (Top) m	-4.70	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	11
		0.0558	10
		0.0396	9
		0.0281	7
		0.0200	5
		0.0104	2
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	99		
2	99		
1.18	99		
0.6	98	Particle density	(assumed)
0.425	98	2.65	Mg/m3
0.3	97		
0.212	85		
0.15	30		
0.063	11		

Dry Mass of sample, g: 807

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.9
Sand	88.5
Silt	10.6
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.181
D30	mm	0.15
D10	mm	0.059
Uniformity Coefficient		3.1
Curvature Coefficient		2.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 09:43

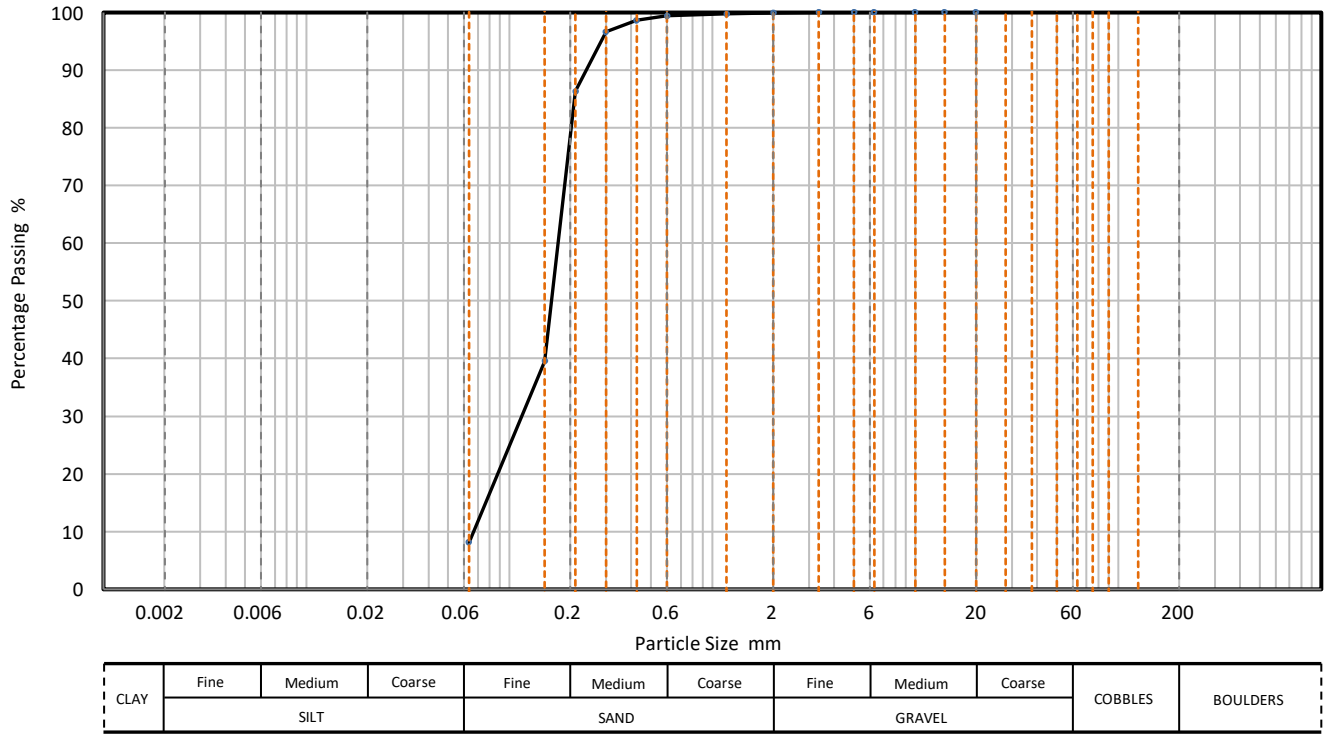
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-114	Lab sample ID	G2MT2025091519
Depth (Top) m	-7.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	97		
0.212	86		
0.15	40		
0.063	8		

Dry Mass of sample, g: 826

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	91.6
Fines <0.063mm	8.0

Grading Analysis		
D100	mm	
D60	mm	0.175
D30	mm	0.115
D10	mm	0.0662
Uniformity Coefficient		2.6
Curvature Coefficient		1.2

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:29

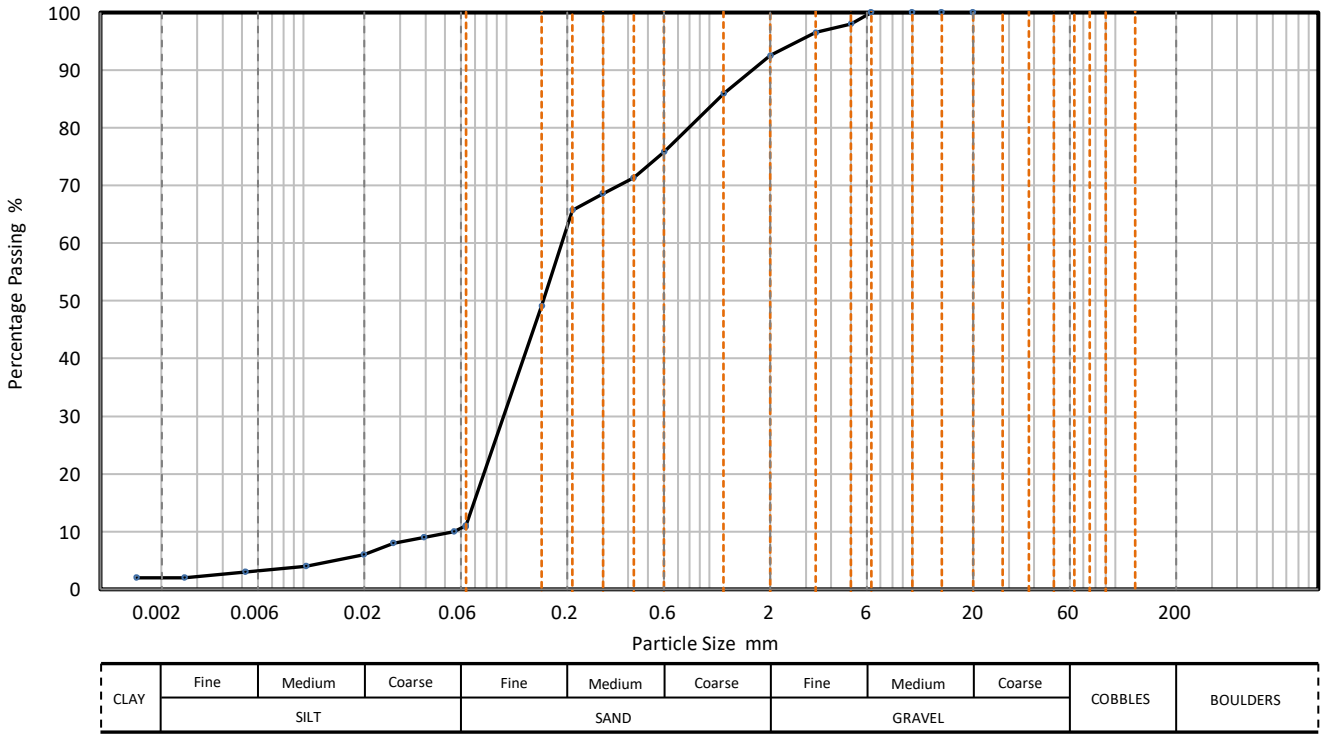
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-114	Lab sample ID	G2MT2025091521
Depth (Top) m	-9.70	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, Gravelly,Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	11
		0.0554	10
		0.0393	9
		0.0278	8
		0.0198	6
		0.0103	4
		0.0052	3
20	100	0.0026	2
14	100	0.0015	2
10	100		
6.3	100		
5	98		
3.35	97		
2	93		
1.18	86		
0.6	76	Particle density	(assumed)
0.425	71	2.65	Mg/m3
0.3	69		
0.212	66		
0.15	49		
0.063	11		

Dry Mass of sample, g: 1168

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	7.5
Sand	81.7
Silt	8.8
Clay	2.0

Grading Analysis		
D100	mm	
D60	mm	0.188
D30	mm	0.0973
D10	mm	0.0578
Uniformity Coefficient		3.3
Curvature Coefficient		0.87

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:05

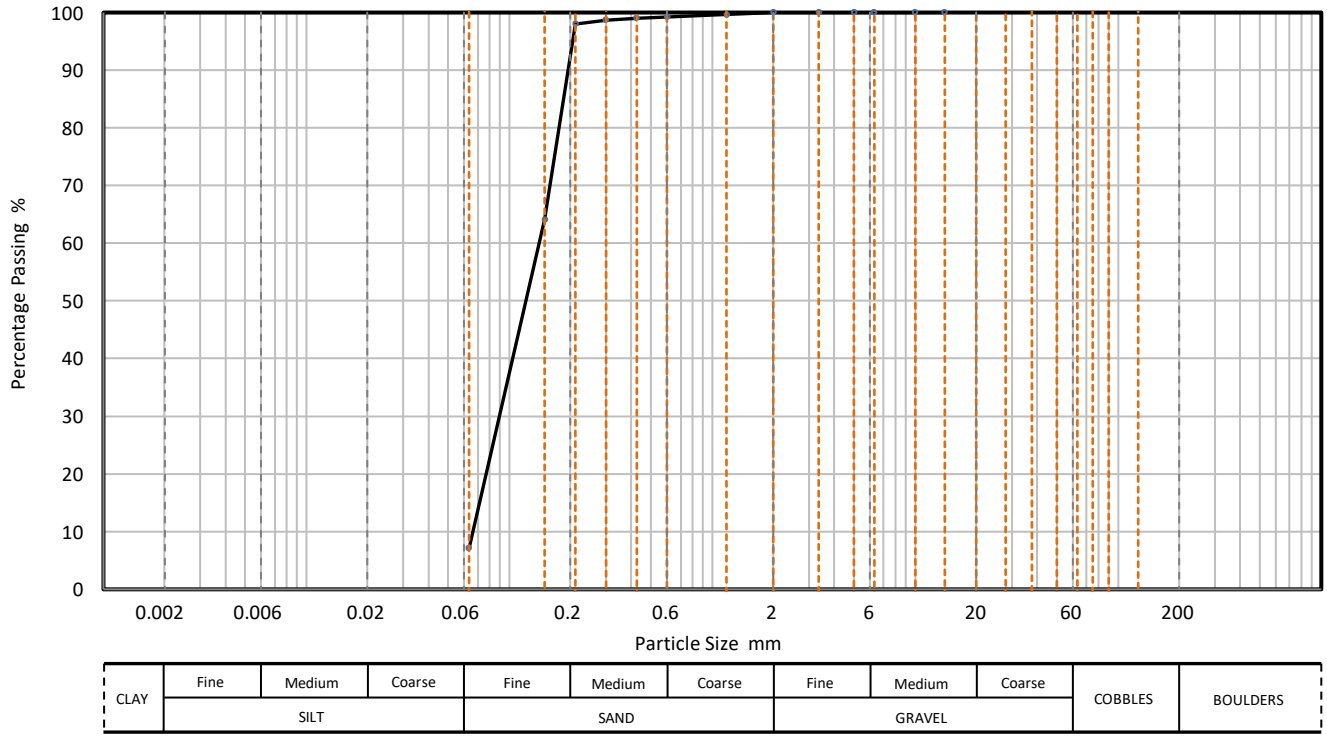
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-114	Lab sample ID	G2MT2025091522
Depth (Top)	m	-12.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Clayey SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	99		
0.212	98		
0.15	64		
0.063	7		

Dry Mass of sample, g	827

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	92.9
Fines <0.063mm	7.0

Grading Analysis		
D100	mm	
D60	mm	0.141
D30	mm	0.0893
D10	mm	0.0659
Uniformity Coefficient		2.1
Curvature Coefficient		0.86

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 08:25

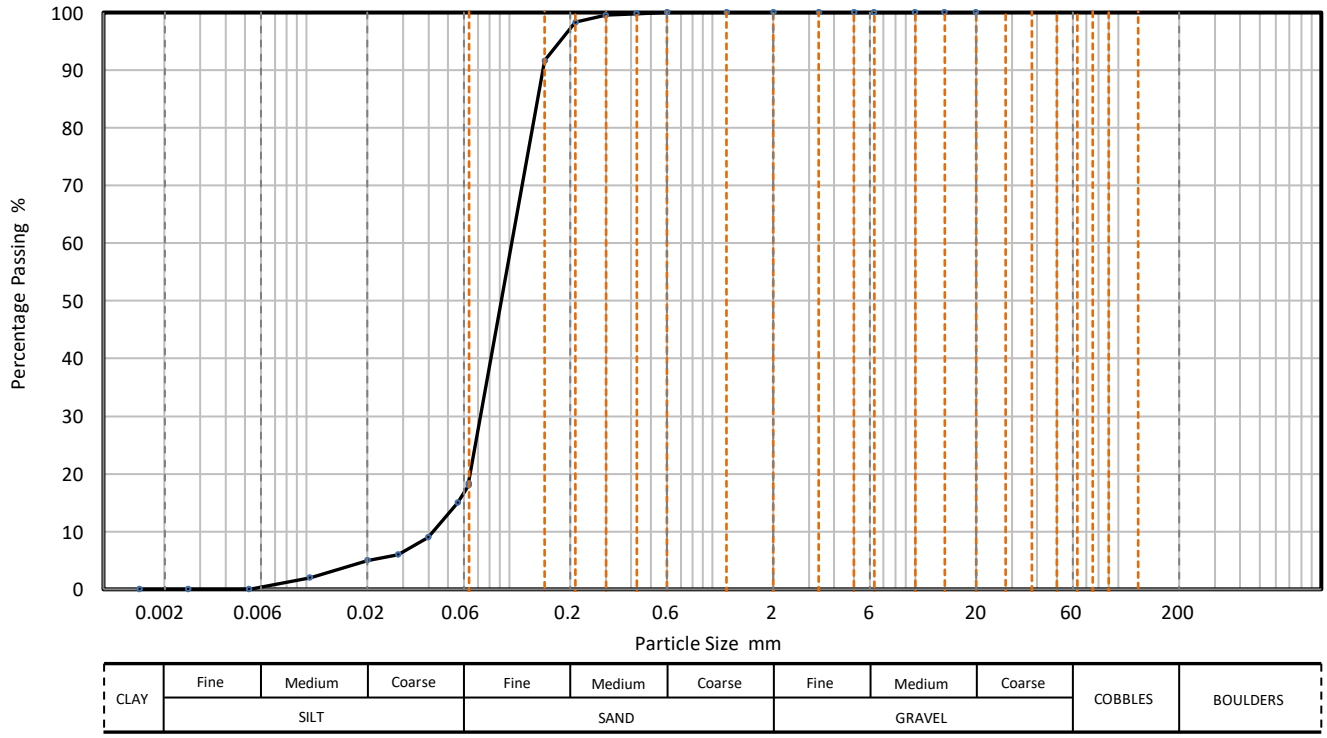
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-115	Lab sample ID	G2MT202509151
Depth (Top)	m	-12.10	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base)	m		Soil Description	Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	18
		0.0558	15
		0.0399	9
		0.0284	6
		0.0201	5
		0.0104	2
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	98		
0.15	92		
0.063	18		

Dry Mass of sample, g	921

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	81.6
Silt	18.4
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.103
D30	mm	0.0723
D10	mm	0.0423
Uniformity Coefficient		2.4
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:08

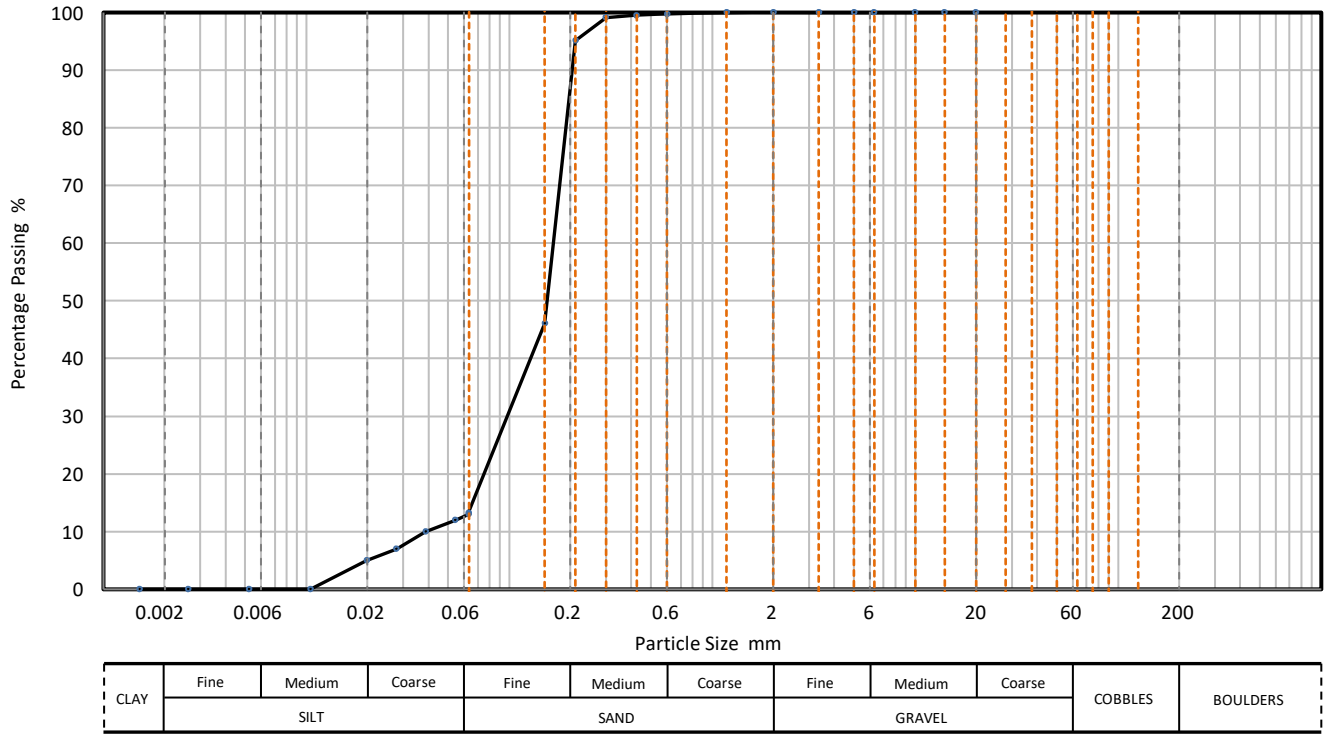
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-116	Lab sample ID	G2MT202509154
Depth (Top) m	-4.50	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	13
		0.0543	12
		0.0388	10
		0.0278	7
		0.0199	5
		0.0105	0
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	95		
0.15	46		
0.063	13		

Dry Mass of sample, g	737

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	86.7
Silt	13.3
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.165
D30	mm	0.098
D10	mm	0.0384
Uniformity Coefficient		4.3
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 09:31

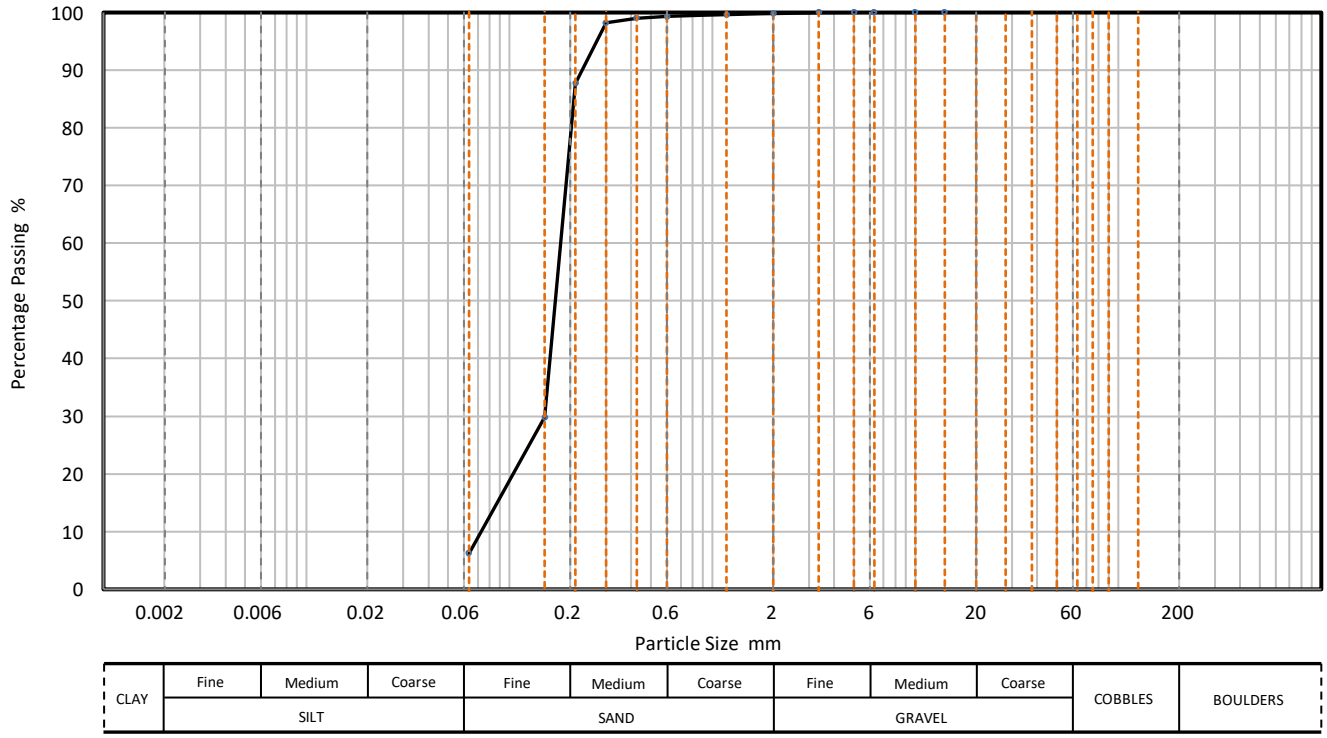
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-116	Lab sample ID	G2MT202509156
Depth (Top) m	-6.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slighlty Gravelly, Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	98		
0.212	88		
0.15	30		
0.063	6		

Dry Mass of sample, g	863

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	93.5
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.18
D30	mm	0.15
D10	mm	0.0722
Uniformity Coefficient		2.5
Curvature Coefficient		1.7

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 08:28

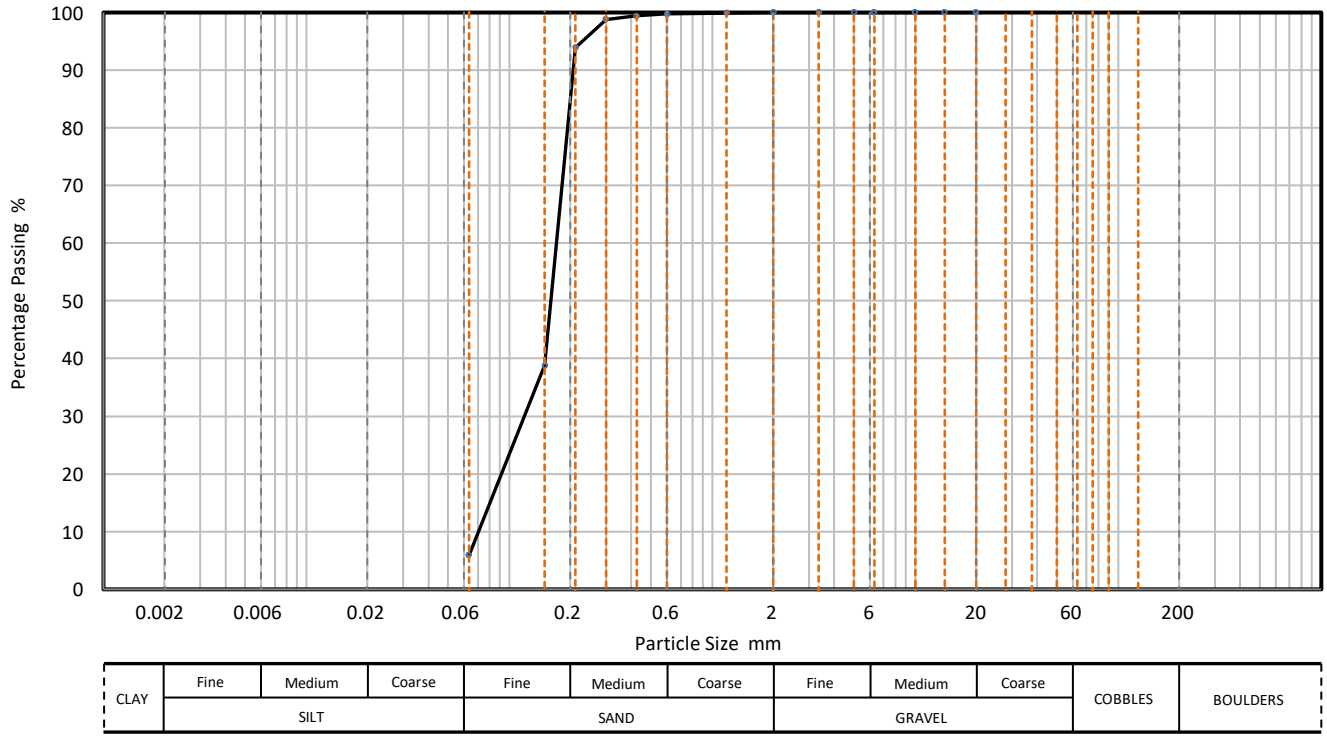
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-116	Lab sample ID	G2MT202509159
Depth (Top) m	-7.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	94		
0.15	39		
0.063	6		

Dry Mass of sample, g	857

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	94.1
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.171
D30	mm	0.119
D10	mm	0.0703
Uniformity Coefficient		2.4
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 08:32

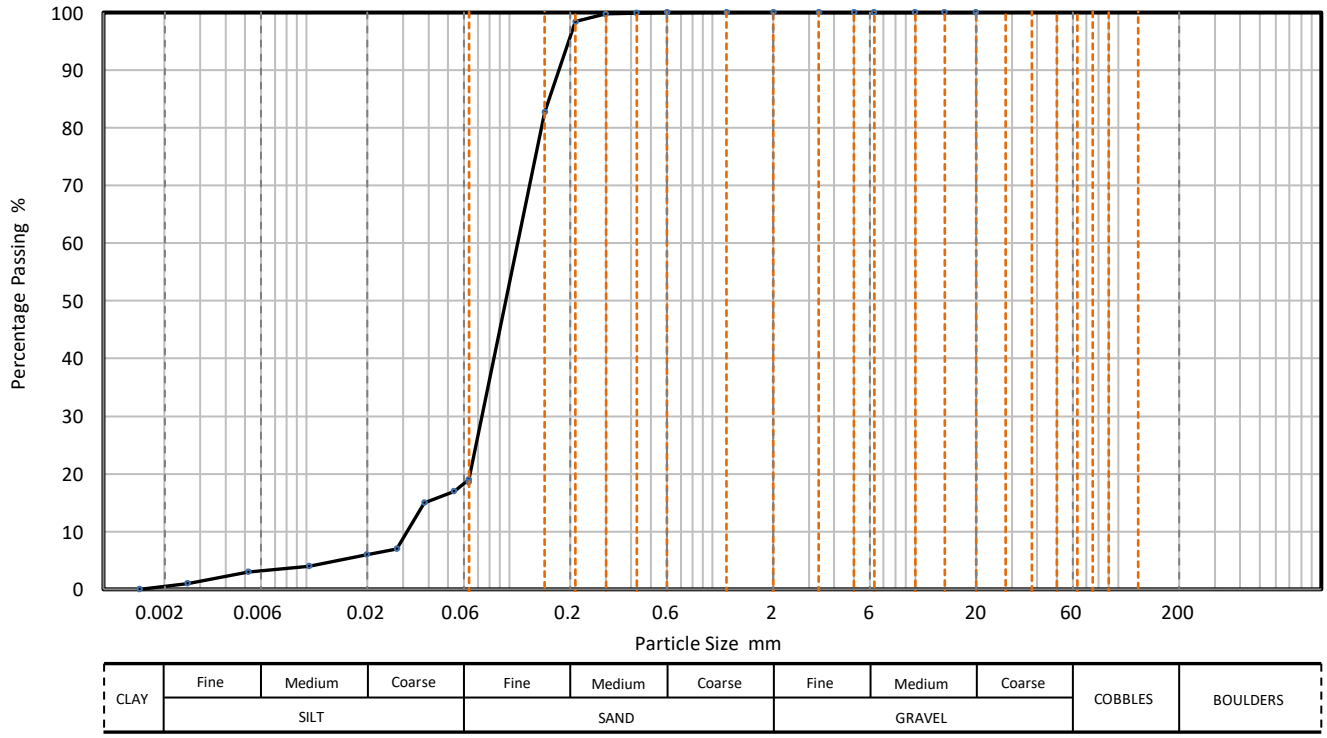
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-116	Lab sample ID	G2MT2025091513
Depth (Top) m	-13.50	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Clayey, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	19
		0.0536	17
		0.0382	15
		0.0279	7
		0.0199	6
		0.0103	4
		0.0052	3
20	100	0.0026	1
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	98		
0.15	83		
0.063	19		

Dry Mass of sample, g: 753

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	81.4
Silt	17.9
Clay	0.7

Grading Analysis		
D100	mm	
D60	mm	0.11
D30	mm	0.0735
D10	mm	0.031
Uniformity Coefficient		3.6
Curvature Coefficient		1.6

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:10

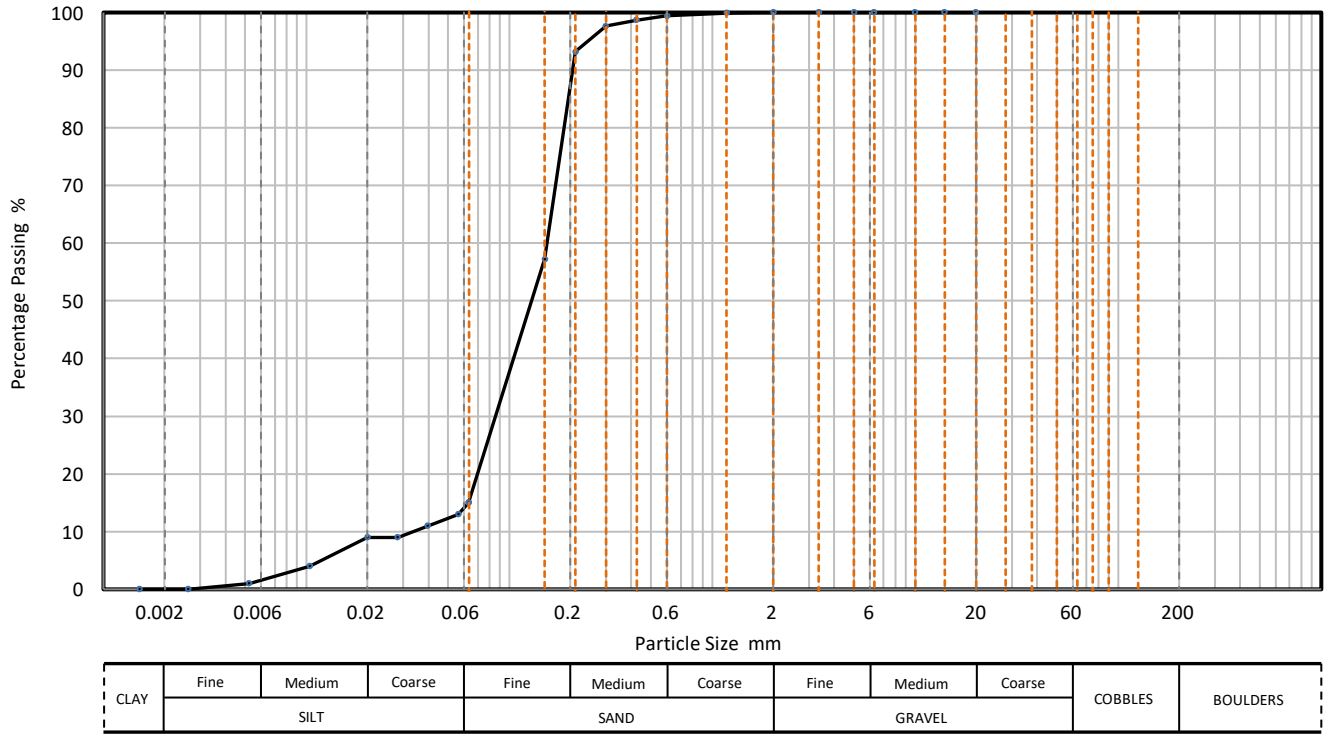
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-117	Lab sample ID	G2MT2025091526
Depth (Top)	m	-13.50	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base)	m		Soil Description	Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	15
		0.0561	13
		0.0398	11
		0.0283	9
		0.0200	9
		0.0104	4
		0.0052	1
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	98		
0.212	93		
0.15	57		
0.063	15		

Dry Mass of sample, g: 825

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	85.0
Silt	15.0
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.154
D30	mm	0.0857
D10	mm	0.0317
Uniformity Coefficient		4.9
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:19

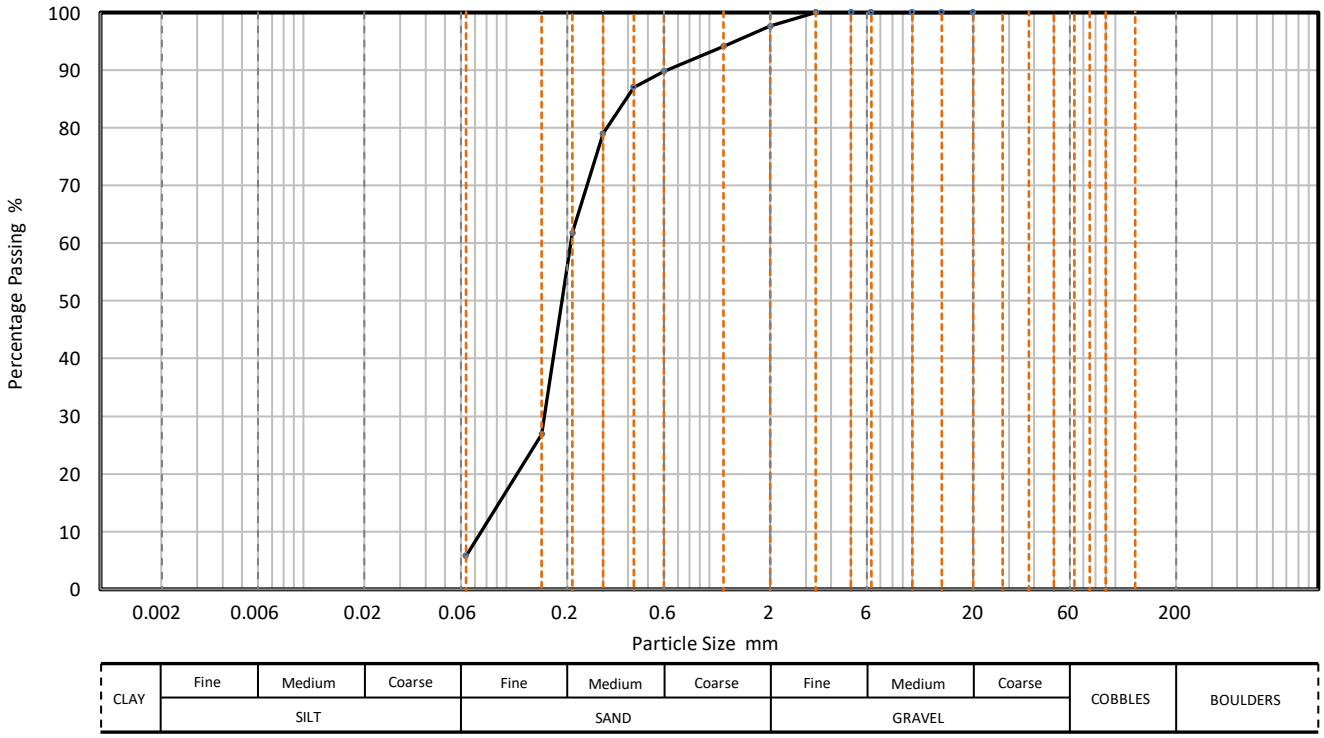
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-118	Lab sample ID	G2MT202509150
Depth (Top) m	-11.60	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	98		
1.18	94		
0.6	90		
0.425	87		
0.3	79		
0.212	62		
0.15	27		
0.063	6		

Dry Mass of sample, g: 896

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	2.4
Sand	91.7
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.208
D30	mm	0.155
D10	mm	0.0748
Uniformity Coefficient		2.8
Curvature Coefficient		1.5

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 09:04

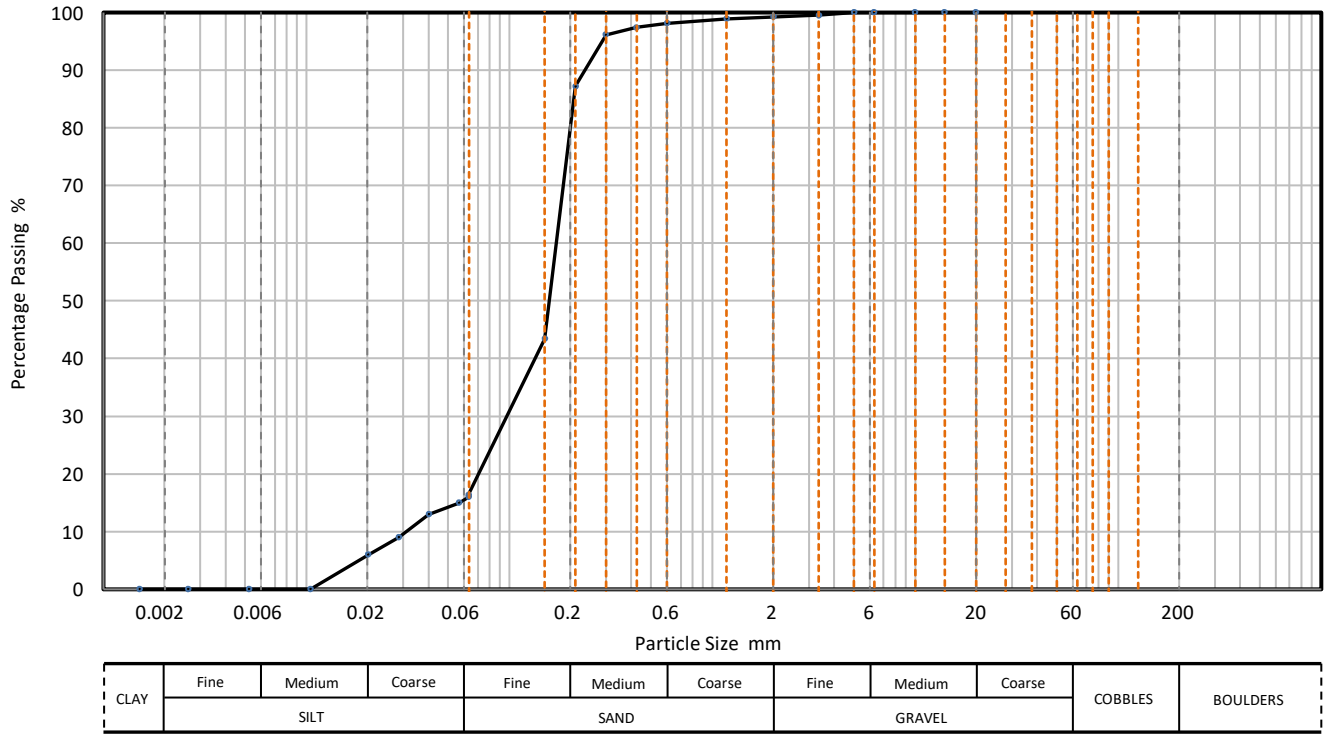
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-119	Lab sample ID	G2MT202510023
Depth (Top) m	-6.30	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	16
		0.0568	15
		0.0402	13
		0.0285	9
		0.0202	6
		0.0105	0
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	98	Particle density	(assumed)
0.425	97	2.65	Mg/m3
0.3	96		
0.212	87		
0.15	43		
0.063	16		

Dry Mass of sample, g	417

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	82.9
Silt	16.3
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.171
D30	mm	0.0976
D10	mm	0.0309
Uniformity Coefficient		5.5
Curvature Coefficient		1.8

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/10/2025 10:02

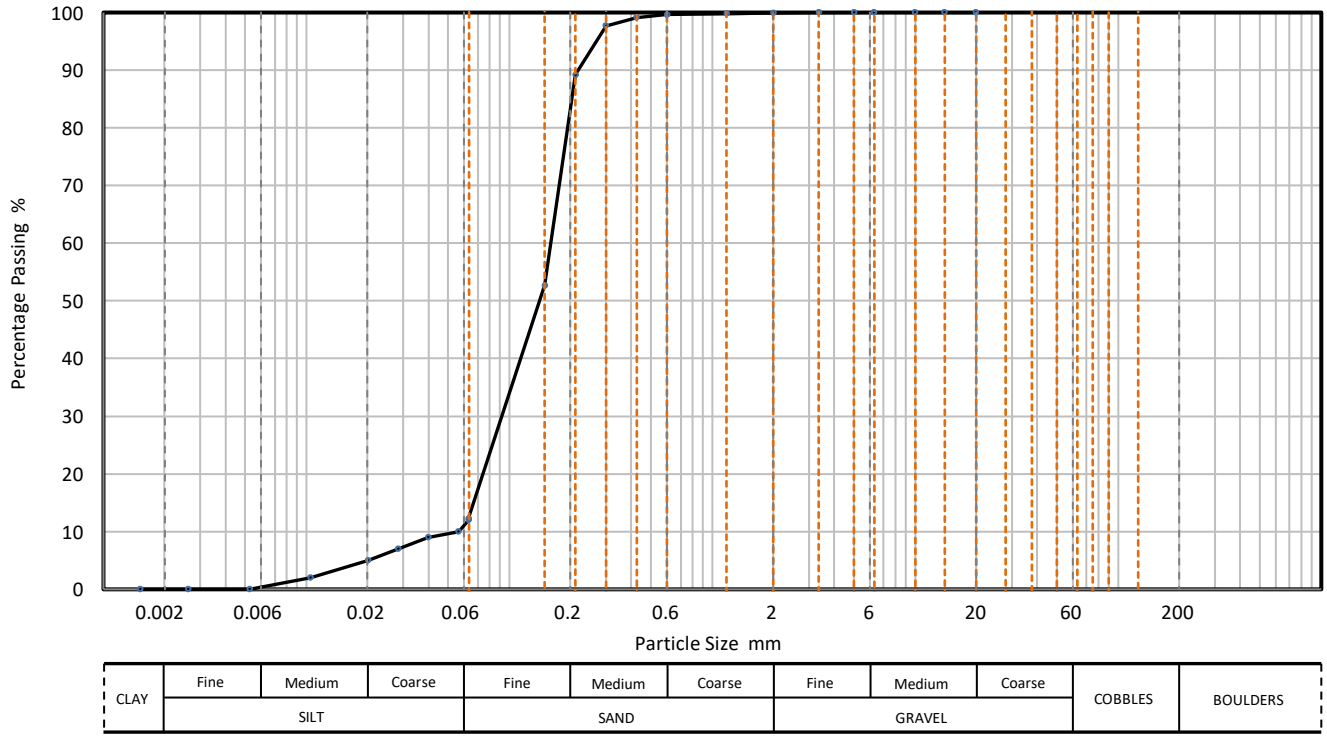
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-119	Lab sample ID	G2MT202510024
Depth (Top) m	-9.30	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	12
		0.0563	10
		0.0399	9
		0.0284	7
		0.0202	5
		0.0105	2
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	98		
0.212	89		
0.15	53		
0.063	12		

Dry Mass of sample, g	887

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	87.6
Silt	12.3
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.161
D30	mm	0.0921
D10	mm	0.0485
Uniformity Coefficient		3.3
Curvature Coefficient		1.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 12:58

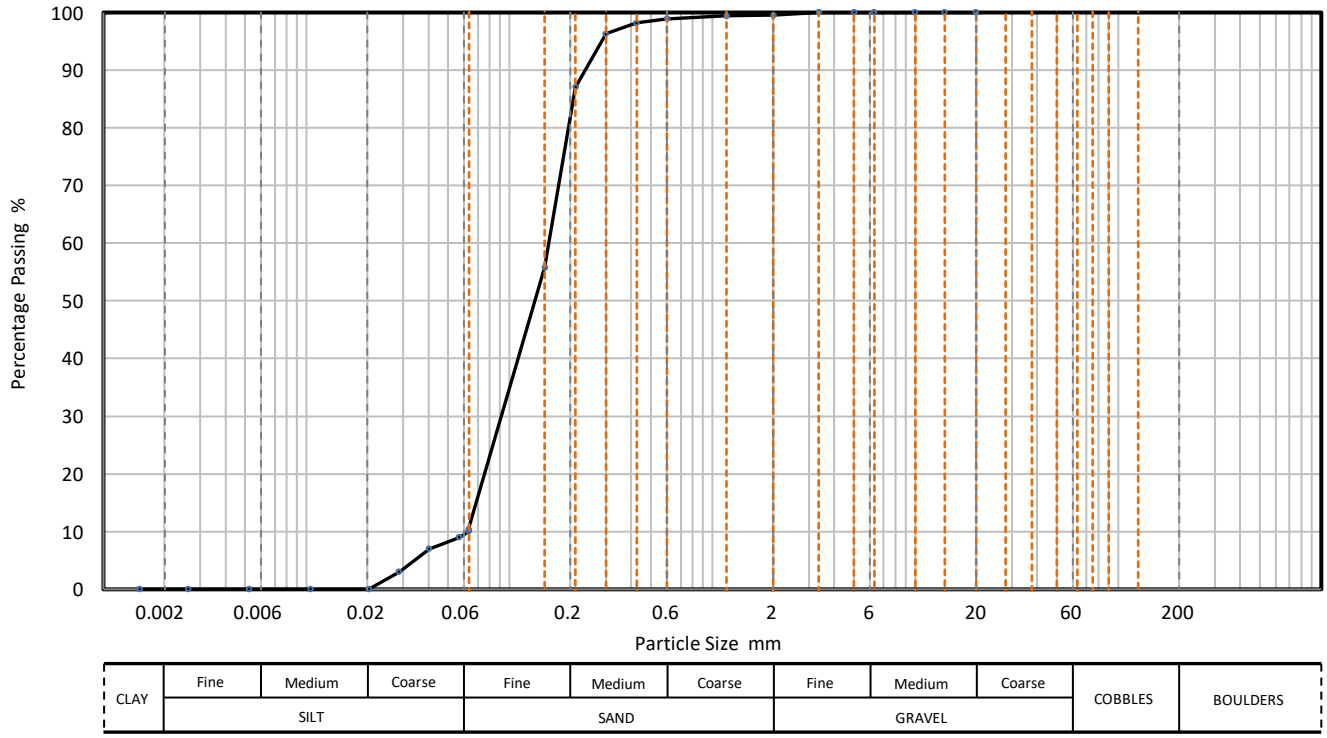
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-119	Lab sample ID	G2MT202510026
Depth (Top) m	-12.30	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	10
		0.0569	9
		0.0403	7
		0.0286	3
		0.0203	0
		0.0105	0
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	99	Particle density	(assumed)
0.425	98	2.65	Mg/m3
0.3	96		
0.212	87		
0.15	56		
0.063	10		

Dry Mass of sample, g: 519

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.5
Sand	89.1
Silt	10.4
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.157
D30	mm	0.0916
D10	mm	0.0614
Uniformity Coefficient		2.6
Curvature Coefficient		0.87

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/10/2025 10:04

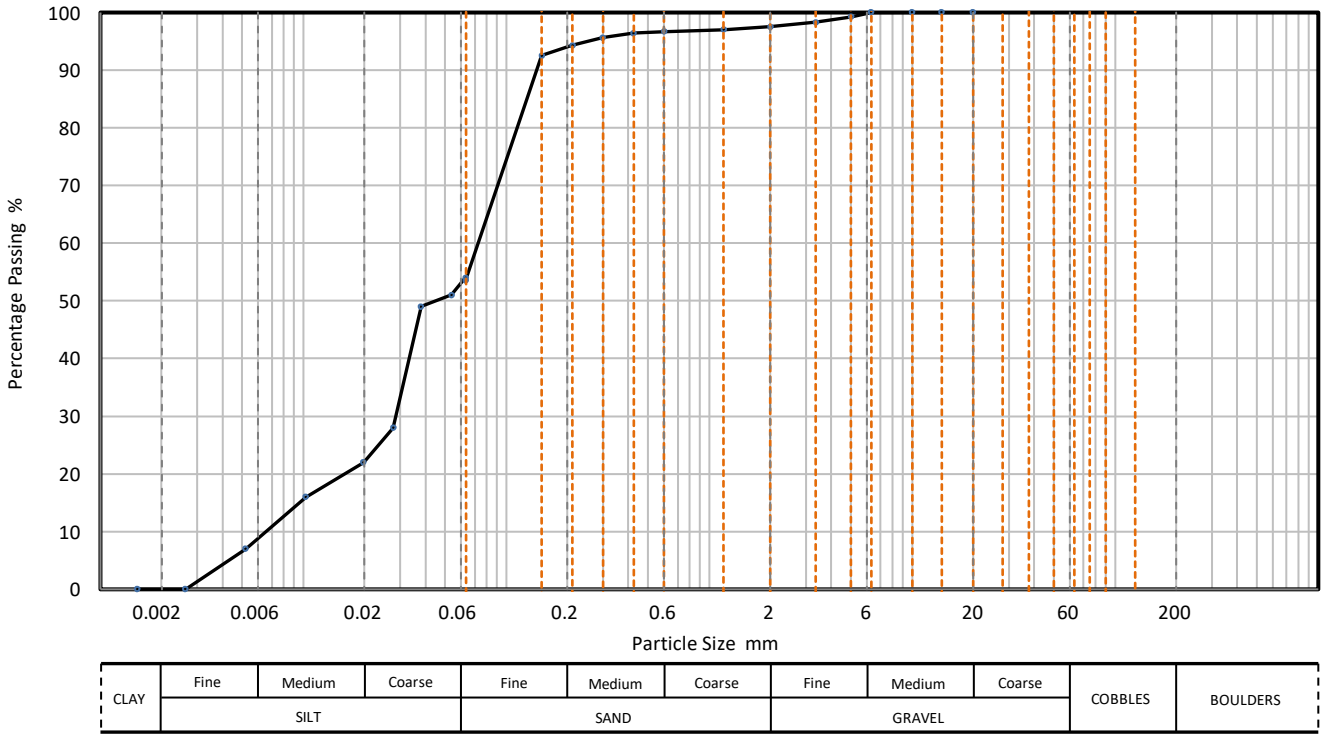
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-119	Lab sample ID	G2MT202510028
Depth (Top) m	-19.80	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, very Sandy, SILT
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	54
		0.0537	51
		0.0381	49
		0.0278	28
		0.0198	22
		0.0103	16
		0.0052	7
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	99		
3.35	98		
2	98		
1.18	97		
0.6	97	Particle density	(assumed)
0.425	96	2.65	Mg/m3
0.3	96		
0.212	94		
0.15	93		
0.063	54		

Dry Mass of sample, g	835

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	2.5
Sand	44.0
Silt	53.5
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.0727
D30	mm	0.0286
D10	mm	0.00646
Uniformity Coefficient		11
Curvature Coefficient		1.7

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 12:54

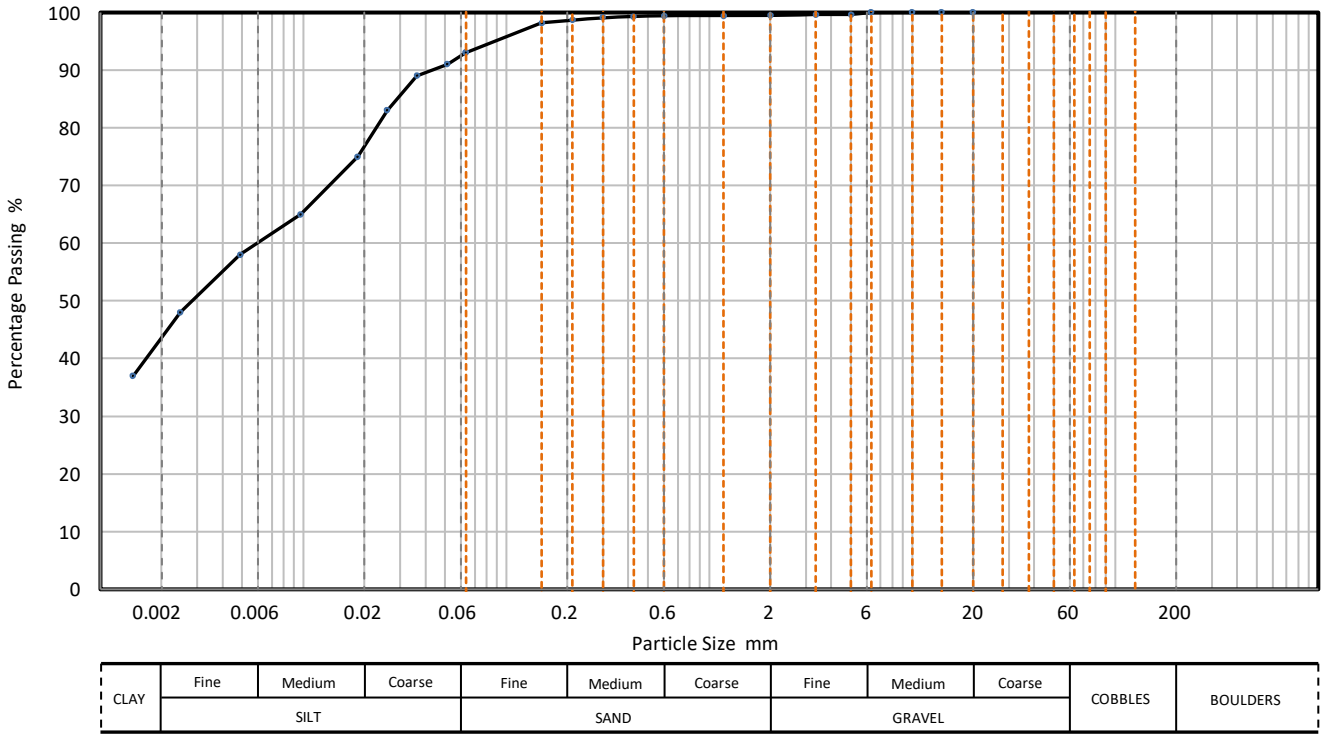
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-119	Lab sample ID	G2MT2025100210
Depth (Top) m	-21.30	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Sandy, very Clayey, SILT
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	93
		0.0513	91
		0.0364	89
		0.0259	83
		0.0185	75
		0.0097	65
		0.0049	58
20	100	0.0025	48
14	100	0.0014	37
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	99	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	99		
0.212	99		
0.15	98		
0.063	93		

Dry Mass of sample, g	679

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.5
Sand	6.5
Silt	49.3
Clay	43.7

Grading Analysis		
D100	mm	
D60	mm	0.00612
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	15/10/2025 09:22

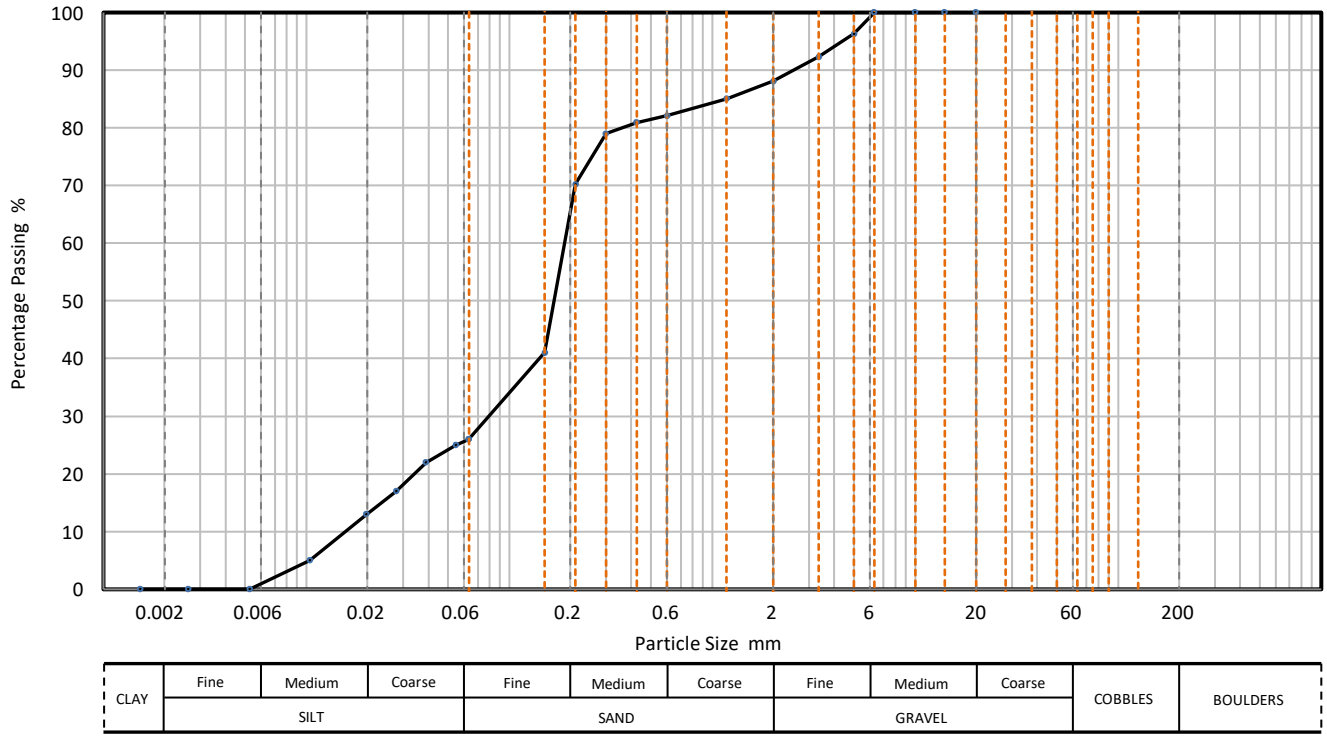
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-201	Lab sample ID	G2MT2025101434
Depth (Top) m	-5.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Gravelly,very Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	26
		0.0545	25
		0.0389	22
		0.0278	17
		0.0198	13
		0.0104	5
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	96		
3.35	92		
2	88		
1.18	85		
0.6	82	Particle density (assumed)	
0.425	81	2.65	Mg/m3
0.3	79		
0.212	70		
0.15	41		
0.063	26		

Dry Mass of sample, g: 328

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	11.9
Sand	62.1
Silt	26.0
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.188
D30	mm	0.0794
D10	mm	0.0156
Uniformity Coefficient		12
Curvature Coefficient		2.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:38

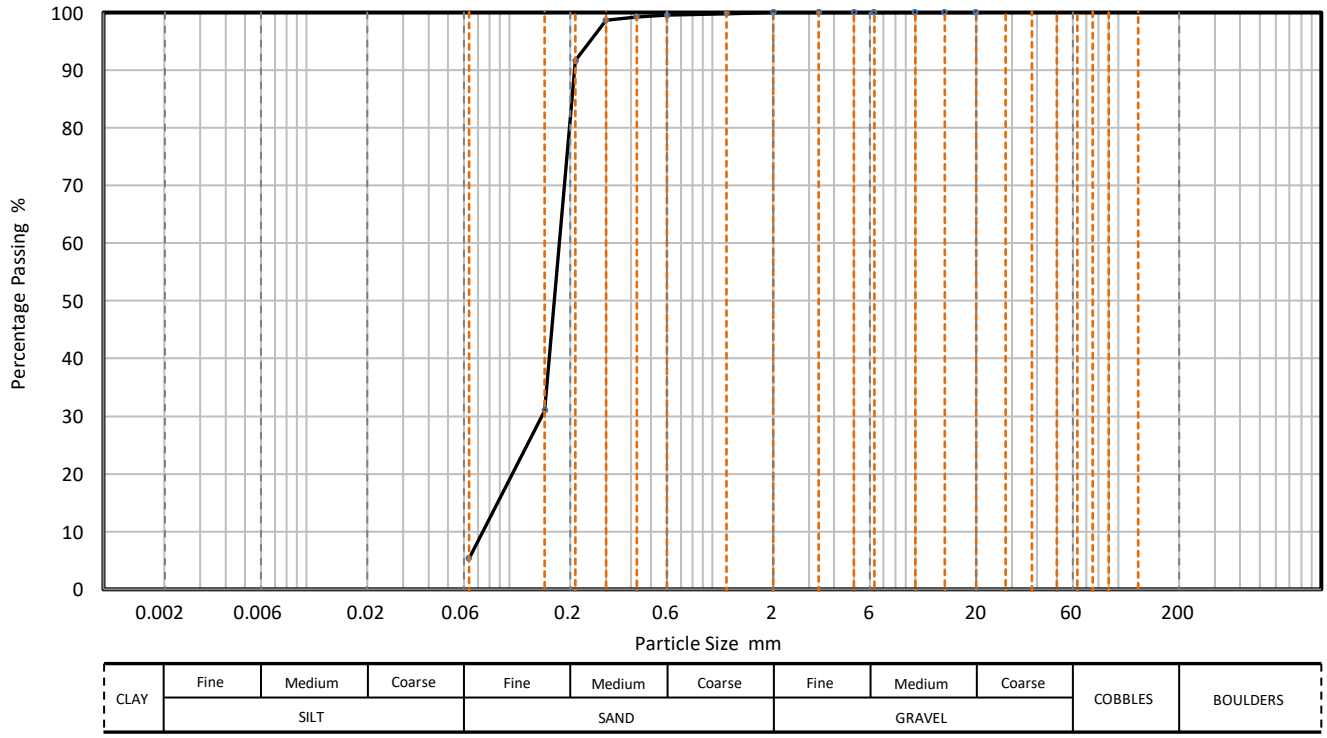
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-201	Lab sample ID	G2MT2025101435
Depth (Top) m	-6.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	92		
0.15	31		
0.063	5		

Dry Mass of sample, g	768

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	94.6
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.177
D30	mm	0.145
D10	mm	0.0737
Uniformity Coefficient		2.4
Curvature Coefficient		1.6

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 10:10

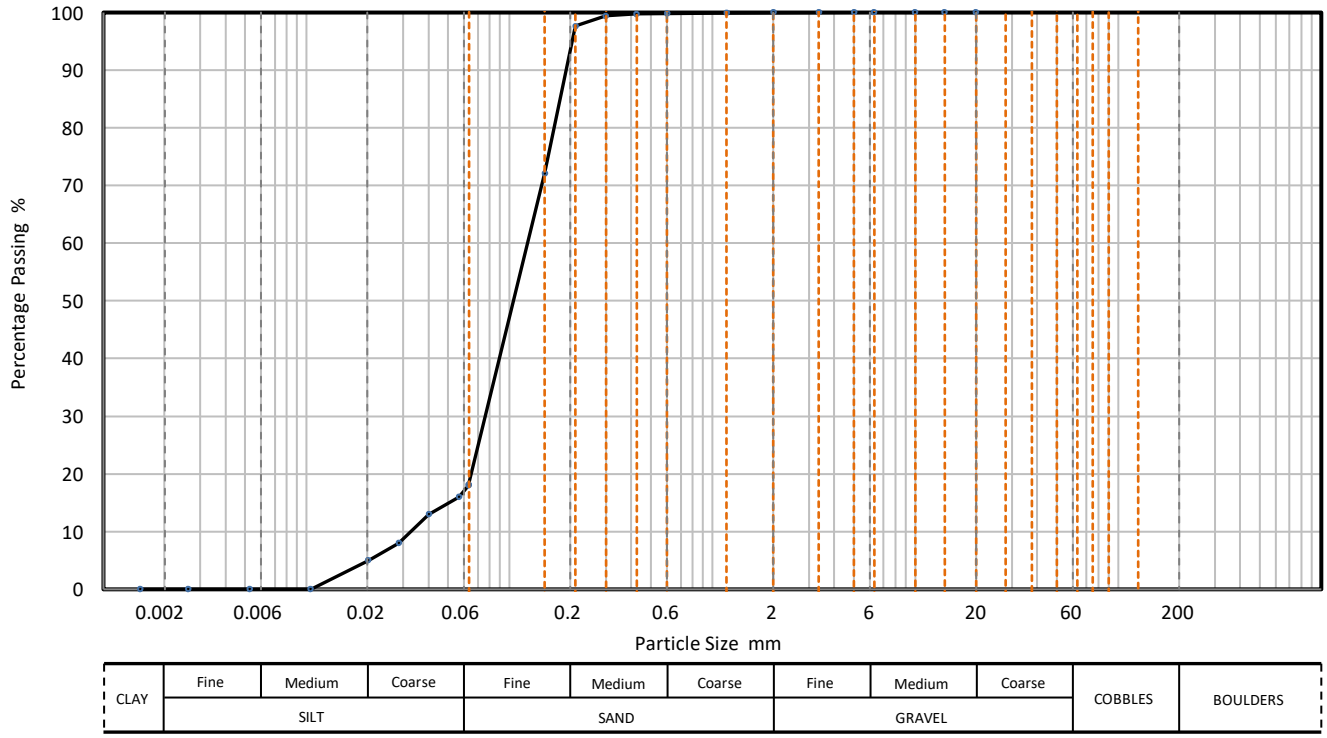
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-201	Lab sample ID	G2MT2025101436
Depth (Top)	m	-11.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base)	m		Soil Description	Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	18
		0.0566	16
		0.0401	13
		0.0286	8
		0.0203	5
		0.0105	0
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	98		
0.15	72		
0.063	18		

Dry Mass of sample, g: 818

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	81.9
Silt	18.1
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.124
D30	mm	0.0763
D10	mm	0.0329
Uniformity Coefficient		3.8
Curvature Coefficient		1.4

Remarks
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Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	25/11/2025 07:40

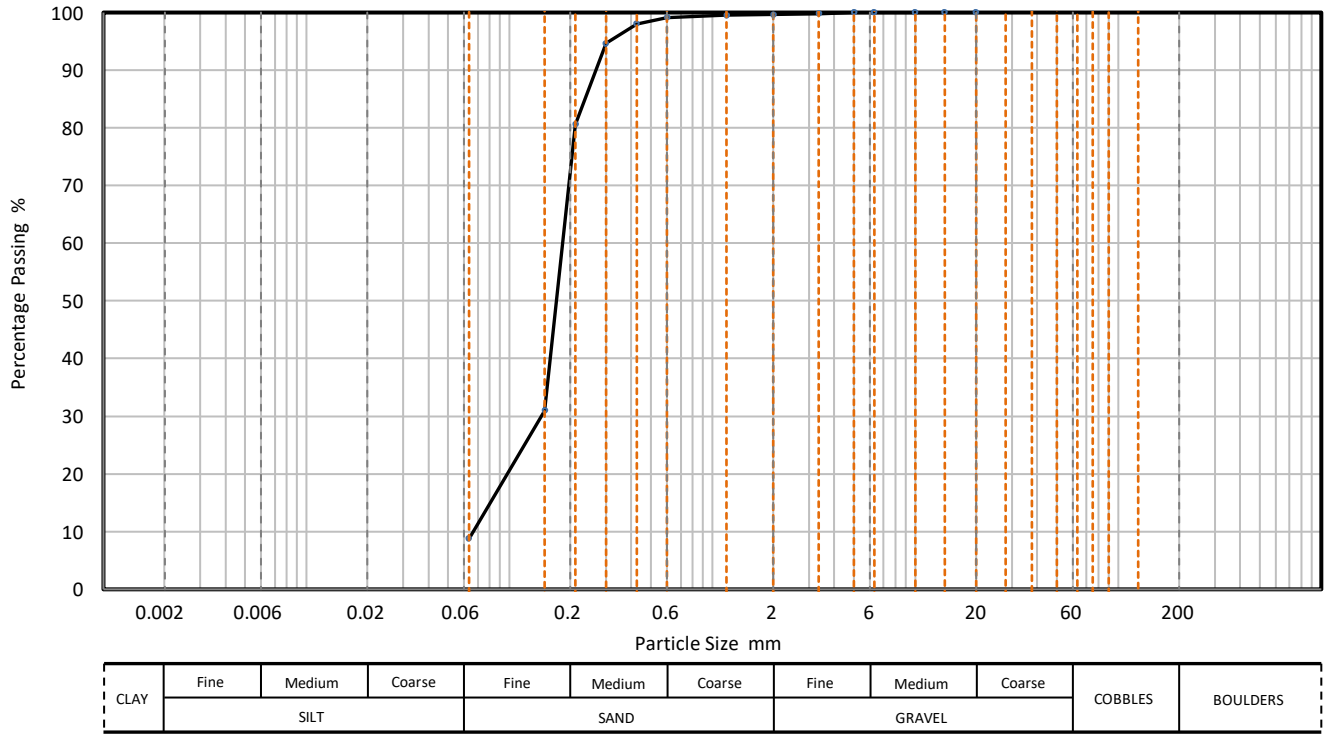
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-201	Lab sample ID	G2MT2025101437
Depth (Top) m	-12.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	95		
0.212	81		
0.15	31		
0.063	9		

Dry Mass of sample, g: 922

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.4
Sand	90.8
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.184
D30	mm	0.144
D10	mm	0.0659
Uniformity Coefficient		2.8
Curvature Coefficient		1.7

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	27/10/2025 09:34

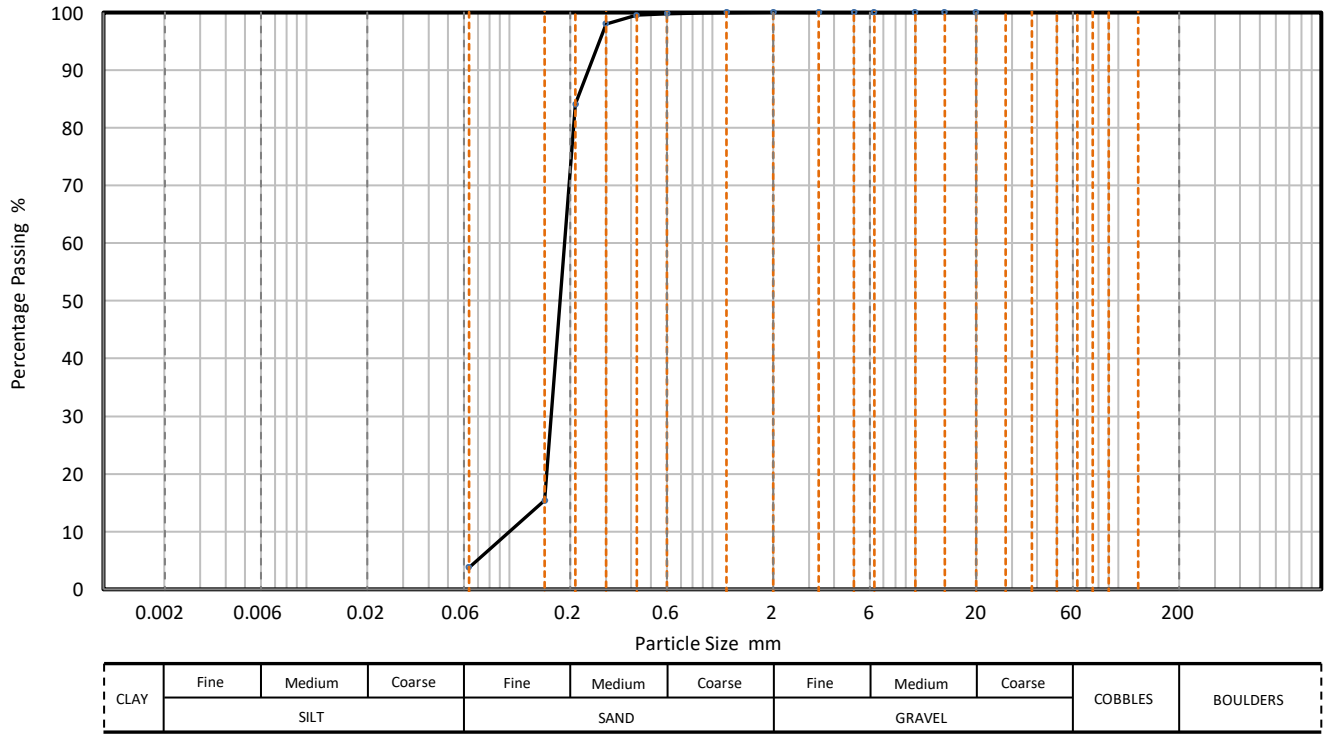
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-202	Lab sample ID	G2MT2025101430
Depth (Top) m	-4.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	98		
0.212	84		
0.15	15		
0.063	4		

Dry Mass of sample, g	1025

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	96.2
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.188
D30	mm	0.161
D10	mm	0.1
Uniformity Coefficient		1.9
Curvature Coefficient		1.4

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	19/01/2026 15:13

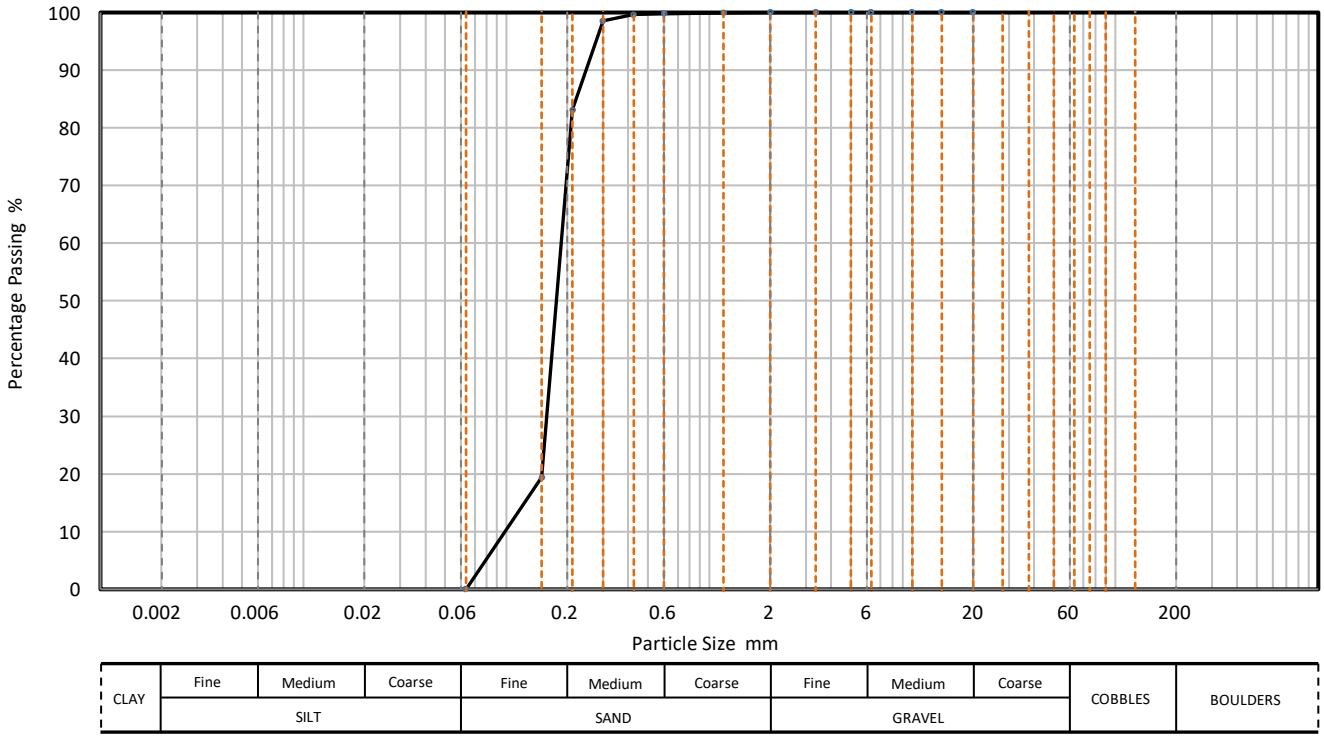
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-202	Lab sample ID	G2MT202510270
Depth (Top) m	5.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m	5.5	Soil Description	SAND
Sample type	D		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	83		
0.15	19		
0.063	0		

Dry Mass of sample, g: 924

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	99.9
Fines <0.063mm	0.0

Grading Analysis		
D100	mm	
D60	mm	0.187
D30	mm	0.159
D10	mm	0.0983
Uniformity Coefficient		1.9
Curvature Coefficient		1.4

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 10:30

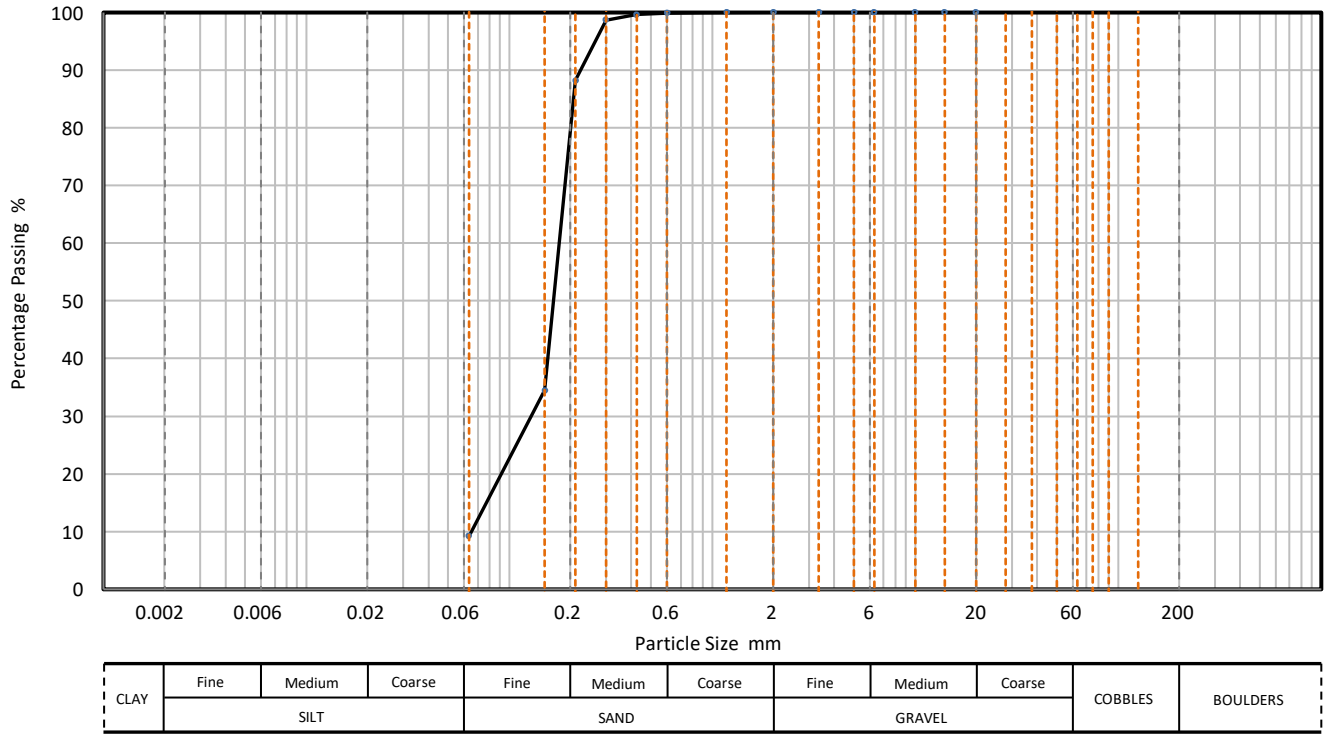
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-202	Lab sample ID	G2MT2025101431
Depth (Top) m	-10.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	88		
0.15	35		
0.063	9		

Dry Mass of sample, g	1031

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	90.7
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.177
D30	mm	0.129
D10	mm	0.0646
Uniformity Coefficient		2.7
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	06/01/2026 11:20

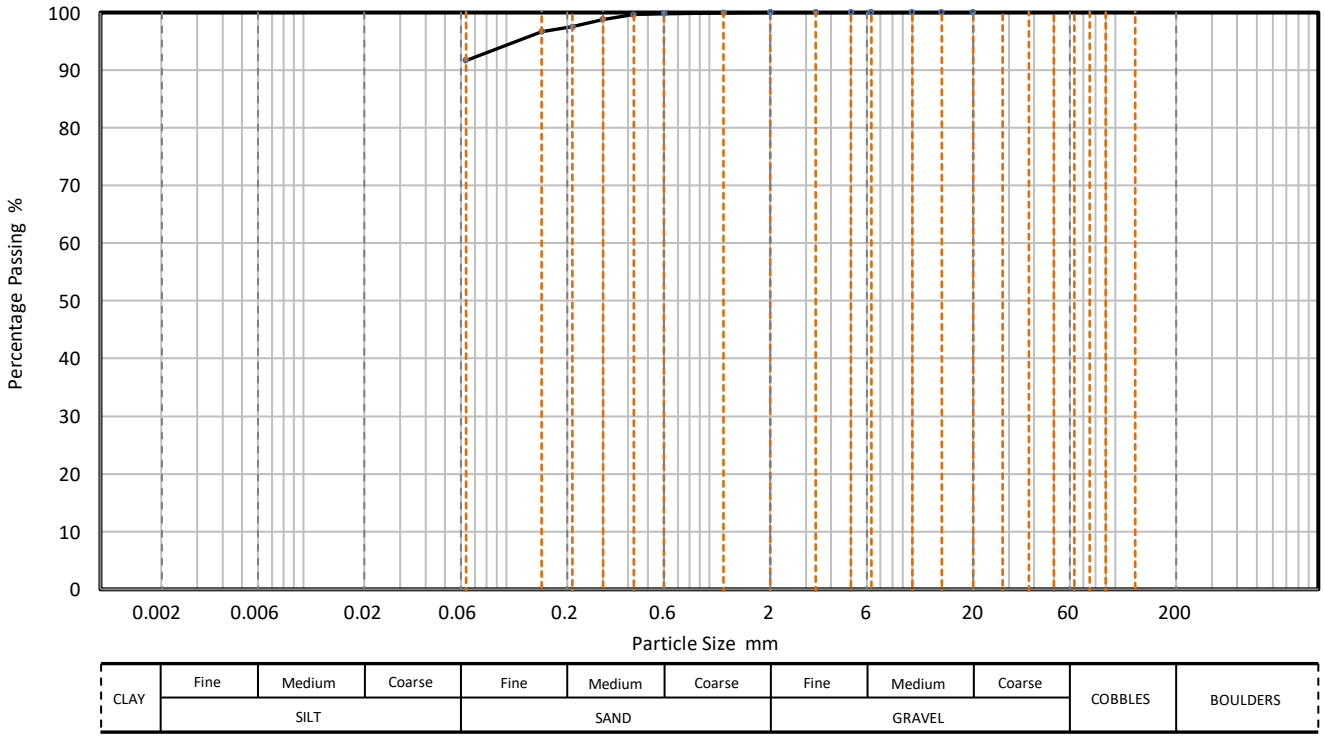
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-202	Lab sample ID	G2MT2025101432
Depth (Top)	m	-13.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Sandy CLAY
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	98		
0.15	97		
0.063	92		

Dry Mass of sample, g: 911

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	8.2
Fines <0.063mm	92.0

Grading Analysis		
D100	mm	
D60	mm	
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	13/01/2026 12:53

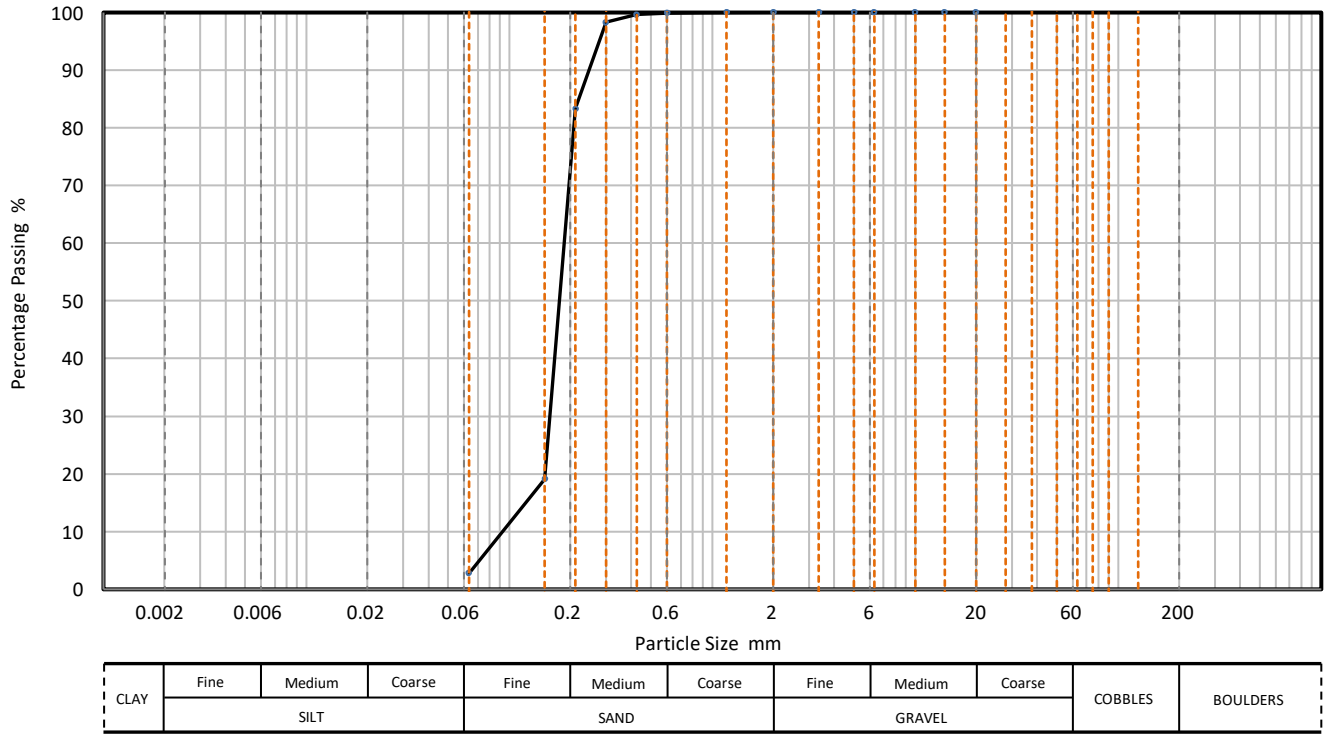
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-203	Lab sample ID	G2MT2025091548
Depth (Top) m	-6.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	98		
0.212	83		
0.15	19		
0.063	3		

Dry Mass of sample, g: 864

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.2
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.187
D30	mm	0.159
D10	mm	0.0923
Uniformity Coefficient		2
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 09:20

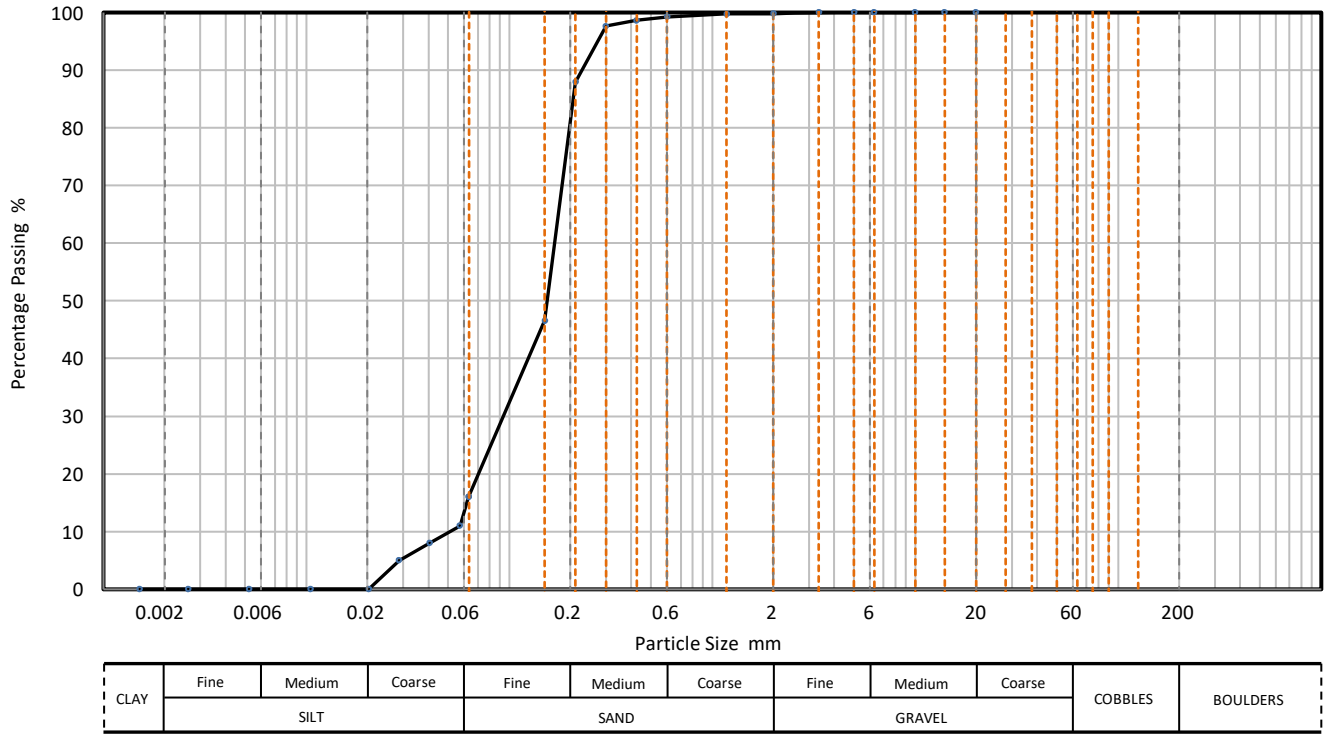
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-203	Lab sample ID	G2MT2025091552
Depth (Top) m	-10.50	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	16
		0.0572	11
		0.0405	8
		0.0287	5
		0.0203	0
		0.0105	0
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	98		
0.212	88		
0.15	47		
0.063	16		

Dry Mass of sample, g: 840

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	83.8
Silt	16.0
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.168
D30	mm	0.0936
D10	mm	0.0525
Uniformity Coefficient		3.2
Curvature Coefficient		1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:06

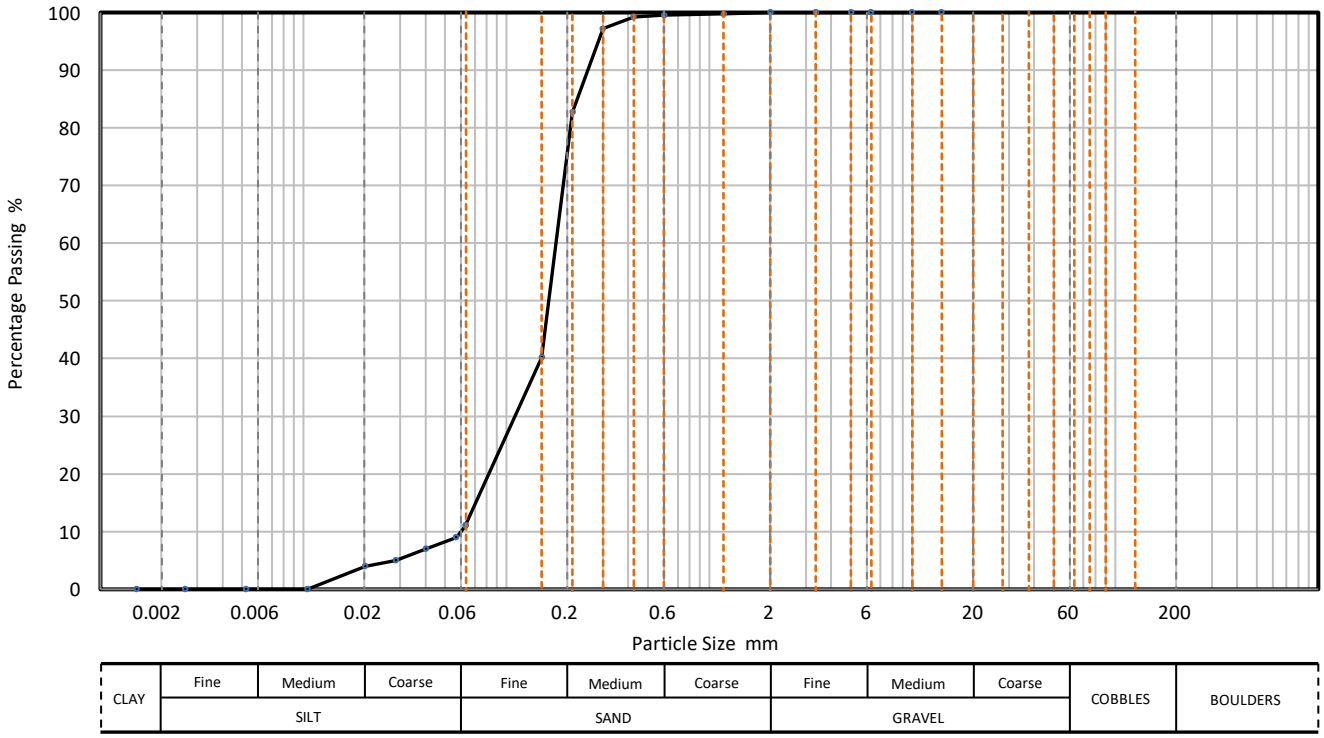
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-203	Lab sample ID	G2MT2025091554
Depth (Top) m	-15.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	11
		0.0568	9
		0.0403	7
		0.0286	5
		0.0202	4
		0.0105	0
		0.0052	0
		0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	97		
0.212	83		
0.15	40		
0.063	11		

Dry Mass of sample, g	914

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	88.9
Silt	11.1
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.176
D30	mm	0.111
D10	mm	0.0593
Uniformity Coefficient		3
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:12

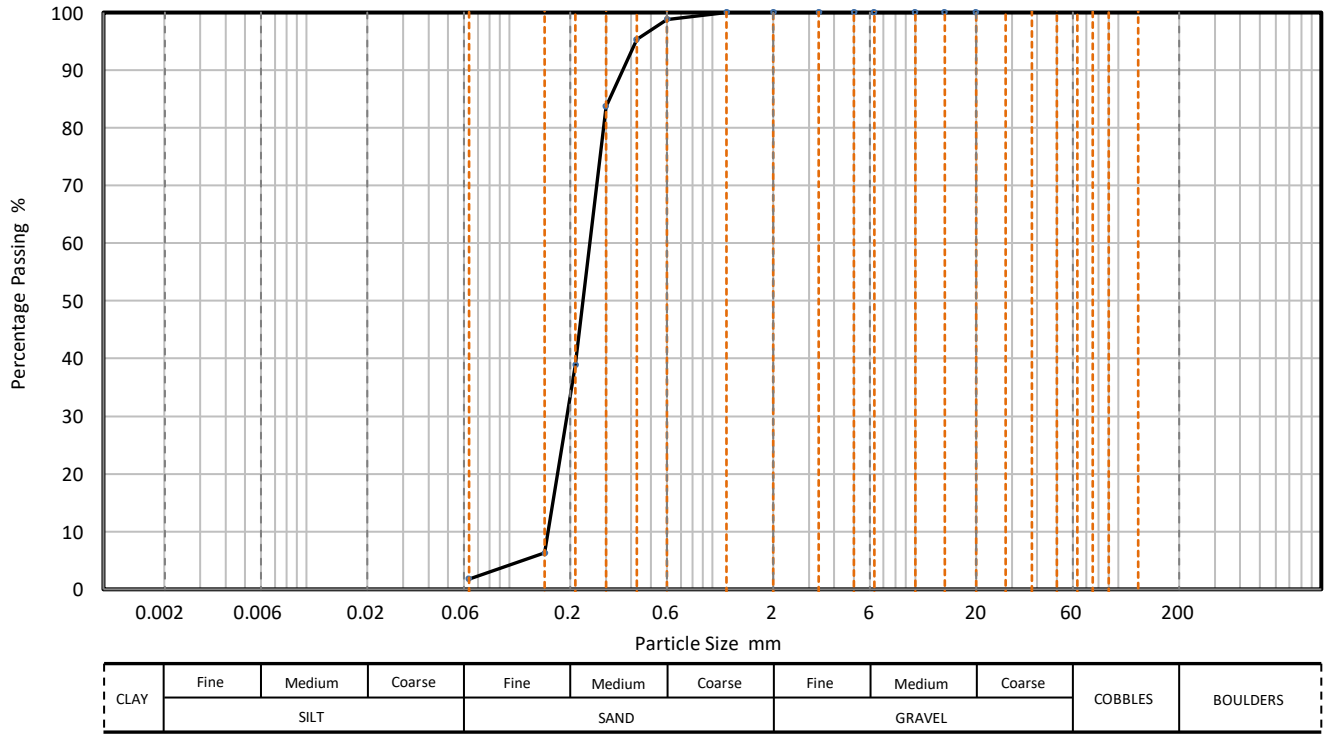
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-205	Lab sample ID	G2MT2025101444
Depth (Top) m	-2.08	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	95		
0.3	84		
0.212	39		
0.15	6		
0.063	2		

Dry Mass of sample, g: 1150

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	98.2
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.25
D30	mm	0.193
D10	mm	0.156
Uniformity Coefficient		1.6
Curvature Coefficient		0.96

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
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Approved by	D Anderson
Approval date	27/10/2025 10:12

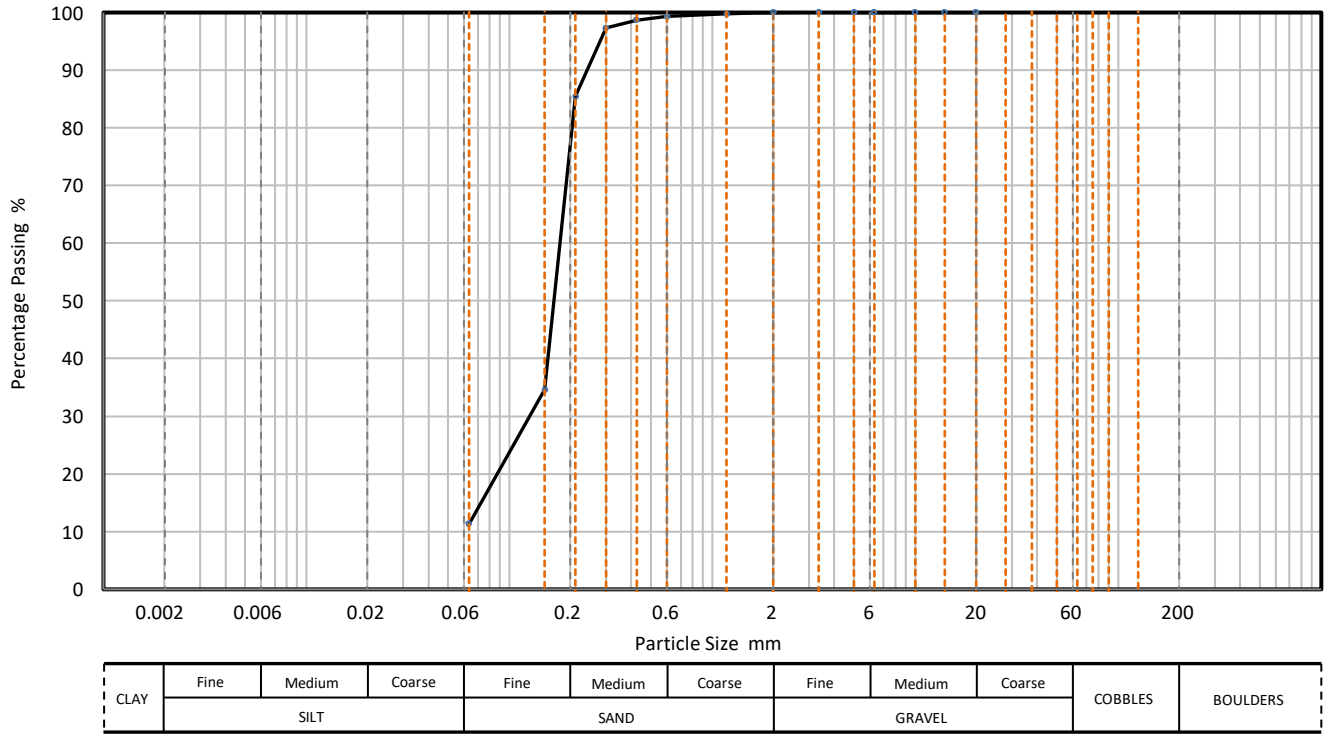
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-205	Lab sample ID	G2MT2025101445
Depth (Top) m	-6.80	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	97		
0.212	85		
0.15	35		
0.063	11		

Dry Mass of sample, g: 1054

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	88.6
Fines <0.063mm	11.0

Grading Analysis		
D100	mm	
D60	mm	0.178
D30	mm	0.126
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	13/01/2026 12:53

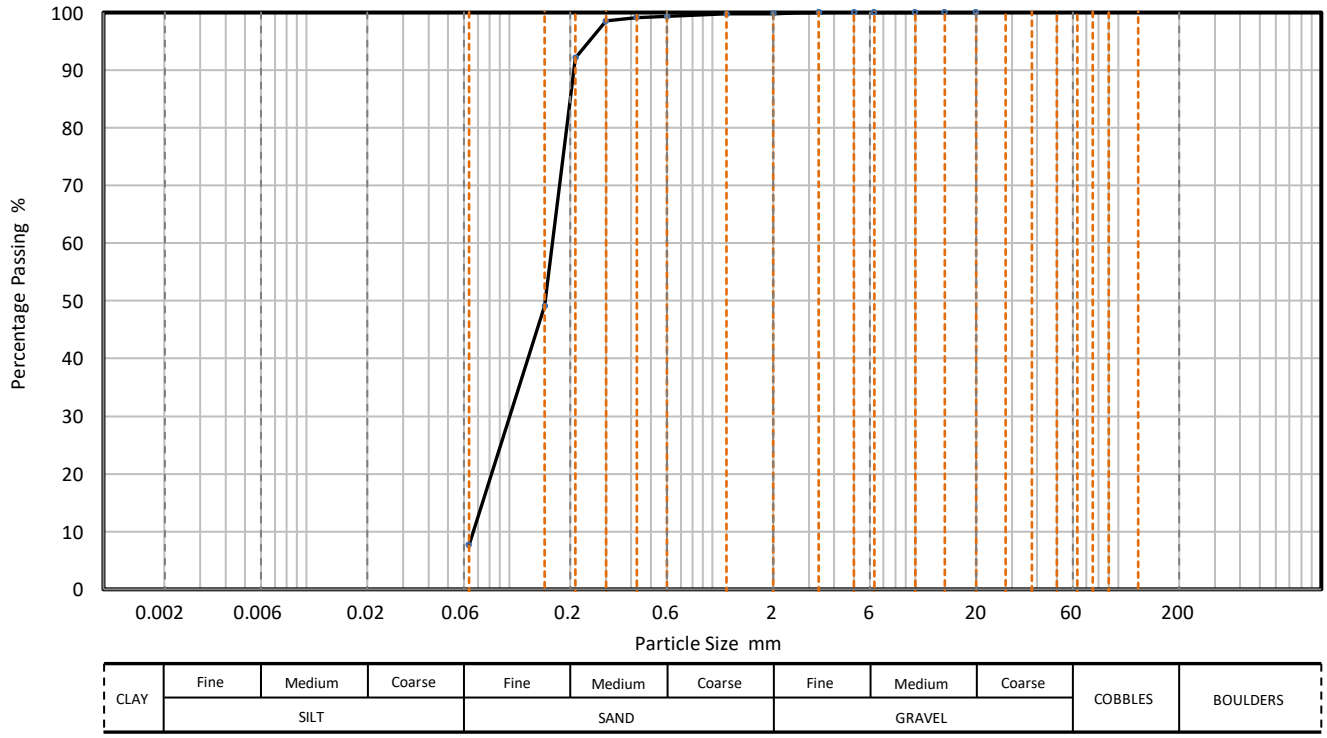
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UKAS TESTING
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-205	Lab sample ID	G2MT2025101446
Depth (Top) m	-11.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	99		
0.212	92		
0.15	49		
0.063	8		

Dry Mass of sample, g	1040

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	92.1
Fines <0.063mm	8.0

Grading Analysis		
D100	mm	
D60	mm	0.164
D30	mm	0.101
D10	mm	0.0661
Uniformity Coefficient		2.5
Curvature Coefficient		0.93

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 09:52

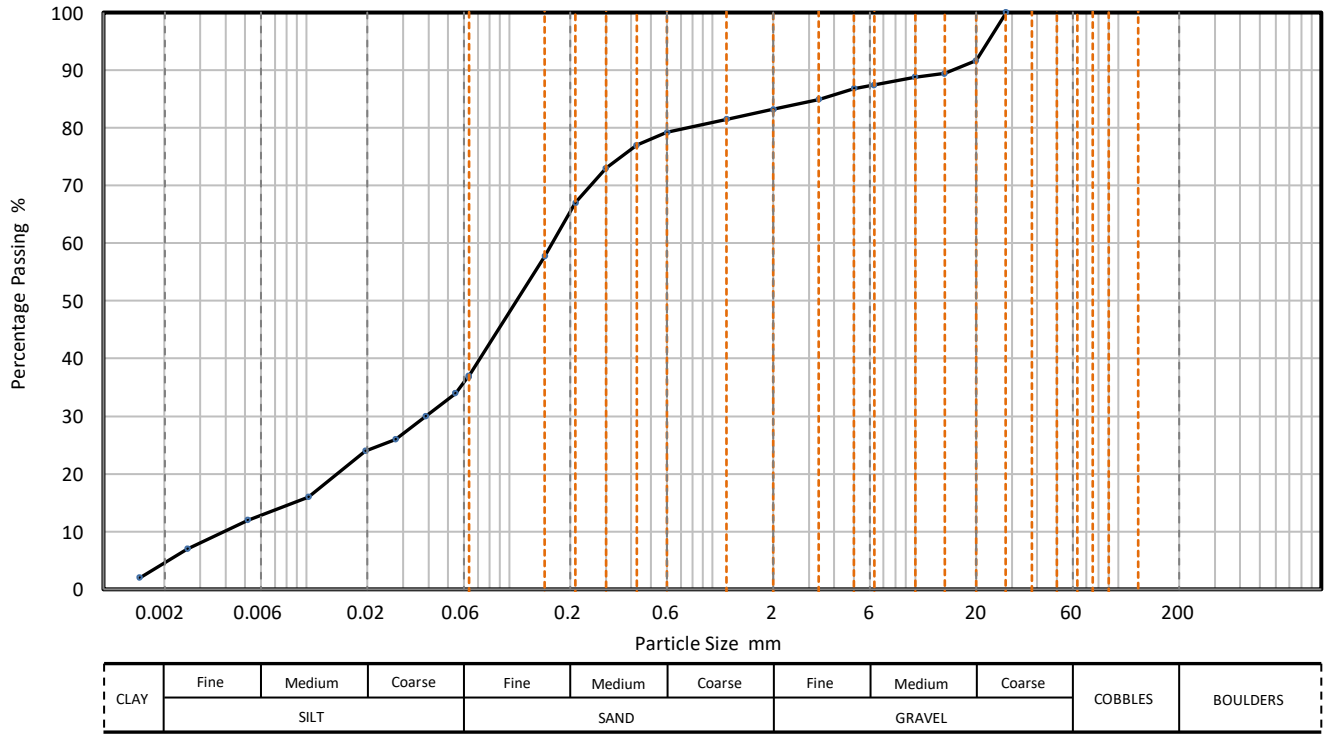
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-205	Lab sample ID	G2MT2025101443
Depth (Top) m	-17.12	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, Gravelly, very Silty,SAND
Sample type	U		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	37
		0.0544	34
		0.0388	30
		0.0276	26
		0.0196	24
		0.0103	16
28	100	0.0052	12
20	92	0.0026	7
14	89	0.0015	2
10	89		
6.3	87		
5	87		
3.35	85		
2	83		
1.18	82		
0.6	79	Particle density	(assumed)
0.425	77	2.65	Mg/m3
0.3	73		
0.212	67		
0.15	58		
0.063	37		

Dry Mass of sample, g	1109

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	16.8
Sand	46.3
Silt	32.6
Clay	4.3

Grading Analysis		
D100	mm	28
D60	mm	0.163
D30	mm	0.04
D10	mm	0.00387
Uniformity Coefficient		42
Curvature Coefficient		2.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:57

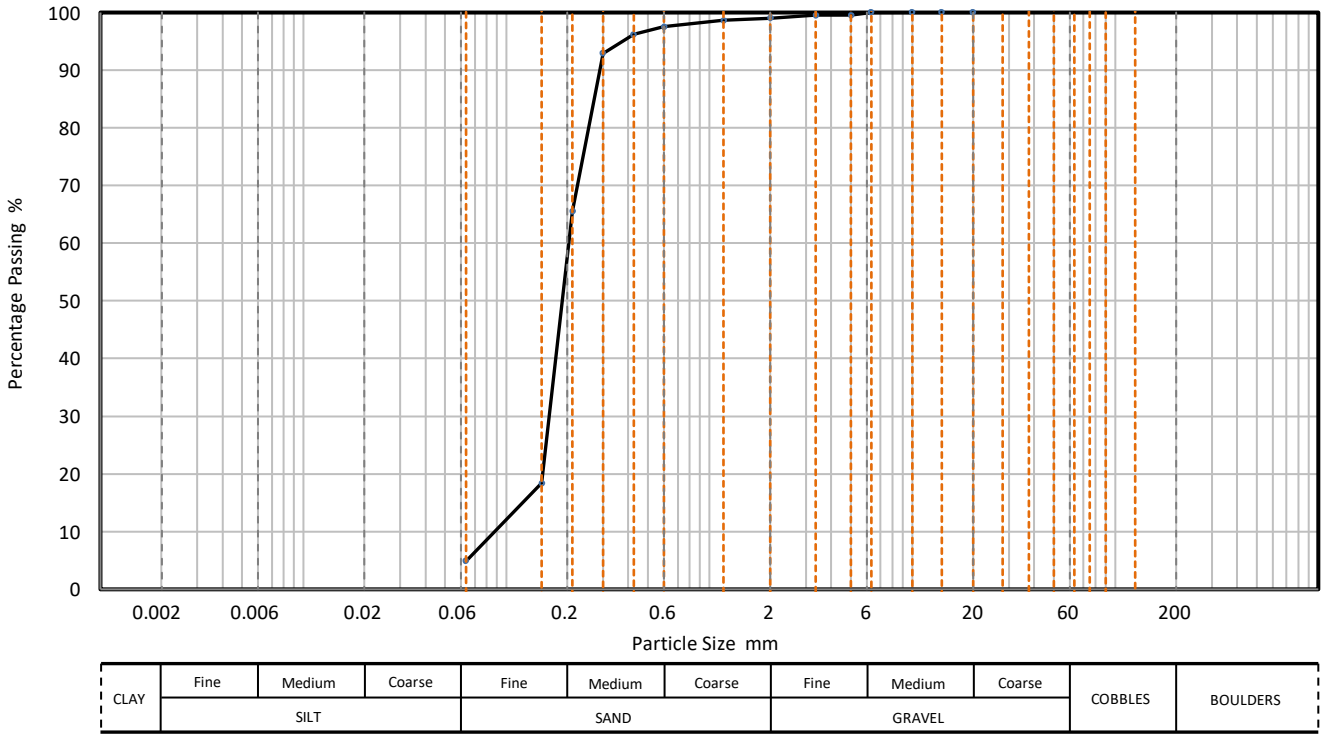
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-206	Lab sample ID	G2MT2025101449
Depth (Top) m	-6.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	98		
0.425	96		
0.3	93		
0.212	66		
0.15	18		
0.063	5		

Dry Mass of sample, g	1453

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.0
Sand	94.1
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.204
D30	mm	0.163
D10	mm	0.0873
Uniformity Coefficient		2.3
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/10/2025 10:28

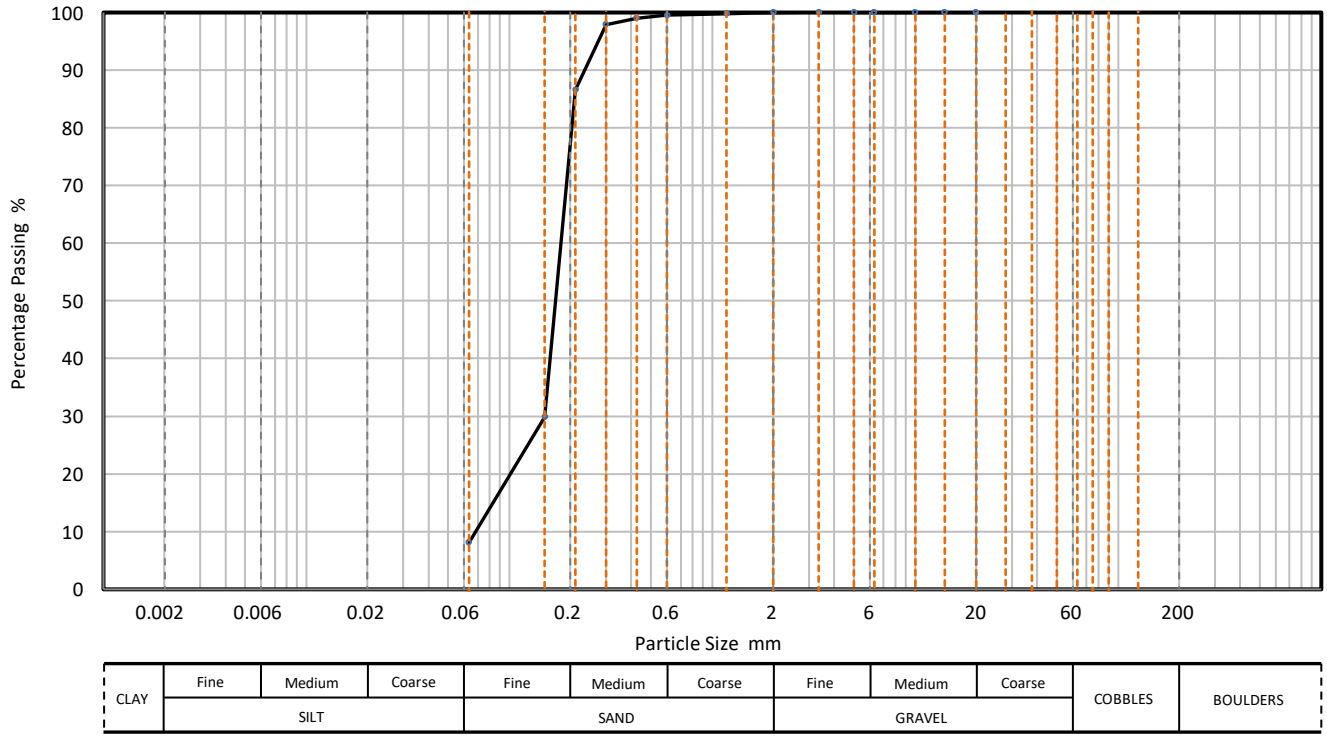
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-206	Lab sample ID	G2MT2025101450
Depth (Top) m	-10.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	87		
0.15	30		
0.063	8		

Dry Mass of sample, g	879

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	91.9
Fines <0.063mm	8.0

Grading Analysis		
D100	mm	
D60	mm	0.18
D30	mm	0.15
D10	mm	0.0679
Uniformity Coefficient		2.7
Curvature Coefficient		1.8

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 09:34

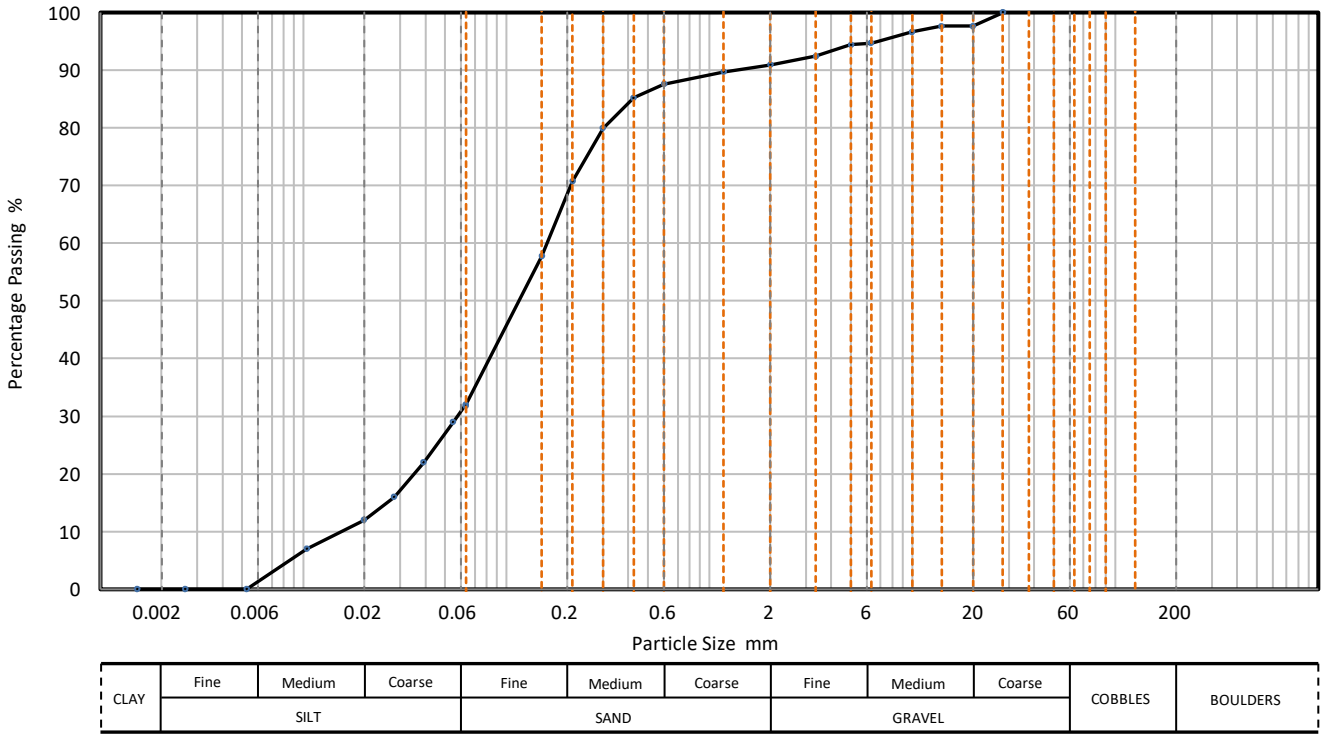
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-206	Lab sample ID	G2MT2025101451
Depth (Top) m	-13.70	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, very Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	32
		0.0547	29
		0.0392	22
		0.0280	16
		0.0199	12
		0.0104	7
28	100	0.0053	0
20	98	0.0026	0
14	98	0.0015	0
10	97		
6.3	95		
5	94		
3.35	92		
2	91		
1.18	90		
0.6	88	Particle density	(assumed)
0.425	85	2.65	Mg/m3
0.3	80		
0.212	71		
0.15	58		
0.063	32		

Dry Mass of sample, g: 1060

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	9.1
Sand	59.1
Silt	31.8
Clay	0.0

Grading Analysis		
D100	mm	28
D60	mm	0.16
D30	mm	0.0569
D10	mm	0.015
Uniformity Coefficient		11
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:42

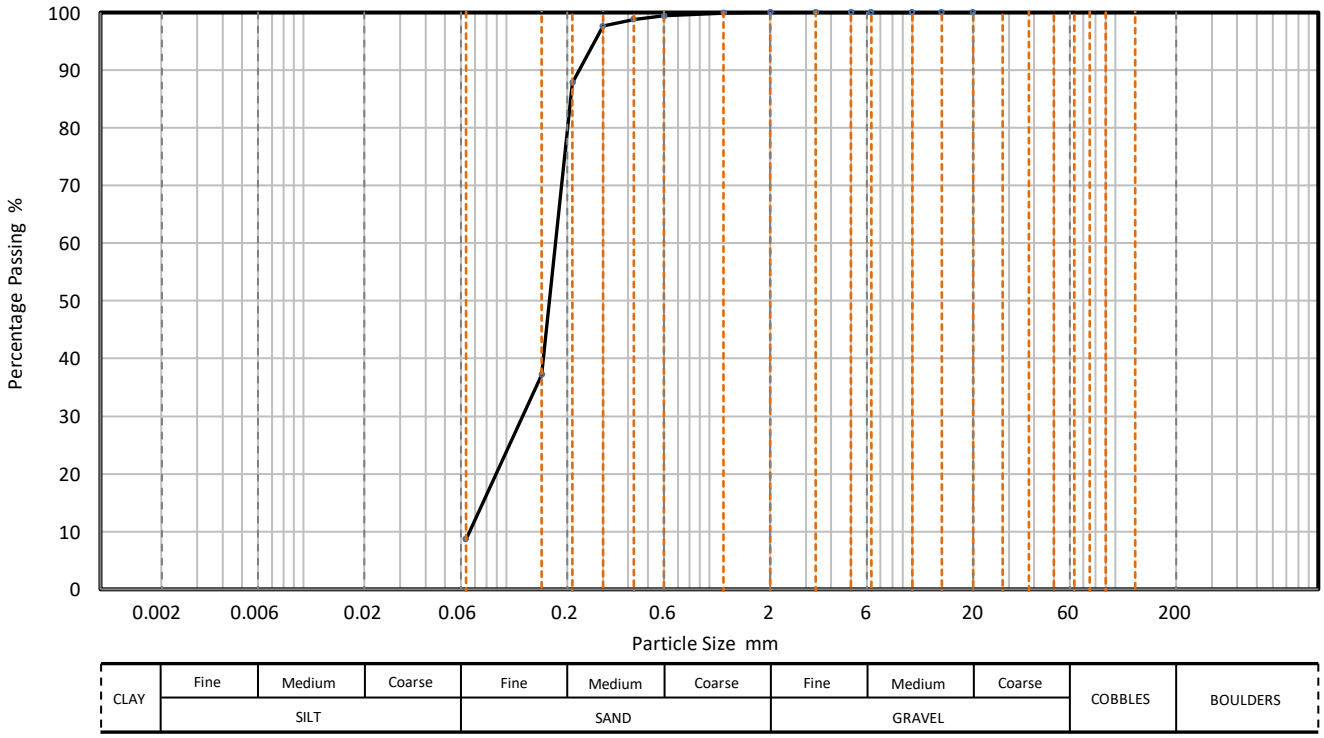
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-207	Lab sample ID	G2MT2025091557
Depth (Top) m	-6.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	98		
0.212	88		
0.15	37		
0.063	9		

Dry Mass of sample, g	915

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	91.3
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.175
D30	mm	0.12
D10	mm	0.0656
Uniformity Coefficient		2.7
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	17/09/2025 14:23

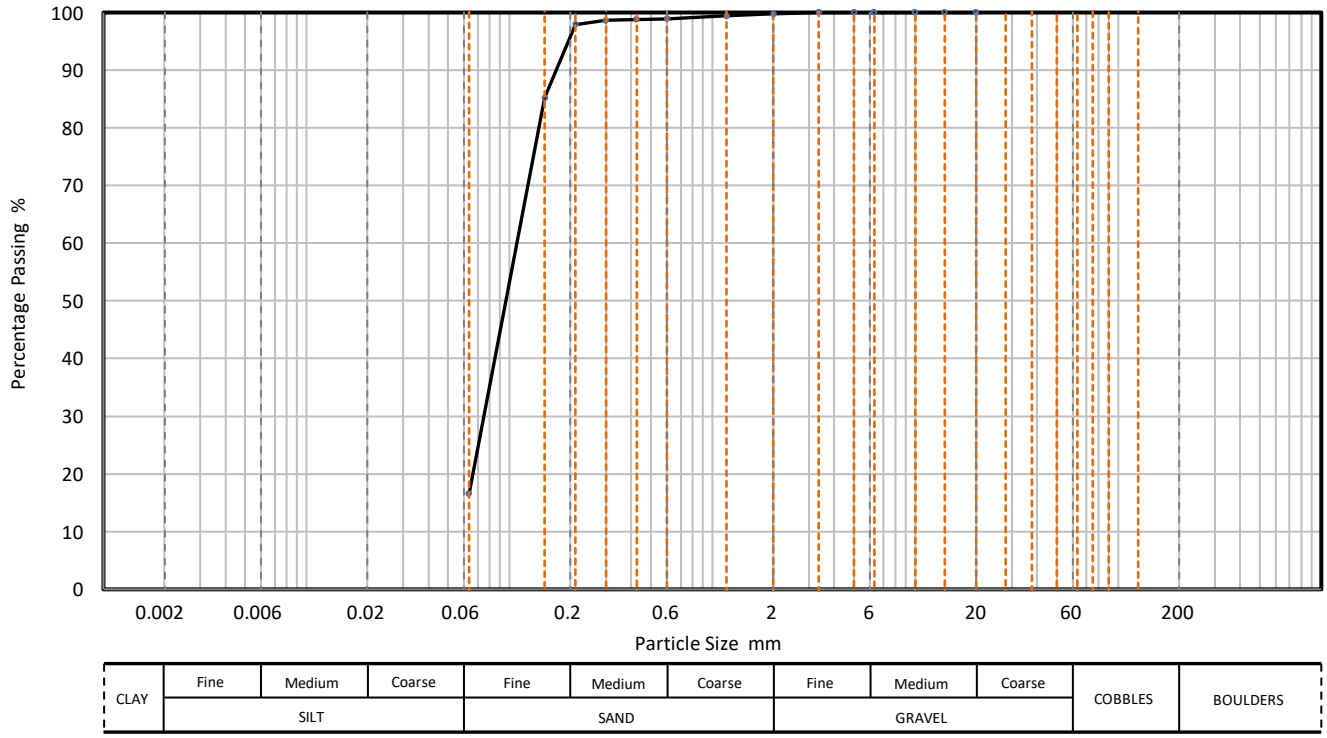
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-207	Lab sample ID	G2MT2025091559
Depth (Top) m	-12.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	99		
0.425	99		
0.3	99		
0.212	98		
0.15	85		
0.063	17		

Dry Mass of sample, g	866

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	83.1
Fines <0.063mm	17.0

Grading Analysis		
D100	mm	
D60	mm	0.109
D30	mm	0.0746
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 09:30

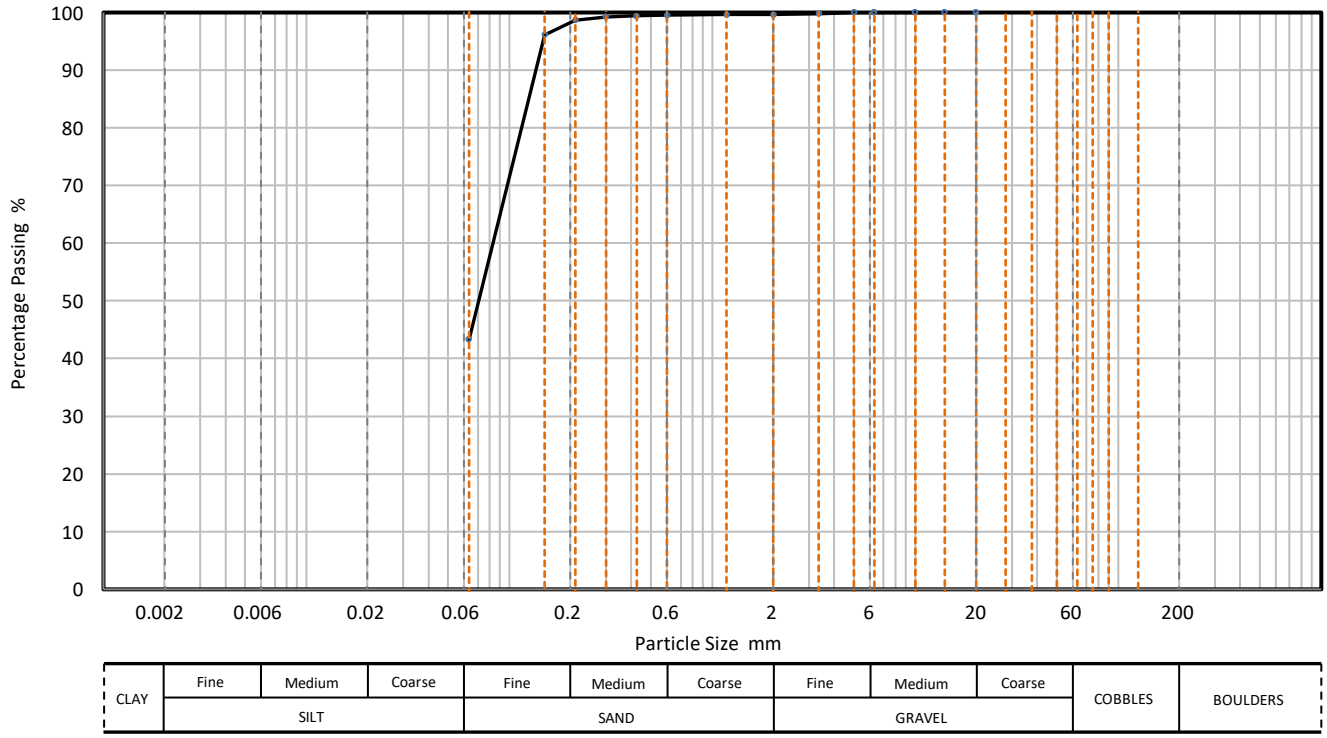
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-207	Lab sample ID	G2MT2025091562
Depth (Top) m	-20.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Very Sandy CLAY
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	99		
0.15	96		
0.063	43		

Dry Mass of sample, g	995

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.4
Sand	56.3
Fines <0.063mm	43.0

Grading Analysis		
D100	mm	
D60	mm	0.0829
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 09:26

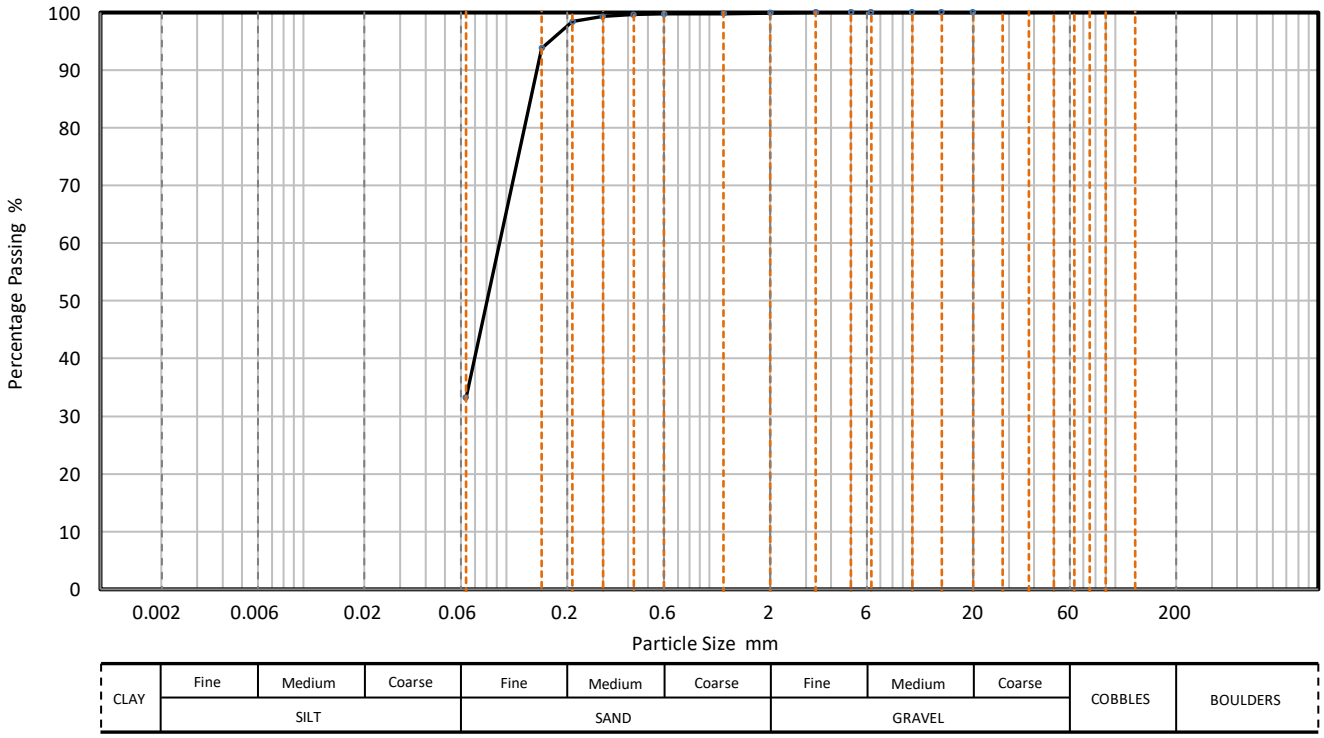
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-207	Lab sample ID	G2MT2025091564
Depth (Top) m	-24.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Very Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	98		
0.15	94		
0.063	33		

Dry Mass of sample, g	885

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	66.7
Fines <0.063mm	33.0

Grading Analysis		
D100	mm	
D60	mm	0.0924
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 09:28

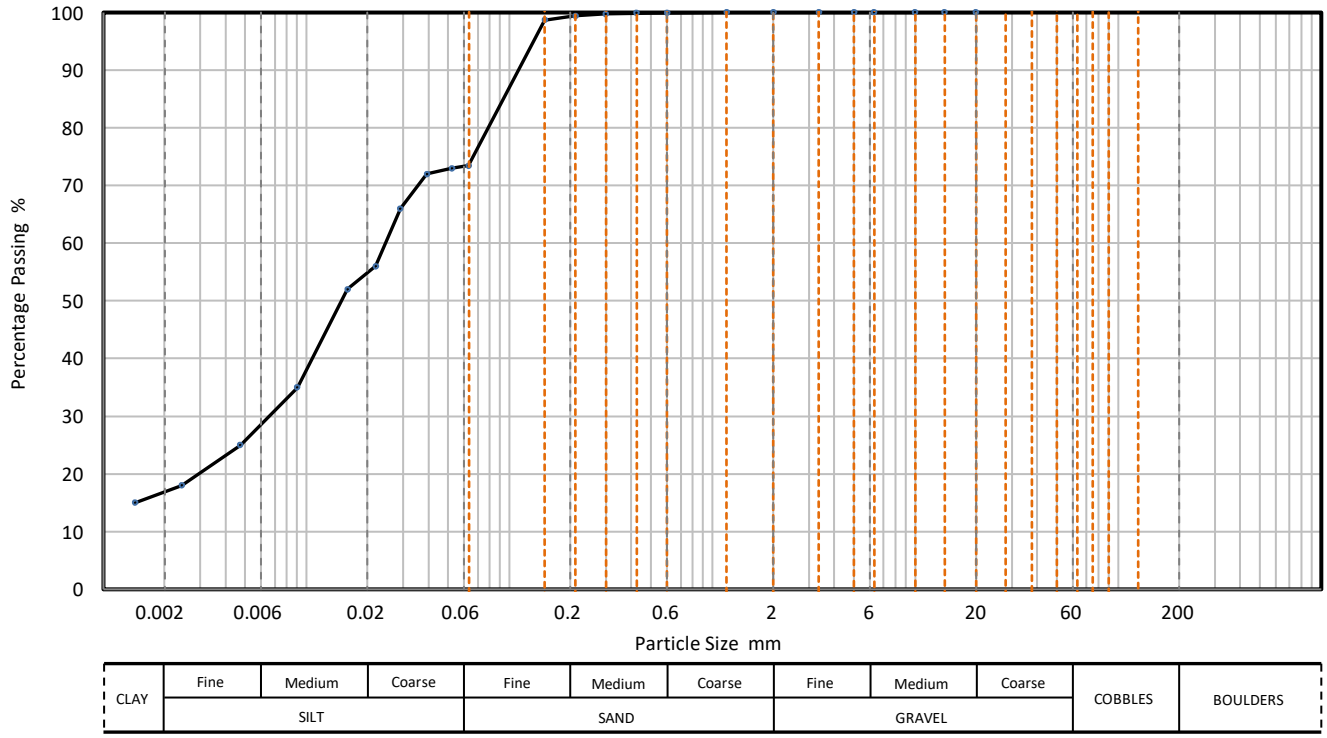
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-207	Lab sample ID	G2MT2025091566
Depth (Top) m	-26.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Clayey, very Sandy, SILT
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0523	73
		0.0393	72
		0.0291	66
		0.0220	56
		0.0160	52
		0.0090	35
		0.0047	25
20	100	0.0024	18
14	100	0.0014	15
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	99		
0.15	99		
0.063	73		

Dry Mass of sample, g: 801

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	26.6
Silt	56.3
Clay	17.1

Grading Analysis		
D100	mm	
D60	mm	0.0246
D30	mm	0.00657
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:28

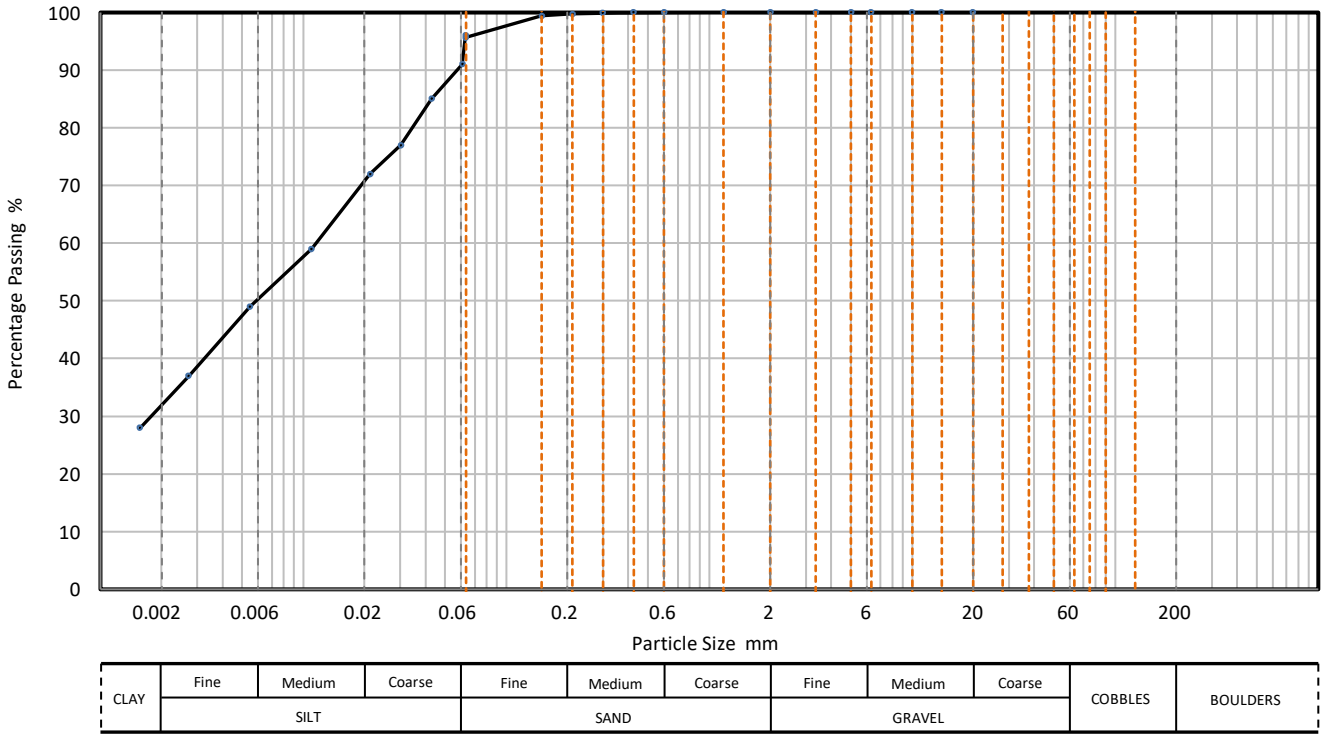
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-207	Lab sample ID	G2MT2025091570
Depth (Top) m	-28.24	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, very Clayey, SILT
Sample type	U		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	96
		0.0607	91
		0.0429	85
		0.0302	77
		0.0213	72
		0.0110	59
		0.0055	49
20	100	0.0027	37
14	100	0.0016	28
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	100		
0.15	99		
0.063	96		

Dry Mass of sample, g: 824

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	4.4
Silt	63.5
Clay	32.1

Grading Analysis		
D100	mm	
D60	mm	0.0113
D30	mm	0.00175
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 14:43

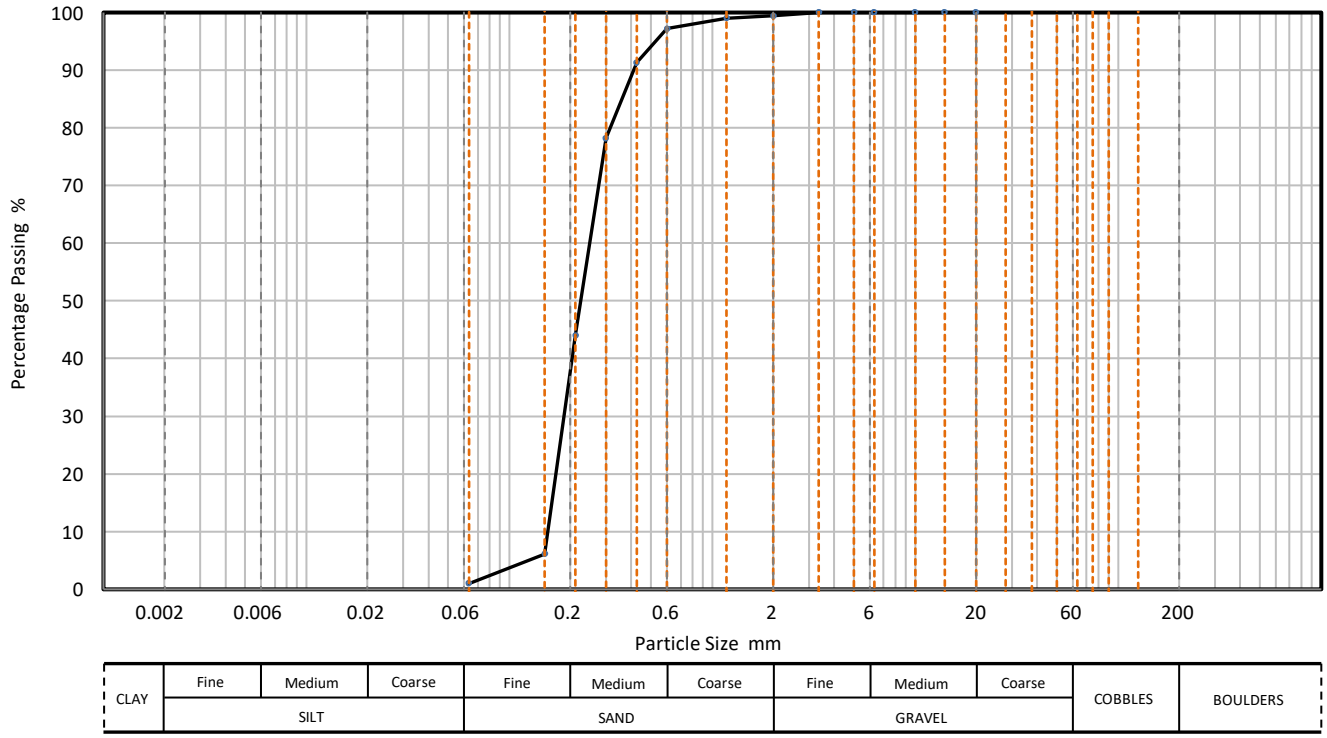
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-101	Lab sample ID	G2MT2025100215
Depth (Top) m	-0.90	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	97		
0.425	91		
0.3	78		
0.212	44		
0.15	6		
0.063	1		

Dry Mass of sample, g: 848

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.6
Sand	98.3
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.249
D30	mm	0.187
D10	mm	0.155
Uniformity Coefficient		1.6
Curvature Coefficient		0.9

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:33

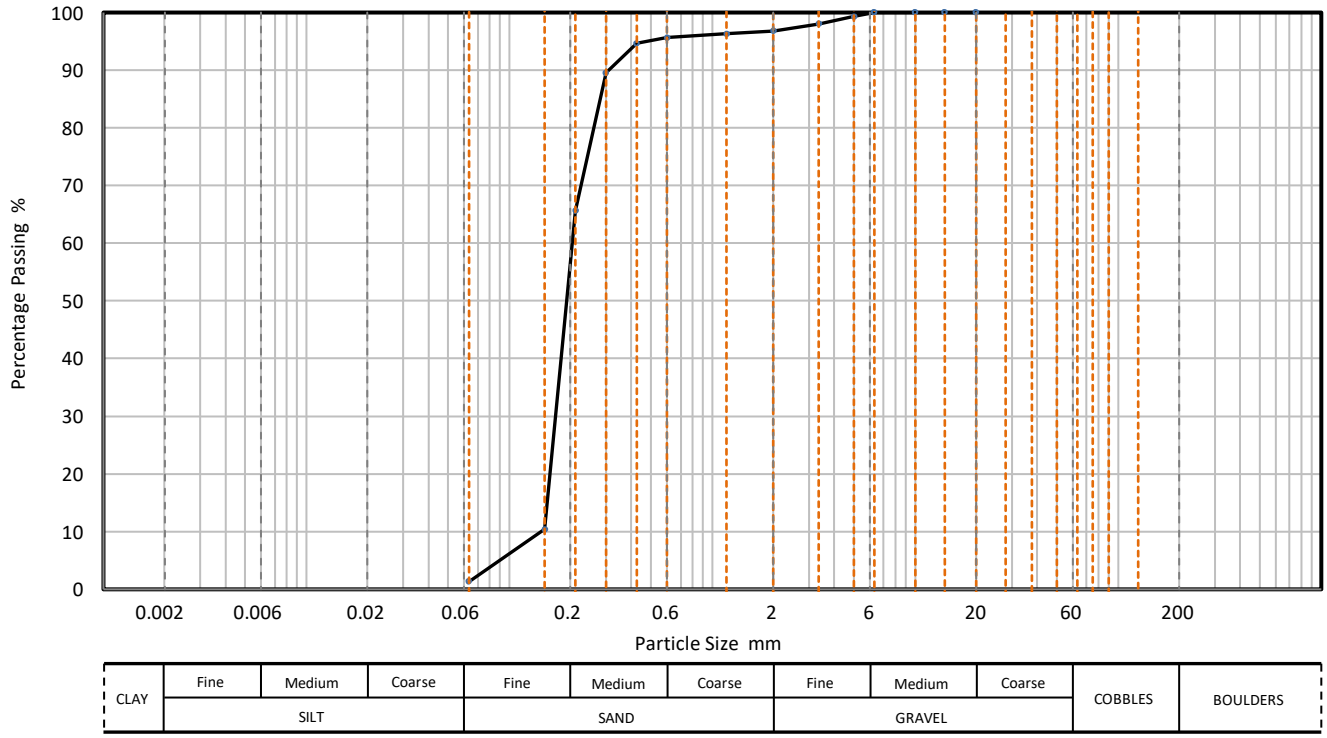
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UKAS TESTING
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		CP-101	Lab sample ID	G2MT2025100213
Depth (Top)	m	2.10	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Silty, slightly Gravelly, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	98		
2	97		
1.18	96		
0.6	96		
0.425	95		
0.3	90		
0.212	66		
0.15	10		
0.063	1		

Dry Mass of sample, g	879

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	3.2
Sand	95.4
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.205
D30	mm	0.17
D10	mm	0.144
Uniformity Coefficient		1.4
Curvature Coefficient		0.97

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	13/10/2025 10:36

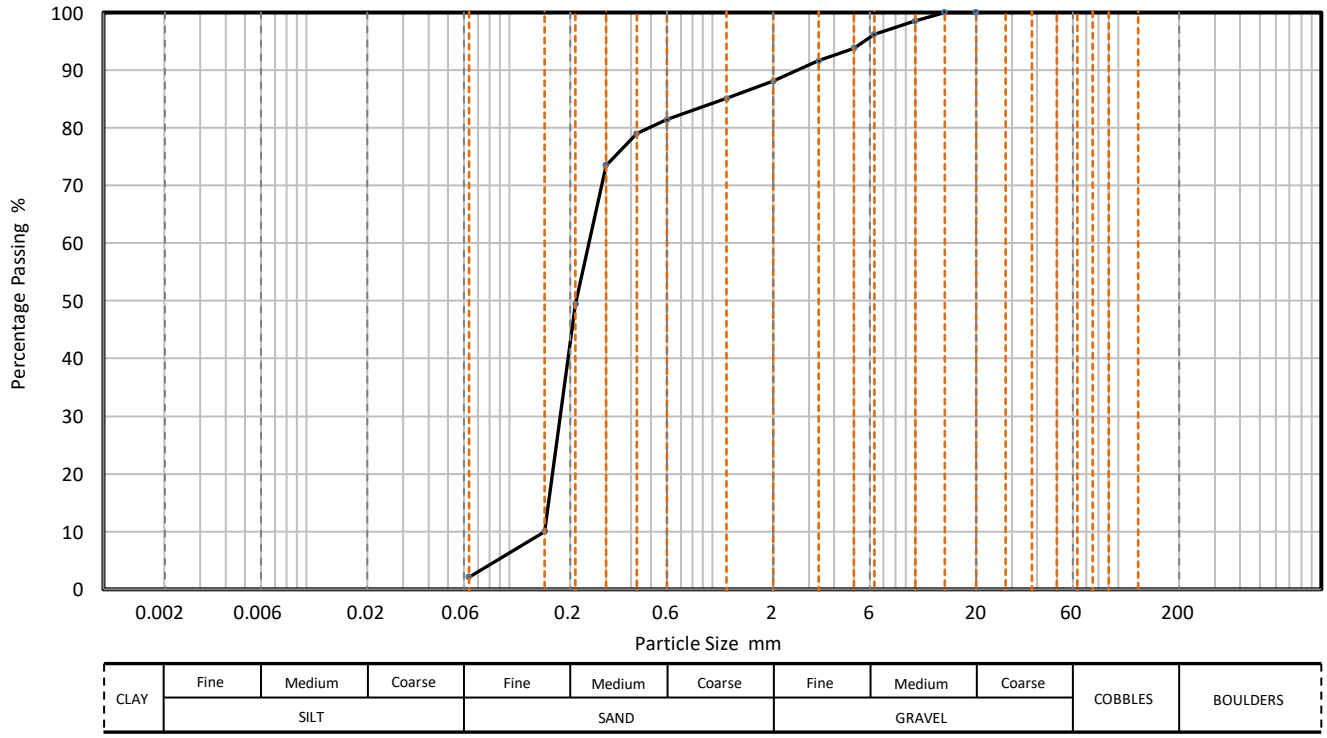
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-101	Lab sample ID	G2MT2025100211
Depth (Top) m	3.60	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, Gravelly,SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	99		
6.3	96		
5	94		
3.35	92		
2	88		
1.18	85		
0.6	81		
0.425	79		
0.3	74		
0.212	49		
0.15	10		
0.063	2		

Dry Mass of sample, g	993

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	11.9
Sand	85.9
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.247
D30	mm	0.179
D10	mm	0.15
Uniformity Coefficient		1.6
Curvature Coefficient		0.86

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:31

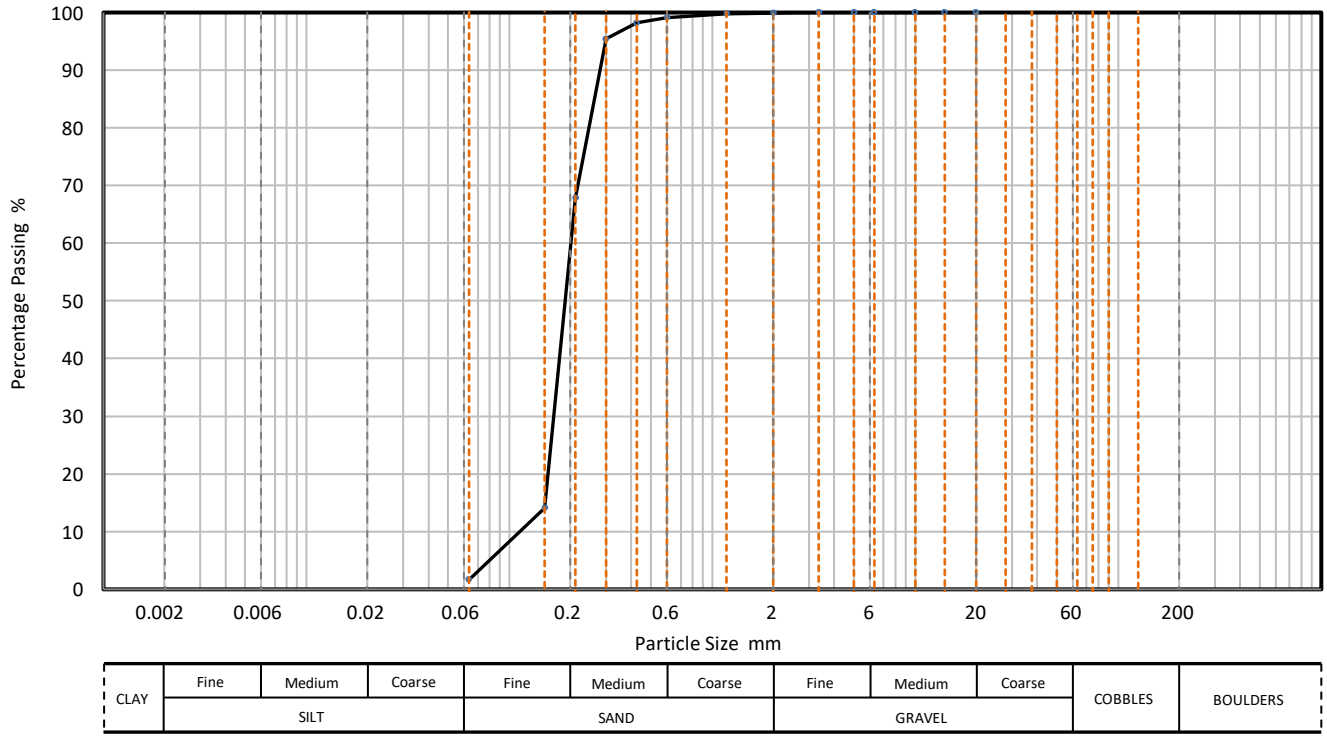
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-101	Lab sample ID	G2MT2025100217
Depth (Top) m	-5.40	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	95		
0.212	68		
0.15	14		
0.063	2		

Dry Mass of sample, g: 1113

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	98.3
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.202
D30	mm	0.166
D10	mm	0.112
Uniformity Coefficient		1.8
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:35

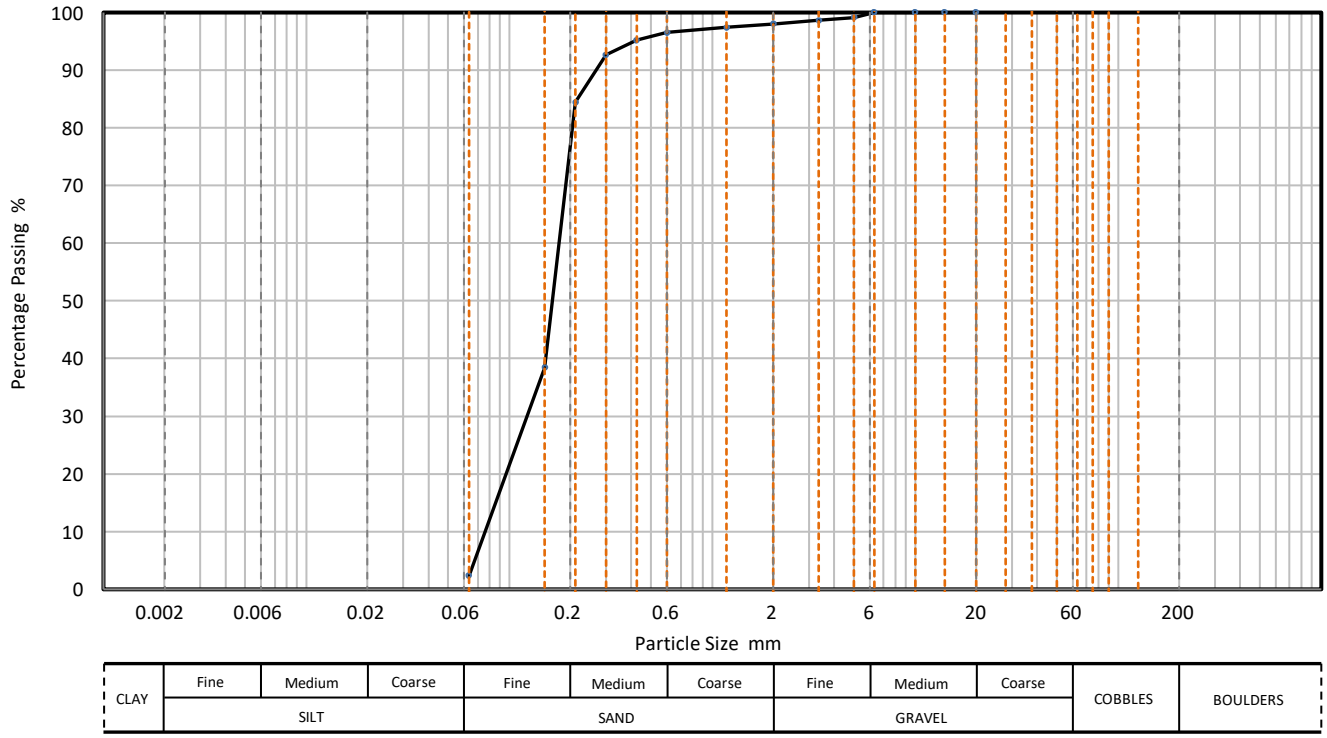
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-101	Lab sample ID	G2MT2025100220
Depth (Top) m	-9.90	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	99		
2	98		
1.18	97		
0.6	97		
0.425	95		
0.3	93		
0.212	84		
0.15	38		
0.063	2		

Dry Mass of sample, g: 836

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	2.0
Sand	95.6
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.176
D30	mm	0.123
D10	mm	0.0757
Uniformity Coefficient		2.3
Curvature Coefficient		1.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:37

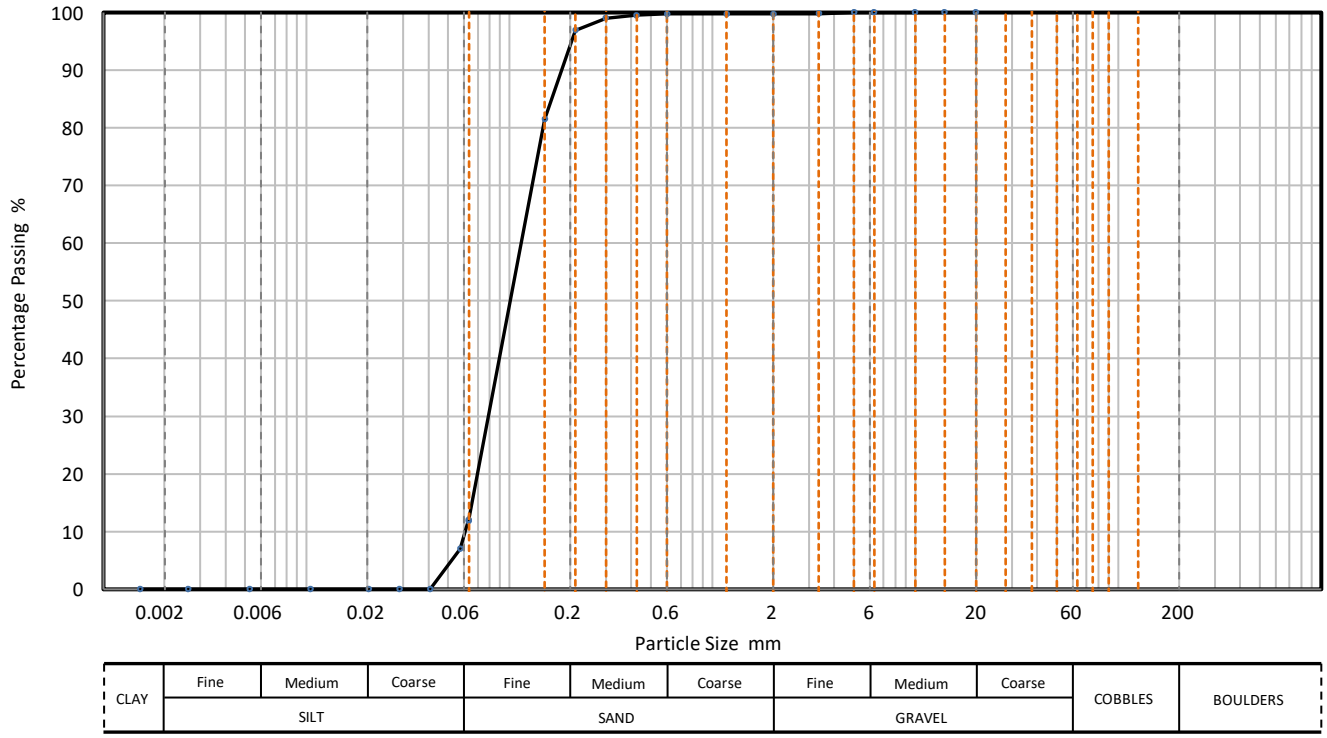
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-101	Lab sample ID	G2MT2025100223
Depth (Top) m	-17.40	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	12
		0.0573	7
		0.0408	0
		0.0288	0
		0.0204	0
		0.0105	0
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	97		
0.15	82		
0.063	12		

Dry Mass of sample, g: 832

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	88.0
Silt	11.7
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.115
D30	mm	0.079
D10	mm	0.0606
Uniformity Coefficient		1.9
Curvature Coefficient		0.9

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 13:01

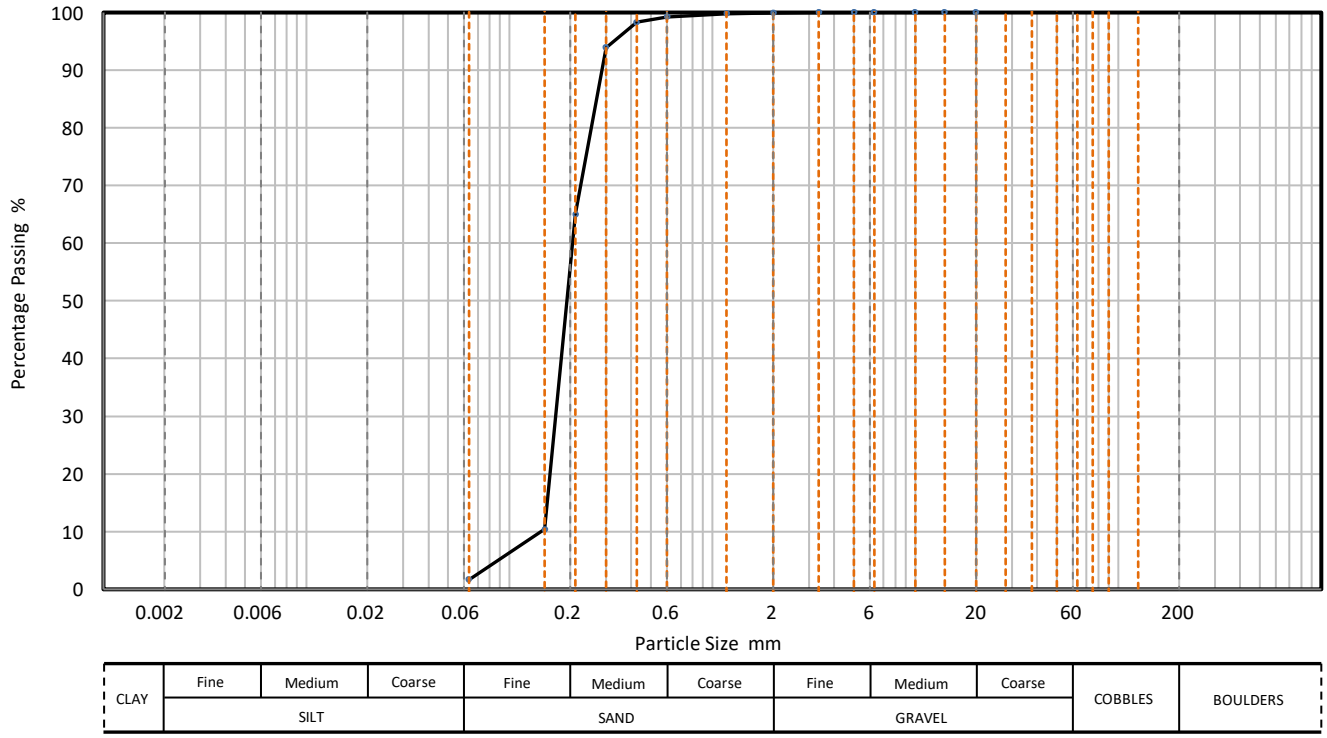
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10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-102	Lab sample ID	G2MT2025100227
Depth (Top) m	1.40	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	94		
0.212	65		
0.15	10		
0.063	2		

Dry Mass of sample, g: 878

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	98.3
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.205
D30	mm	0.17
D10	mm	0.145
Uniformity Coefficient		1.4
Curvature Coefficient		0.97

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:44

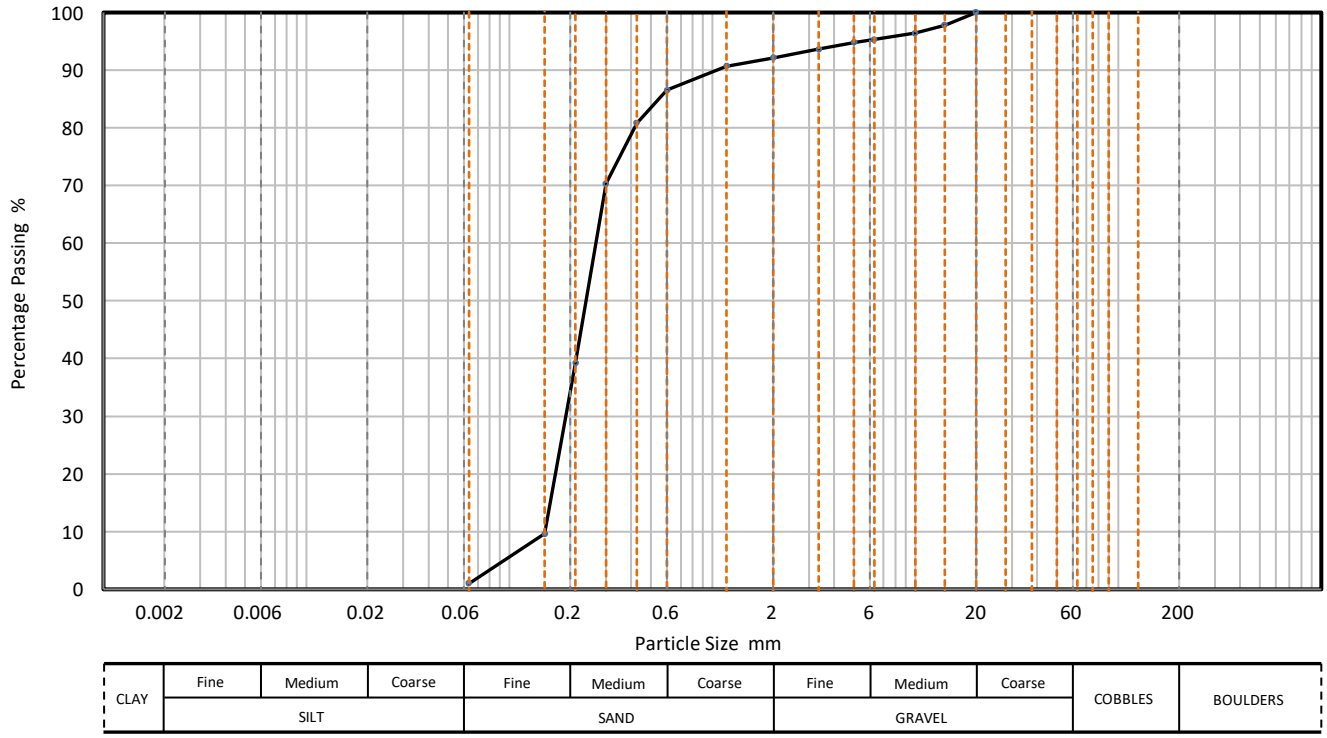
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10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-102	Lab sample ID	G2MT2025100228
Depth (Top) m	-1.60	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, slightly Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	98		
10	96		
6.3	95		
5	95		
3.35	94		
2	92		
1.18	91		
0.6	87		
0.425	81		
0.3	70		
0.212	39		
0.15	10		
0.063	1		

Dry Mass of sample, g	840

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	7.9
Sand	91.0
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	20
D60	mm	0.267
D30	mm	0.19
D10	mm	0.151
Uniformity Coefficient		1.8
Curvature Coefficient		0.9

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:46

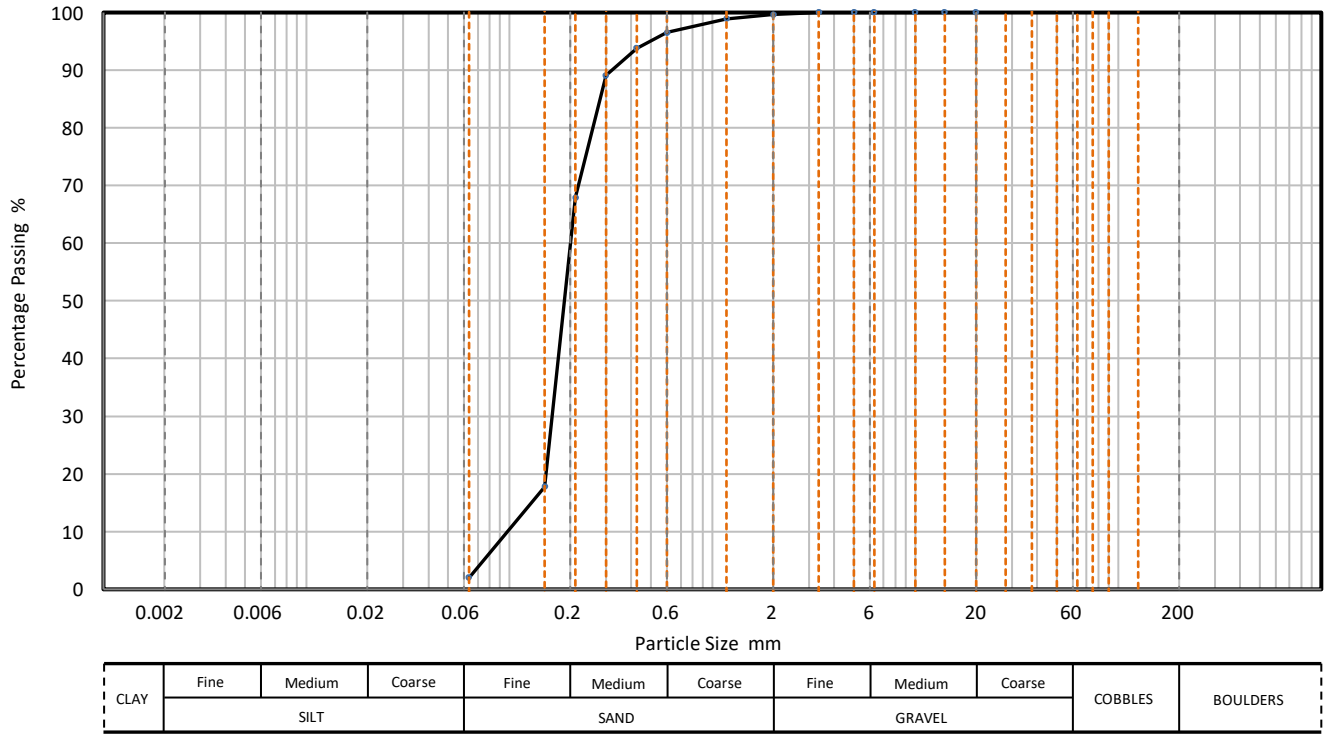
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-102	Lab sample ID	G2MT2025100226
Depth (Top) m	-2.90	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	97		
0.425	94		
0.3	89		
0.212	68		
0.15	18		
0.063	2		

Dry Mass of sample, g	824

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.4
Sand	97.6
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.201
D30	mm	0.163
D10	mm	0.0979
Uniformity Coefficient		2.1
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:42

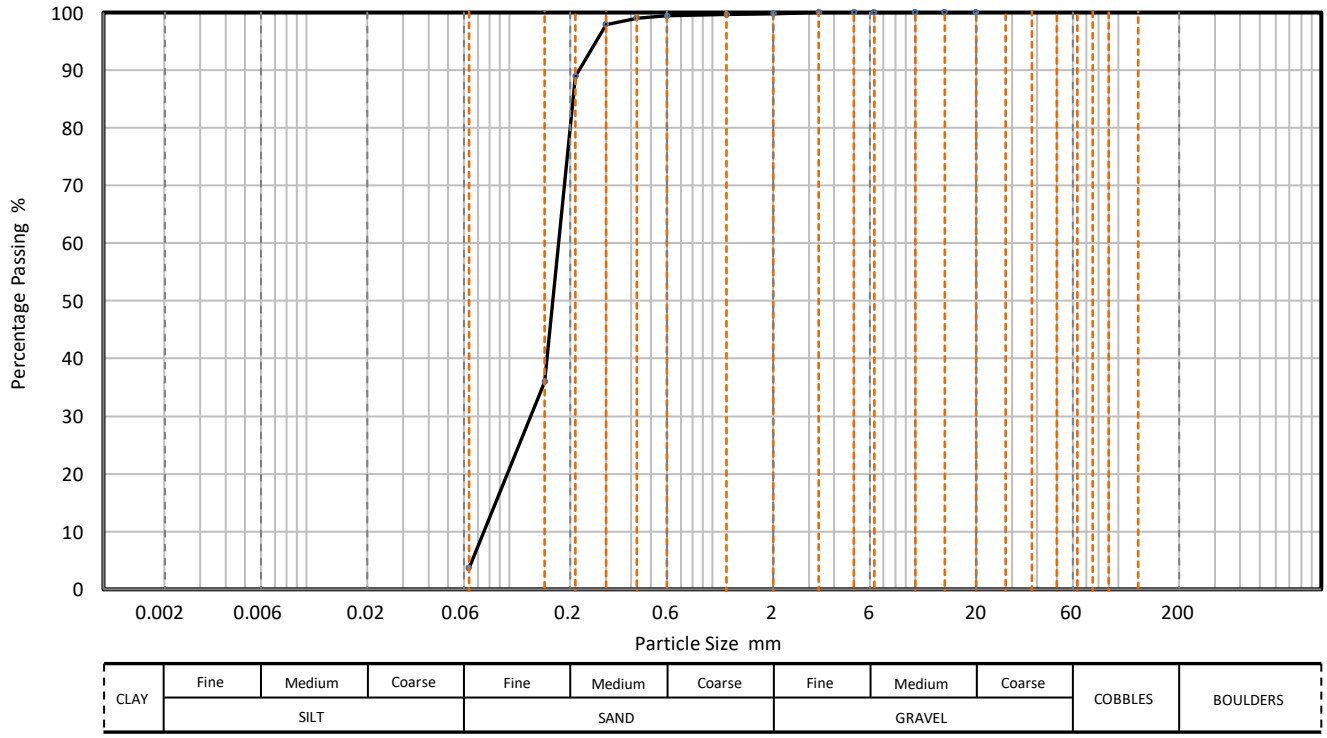
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-102	Lab sample ID	G2MT2025100230
Depth (Top) m	-9.10	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	98		
0.212	89		
0.15	36		
0.063	4		

Dry Mass of sample, g	845

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	96.1
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.176
D30	mm	0.128
D10	mm	0.0747
Uniformity Coefficient		2.4
Curvature Coefficient		1.2

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:48

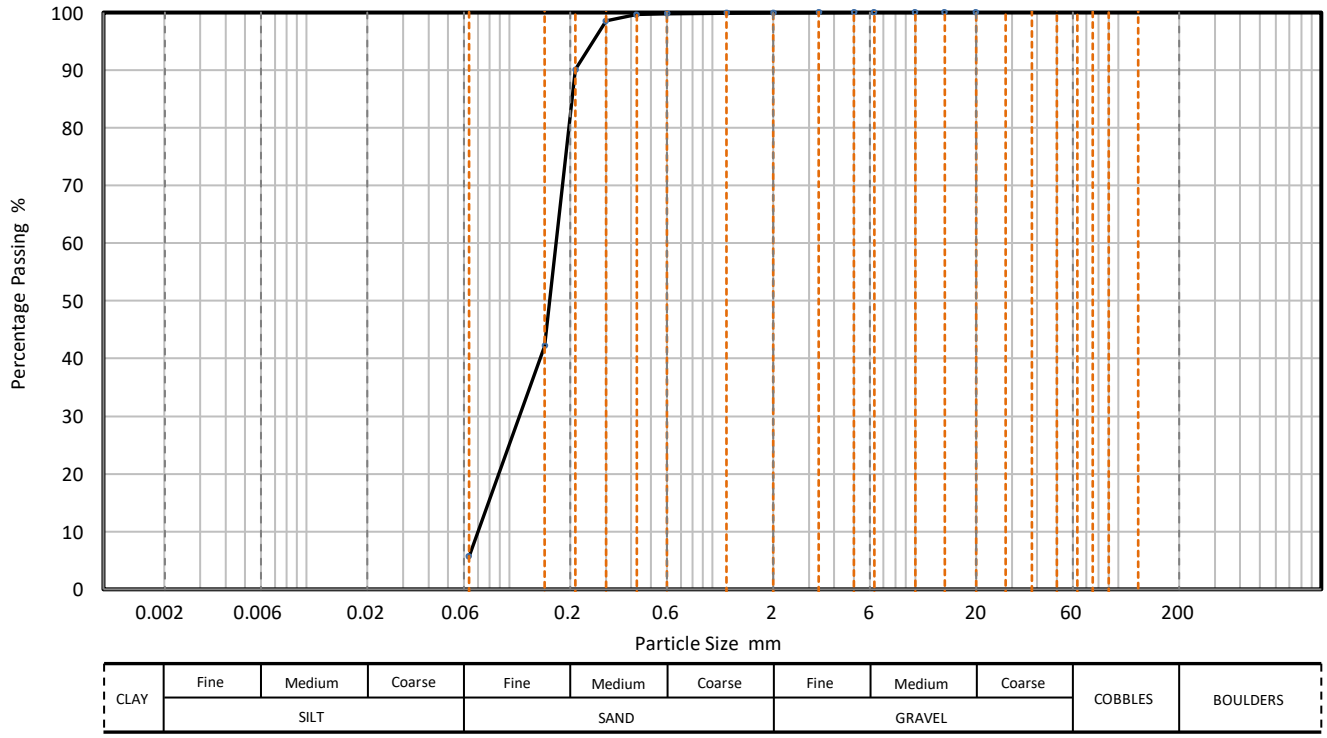
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-102	Lab sample ID	G2MT2025100231
Depth (Top) m	-13.60	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	90		
0.15	42		
0.063	6		

Dry Mass of sample, g	870

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	94.3
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.171
D30	mm	0.112
D10	mm	0.0698
Uniformity Coefficient		2.4
Curvature Coefficient		1.1

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:49

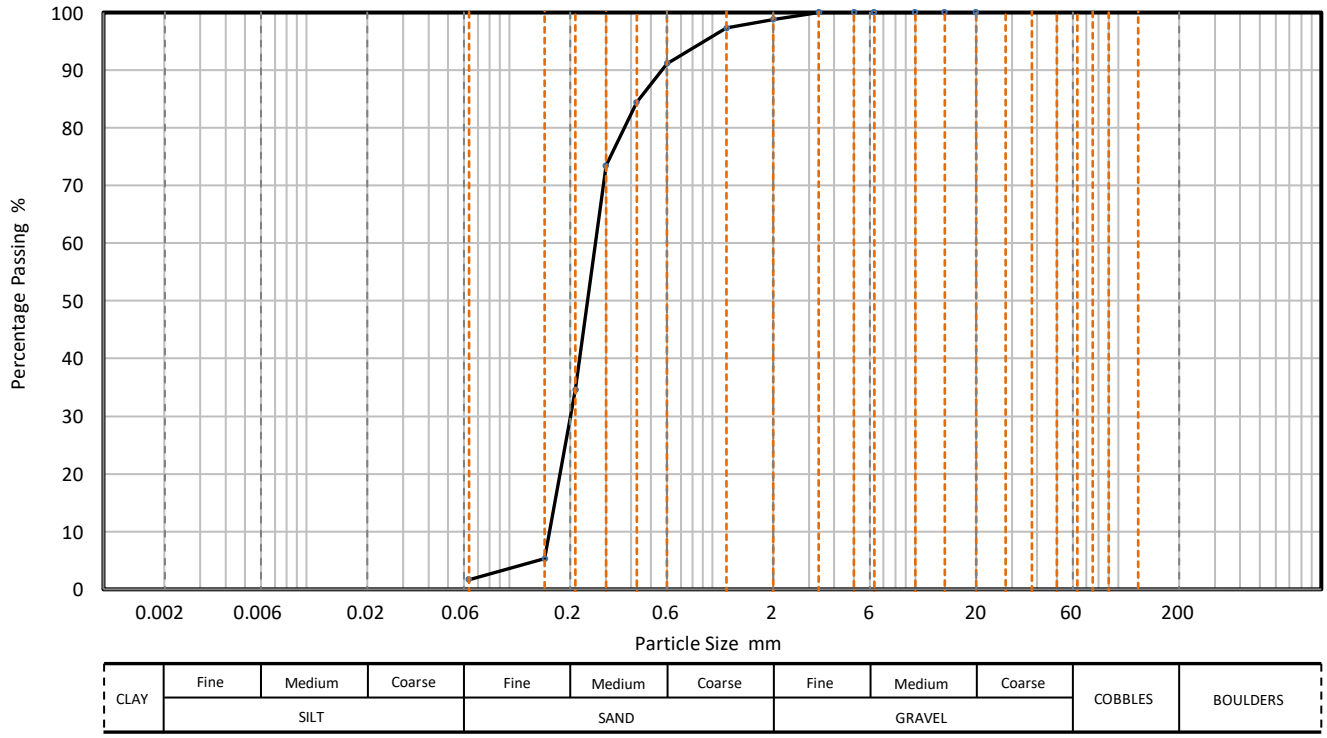
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-103	Lab sample ID	G2MT2025110510
Depth (Top) m	-0.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	97		
0.6	91		
0.425	84		
0.3	73		
0.212	35		
0.15	5		
0.063	2		

Dry Mass of sample, g	911

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.2
Sand	97.1
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.266
D30	mm	0.201
D10	mm	0.158
Uniformity Coefficient		1.7
Curvature Coefficient		0.96

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:05

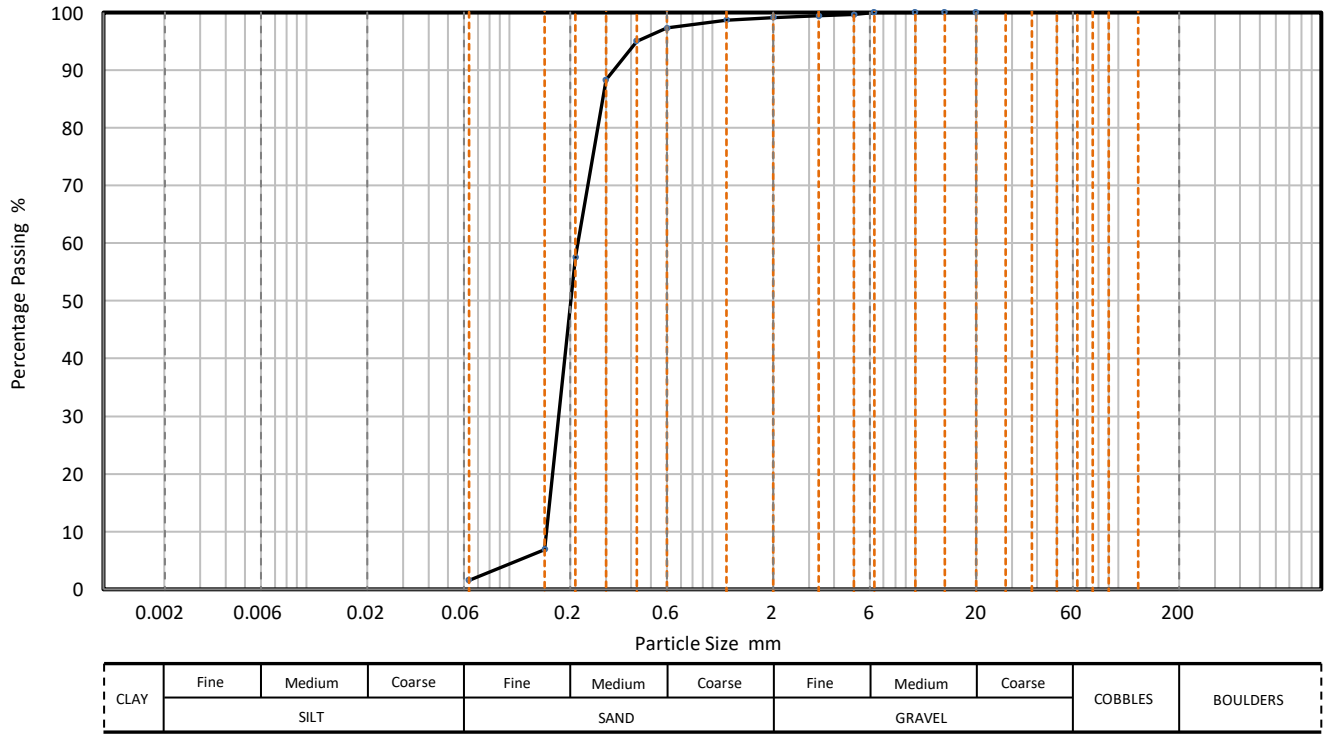
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-103	Lab sample ID	G2MT202511058
Depth (Top) m	2.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	99		
1.18	99		
0.6	97		
0.425	95		
0.3	88		
0.212	58		
0.15	7		
0.063	2		

Dry Mass of sample, g: 904

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.9
Sand	97.5
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.218
D30	mm	0.176
D10	mm	0.153
Uniformity Coefficient		1.4
Curvature Coefficient		0.92

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:57

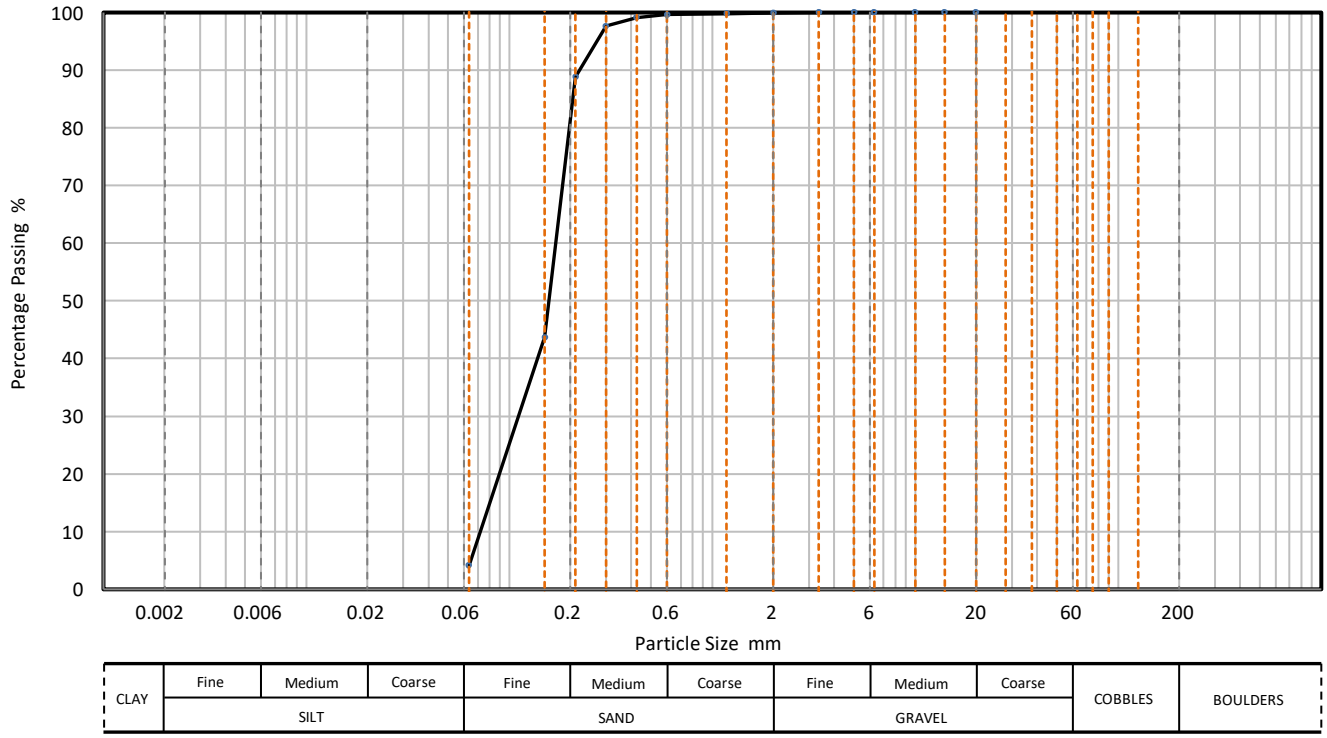
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UKAS TESTING
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-103	Lab sample ID	G2MT2025110514
Depth (Top) m	-9.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	89		
0.15	44		
0.063	4		

Dry Mass of sample, g	807

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	95.7
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.17
D30	mm	0.111
D10	mm	0.0716
Uniformity Coefficient		2.4
Curvature Coefficient		1

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:20

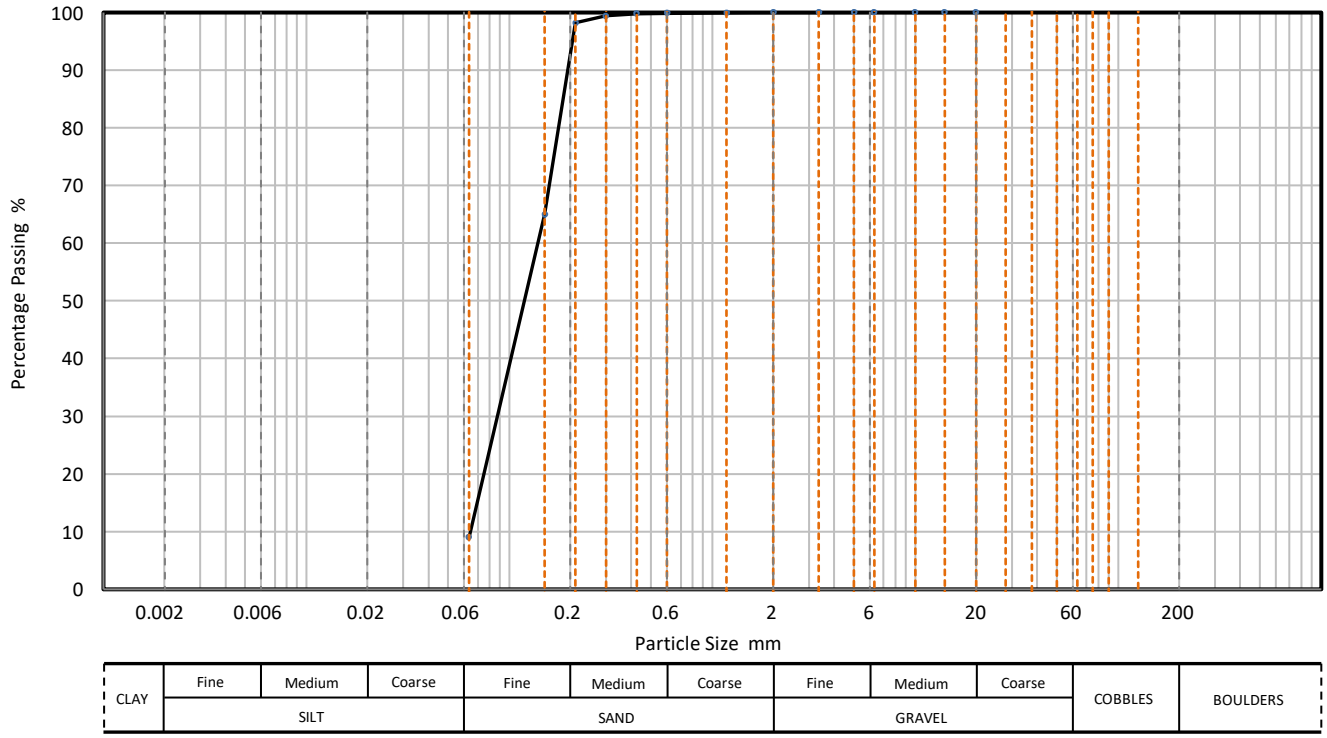
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-103	Lab sample ID	G2MT2025110515
Depth (Top) m	-13.80	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	98		
0.15	65		
0.063	9		

Dry Mass of sample, g: 852

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	91.0
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.139
D30	mm	0.0872
D10	mm	0.064
Uniformity Coefficient		2.2
Curvature Coefficient		0.86

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:07

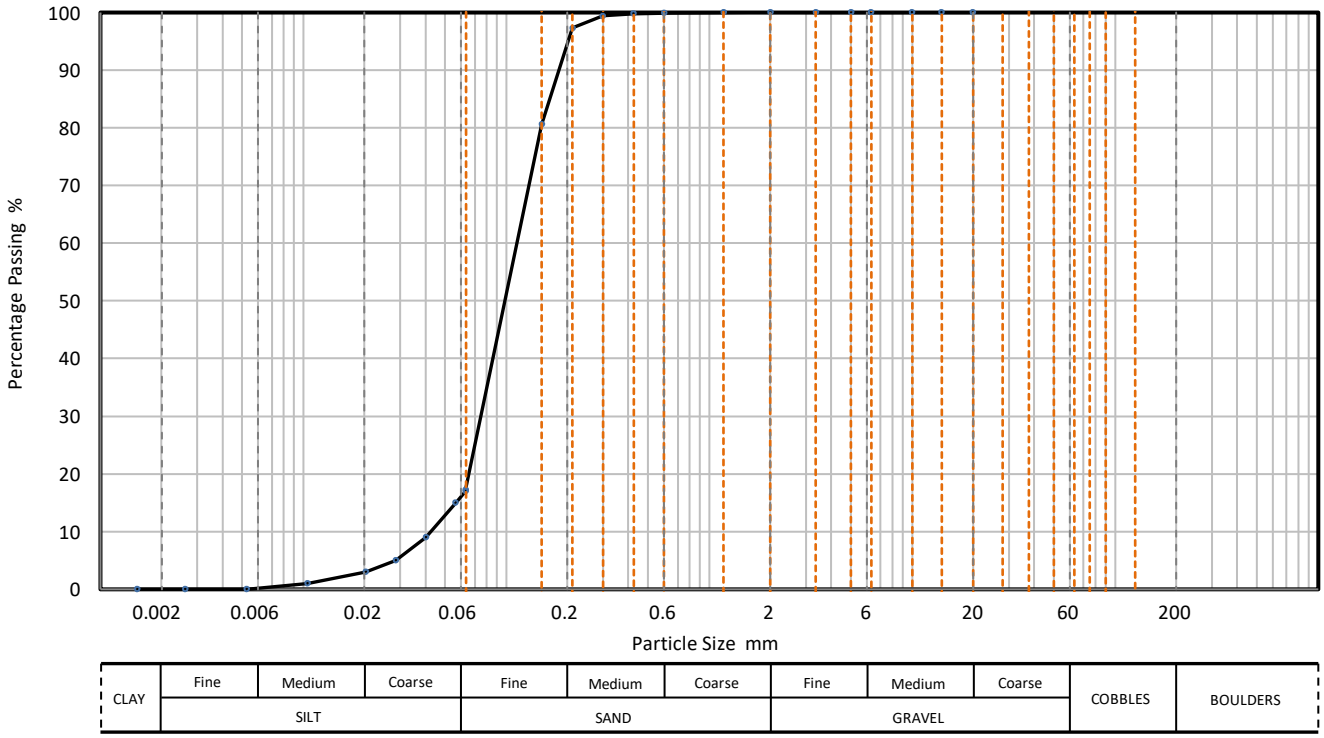
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-103	Lab sample ID	G2MT2025110516
Depth (Top) m	-16.80	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Silty SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	17
		0.0563	15
		0.0402	9
		0.0286	5
		0.0203	3
		0.0105	1
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	97		
0.15	81		
0.063	17		

Dry Mass of sample, g: 872

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	82.8
Silt	17.2
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.113
D30	mm	0.075
D10	mm	0.0418
Uniformity Coefficient		2.7
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	03/12/2025 09:38

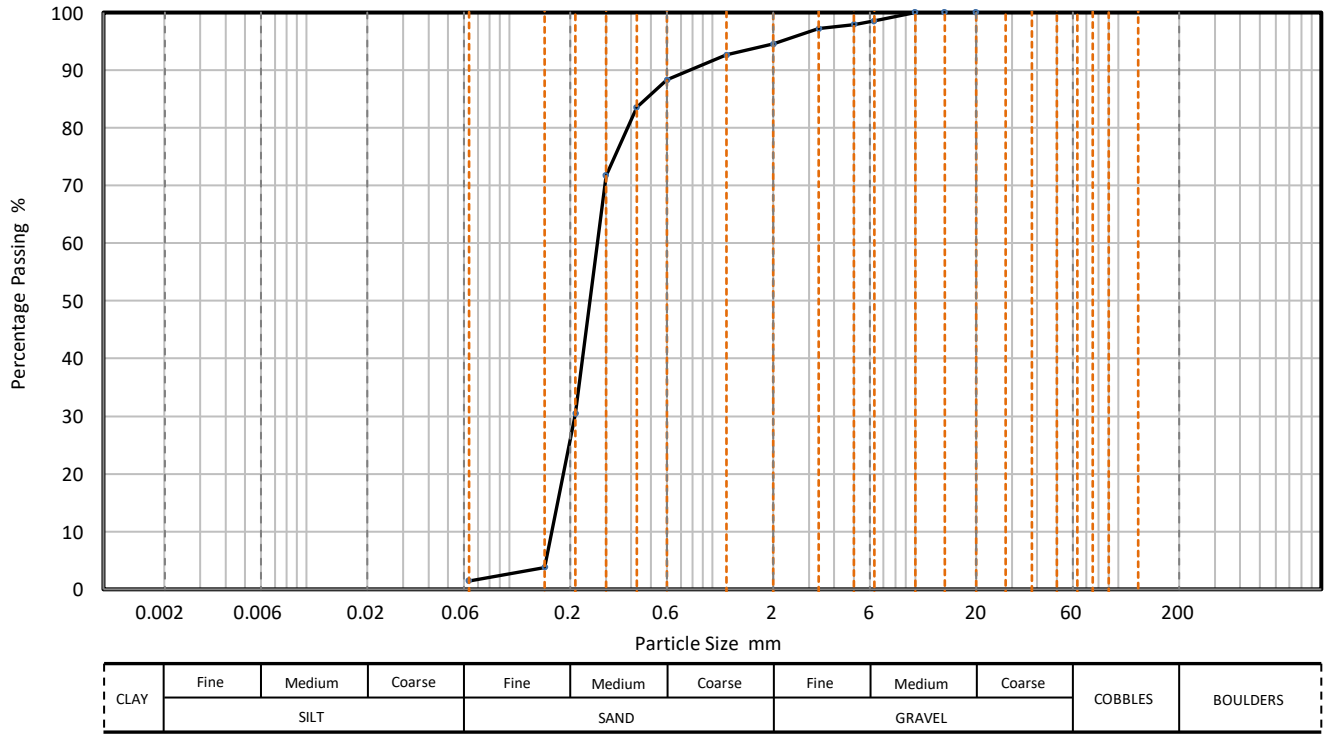
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-104	Lab sample ID	G2MT2025110522
Depth (Top) m	-0.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	99		
5	98		
3.35	97		
2	95		
1.18	93		
0.6	88		
0.425	84		
0.3	72		
0.212	30		
0.15	4		
0.063	2		

Dry Mass of sample, g	1153

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	5.5
Sand	93.0
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.272
D30	mm	0.211
D10	mm	0.163
Uniformity Coefficient		1.7
Curvature Coefficient		1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:34

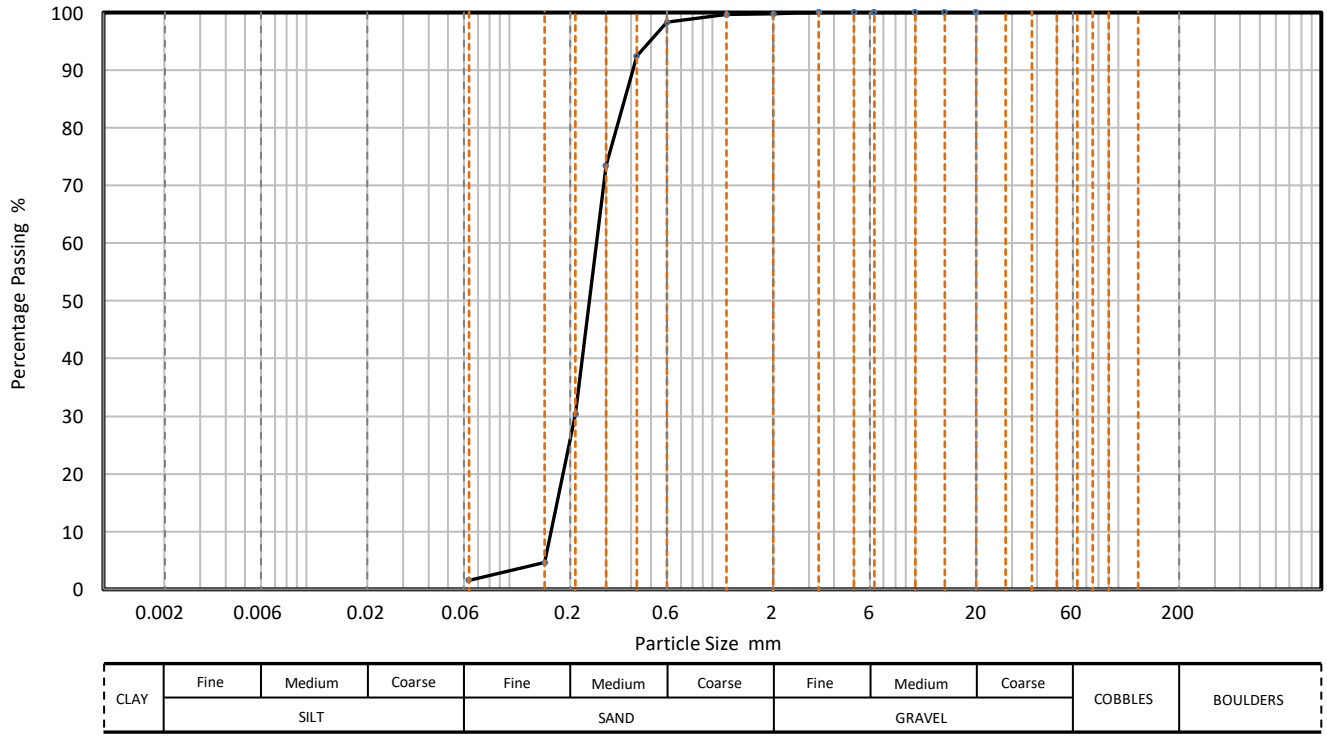
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-104	Lab sample ID	G2MT2025110520
Depth (Top) m	2.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	98		
0.425	92		
0.3	73		
0.212	30		
0.15	5		
0.063	2		

Dry Mass of sample, g	517

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	98.1
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.269
D30	mm	0.211
D10	mm	0.161
Uniformity Coefficient		1.7
Curvature Coefficient		1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:35

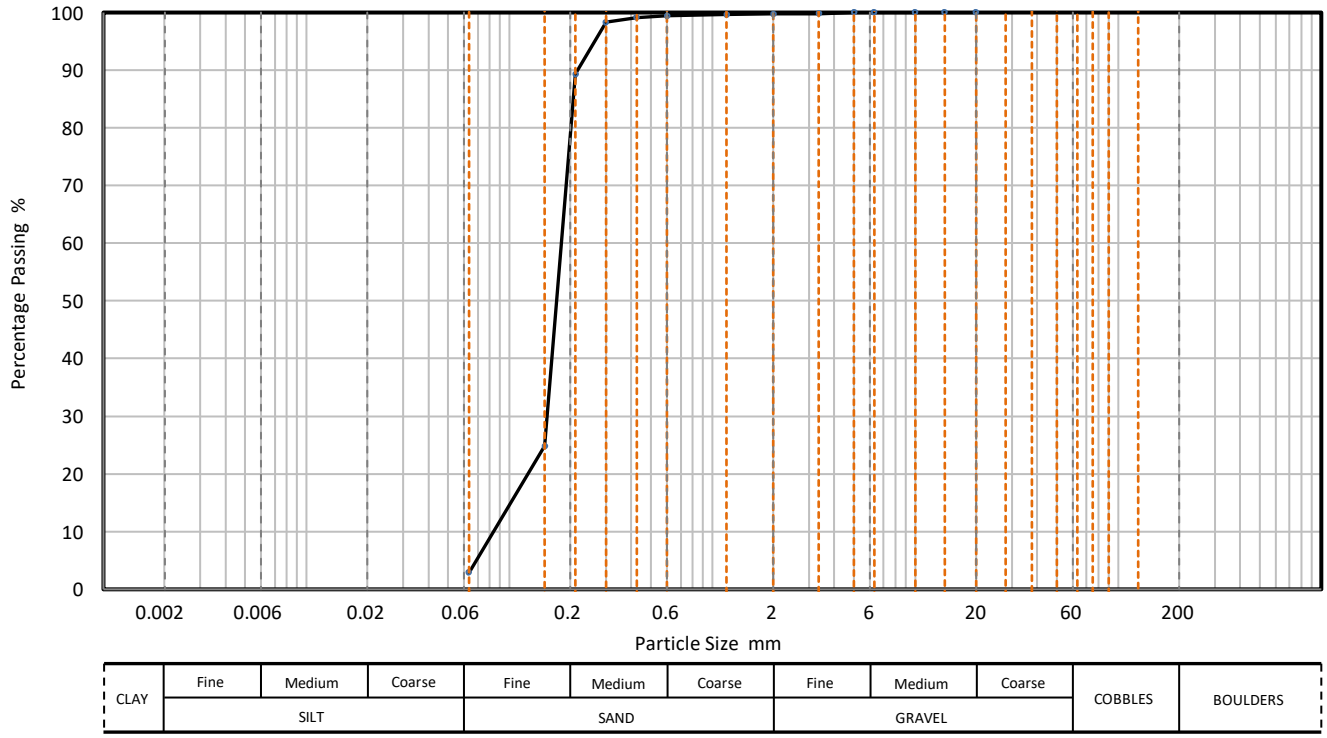
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-104	Lab sample ID	G2MT2025110524
Depth (Top) m	-8.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	98		
0.212	89		
0.15	25		
0.063	3		

Dry Mass of sample, g	690

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	96.8
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.181
D30	mm	0.154
D10	mm	0.0835
Uniformity Coefficient		2.2
Curvature Coefficient		1.6

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:38

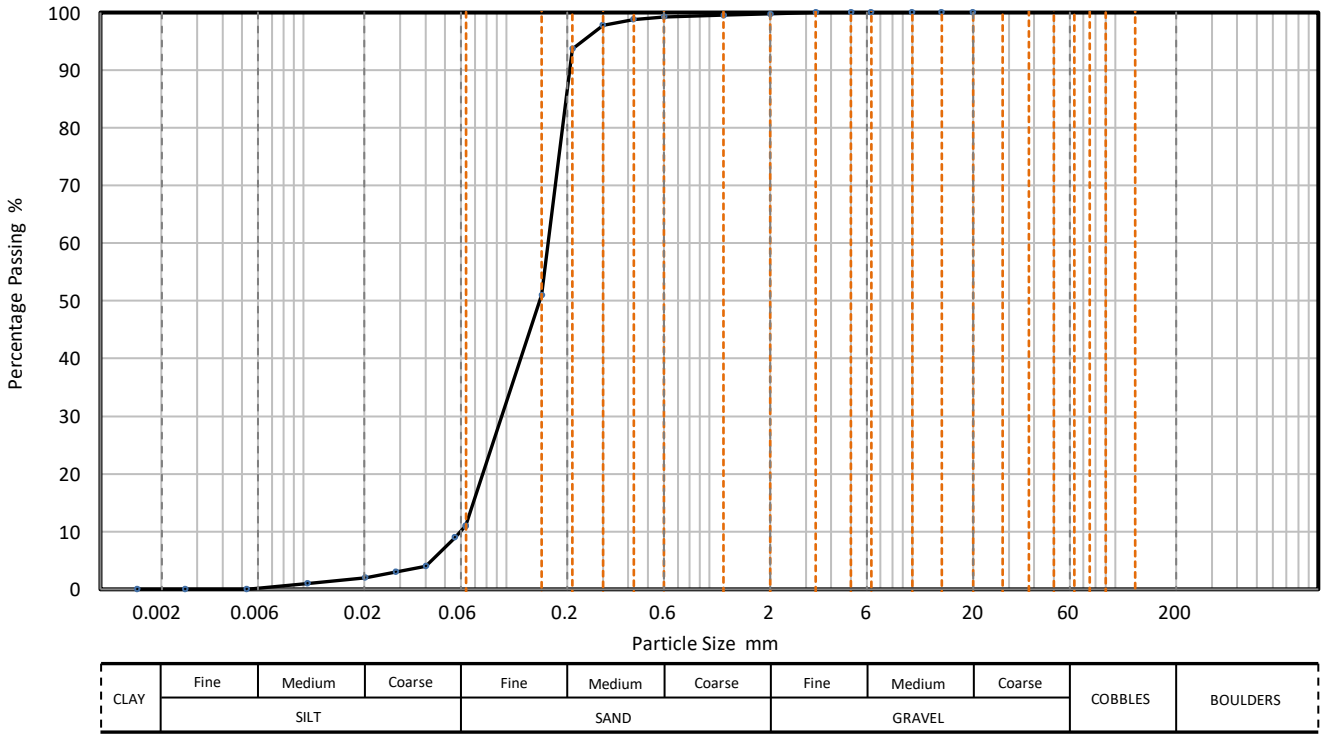
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-104	Lab sample ID	G2MT2025110525
Depth (Top) m	-11.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, Silty SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	11
		0.0559	9
		0.0402	4
		0.0286	3
		0.0202	2
		0.0105	1
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	98		
0.212	94		
0.15	51		
0.063	11		

Dry Mass of sample, g: 708

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	88.9
Silt	10.8
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.161
D30	mm	0.0952
D10	mm	0.0593
Uniformity Coefficient		2.7
Curvature Coefficient		0.95

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	03/12/2025 09:52

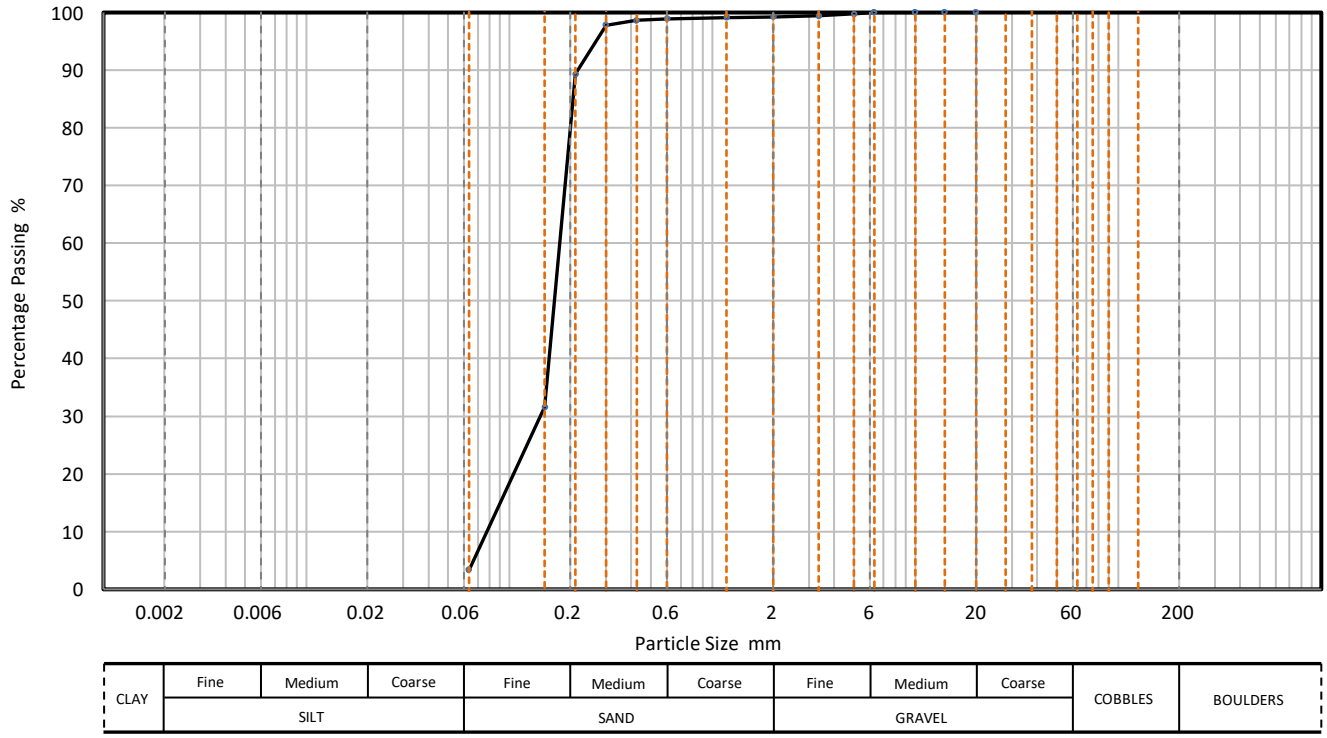
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-104	Lab sample ID	G2MT2025110526
Depth (Top) m	-15.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	99		
1.18	99		
0.6	99		
0.425	99		
0.3	98		
0.212	89		
0.15	32		
0.063	3		

Dry Mass of sample, g	852

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	95.8
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.178
D30	mm	0.143
D10	mm	0.0772
Uniformity Coefficient		2.3
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	24/11/2025 14:37

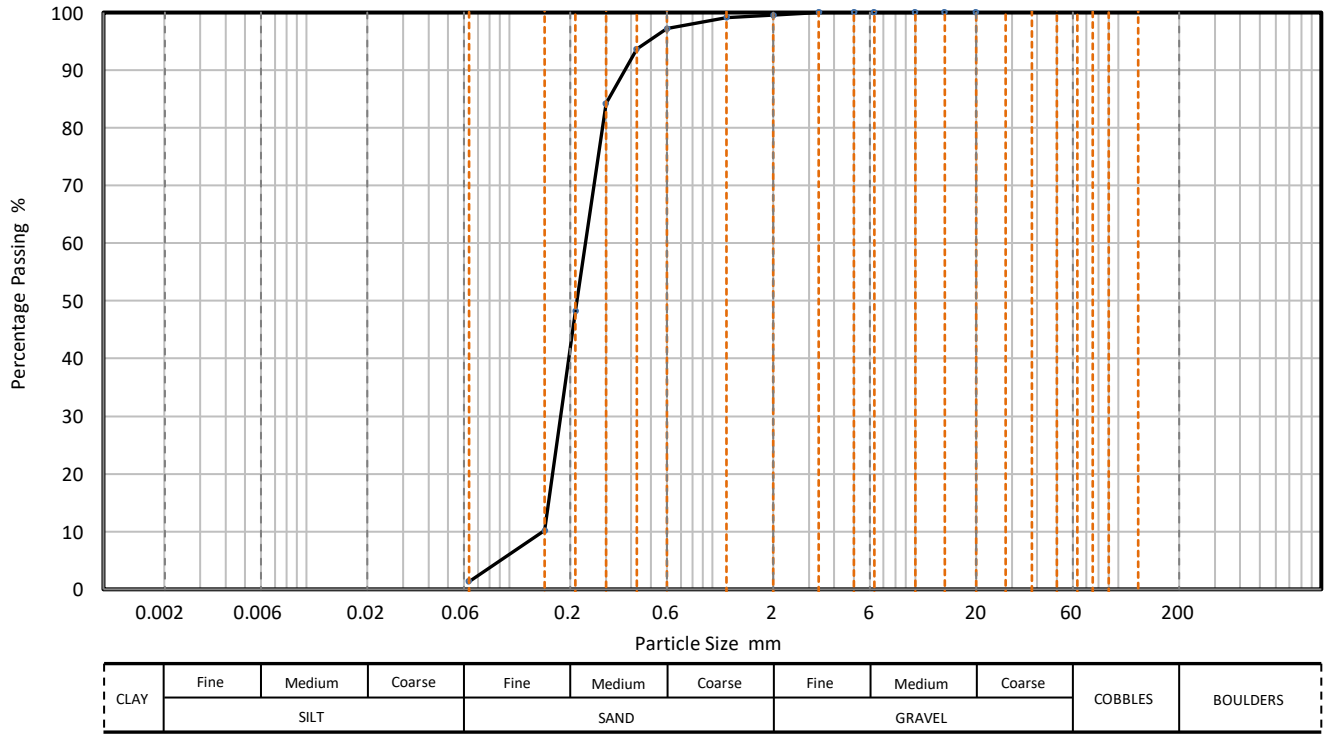
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-201	Lab sample ID	G2MT2025110542
Depth (Top) m	-1.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	97		
0.425	94		
0.3	84		
0.212	48		
0.15	10		
0.063	1		

Dry Mass of sample, g	985

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.5
Sand	98.1
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.238
D30	mm	0.18
D10	mm	0.147
Uniformity Coefficient		1.6
Curvature Coefficient		0.93

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:49

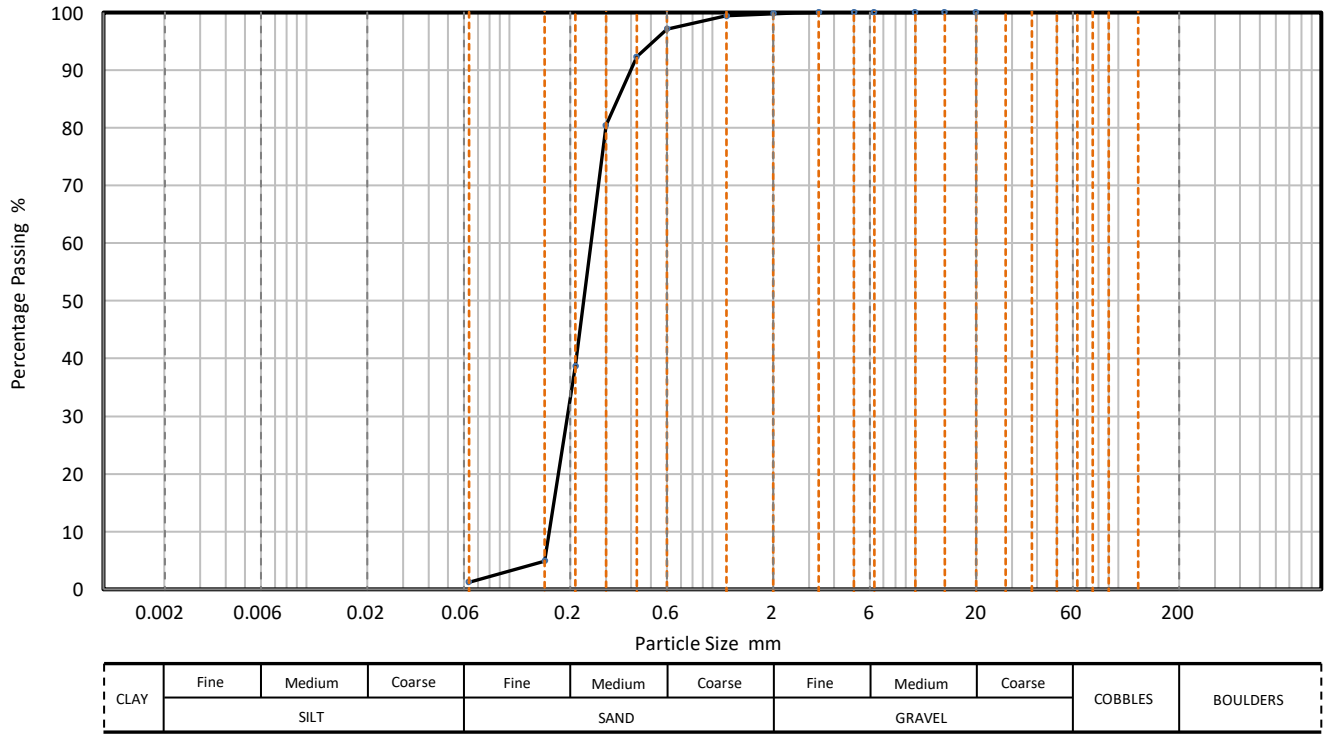
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-201	Lab sample ID	G2MT2025110540
Depth (Top) m	2.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	97		
0.425	92		
0.3	80		
0.212	39		
0.15	5		
0.063	1		

Dry Mass of sample, g: 1215

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	98.5
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.253
D30	mm	0.194
D10	mm	0.158
Uniformity Coefficient		1.6
Curvature Coefficient		0.94

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:31

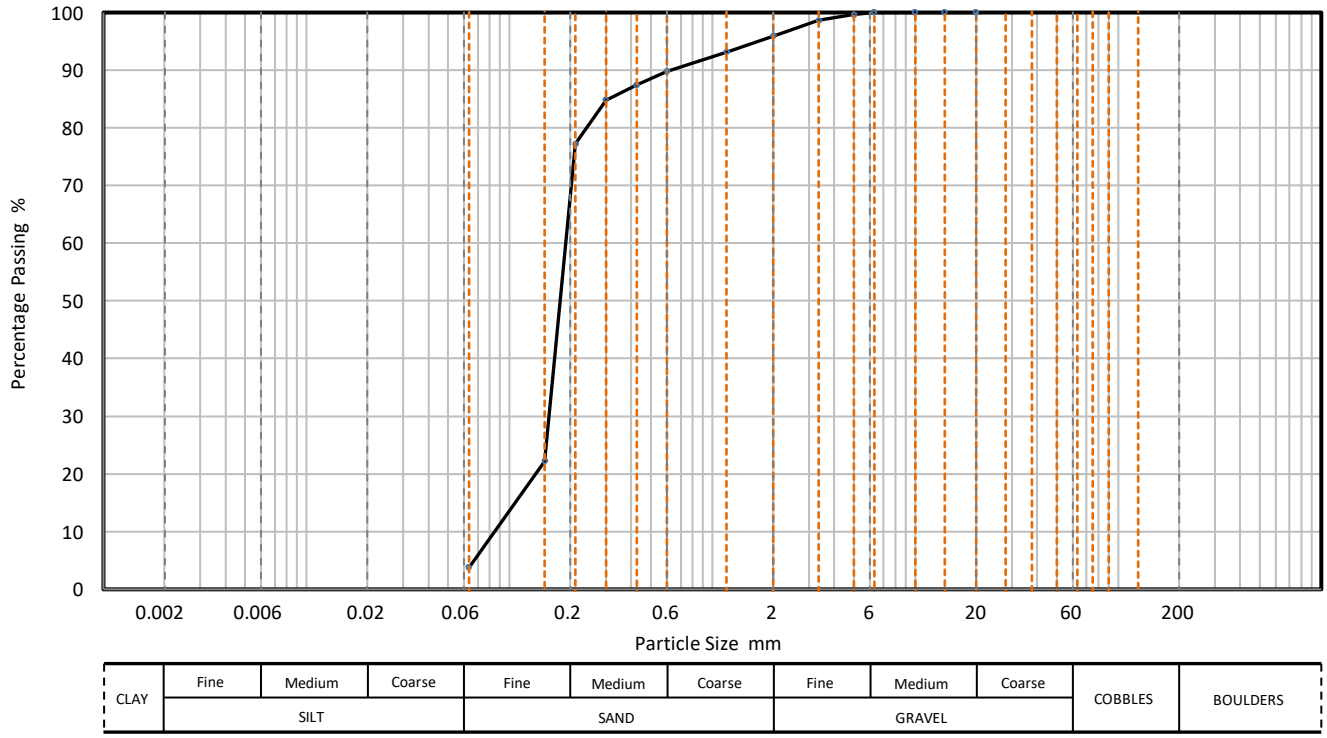
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-201	Lab sample ID	G2MT2025110545
Depth (Top) m	-8.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	96		
1.18	93		
0.6	90		
0.425	87		
0.3	85		
0.212	77		
0.15	22		
0.063	4		

Dry Mass of sample, g: 1005

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	4.1
Sand	92.1
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.19
D30	mm	0.158
D10	mm	0.0844
Uniformity Coefficient		2.3
Curvature Coefficient		1.5

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:11

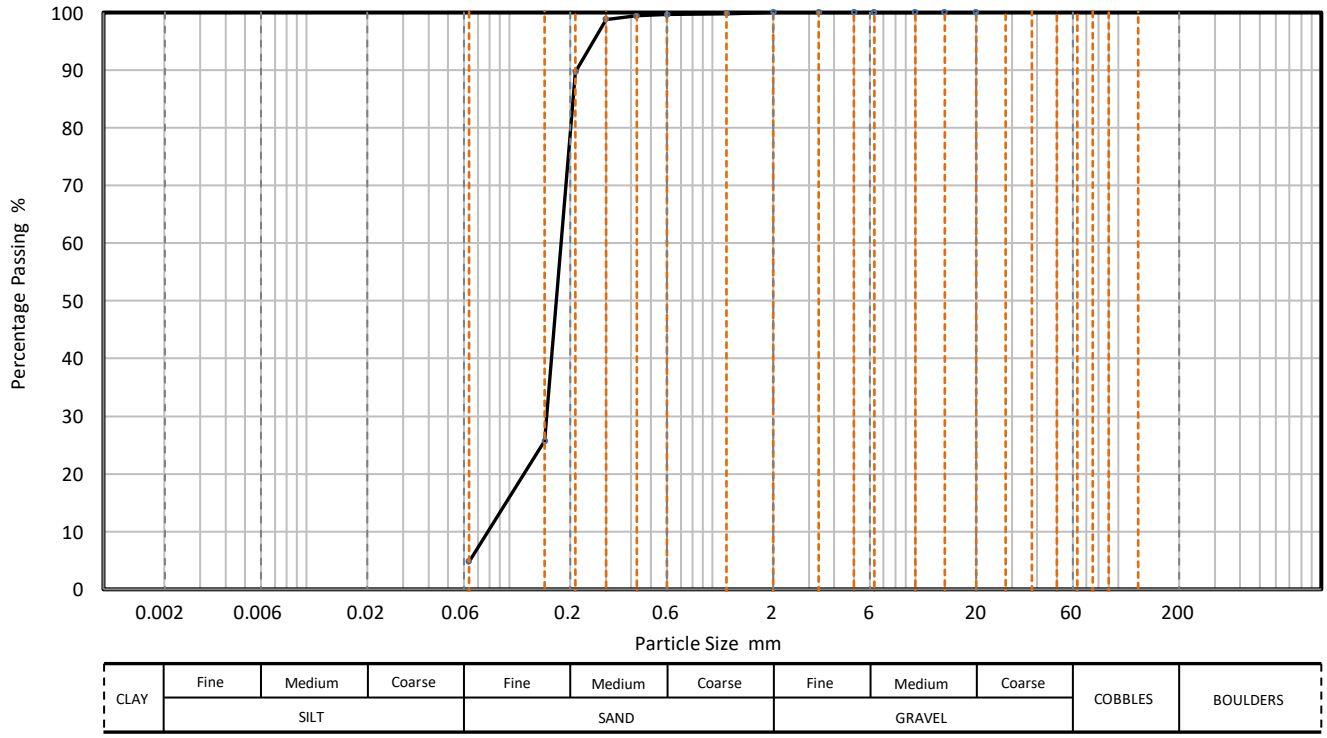
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-201	Lab sample ID	G2MT2025110547
Depth (Top) m	-13.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	90		
0.15	26		
0.063	5		

Dry Mass of sample, g	874

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	95.2
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.181
D30	mm	0.153
D10	mm	0.0781
Uniformity Coefficient		2.3
Curvature Coefficient		1.7

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:51

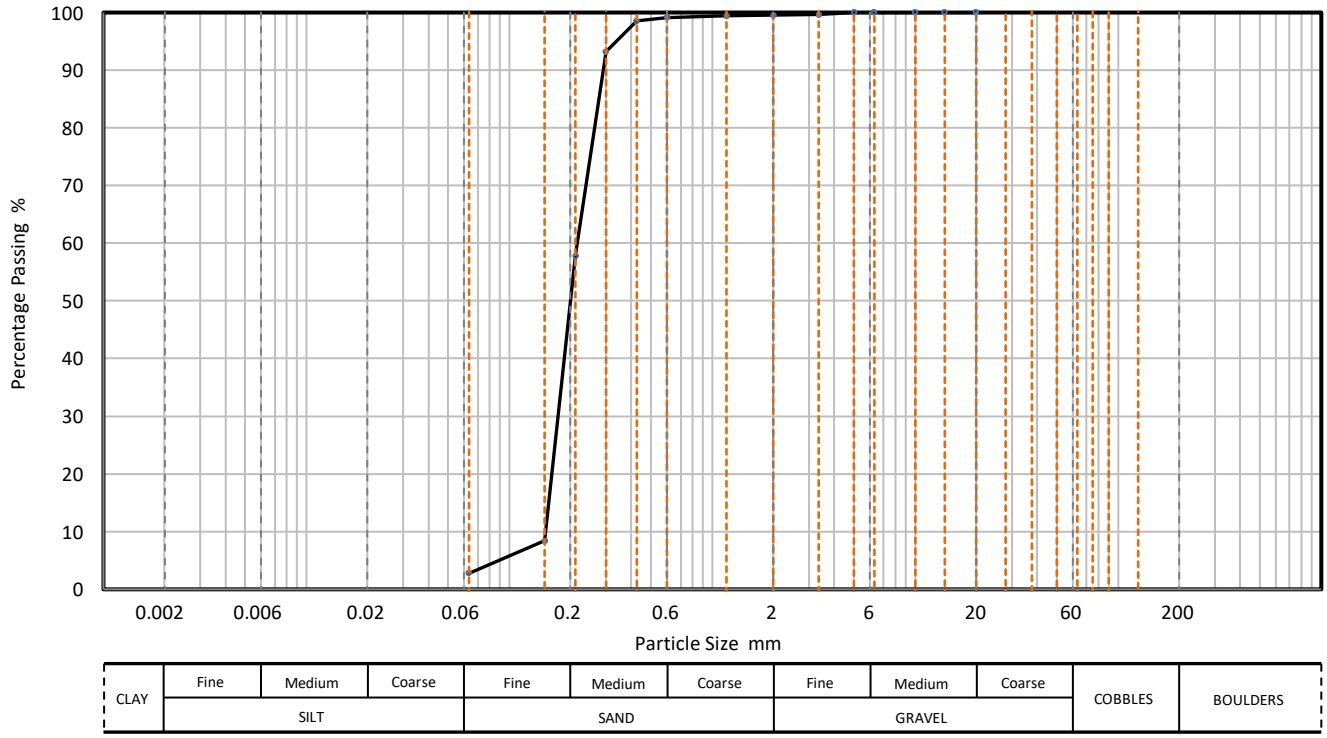
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-202	Lab sample ID	G2MT2025110548
Depth (Top) m	2.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	99		
0.425	99		
0.3	93		
0.212	58		
0.15	8		
0.063	3		

Dry Mass of sample, g: 1109

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.5
Sand	96.7
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.217
D30	mm	0.175
D10	mm	0.152
Uniformity Coefficient		1.4
Curvature Coefficient		0.93

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:57

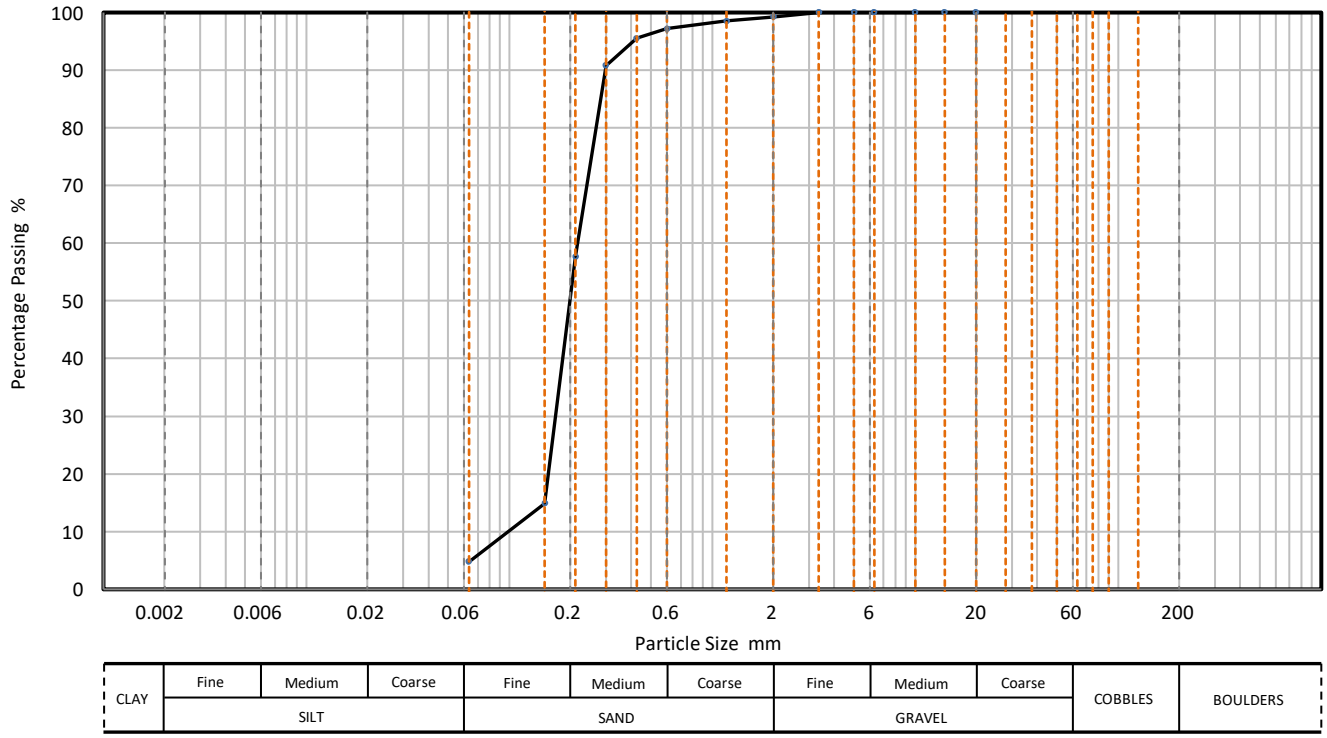
PARTICLE SIZE DISTRIBUTION

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-202	Lab sample ID	G2MT2025110550
Depth (Top) m	-4.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	97		
0.425	96		
0.3	91		
0.212	58		
0.15	15		
0.063	5		

Dry Mass of sample, g	823

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	94.4
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.217
D30	mm	0.17
D10	mm	0.0988
Uniformity Coefficient		2.2
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:28

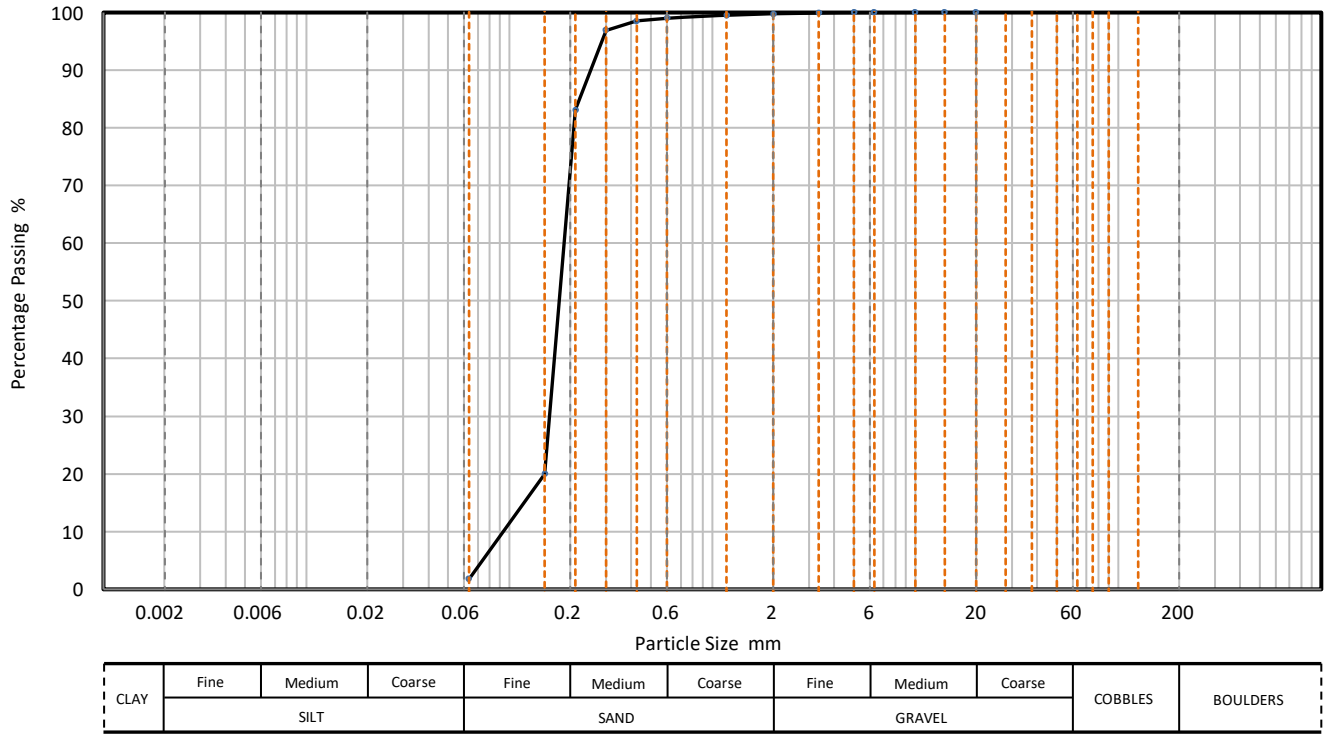
PARTICLE SIZE DISTRIBUTION

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-202	Lab sample ID	G2MT2025110552
Depth (Top) m	-7.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	97		
0.212	83		
0.15	20		
0.063	2		

Dry Mass of sample, g	884

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	97.9
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.187
D30	mm	0.158
D10	mm	0.0929
Uniformity Coefficient		2
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:14

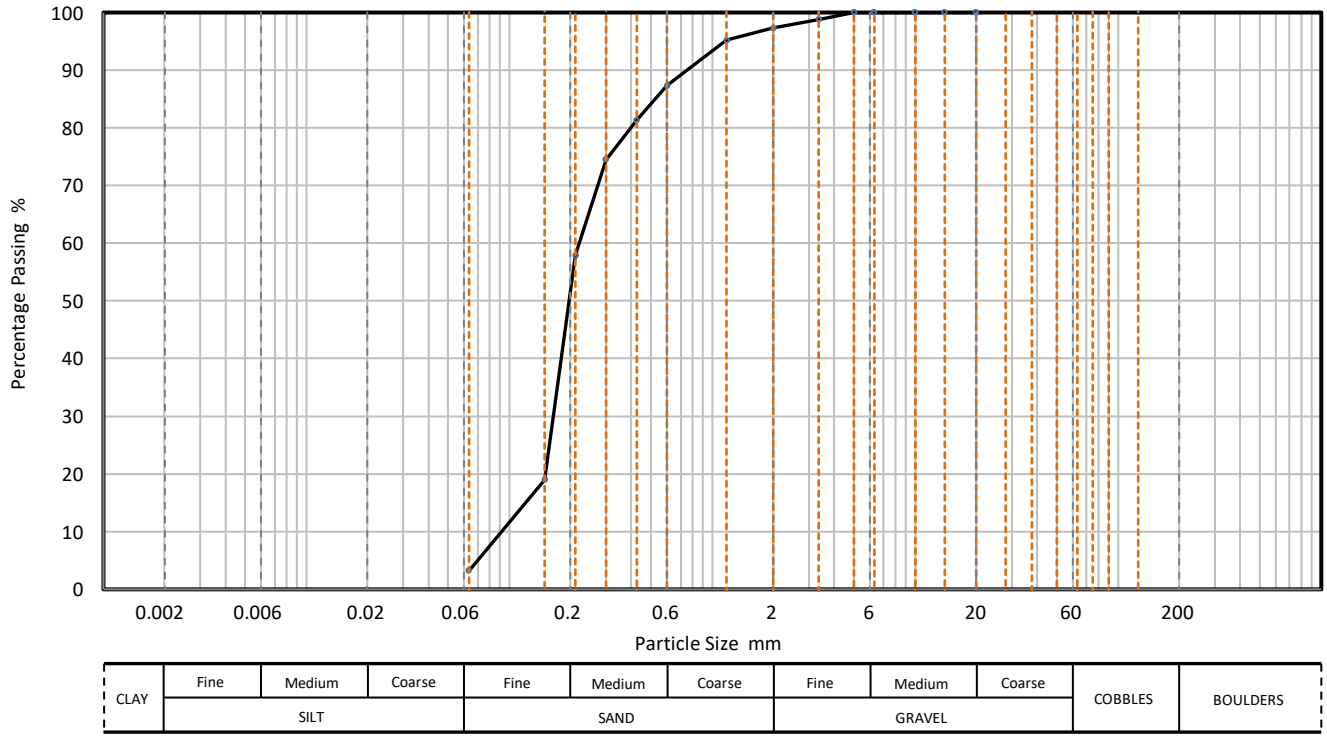
PARTICLE SIZE DISTRIBUTION

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-202	Lab sample ID	G2MT2025110554
Depth (Top) m	-13.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	97		
1.18	95		
0.6	87		
0.425	81		
0.3	75		
0.212	58		
0.15	19		
0.063	3		

Dry Mass of sample, g	818

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	2.7
Sand	94.0
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.221
D30	mm	0.165
D10	mm	0.0912
Uniformity Coefficient		2.4
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:15

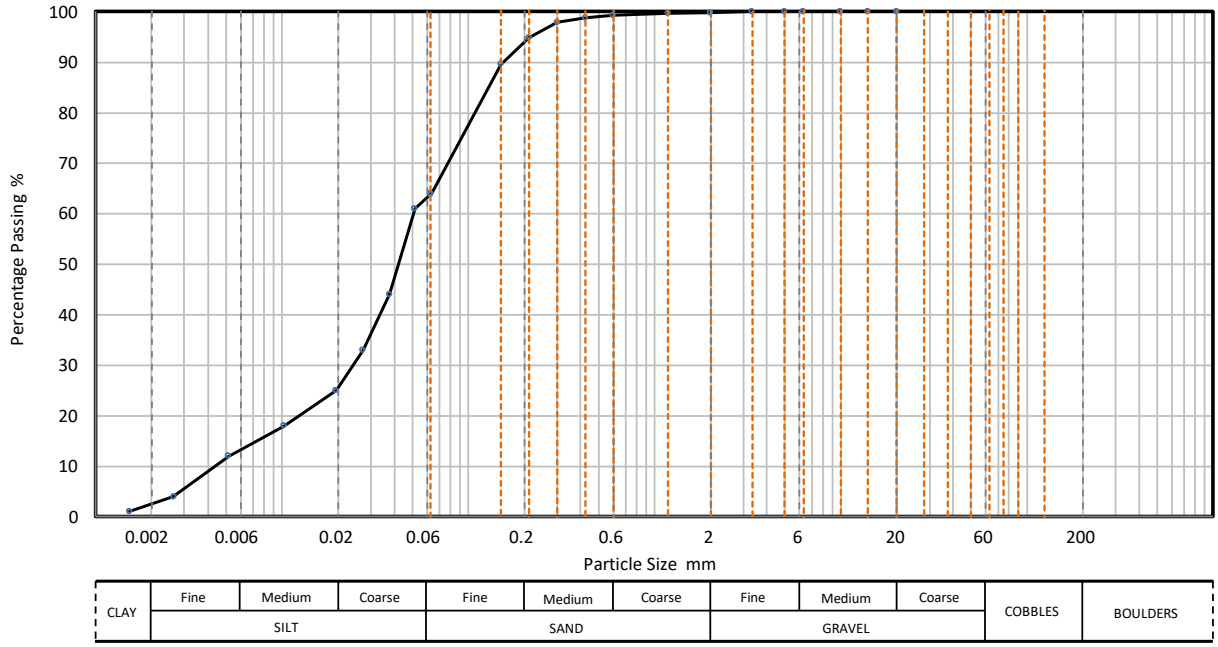
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Marine GI - Ardersier Port	S250403

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	CP-202	Lab sample ID	G2MT2025110557
Depth (Top) m	-16.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, Very Sandy SILT
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	64
		0.0517	61
		0.0377	44
		0.0272	33
		0.0195	25
		0.0102	18
		0.0052	12
20	100	0.0026	4
14	100	0.0015	1
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	98		
0.212	95		
0.15	90		
0.063	64		

Dry Mass of sample, g: 851

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	36.0
Silt	61.5
Clay	2.3

Grading Analysis		
D100	mm	
D60	mm	0.0511
D30	mm	0.0238
D10	mm	0.00444
Uniformity Coefficient		12
Curvature Coefficient		2.5

Remarks
Preparation and testing in accordance with test method unless noted below

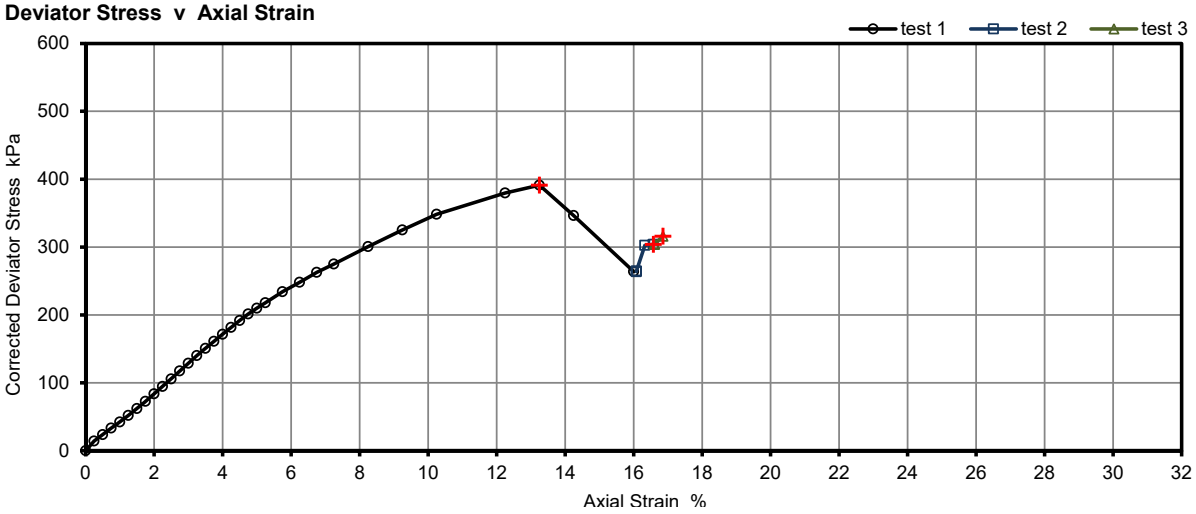
Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	03/12/2025 09:40

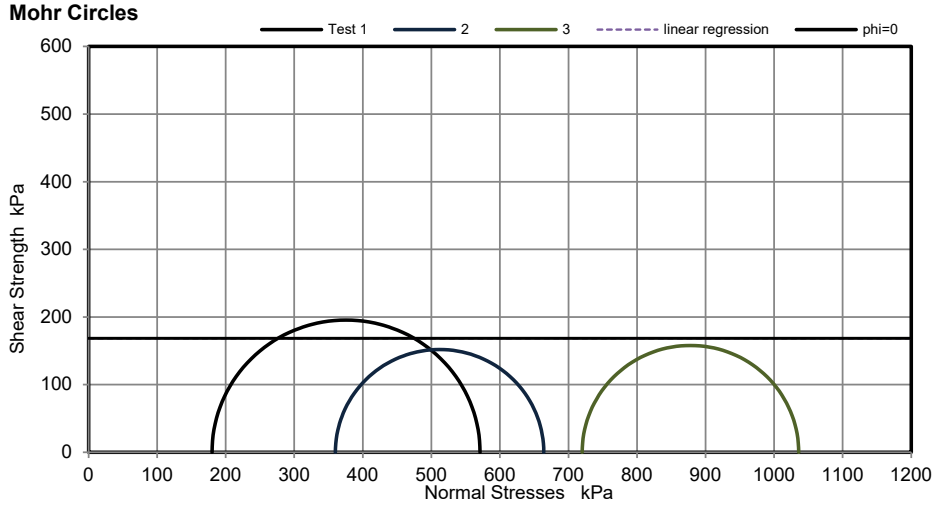
UKAS TESTING 10258	**Unconsolidated Undrained Triaxial Compression Test without measurement of pore pressure - Multistage test**			Job Ref	S250403
				Borehole/Pit No.	BH-205
Site Name	Marine GI - Ardersier Port			Sample No.	
Soil Description				Depth	-17.12
Specimen Reference	BH-205	Specimen Depth	-17.12 m	Sample Type	U
Specimen Description	Very High Strength CLAY			KeyLAB ID	G2MT2025101443
Test Method	BS1377:Part 7:1990, clause 9, multistage test on a single specim			Date of test	28/10/2025

				No of membranes used	
Length		mm	200.0		
Diameter		mm	100.0	Total thickness (mm)	
Bulk Density		Mg/m3	2.55		
Moisture Content		%	11	Membrane Correction	
Dry Density		Mg/m3	2.29		
Rate of Strain		%/min	2.00		
Stage Number			1	2	3
Cell Pressure		kPa	180	360	720
End of stage	Axial Strain	%	13.2	16.6	16.9
	Deviator Stress, (σ1 - σ3) corrected for area and membrane	kPa	391.1	304.0	315.9
	Shear strength, cu	kPa	195.6	152.0	158.0
	Mode of failure		Plastic		

Deviator Stress v Axial Strain



Mohr Circles



ϕu = 0

Average cu 169 kPa

Linear Regression

ϕu 0.0 °

cu 169 kPa

Mohr circles and their interpretation is not covered by BS1377. These are provided for information only.

Remarks

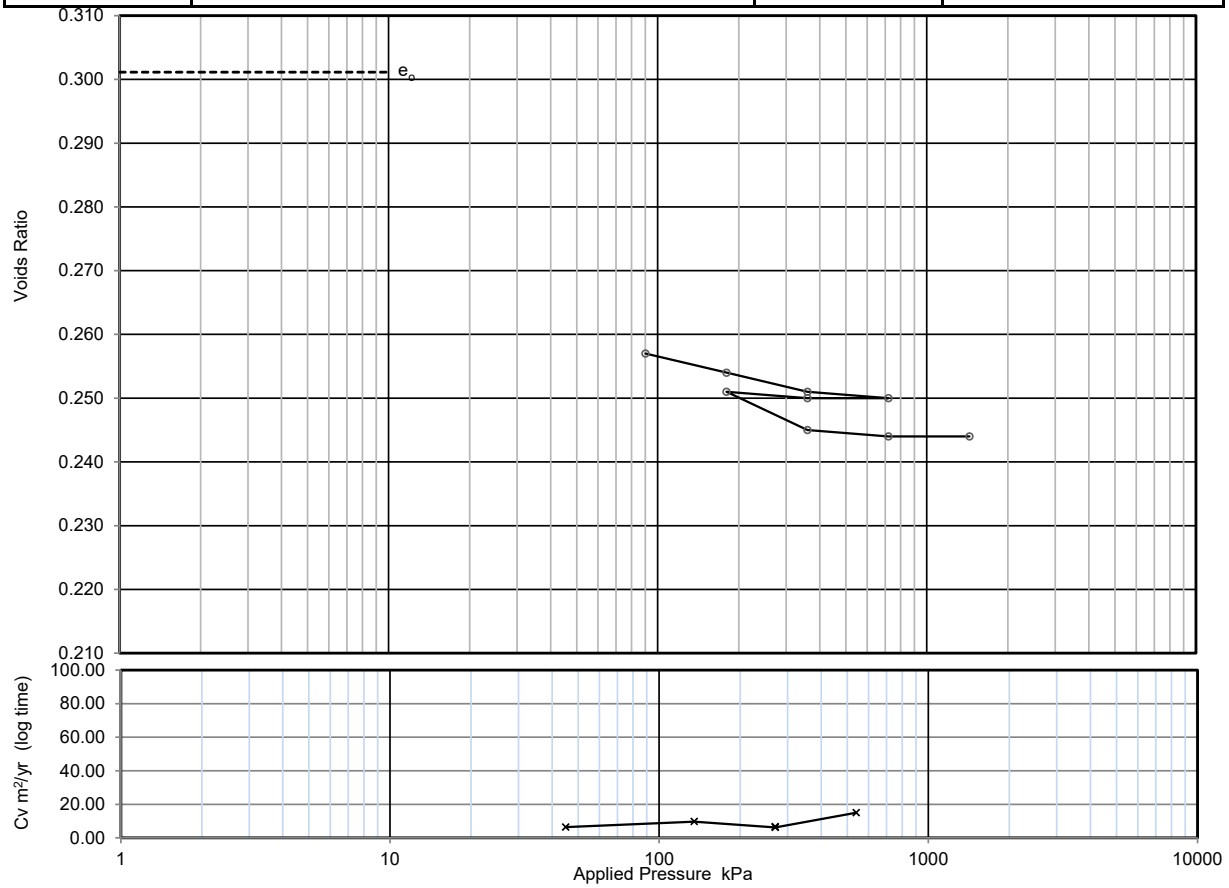
Approved	Printed
JBrischuk	19/02/2026 09:07

Lab Sheet Reference :

Fig. No. 1

Sheet 1

UKAS TESTING 10258	**ONE DIMENSIONAL CONSOLIDATION TEST ISO 17892-5:2017**			Job Ref	S250403
				Borehole/Pit No.	BH-205
Site Name	Marine GI - Ardersier Port			Sample No.	
Soil Description				Depth	-17.12
Specimen Reference	BH-205	Specimen Depth	-17.12 m	Sample Type	U
Specimen Description				KeyLAB ID	G2MT2025101443
Test Method	ISO 17892-5:2017			Date started	04/11/2025



Applied Pressure kPa	Voids ratio	Mv m2/MN	Cv (t50, log) m2/yr	Cv (t90, root) m2/yr	Csec
0.0	0.301	-	-	-	-
90	0.257	0.37	6.4	8.8	0.00032
180	0.254	0.025	9.7	22	0.00047
360	0.251	0.013	6.2	54	0.00063
720	0.250	0.0036	15	140	0.00063
360	0.250	0.0014			
180	0.251	0.0032			
360	0.245	0.029	6.7	600	-2.15E+09
720	0.244	0.0017	54	170	0.0003
1,440	0.244	0.00015	32	37	0.00083

Preparation

Index tests Liquid limit % Plastic limit %

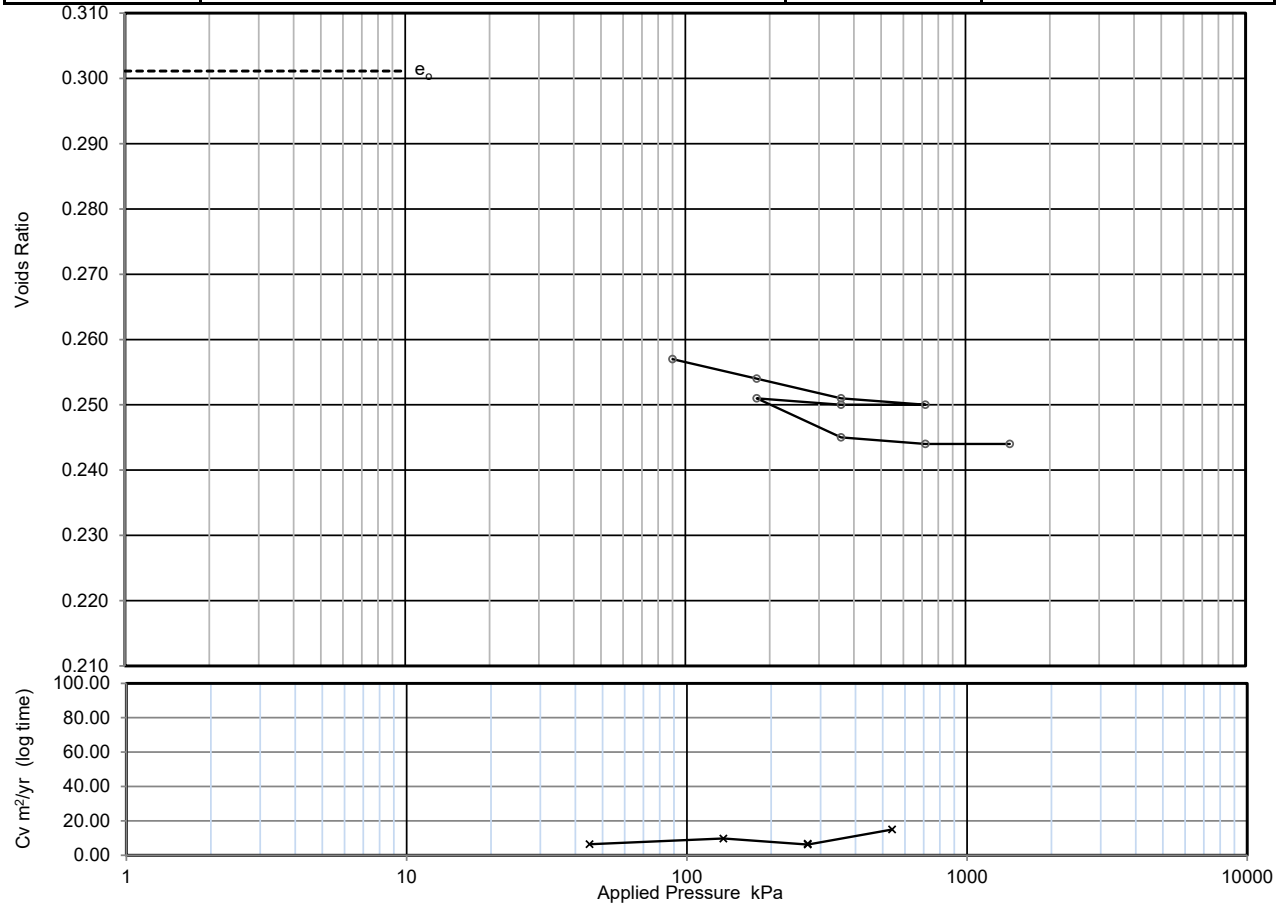
Particle density assumed 2.65 Mg/m3

Specimen details	Initial	Final	
Diameter	75.03	-	mm
Height	20.06	19.17	mm
Water Content	12	10	%
Bulk density	2.27		Mg/m3
Dry density	2.04		Mg/m3
Voids Ratio	0.301		
Saturation	103		%
Average temperature for test	21.0		oC
Swelling Pressure			kPa
Settlement on saturation			%

Remarks

Final values should be used with caution Cv plotted at mid point of load increments Cv corrected to 20oC	Tested	Checked	Approved	Printed : 19/02/2026 09:07	Fig. No 1

UKAS TESTING 10258	**ONE DIMENSIONAL CONSOLIDATION TEST ISO 17892-5:2017**			Job Ref	S250403
				Borehole/Pit No.	BH-205
Site Name	Marine GI - Ardersier Port			Sample No.	
Soil Description				Depth	-17.12
Specimen Reference	BH-205	Specimen Depth	-17.12 m	Sample Type	U
Specimen Description				KeyLAB ID	G2MT2025101443
Test Method	ISO 17892-5:2017			Date started	04/11/2025



Applied Pressure kPa	Voids ratio	Mv m2/MN	Cv (t50, log) m2/yr	Cv (t90, root) m2/yr	Csec
0.0	0.301	-	-	-	-
90	0.257	0.37	6.4	8.8	0.00032
180	0.254	0.025	9.7	22	0.00047
360	0.251	0.013	6.2	54	0.00063
720	0.250	0.0036	15	140	0.00063
360	0.250	0.0014			
180	0.251	0.0032			
360	0.245	0.029	6.7	600	-2.15E+09
720	0.244	0.0017	54	170	0.0003
1,440	0.244	0.00015	32	37	0.00083

Preparation

Index tests Liquid limit % Plastic limit %

Particle density assumed 2.65 Mg/m3

Specimen details	Initial	Final	
Diameter	75.03	-	mm
Height	20.06	19.17	mm
Water Content	12	10	%
Bulk density	2.27		Mg/m3
Dry density	2.04		Mg/m3
Voids Ratio	0.301		
Saturation	103		%
Average temperature for test	21.0		oC
Swelling Pressure			kPa
Settlement on saturation			%

Remarks

Final values should be used with caution Cv plotted at mid point of load increments Cv corrected to 20oC	Tested	Checked	Approved	Printed : 19/02/2026 09:07	Fig. No 1

Density Tests - Summary of Results

Project No.: S250403

Project Name: Marine GI - Ardersier Port

Hole No.	Sample Ref	Sample Top	Sample Base	Sample Type	Soil Description	Linear Measurement Bulk density Mg/m3	Linear Measurement Dry density Mg/m3	Linear Measurement w %	Immersion in water Bulk density Mg/m3	Immersion in water Dry density Mg/m3	Immersion in water w %	Water displacement Bulk density Mg/m3	Water displacement Dry density Mg/m3	Water displacement w %	Remarks
BH-113		-16.58		D		1.96	1.57	24.2							
BH-116		-10.50		B		1.82	1.49	22.5							
BH-203		-12.00		B		2.17	1.90	14.1							

Legend: w moisture content of the density test specimen

Notes

Tests carried out in accordance with BS1377:Part2:1990 and the following clauses unless annotated otherwise

Linear measurement	clause 7.2
Immersion in water	clause 7.3
Water displacement	clause 7.4

Date Printed: 19/02/2026

Approved By: D Anderson

Table: 1

sheet: 1

Particle Density by Gas Jar Tests - Summary of Results

Project No.	Project Name
S250403	Marine GI - Ardersier Port

Hole No.	Sample				Soil Description at test horizon	Particle Density Mg/m3	Remarks
	Ref	Top	Base	Type			
BH-102		3.50		B		2.66	
BH-202		-10.20		B		2.65	
BH-202		-13.20		B		2.72	
BH-205		-2.08		B		2.66	
BH-205		-6.80		B		2.65	
CP-202		-16.00		B		2.70	

Notes	Date Printed	Table
Tests performed in accordance with BS 1377 unless annotated otherwise Gas Jar tests to BS1377: Part 2 : 1990, clause 8.2	19/02/2026	sheet

SITE NAME:
JOB NUMBER:

Hole	Depth m	Type	Hand Vane (kPa)
BH-207	-28.24	U100	12, 10, 10

Checked & Approved by: J.Brischuk
Date: 22/09/2025

Certificate of Analysis

Certificate Number 25-21353 *Issued:* 23-Sep-25

Client G2M Testing Ltd
12 Yarm Road
Stockton On Tees
Cleveland
TS18 3NA

Our Reference 25-21353

Client Reference ~ S250403

Order No ~ LAB2464

Contract Title ~ MARINE GI-Ardersier Port

Description 3 Soil samples.

Date Received 15-Sep-25

Date Started 15-Sep-25

Date Completed 23-Sep-25

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Reyhan Irfan
Operations Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Symbol key
at end of report

Summary of Chemical Analysis
Soil Samples

Our Ref 25-21353
Client Ref ~ S250403
Contract Title ~ MARINE GI-Ardersier Port

			Lab No	2568400	2568401	2568402
			Sample ID ~	BH-116	BH-114	BH-117
			Depth ~			
			Other ID ~			
			Sample Type ~	D	D	D
			Sampling Date ~	n/s	n/s	n/s
			Sampling Time ~	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Inorganics						
Organic matter	DETSC 2002#	0.1	%	0.2	1.4	0.6

Symbol key at end of report

Information in Support of the Analytical Results

Our Ref 25-21353
Client Ref ~ S250403
Contract ~ MARINE GI-Ardersier Port

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2568400	BH-116 SOIL		PT 500ml	Sample date not supplied, Organic Matter (Manual) (28 days)	
2568401	BH-114 SOIL		PT 500ml	Sample date not supplied, Organic Matter (Manual) (28 days)	
2568402	BH-117 SOIL		PT 500ml	Sample date not supplied, Organic Matter (Manual) (28 days)	

Key: P-Plastic T-Tub
Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.09.01

Symbol key at end of report

Certificate of Analysis

Certificate Number	25-21764	*Issued:*	29-Sep-25

Client G2M Testing Ltd
12 Yarm Road
Stockton On Tees
Cleveland
TS18 3NA

Our Reference	25-21764
Client Reference ~	S250403
Order No ~	LAB2468
Contract Title ~	Marine GI - Ardersier
Description	1 Soil sample.
Date Received	19-Sep-25
Date Started	19-Sep-25
Date Completed	29-Sep-25
Test Procedures	Identified by prefix DETSn (details on request).
Notes	Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Louise Cook
Contracts Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Summary of Chemical Analysis
Soil Samples

Our Ref 25-21764
Client Ref ~ S250403
Contract Title ~ Marine GI - Ardersier

Lab No	2570948
Sample ID ~	BH-108
Depth ~	4.80
Other ID ~	
Sample Type ~	D
Sampling Date ~	n/s
Sampling Time ~	n/s

Test	Method	LOD	Units	
Inorganics				
Organic matter	DETSC 2002#	0.1	%	0.4

Symbol key at end of report

Information in Support of the Analytical Results

Our Ref 25-21764
Client Ref ~ S250403
Contract ~ Marine GI - Ardersier

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2570948	BH-108 4.80 SOIL		PT 1L	Sample date not supplied, Organic Matter (Manual) (28 days)	

Key: P-Plastic T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.09.01

Symbol key at end of report

Certificate of Analysis

Certificate Number	25-22803	*Issued:*	09-Oct-25

Client G2M Testing Ltd
12 Yarm Road
Stockton On Tees
Cleveland
TS18 3NA

Our Reference	25-22803
Client Reference ~	S250403
Order No ~	LAB2480
Contract Title ~	Marine GI - Ardersier Port Sch 11, 16, 17 Comb
Description	1 Soil sample.
Date Received	03-Oct-25
Date Started	03-Oct-25
Date Completed	09-Oct-25
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Louise Cook
Contracts Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Symbol key
at end of report

Summary of Chemical Analysis
Soil Samples

Our Ref 25-22803
Client Ref ~ S250403
Contract Title ~ Marine GI - Ardersier Port Sch 11, 16, 17 Comb

Lab No	2577144
Sample ID ~	BH119
Depth ~	6.20
Other ID ~	
Sample Type ~	D
Sampling Date ~	n/s
Sampling Time ~	n/s

Test	Method	LOD	Units	
Inorganics				
Organic matter	DETSC 2002#	0.1	%	0.6

Symbol key at end of report

Information in Support of the Analytical Results

Our Ref 25-22803
Client Ref ~ S250403
Contract ~ Marine GI - Ardersier Port Sch 11, 16, 17 Comb

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2577144	BH119 6.20 SOIL		PT 1L	Sample date not supplied, Organic Matter (Manual) (28 days)	

Key: P-Plastic T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.10.01

Certificate of Analysis

Certificate Number	25-23928	*Issued:*	23-Oct-25

Client G2M Testing Ltd
12 Yarm Road
Stockton On Tees
Cleveland
TS18 3NA

Our Reference	25-23928
Client Reference ~	S250403
Order No ~	LAB2490
Contract Title ~	Marine GI - Ardersier Port SCH 12, 13, 14, 18, 19, 20, 21, 25, 26, (
Description	2 Soil samples.
Date Received	16-Oct-25
Date Started	16-Oct-25
Date Completed	23-Oct-25
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Reyhan Irfan
Operations Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Summary of Chemical Analysis
Soil Samples

Our Ref 25-23928
Client Ref ~ S250403
Contract Title ~ Marine GI - Ardersier Port SCH 12, 13, 14, 18, 19, 20, 21, 25, 26, Comb

Lab No	2583871	2583872
Sample ID ~	BH-202	BH-201
Depth ~	4.10	4.70
Other ID ~		
Sample Type ~	D	D
Sampling Date ~	n/s	n/s
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
Inorganics					
Organic matter	DETSC 2002#	0.1	%	4.6	0.4

Symbol key at end of report

Information in Support of the Analytical Results

Our Ref 25-23928
Client Ref ~ S250403
Contract ~ Marine GI - Ardersier Port SCH 12, 13, 14, 18, 19, 20, 21, 25, 26, Comb

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2583871	BH-202 4.10 SOIL		PT 1L	Sample date not supplied, Organic Matter (Manual) (28 days)	
2583872	BH-201 4.70 SOIL		PT 1L	Sample date not supplied, Organic Matter (Manual) (28 days)	

Key: P-Plastic T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.10.01

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	0.8
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010625
Test Method	BS EN ISO 17892-10:2018			Date of test	

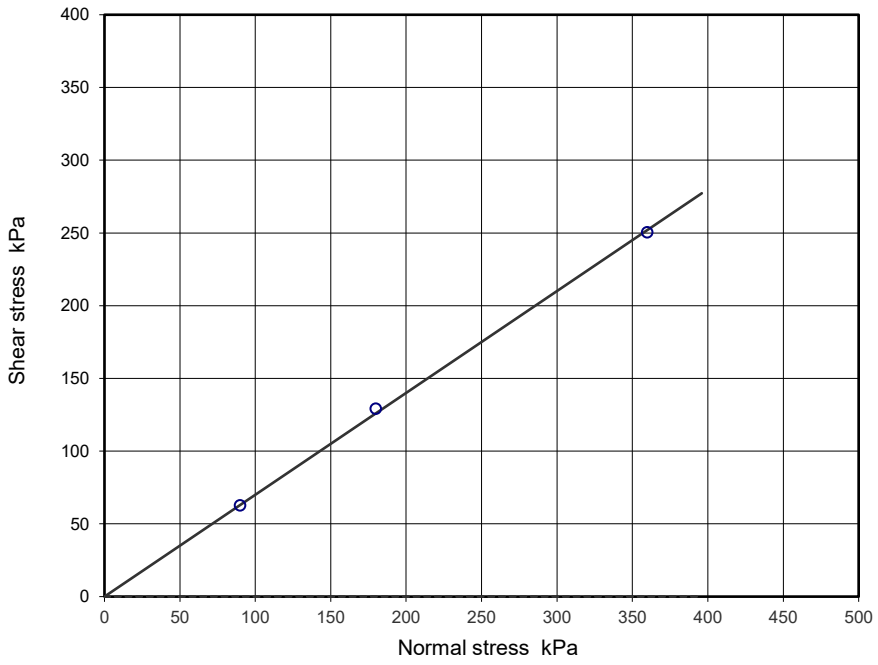
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.4	26.3				mm
	Bulk Density		1.76	1.76	1.76				Mg/m³
	Moisture Content		10.3	10.3	10.3				%
	Dry density		1.60	1.60	1.60				Mg/m³
	Voids ratio		0.656	0.656	0.656				
	Degree of Saturation		42	42	42				%
Consolidation	Consolidation / Normal Stress applied		**90**	**180**	**360**				kPa
	Change in height during consolidation*		-0.144	-0.214	-0.538				mm
	Voids ratio after consolidation		0.647	0.643	0.622				
After test	Final Moisture content		24.0	23.9	23.2				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	0.90	1.30	1.75				mm
	Shear stress	62.7	129.2	250.3				kPa
	Vertical Movement at peak shear stress*	-0.06	-0.10	-0.45				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[2.2]	0
Ø '	degrees	[34.5]	35

Residual strength, (x)

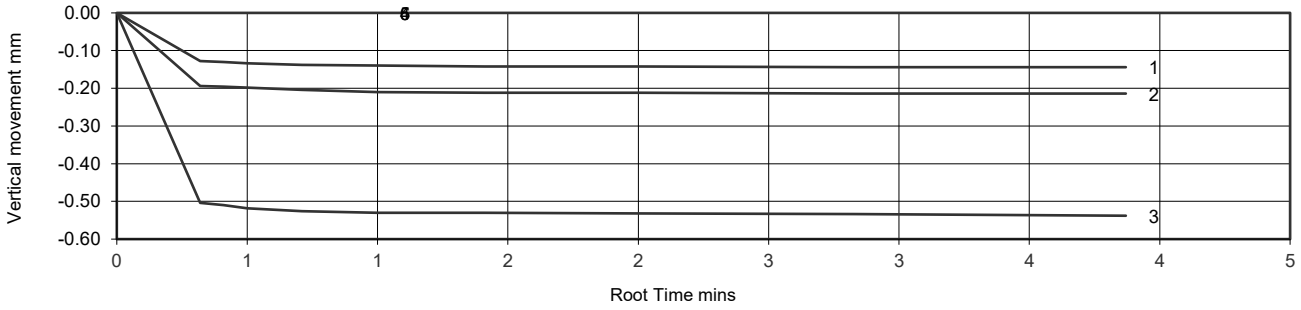
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

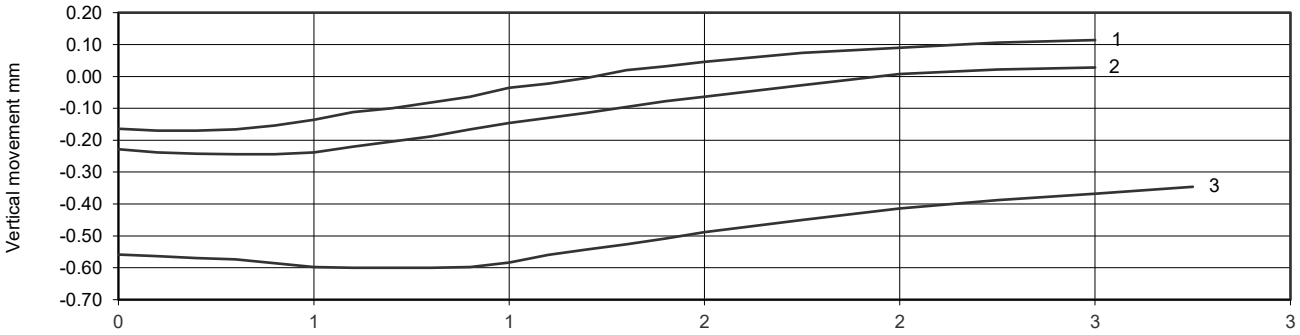
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	27/02/2026	UKAS TESTING 7758	TTL	**SSB**

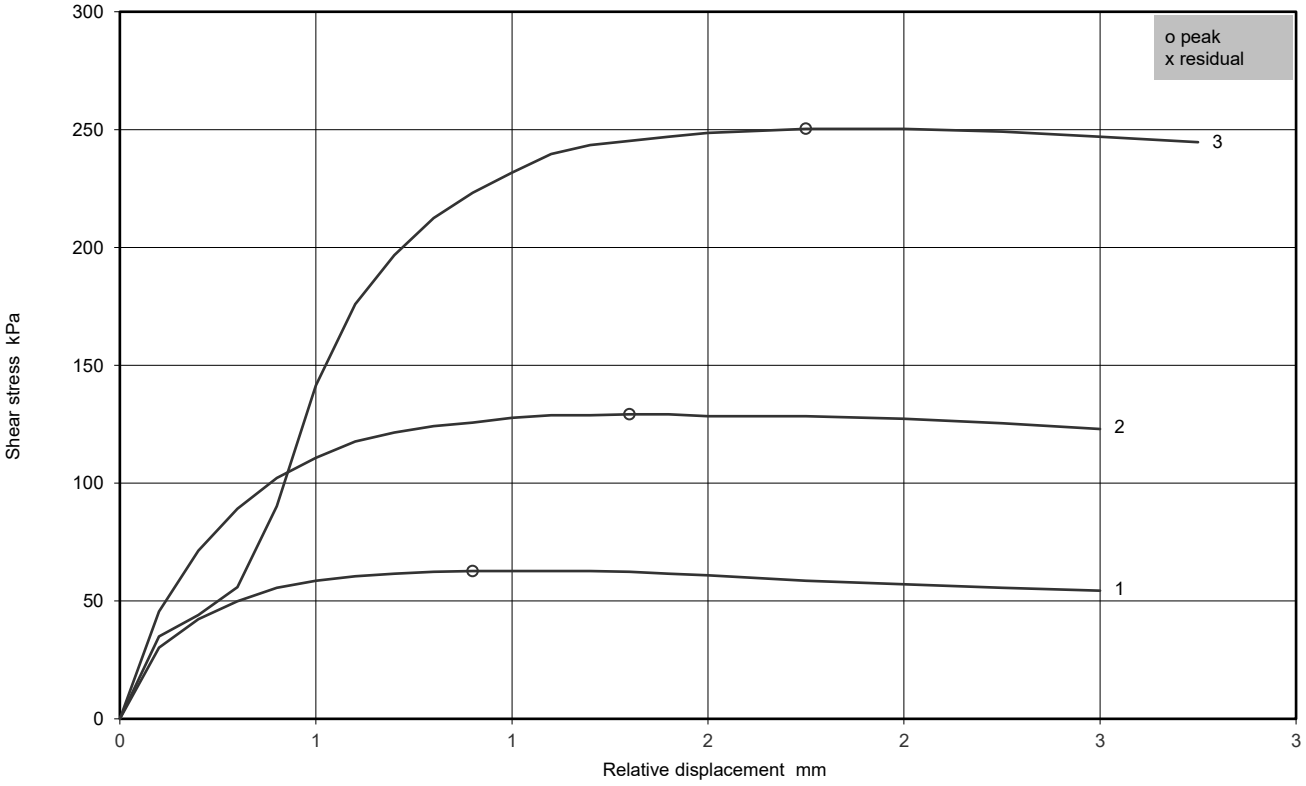
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	0.8
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010625

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	27/02/2026			

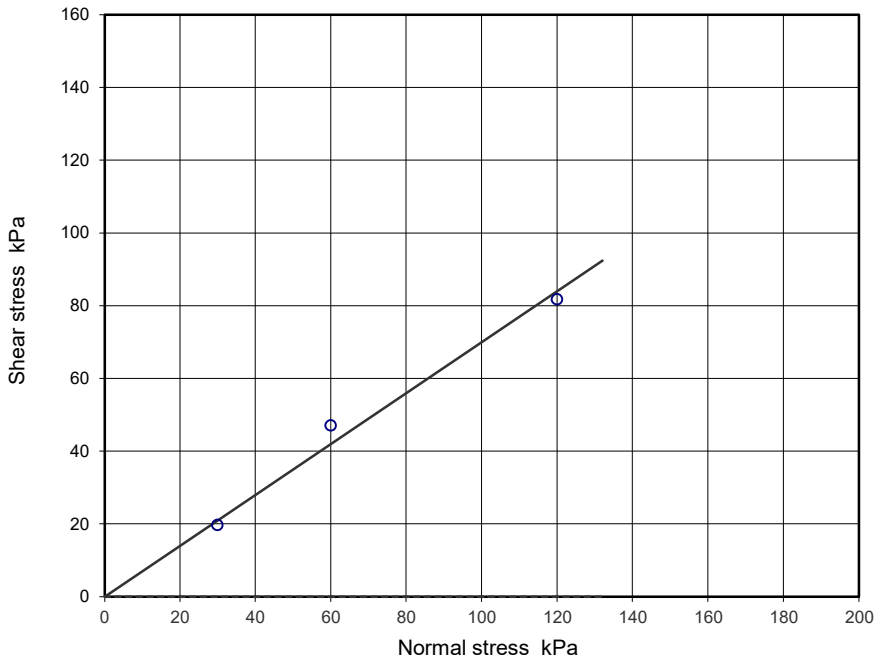
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey and brown silty SAND			Depth m	2.2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010624
Test Method	BS EN ISO 17892-10:2018			Date of test	

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details	Test No.	**1**	**2**	**3**				
Initial	Height	26.3	26.4	26.4				mm
	Bulk Density	1.81	1.81	1.81				Mg/m³
	Moisture Content	22.1	22.1	22.1				%
	Dry density	1.48	1.48	1.48				Mg/m³
	Voids ratio	0.791	0.791	0.791				
	Degree of Saturation	74	74	74				%
Consolidation	Consolidation / Normal Stress applied	**30**	**60**	**120**				kPa
	Change in height during consolidation*	-0.082	-0.204	-0.366				mm
	Voids ratio after consolidation	0.785	0.777	0.766				
After test	Final Moisture content	24.4	23.8	24.1				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	1.00	1.30	1.30				mm
	Shear stress	19.7	47.1	81.7				kPa
	Vertical Movement at peak shear stress*	0.03	-0.15	-0.30				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[2.4]	0
Ø '	degrees	[34.0]	35

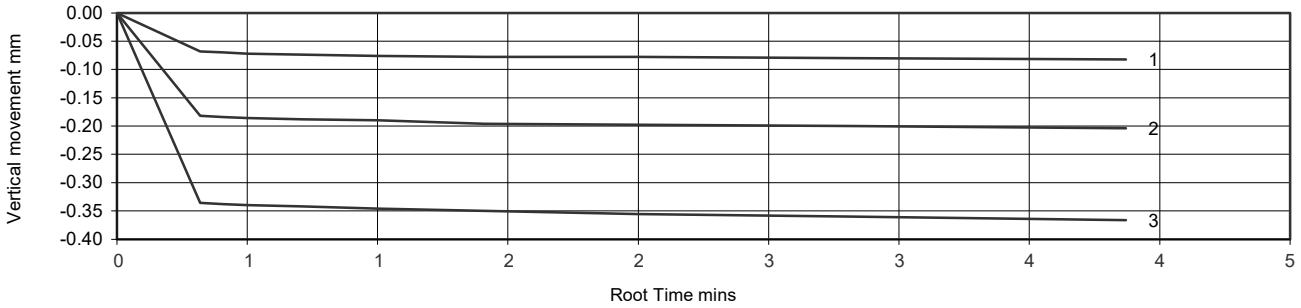
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

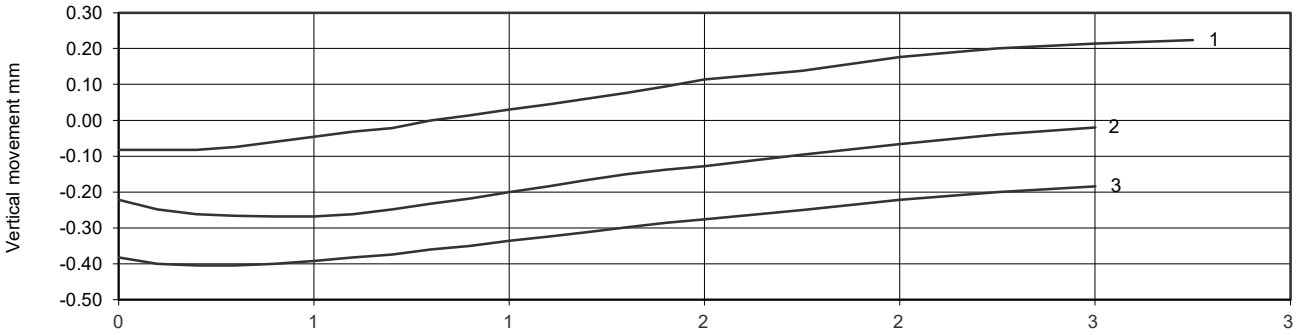
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	26/02/2026	UKAS TESTING 7758	TTL	**SSB**

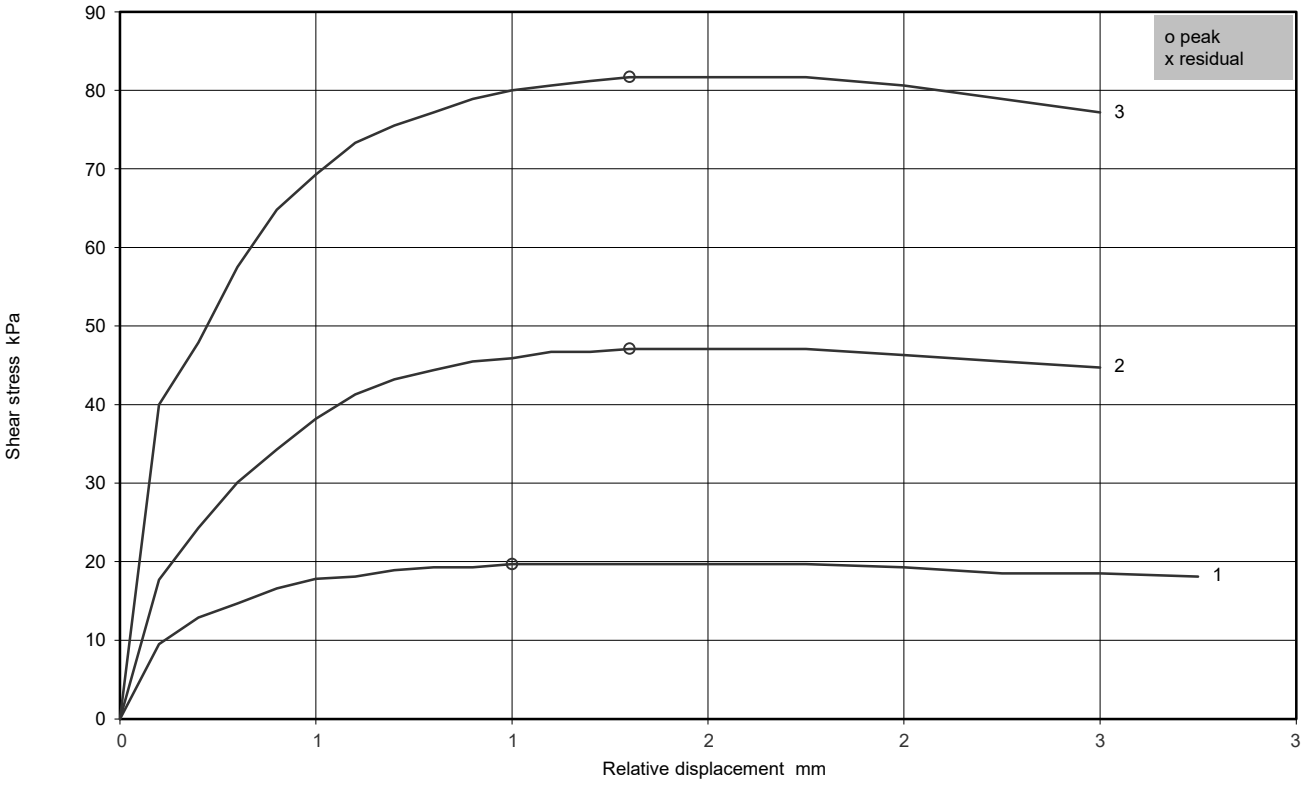
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey and brown silty SAND				Depth m	2.2
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010624

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
26/02/2026			SSB

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	5.3
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010626
Test Method	BS EN ISO 17892-10:2018			Date of test	03/02/2026

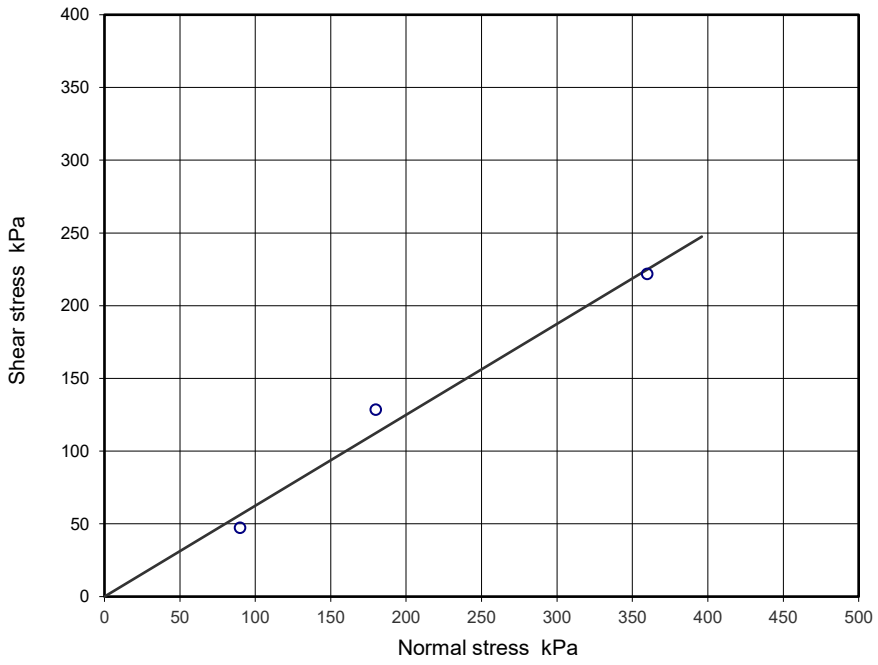
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.0	26.1				mm
	Bulk Density		1.78	1.78	1.78				Mg/m³
	Moisture Content		24.4	24.4	24.4				%
	Dry density		1.43	1.43	1.43				Mg/m³
	Voids ratio		0.853	0.853	0.853				
	Degree of Saturation		76	76	76				%
Consolidation	Consolidation / Normal Stress applied		**90**	**180**	**360**				kPa
	Change in height during consolidation*		-0.508	-0.498	-0.600				mm
	Voids ratio after consolidation		0.817	0.818	0.810				
After test	Final Moisture content		24.3	23.6	23.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	7.00	5.00	2.75				mm
	Shear stress	47.3	128.5	221.7				kPa
	Vertical Movement at peak shear stress*	-1.13	-0.71	-0.67				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[0.7]	0
Ø '	degrees	[32.0]	32

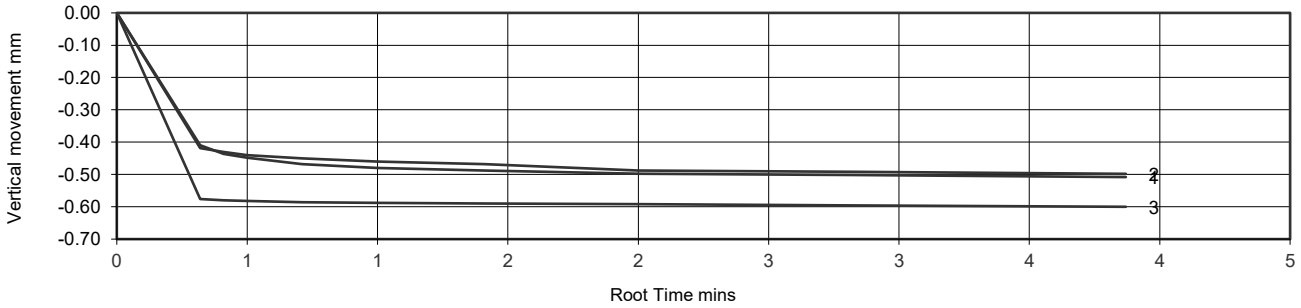
Residual strength, (x)			
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

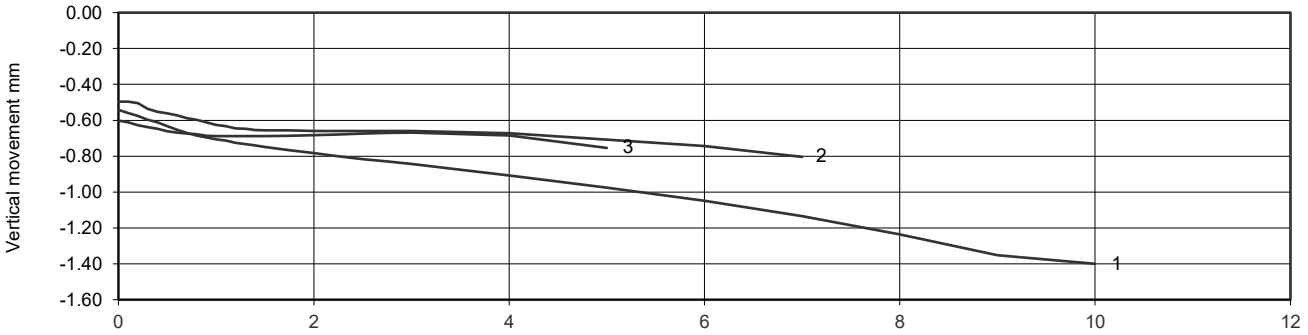
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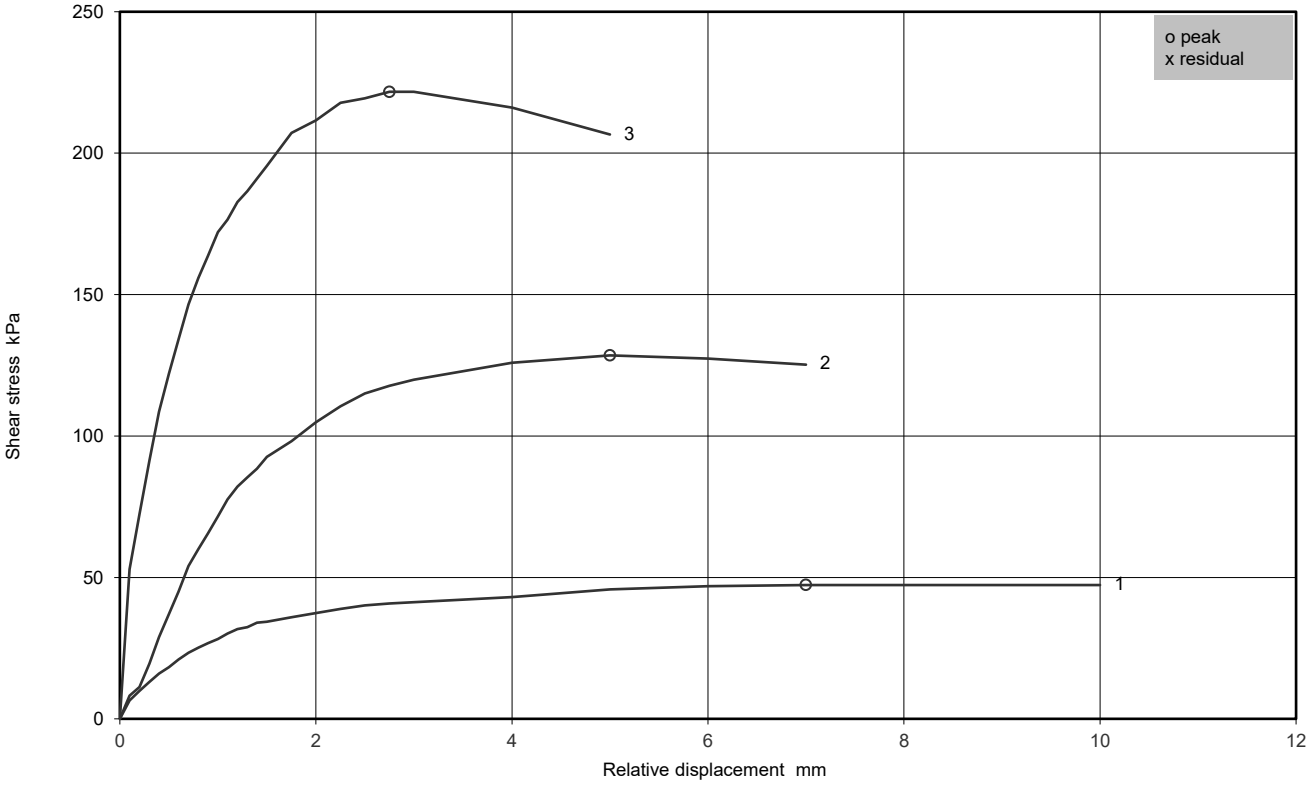
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	5.3
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010626

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
04/03/2026			SSB

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	1
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010631
Test Method	BS EN ISO 17892-10:2018			Date of test	03/02/2026

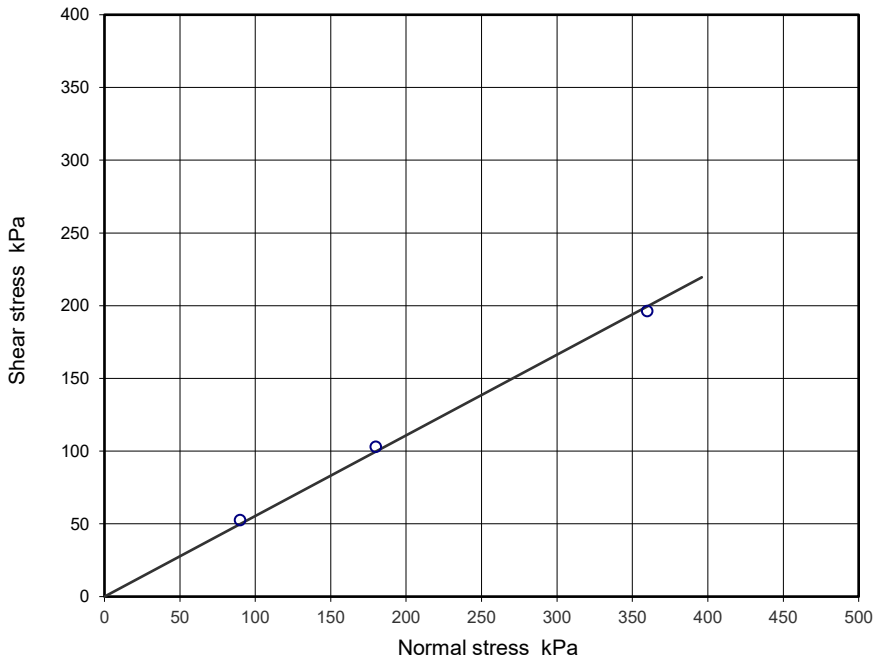
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.3	26.3				mm
	Bulk Density		1.77	1.77	1.77				Mg/m³
	Moisture Content		18.6	18.6	18.6				%
	Dry density		1.49	1.49	1.49				Mg/m³
	Voids ratio		0.779	0.779	0.779				
	Degree of Saturation		63	63	63				%
Consolidation	Consolidation / Normal Stress applied		**90**	**180**	**360**				kPa
	Change in height during consolidation*		-0.290	-0.394	-0.600				mm
	Voids ratio after consolidation		0.759	0.752	0.738				
After test	Final Moisture content		23.2	22.2	23.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	5.00	5.00	2.75				mm
	Shear stress	52.5	103.0	196.2				kPa
	Vertical Movement at peak shear stress*	-0.70	-0.68	-0.83				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[5.9]	0
Ø '	degrees	[28.0]	29

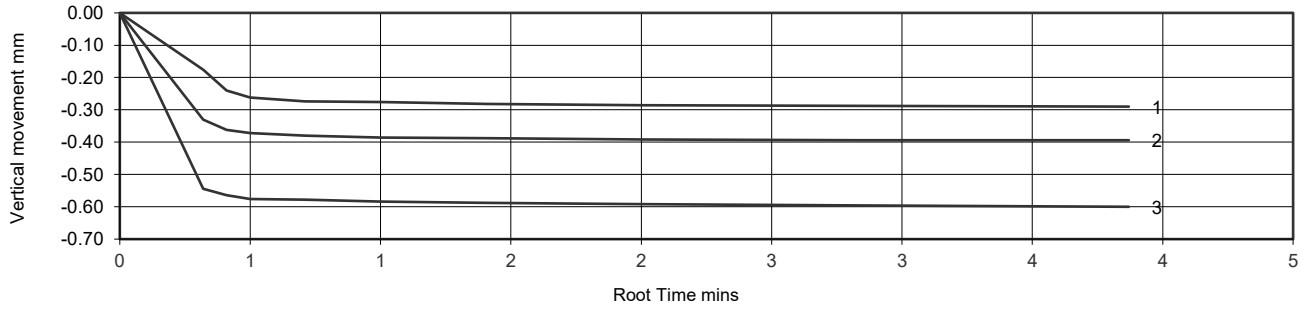
Residual strength, (x)			
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

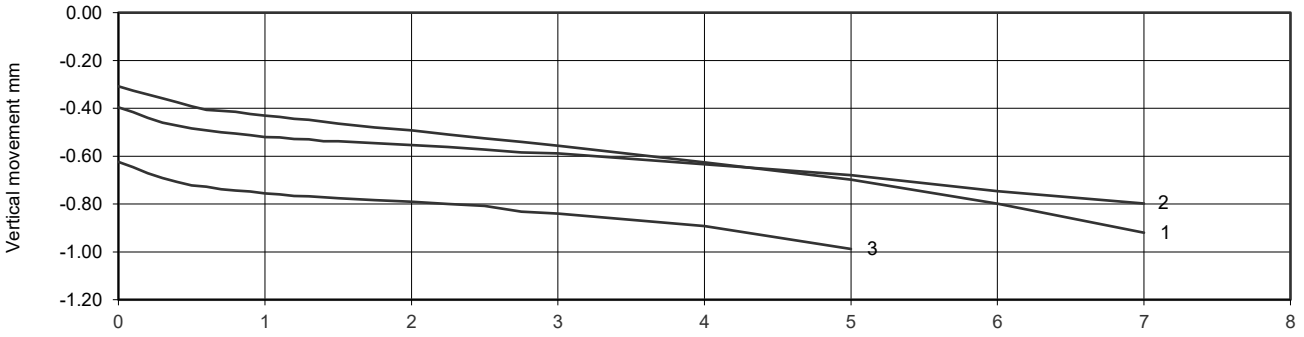
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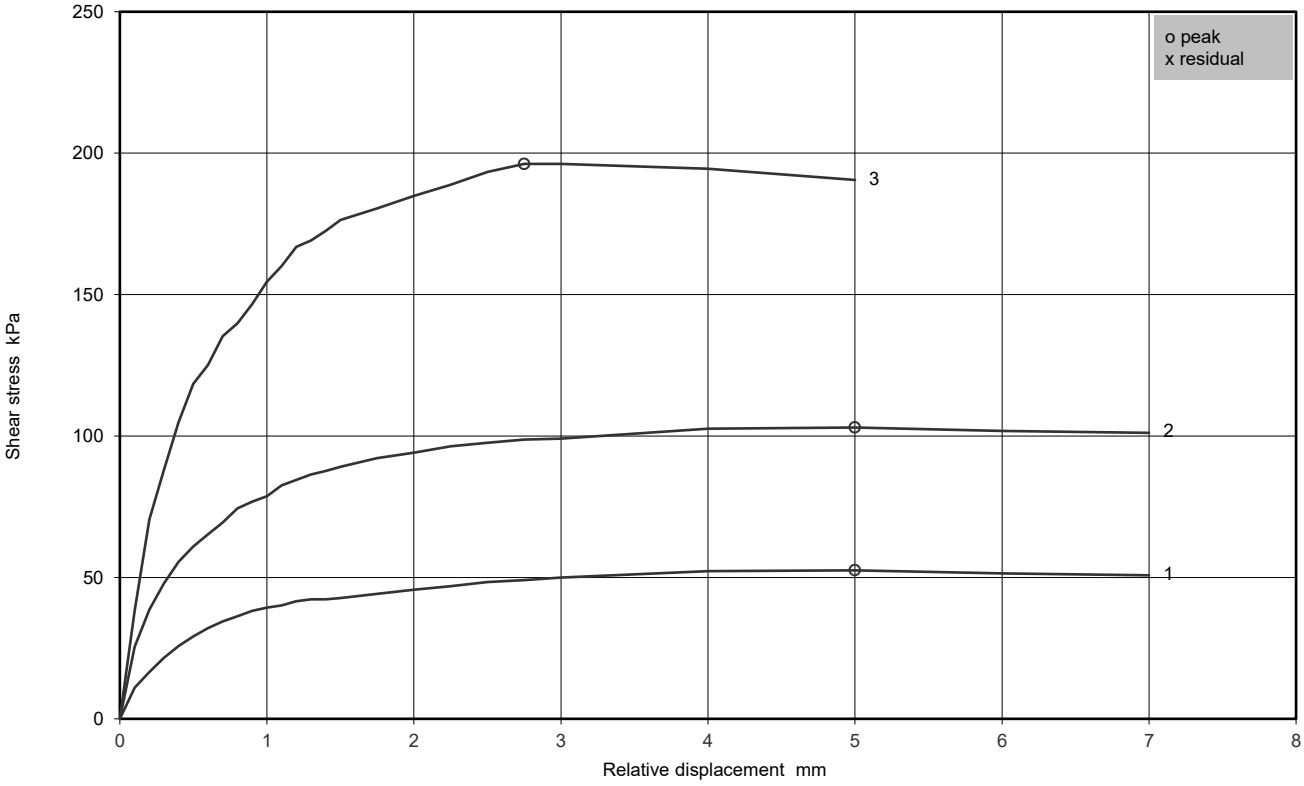
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	1
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010631

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	04/03/2026			

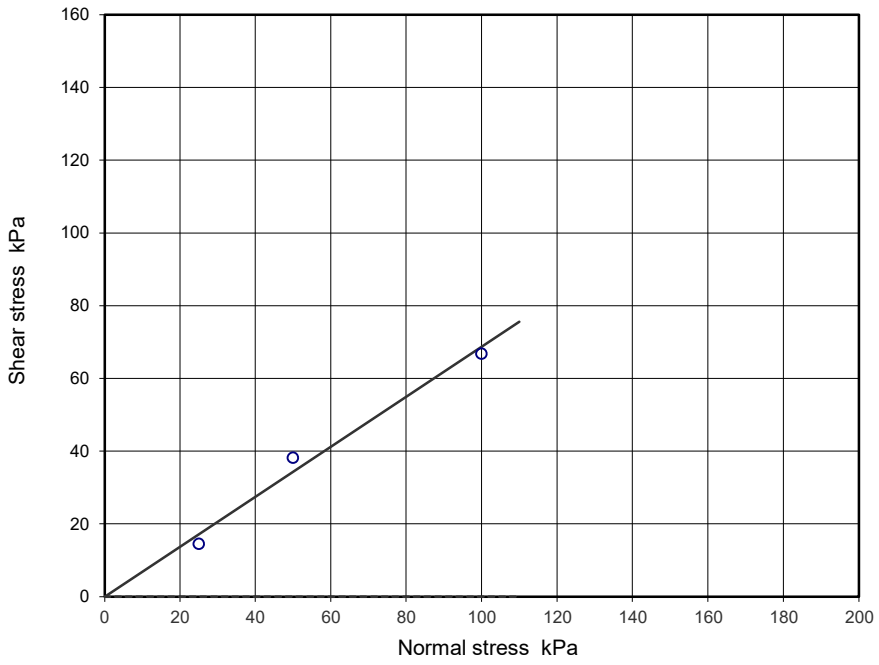
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey and brown silty SAND			Depth m	3.5
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010630
Test Method	BS EN ISO 17892-10:2018			Date of test	

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details	Test No.	**1**	**2**	**3**				
Initial	Height	26.1	26.0	26.1				mm
	Bulk Density	1.90	1.90	1.90				Mg/m³
	Moisture Content	24.7	24.7	24.7				%
	Dry density	1.52	1.52	1.52				Mg/m³
	Voids ratio	0.743	0.743	0.743				
	Degree of Saturation	88	88	88				%
Consolidation	Consolidation / Normal Stress applied	**25**	**50**	**100**				kPa
	Change in height during consolidation*	-0.068	-0.174	-0.398				mm
	Voids ratio after consolidation	0.738	0.731	0.716				
After test	Final Moisture content	25.1	24.5	25.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	2.50	4.00	10.00				mm
	Shear stress	14.5	38.2	66.8				kPa
	Vertical Movement at peak shear stress*	-0.01	-0.16	-0.84				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[0.2]	0
Ø '	degrees	[34.0]	34.5

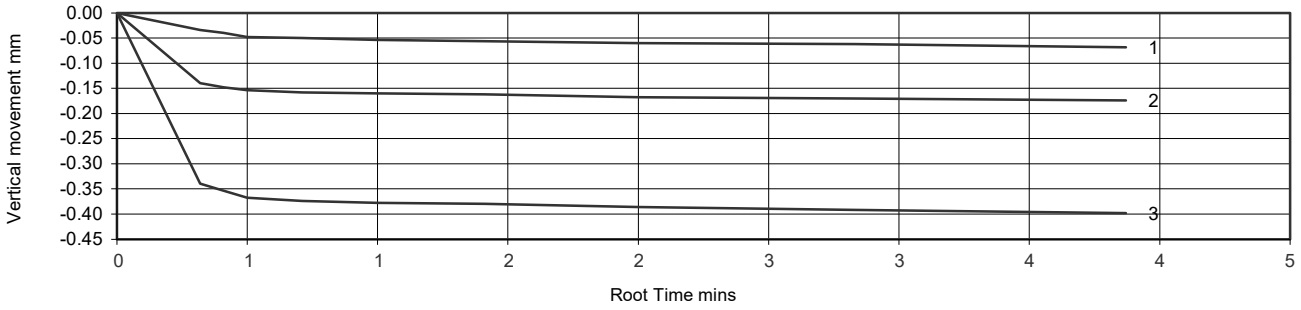
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

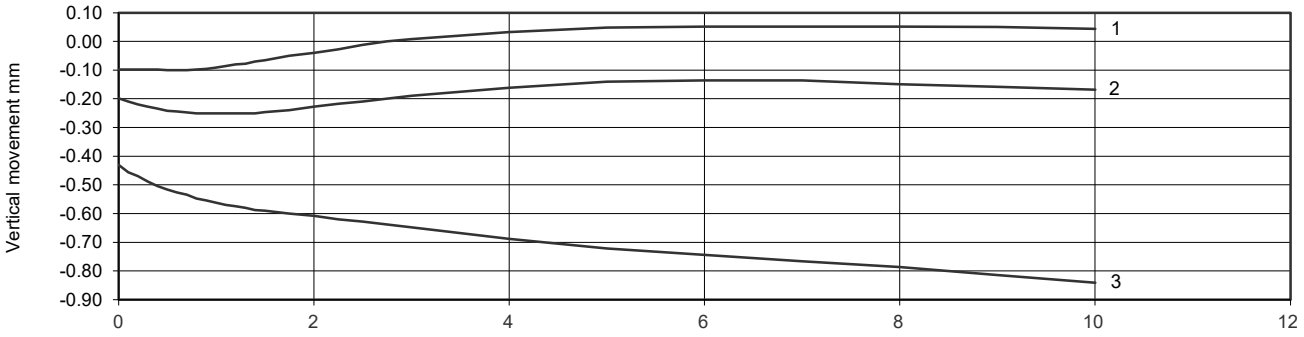
	Date Printed			
	26/02/2026	UKAS TESTING 7758	TTL	**SSB**

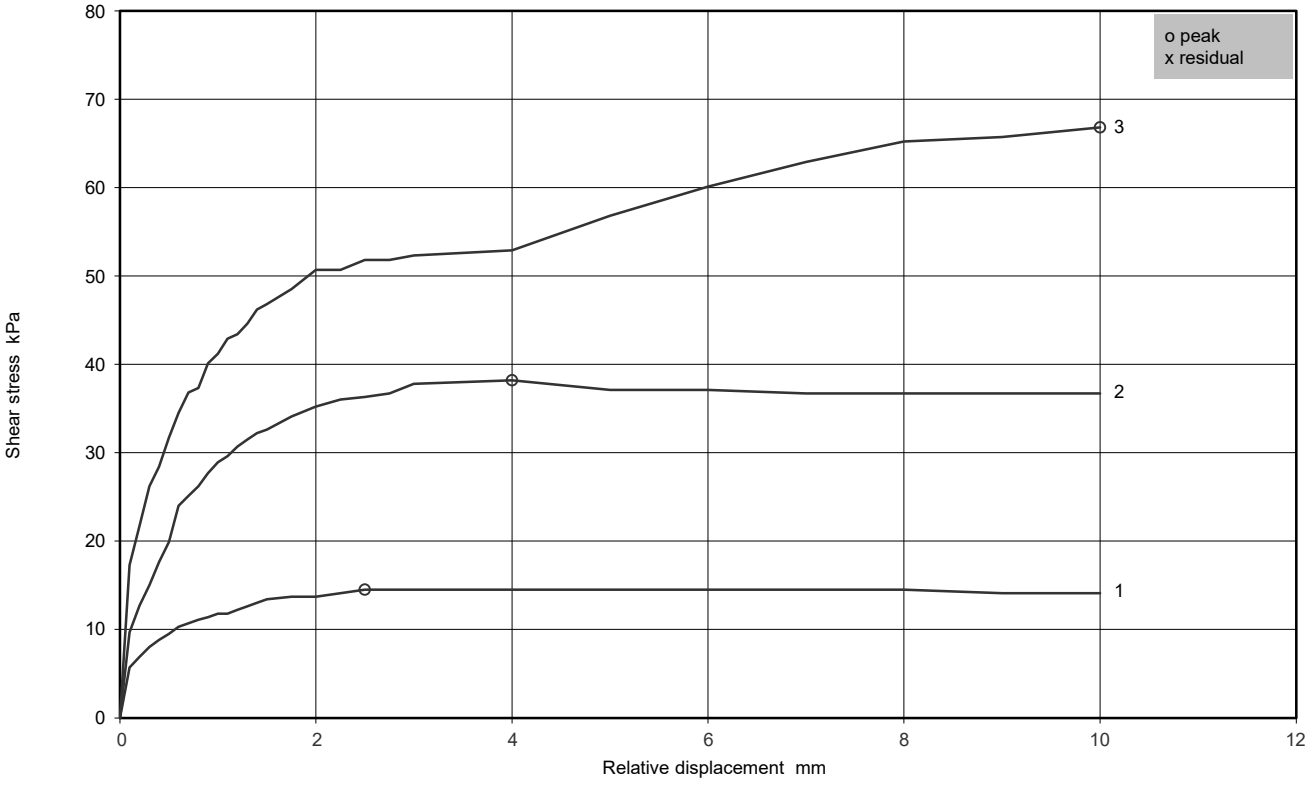
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey and brown silty SAND				Depth m	3.5
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010630

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

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26/02/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	7
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010632
Test Method	BS EN ISO 17892-10:2018			Date of test	

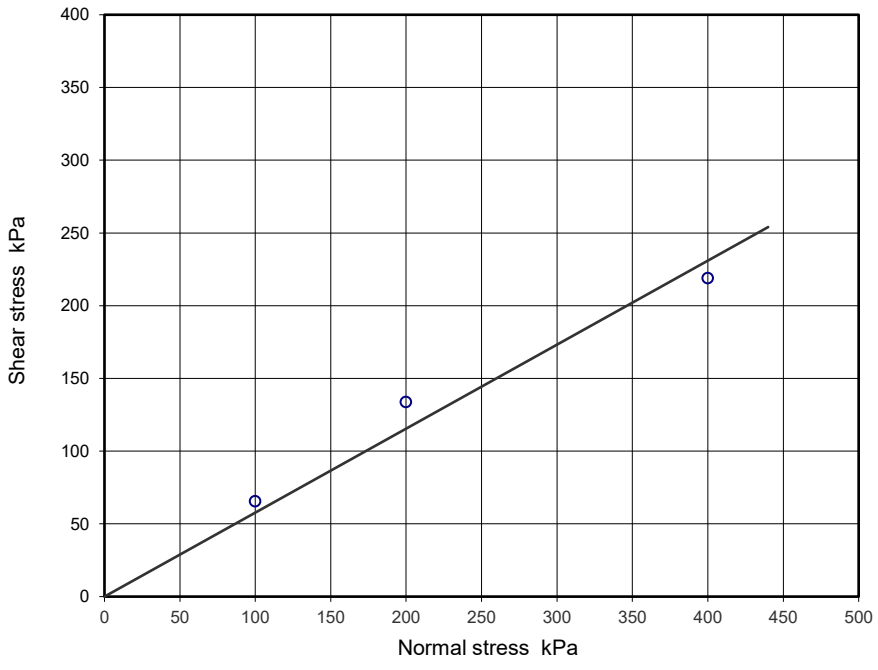
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.1	26.1				mm
	Bulk Density		1.78	1.78	1.78				Mg/m³
	Moisture Content		22.5	22.5	22.5				%
	Dry density		1.45	1.45	1.45				Mg/m³
	Voids ratio		0.828	0.828	0.828				
	Degree of Saturation		72	72	72				%
Consolidation	Consolidation / Normal Stress applied		**100**	**200**	**400**				kPa
	Change in height during consolidation*		-0.328	-0.718	-0.832				mm
	Voids ratio after consolidation		0.805	0.778	0.770				
After test	Final Moisture content		24.1	24.1	23.4				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	10.00	7.00	2.25				mm
	Shear stress	65.6	133.8	218.9				kPa
	Vertical Movement at peak shear stress*	-0.79	-1.07	-1.04				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[23]	0
Ø '	degrees	[26.5]	30

Residual strength, (x)

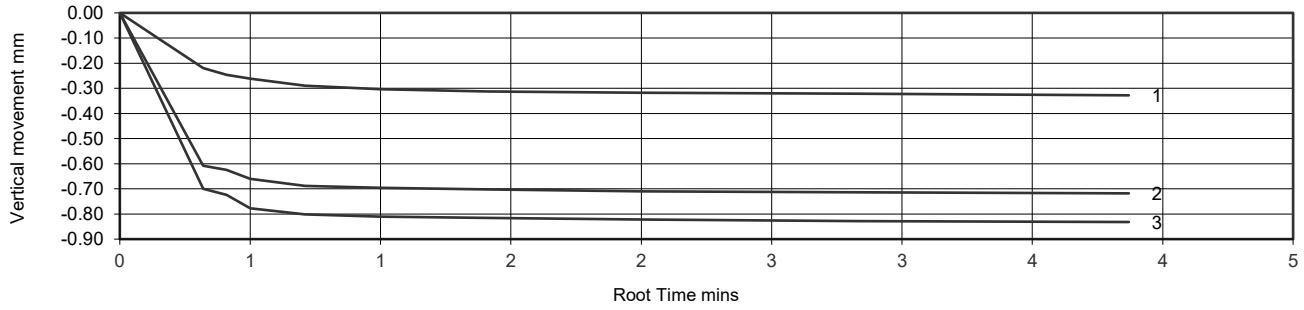
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

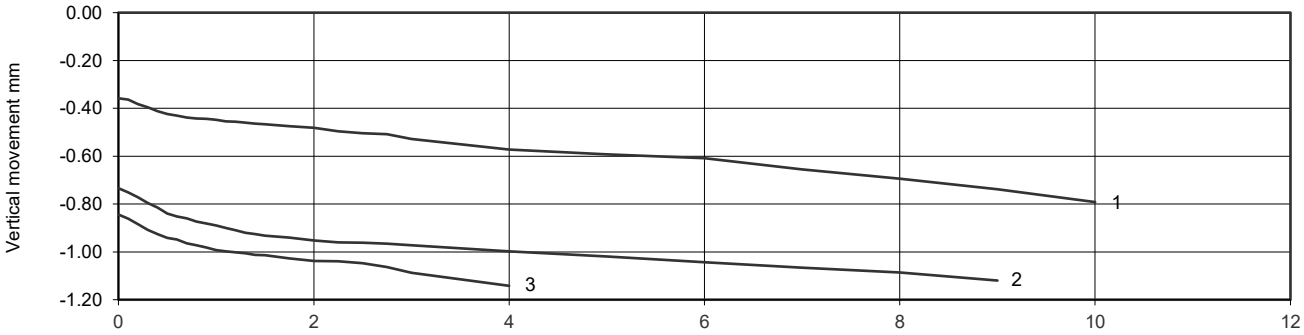
	Date Printed			
	04/03/2026	UKAS TESTING 7758	TTL	**SSB**

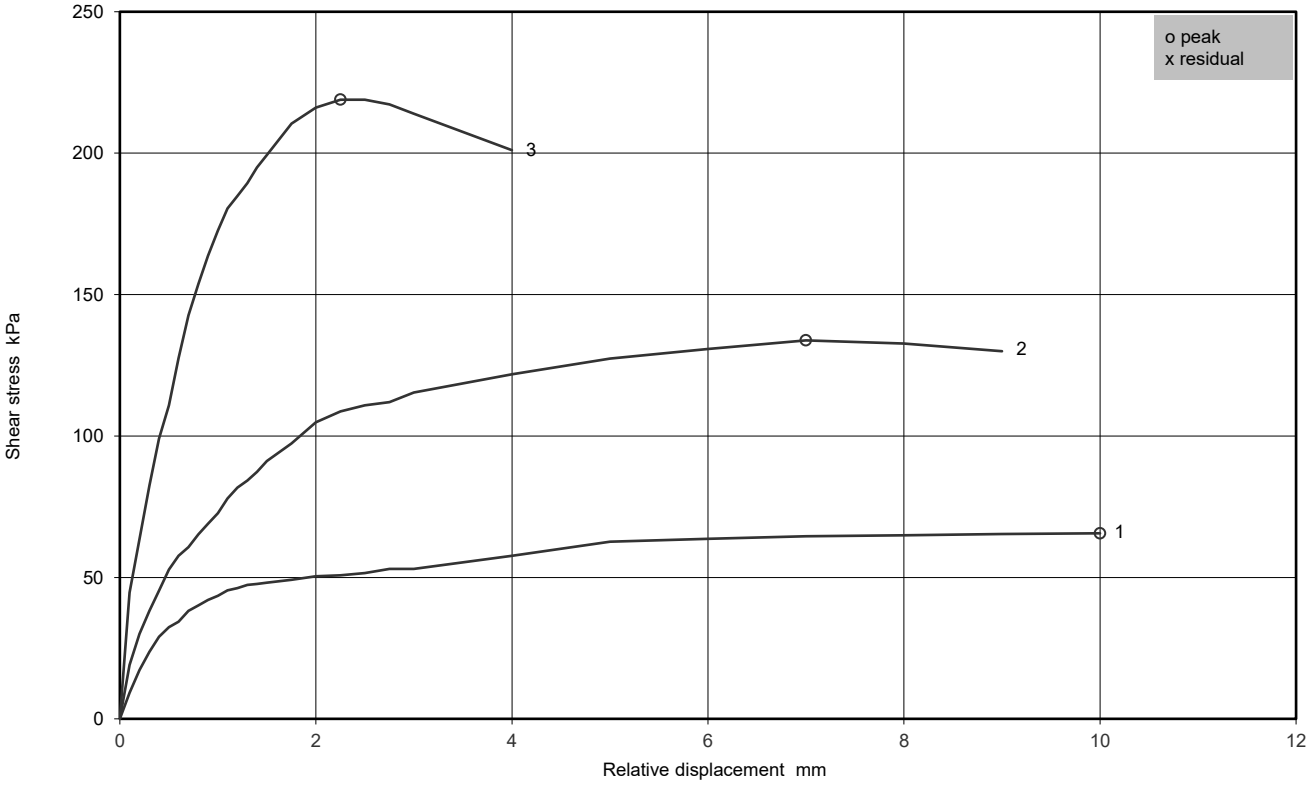
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	7
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010632

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
04/03/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	12
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010633
Test Method	BS EN ISO 17892-10:2018			Date of test	

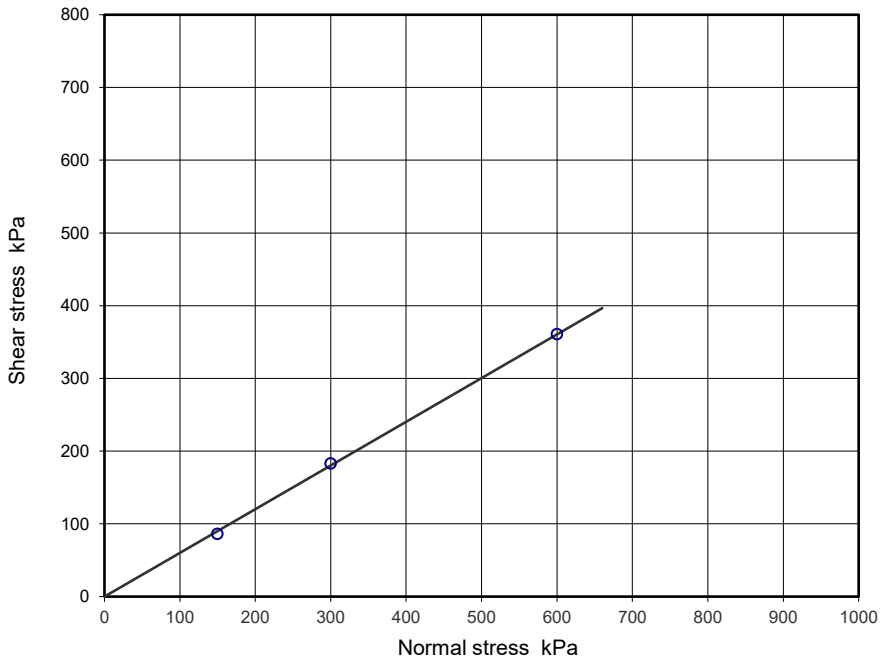
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.3	26.3				mm
	Bulk Density		1.80	1.80	1.80				Mg/m³
	Moisture Content		24.1	24.1	24.1				%
	Dry density		1.45	1.45	1.45				Mg/m³
	Voids ratio		0.828	0.828	0.828				
	Degree of Saturation		77	77	77				%
Consolidation	Consolidation / Normal Stress applied		**150**	**300**	**600**				kPa
	Change in height during consolidation*		-0.298	-0.482	-0.800				mm
	Voids ratio after consolidation		0.807	0.794	0.772				
After test	Final Moisture content		35.0	26.9	26.2				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	9.00	8.00	4.00				mm
	Shear stress	86.2	182.8	360.8				kPa
	Vertical Movement at peak shear stress*	-0.53	-0.68	-0.94				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[-2.8]	0
Ø '	degrees	[31.5]	31

Residual strength, (x)

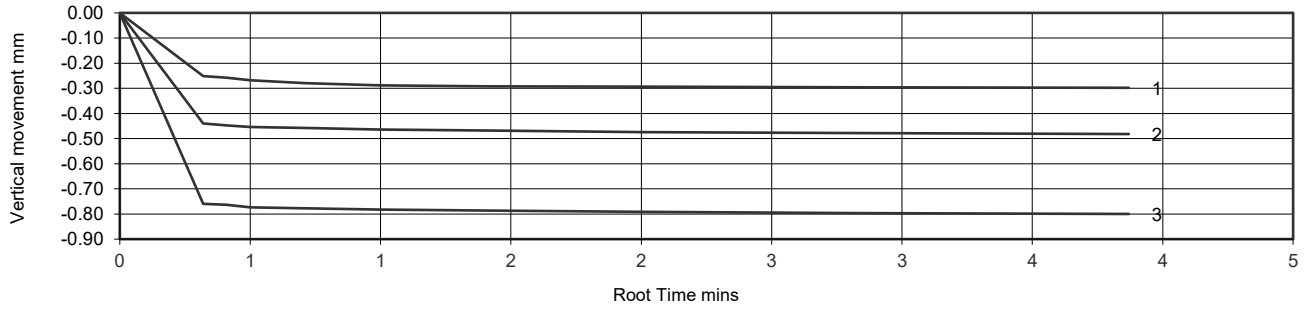
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

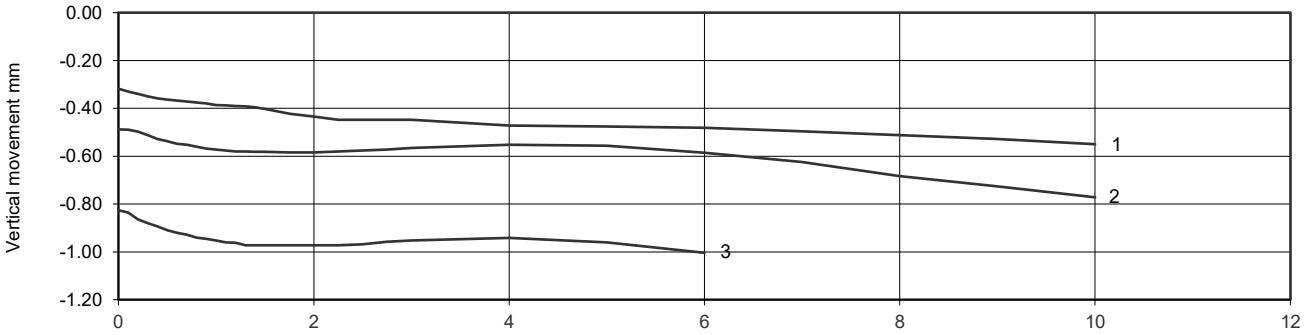
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	04/03/2026	UKAS TESTING 7758	TTL	**SSB**

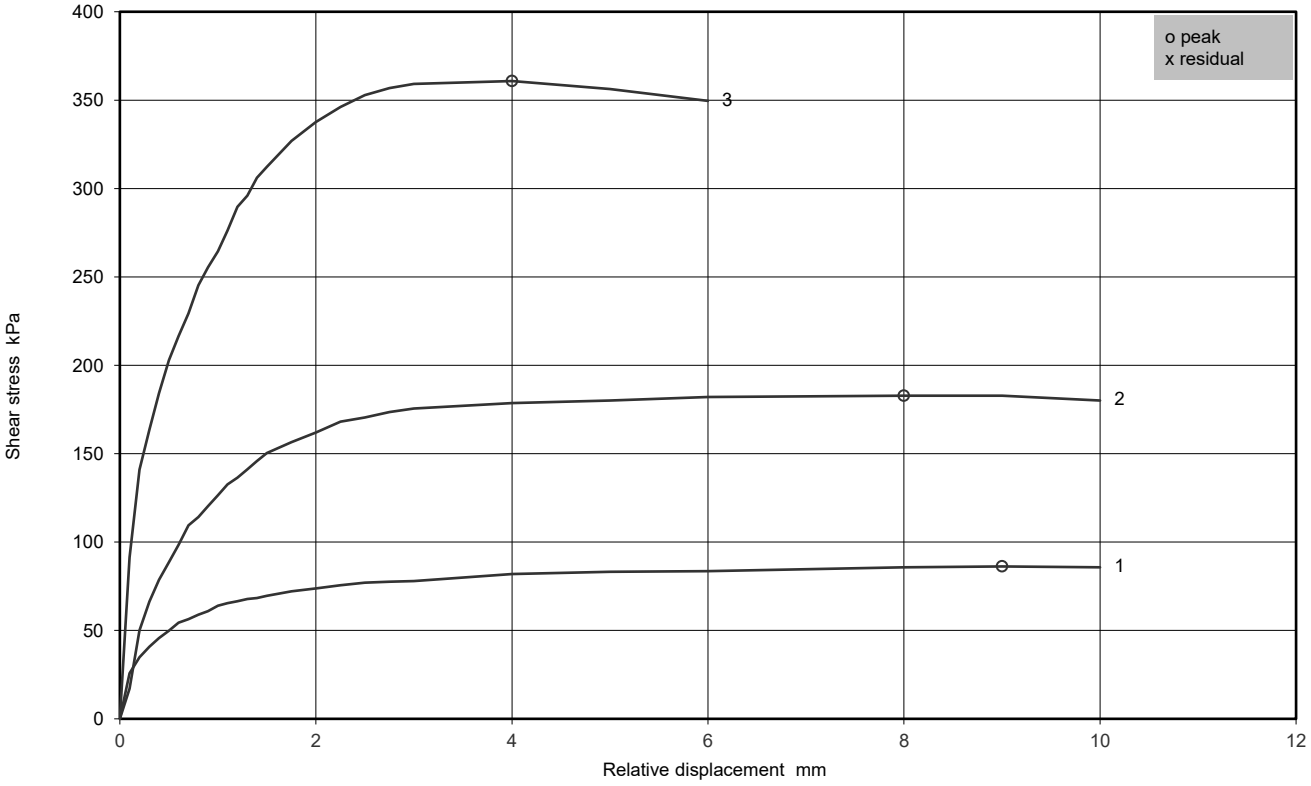
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	12
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010633

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	04/03/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH106
Project Name	Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	7.91
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026021610
Test Method	BS EN ISO 17892-10:2018			Date of test	20/02/2026

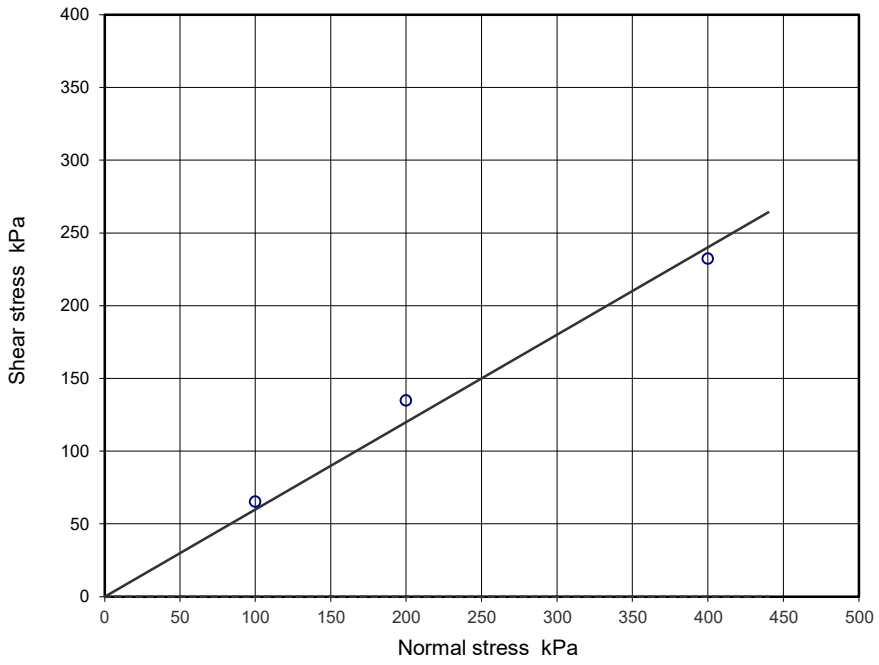
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	1	2	3				
Initial	Height		26.1	26.0	26.0				mm
	Bulk Density		1.83	1.83	1.83				Mg/m³
	Moisture Content		22.1	22.1	22.1				%
	Dry density		1.50	1.50	1.50				Mg/m³
	Voids ratio		0.767	0.767	0.767				
	Degree of Saturation		76	76	76				%
Consolidation	Consolidation / Normal Stress applied		**100**	**200**	**400**				kPa
	Change in height during consolidation*		-0.312	-0.528	-0.724				mm
	Voids ratio after consolidation		0.746	0.731	0.718				
After test	Final Moisture content		21.1	21.5	22.6				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	2.75	4.00	2.75				mm
	Shear stress	65.3	134.9	232.2				kPa
	Vertical Movement at peak shear stress*	-0.19	-0.56	-0.82				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[17]	0
Ø '	degrees	[28.5]	31

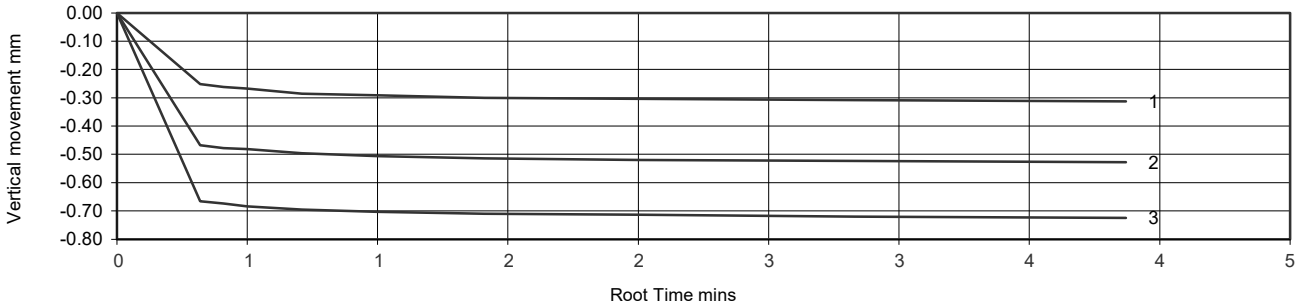
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

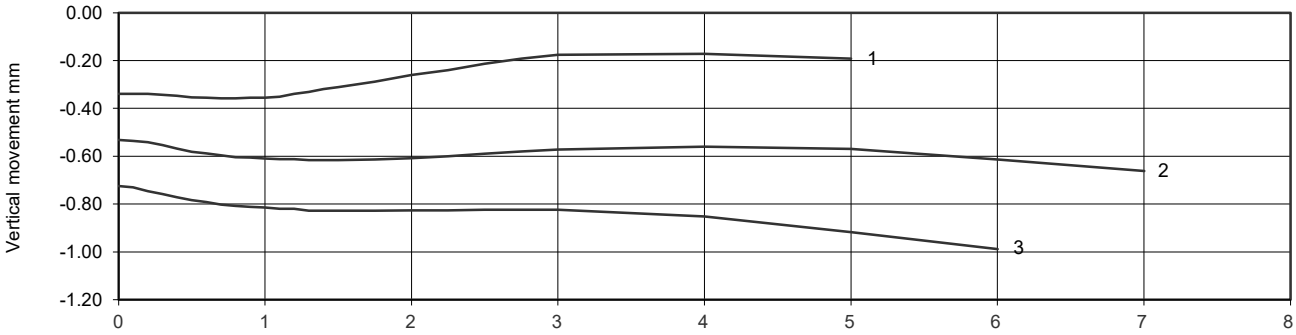
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	23/02/2026	UKAS TESTING 7758	TTL	**SSB**

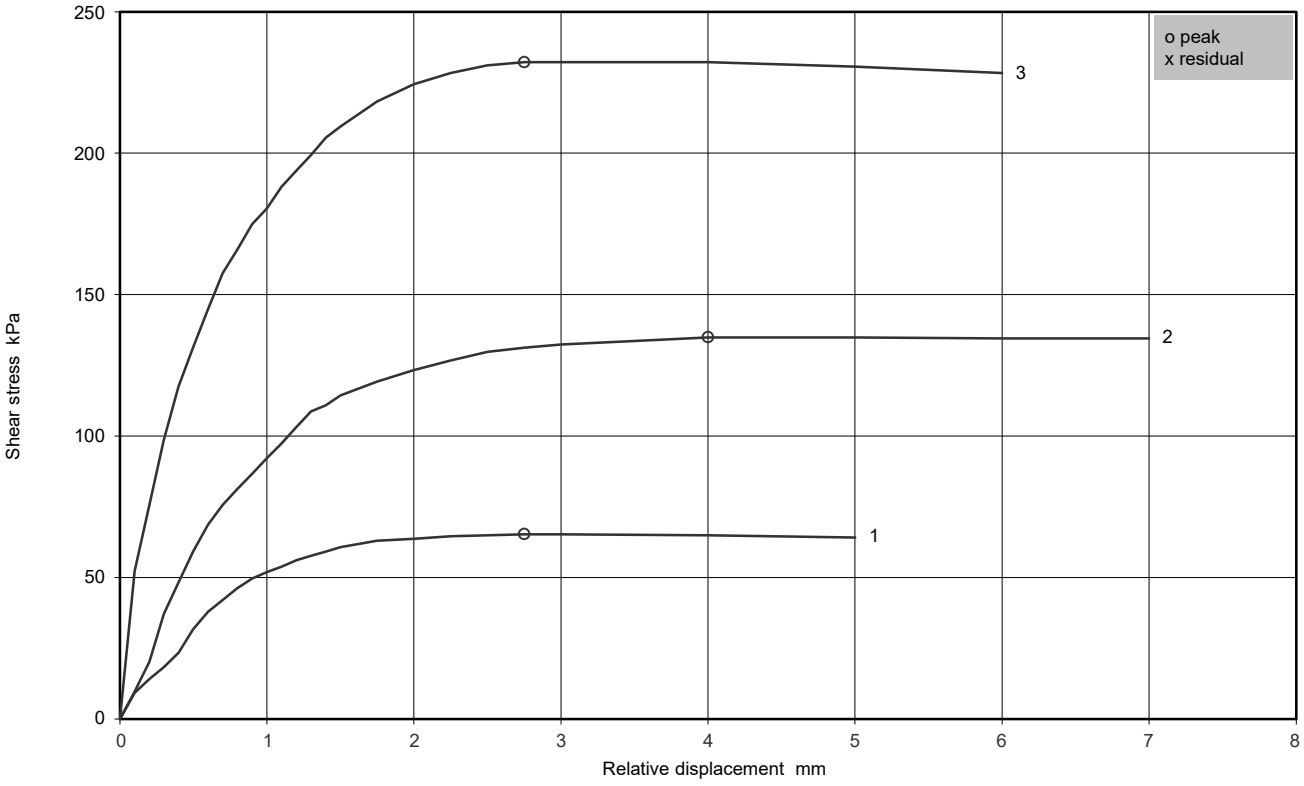
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH106
Project Name	Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	7.91
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026021610

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
23/02/2026			

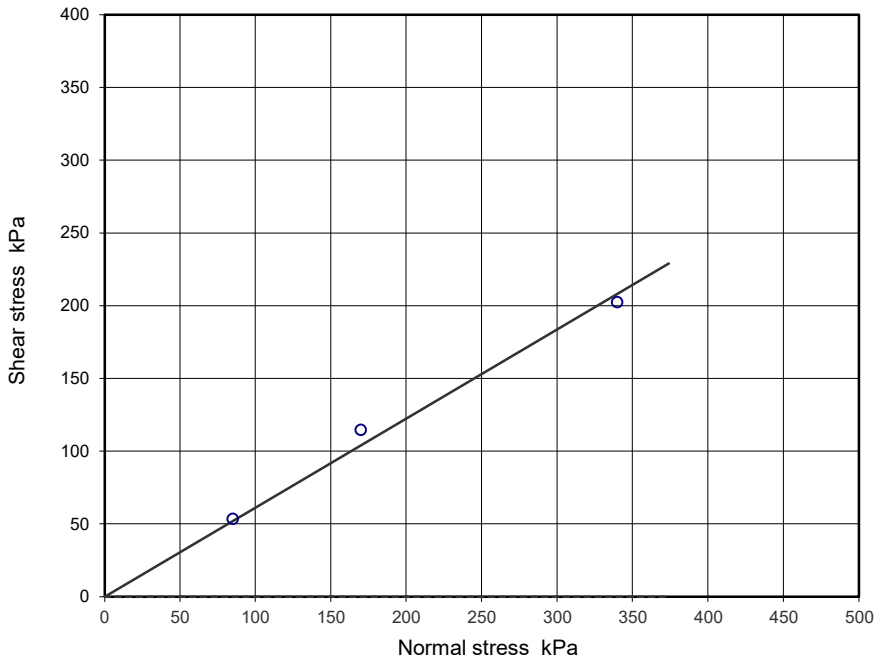
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH107
Project Name	Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	5.5
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202602169
Test Method	BS EN ISO 17892-10:2018			Date of test	20/02/2026

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.3	26.3				mm
	Bulk Density		1.76	1.76	1.76				Mg/m³
	Moisture Content		21.1	21.1	21.1				%
	Dry density		1.45	1.45	1.45				Mg/m³
	Voids ratio		0.828	0.828	0.828				
	Degree of Saturation		68	68	68				%
Consolidation	Consolidation / Normal Stress applied		**85**	**170**	**340**				kPa
	Change in height during consolidation*		-0.288	-0.558	-0.828				mm
	Voids ratio after consolidation		0.808	0.789	0.770				
After test	Final Moisture content		24.2	23.9	23.0				

Shearing stage(s)

Rate of displacement	Peak		0.60000	0.60000	0.60000				mm/min
	Residual								mm/min
Peak values, (o)	Relative horizontal displacement		10.00	10.00	10.00				mm
	Shear stress		53.3	114.6	202.4				kPa
	Vertical Movement at peak shear stress*		-0.84	-0.77	-1.33				mm
Residual values, (x)	No. of traverses (including peak run)		1	1	1				
	Relative horizontal displacement								mm
	Shear stress								kPa
	Vertical movement at residual shear stress*								mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[9.4]	0
Ø '	degrees	[30.0]	31.5

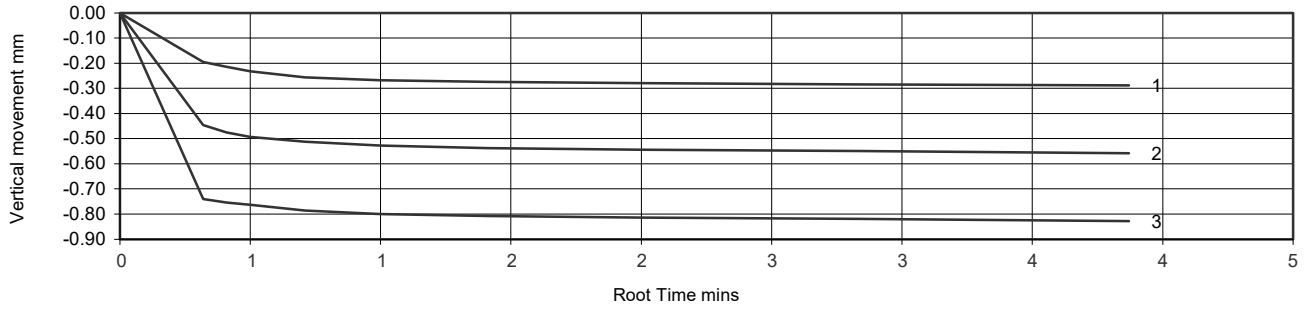
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

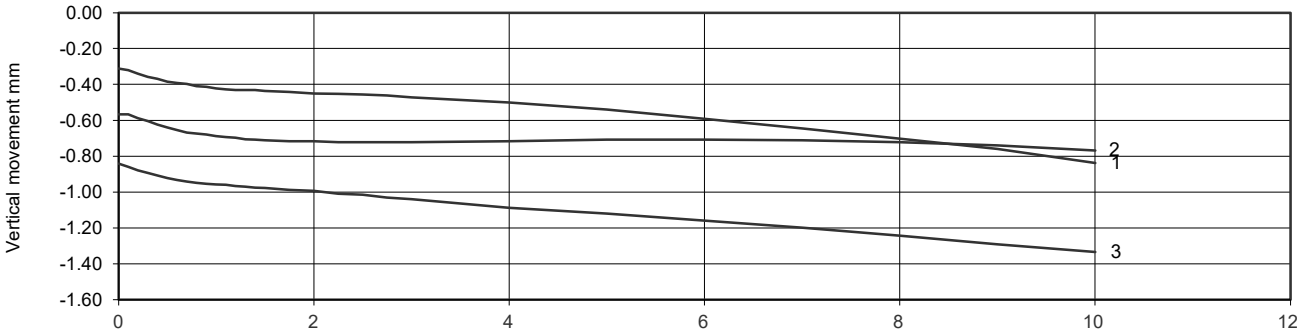
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	23/02/2026	UKAS TESTING 7758	TTL	**SSB**

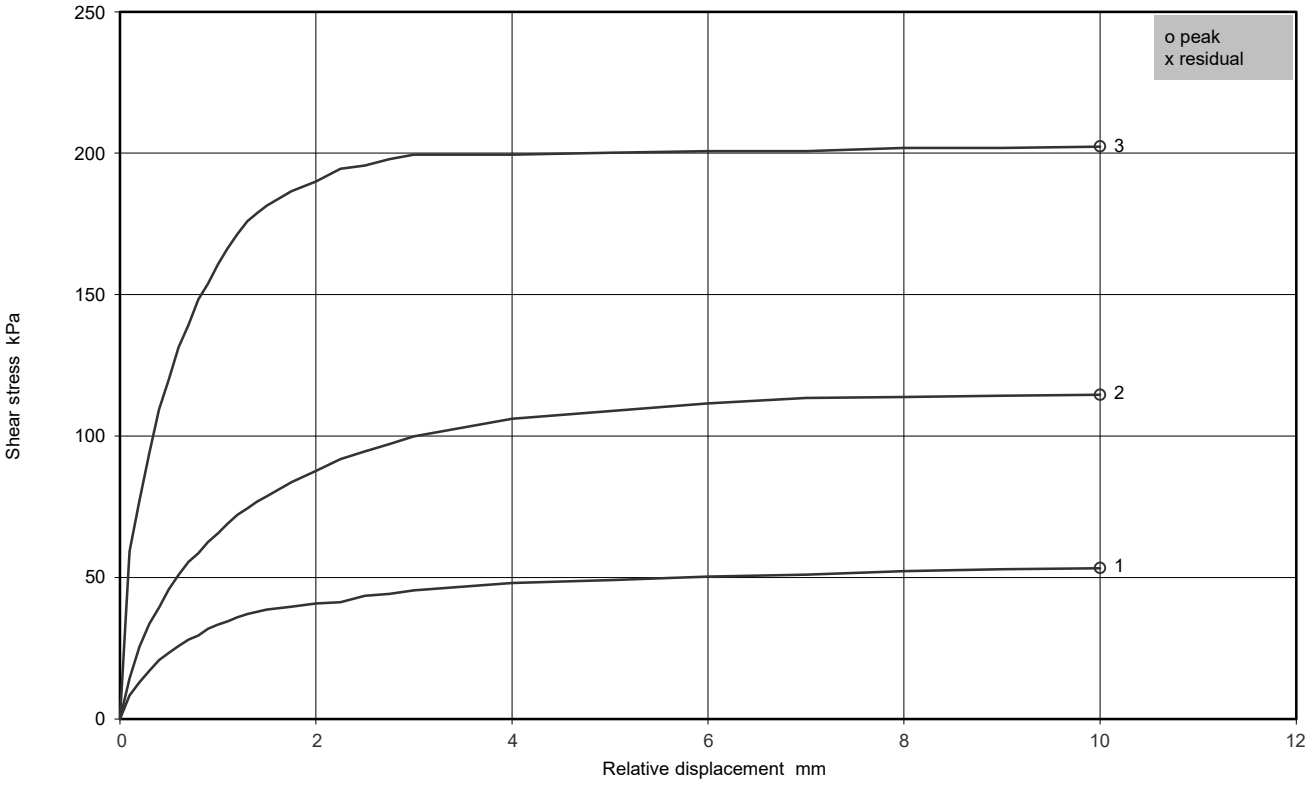
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH107
Project Name	Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	5.5
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202602169

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
23/02/2026			

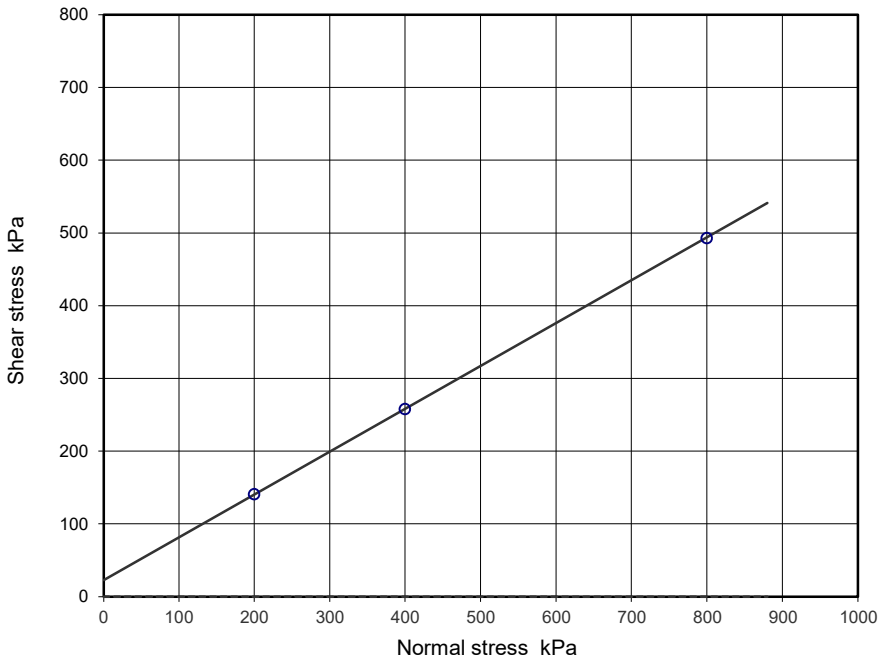
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J326001
				Borehole/Pit No.	BH-108
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey brown SAND			Depth m	18.7
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2025112043
Test Method	BS EN ISO 17892-10:2018			Date of test	19/11/2025

Preparation Details -2mm material. Recompacted to 50% of the relative density at as received moisture content.

Specimen Details		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.0	26.1				mm
	Bulk Density		1.61	1.61	1.61				Mg/m³
	Moisture Content		20.4	20.4	20.4				%
	Dry density		1.34	1.34	1.34				Mg/m³
	Voids ratio		0.978	0.978	0.978				
	Degree of Saturation		55	55	55				%
Consolidation	Consolidation / Normal Stress applied		**200**	**400**	**800**				kPa
	Change in height during consolidation*		-1.028	-1.266	-2.012				mm
	Voids ratio after consolidation		0.900	0.882	0.825				
After test	Final Moisture content		22.7	22.4	22.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	10.00	8.00	5.00				mm
	Shear stress	140.8	257.8	492.9				kPa
	Vertical Movement at peak shear stress*	-1.93	-1.95	-2.58				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	23	-
Ø '	degrees	30.5	-

Residual strength, (x)

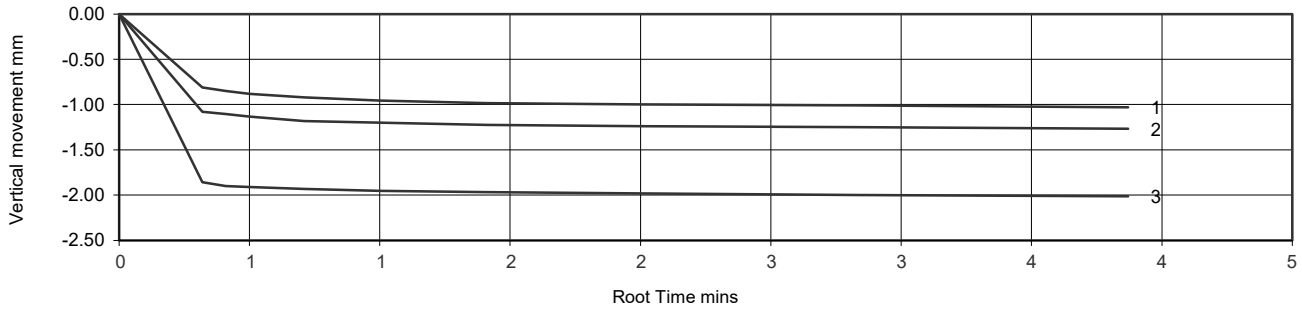
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

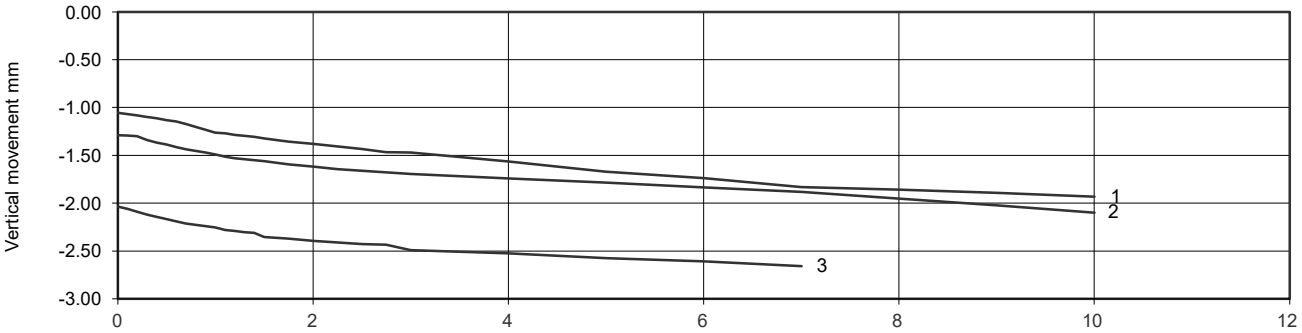
	Date Printed			
	20/11/2025	UKAS TESTING 7758	TTL	**SSB**

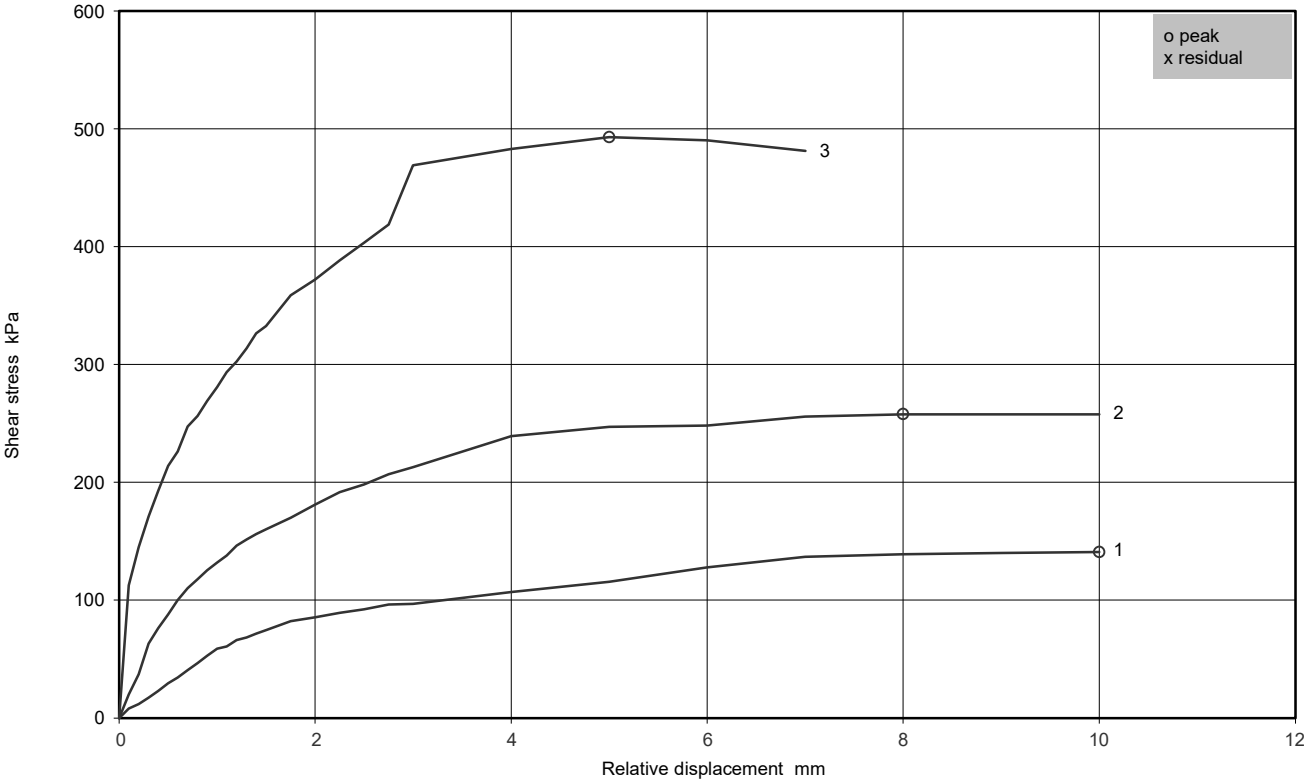
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J326001
					Borehole/Pit No.	BH-108
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey brown SAND				Depth m	18.7
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2025112043

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	20/11/2025			

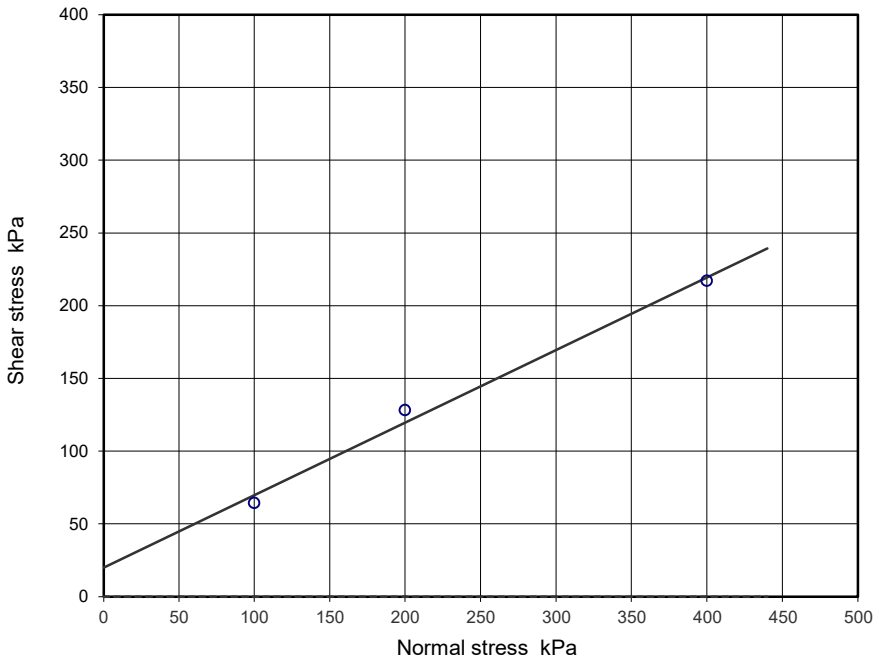
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J326001
				Borehole/Pit No.	BH-108
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey brown SAND			Depth m	11.2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2025112042
Test Method	BS EN ISO 17892-10:2018			Date of test	18/11/2025

Preparation Details -2mm material. Recompacted to 70% of the relative density at as received moisture content.

Specimen Details		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.1	26.1				mm
	Bulk Density		1.72	1.72	1.72				Mg/m³
	Moisture Content		20.8	20.8	20.8				%
	Dry density		1.42	1.42	1.42				Mg/m³
	Voids ratio		0.866	0.866	0.866				
	Degree of Saturation		64	64	64				%
Consolidation	Consolidation / Normal Stress applied		**100**	**200**	**400**				kPa
	Change in height during consolidation*		-0.490	-0.492	-0.832				mm
	Voids ratio after consolidation		0.831	0.831	0.806				
After test	Final Moisture content		23.4	23.2	22.9				

Shearing stage(s)

Rate of displacement	Peak		0.60000	0.60000	0.60000				mm/min
	Residual								mm/min
Peak values, (o)	Relative horizontal displacement		6.00	5.00	4.00				mm
	Shear stress		64.5	128.2	217.2				kPa
	Vertical Movement at peak shear stress*		-0.90	-0.85	-1.29				mm
Residual values, (x)	No. of traverses (including peak run)		1	1	1				
	Relative horizontal displacement								mm
	Shear stress								kPa
	Vertical movement at residual shear stress*								mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	20	-
Ø '	degrees	26.5	-

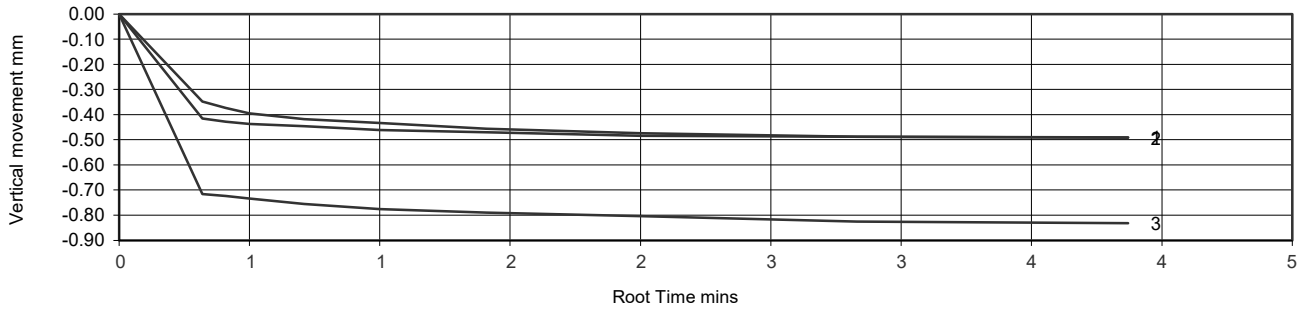
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

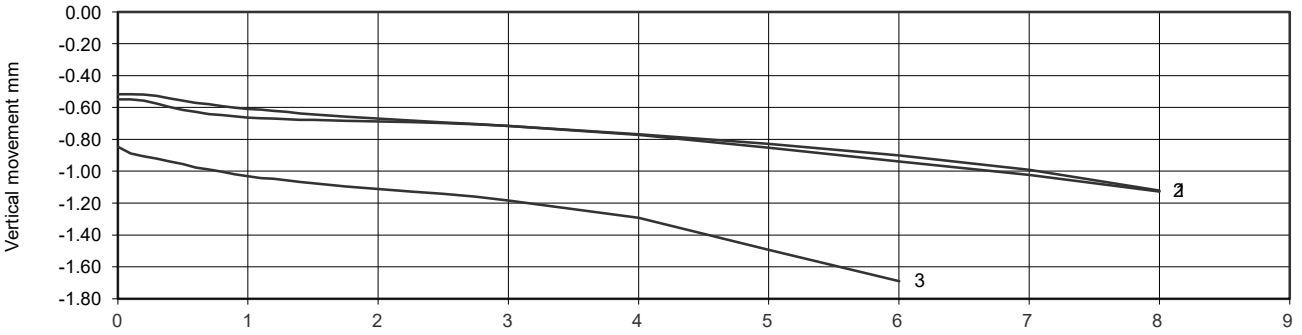
	Date Printed			
	20/11/2025	UKAS TESTING 7758	TTL	**SSB**

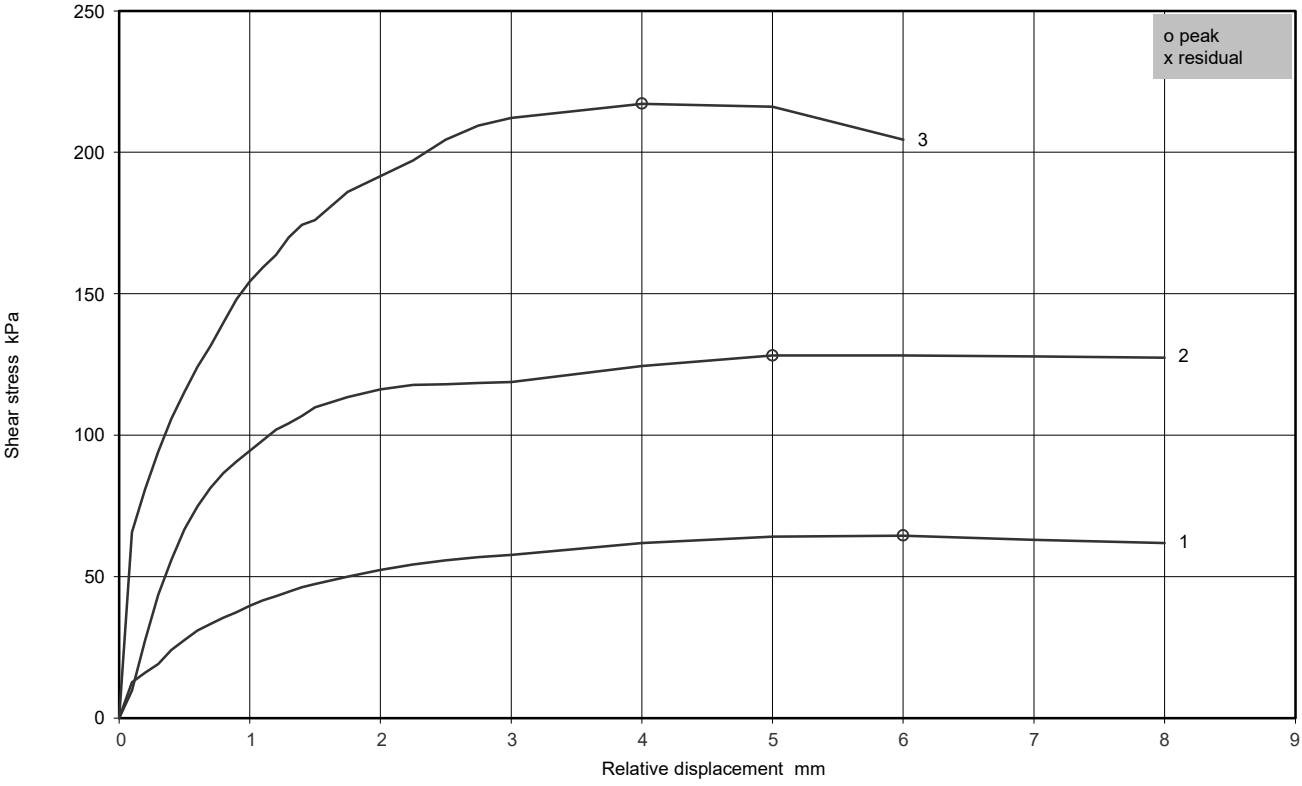
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J326001
					Borehole/Pit No.	BH-108
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey brown SAND				Depth m	11.2
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2025112042

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	20/11/2025			

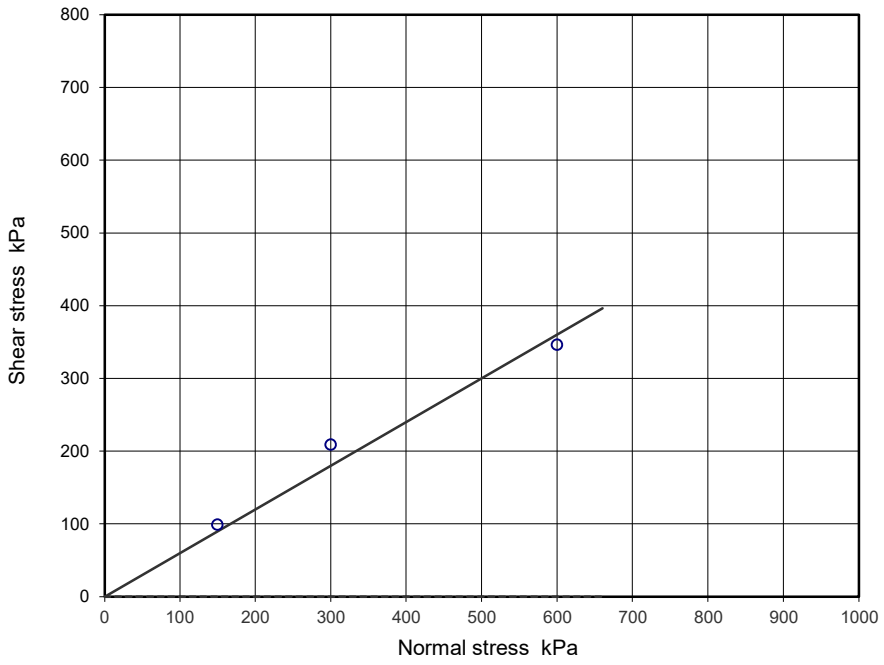
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH109
Project Name	Ardersier Port			Sample No.	
Soil Description	Dark brown SAND			Depth m	13.2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026021614
Test Method	BS EN ISO 17892-10:2018			Date of test	20/02/2026

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details	Test No.	**1**	**2**	**3**				
Initial	Height	26.1	26.0	26.0				mm
	Bulk Density	1.75	1.75	1.75				Mg/m³
	Moisture Content	27.0	27.0	27.0				%
	Dry density	1.38	1.38	1.38				Mg/m³
	Voids ratio	0.920	0.920	0.920				
	Degree of Saturation	78	78	78				%
Consolidation	Consolidation / Normal Stress applied	**150**	**300**	**600**				kPa
	Change in height during consolidation*	-0.648	-0.806	-0.960				mm
	Voids ratio after consolidation	0.872	0.861	0.849				
After test	Final Moisture content	26.7	26.5	26.4				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	10.00	5.00	5.00				mm
	Shear stress	98.8	209.1	346.4				kPa
	Vertical Movement at peak shear stress*	-1.34	-0.97	-1.34				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[30]	0
Ø '	degrees	[28.0]	31

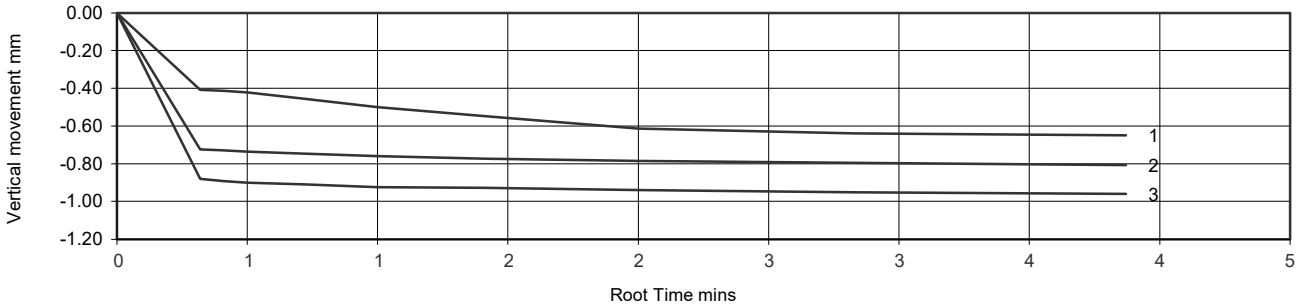
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

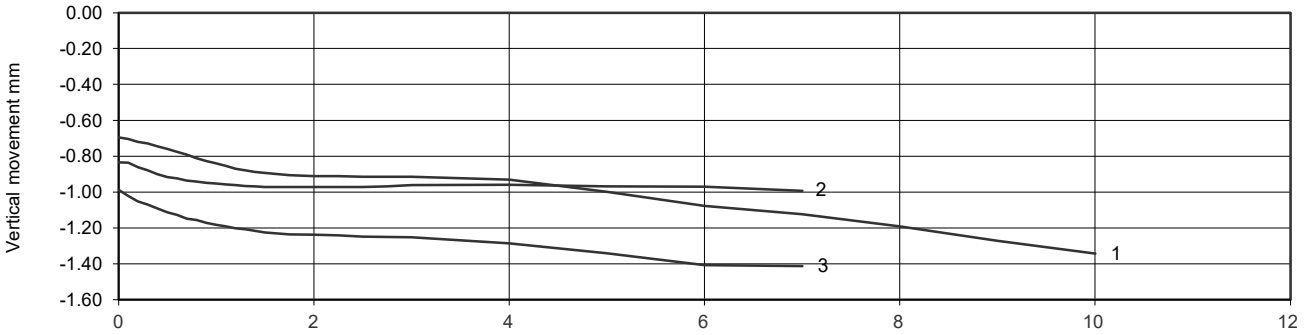
	Date Printed			
	23/02/2026	UKAS TESTING 7758	TTL	**SSB**

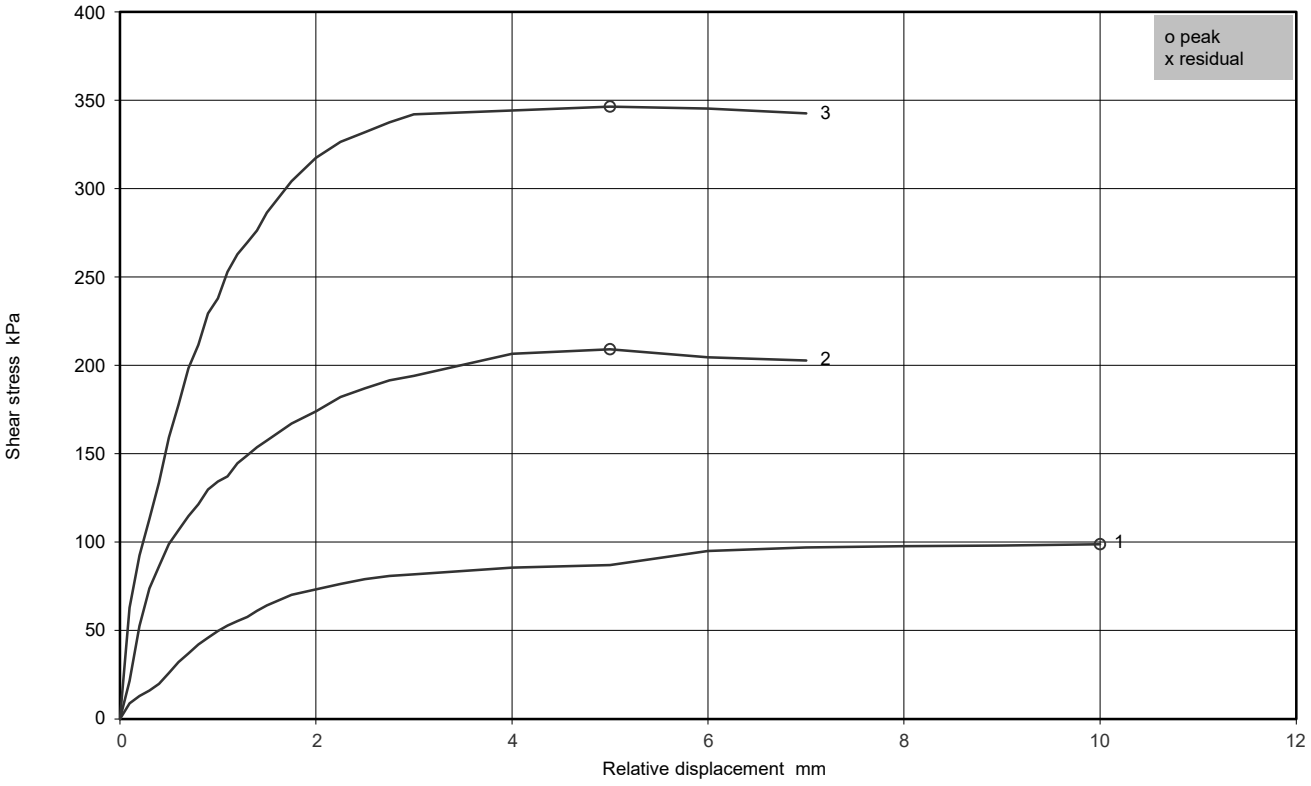
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH109
Project Name	Ardersier Port				Sample No.	
Soil Description	Dark brown SAND				Depth m	13.2
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026021614

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
23/02/2026			SSB

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH110
Project Name	Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	14
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026021611
Test Method	BS EN ISO 17892-10:2018			Date of test	23/02/2026

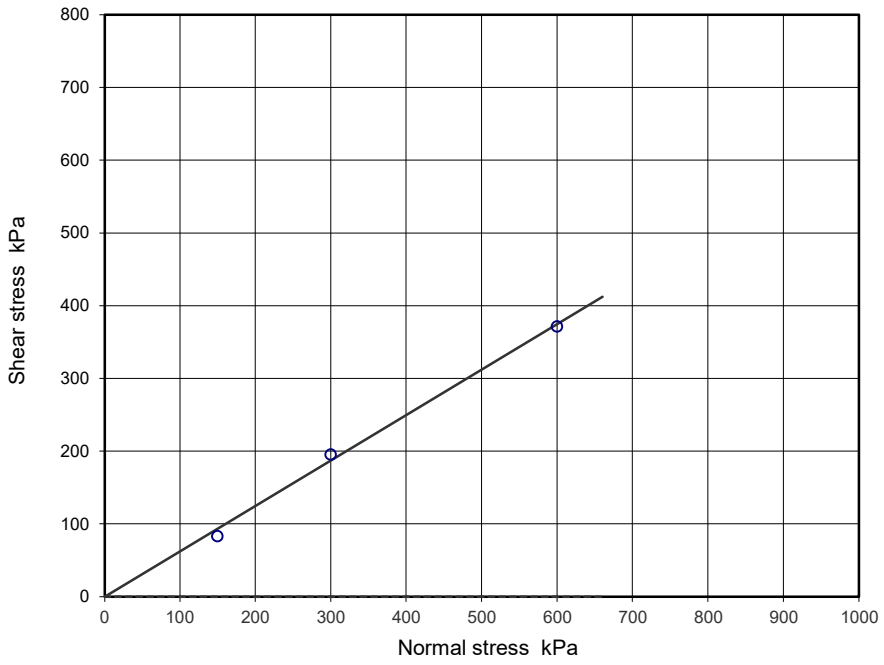
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.1	26.1				mm
	Bulk Density		1.70	1.70	1.70				Mg/m³
	Moisture Content		21.2	21.2	21.2				%
	Dry density		1.40	1.40	1.40				Mg/m³
	Voids ratio		0.893	0.893	0.893				
	Degree of Saturation		63	63	63				%
Consolidation	Consolidation / Normal Stress applied		**150**	**300**	**600**				kPa
	Change in height during consolidation*		-1.252	-1.452	-1.928				mm
	Voids ratio after consolidation		0.802	0.788	0.753				
After test	Final Moisture content		21.3	21.1	21.4				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	7.00	9.00	9.00				mm
	Shear stress	82.8	195.2	371.5				kPa
	Vertical Movement at peak shear stress*	-2.06	-1.93	-2.89				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[-5.4]	0
Ø '	degrees	[32.5]	32

Residual strength, (x)

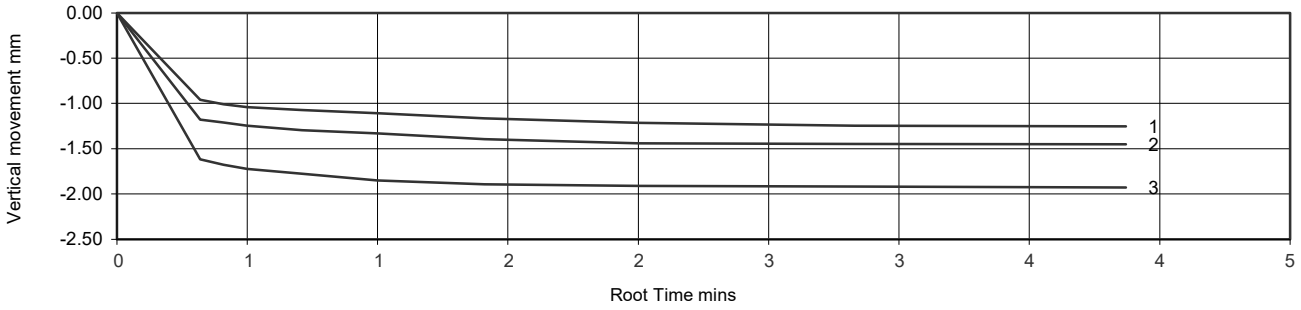
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

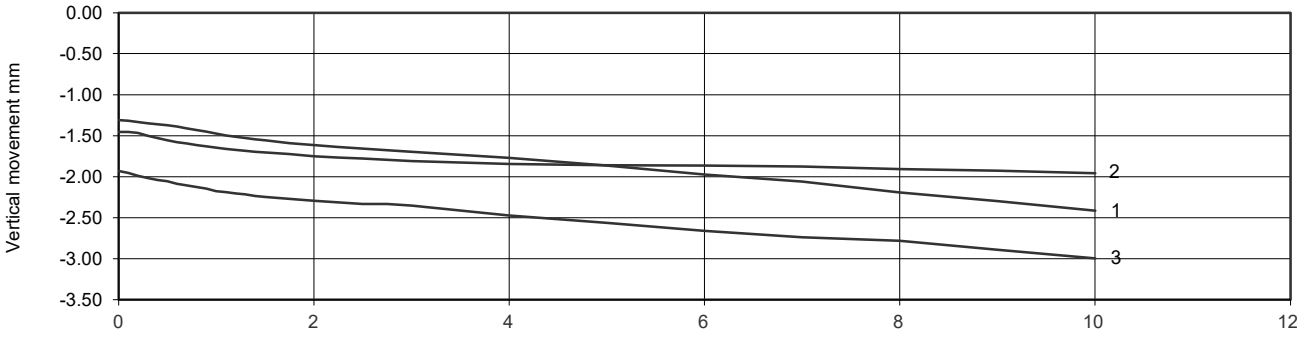
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	24/02/2026	UKAS TESTING 7758	TTL	**SSB**

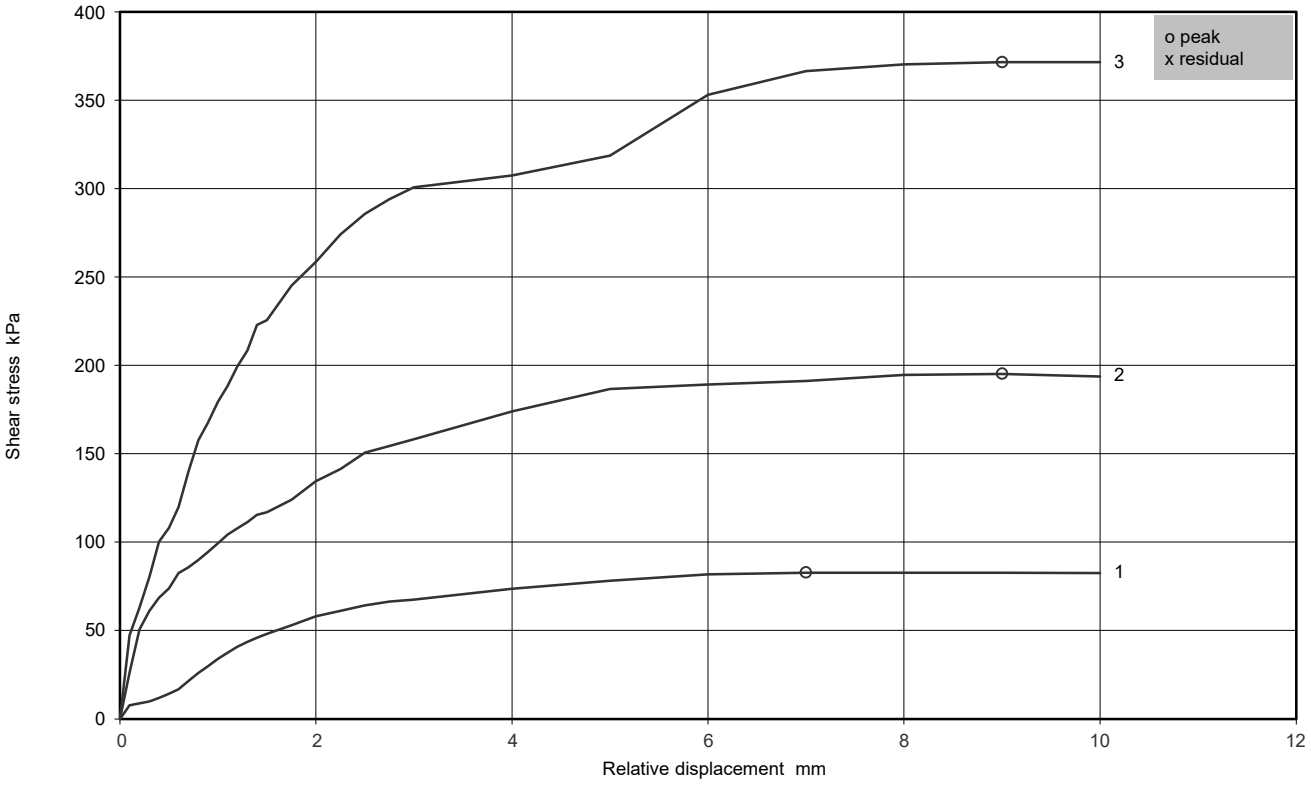
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH110
Project Name	Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	14
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026021611

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	24/02/2026			

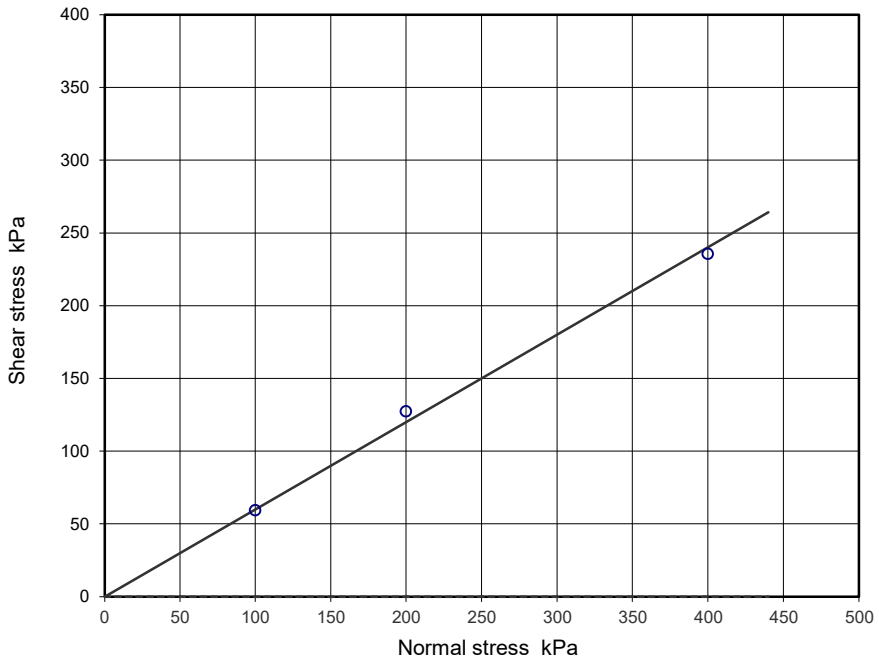
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH111
Project Name	Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	11.7
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026021612
Test Method	BS EN ISO 17892-10:2018			Date of test	23/02/2026

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.3	26.3				mm
	Bulk Density		1.60	1.60	1.60				Mg/m³
	Moisture Content		13.2	13.2	13.2				%
	Dry density		1.41	1.41	1.41				Mg/m³
	Voids ratio		0.879	0.879	0.879				
	Degree of Saturation		40	40	40				%
Consolidation	Consolidation / Normal Stress applied		**100**	**200**	**400**				kPa
	Change in height during consolidation*		-2.528	-2.940	-3.028				mm
	Voids ratio after consolidation		0.699	0.669	0.662				
After test	Final Moisture content		19.3	18.0	20.3				

Shearing stage(s)

Rate of displacement	Peak		0.60000	0.60000	0.60000				mm/min
	Residual								mm/min
Peak values, (o)	Relative horizontal displacement		10.00	6.00	6.00				mm
	Shear stress		59.3	127.3	235.6				kPa
	Vertical Movement at peak shear stress*		-3.64	-3.47	-3.67				mm
Residual values, (x)	No. of traverses (including peak run)		1	1	1				
	Relative horizontal displacement								mm
	Shear stress								kPa
	Vertical movement at residual shear stress*								mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[5.2]	0
Ø '	degrees	[30.0]	31

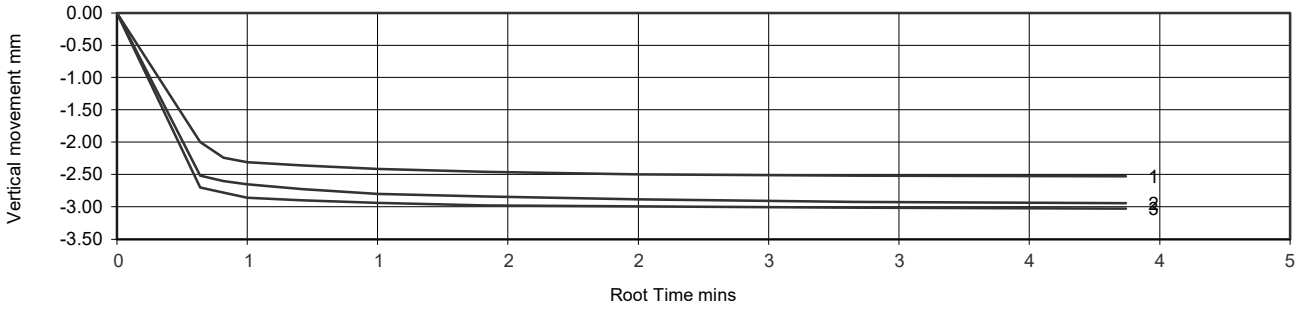
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

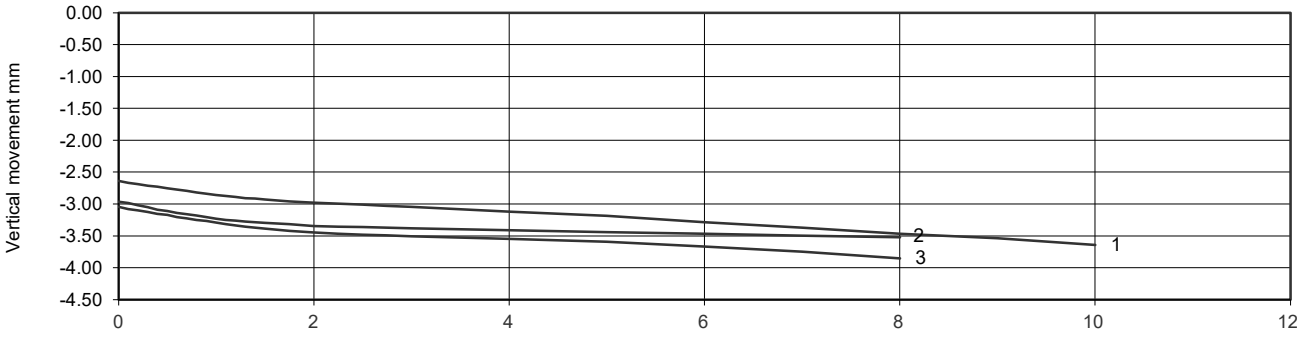
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	24/02/2026	UKAS TESTING 7758	TTL	**SSB**

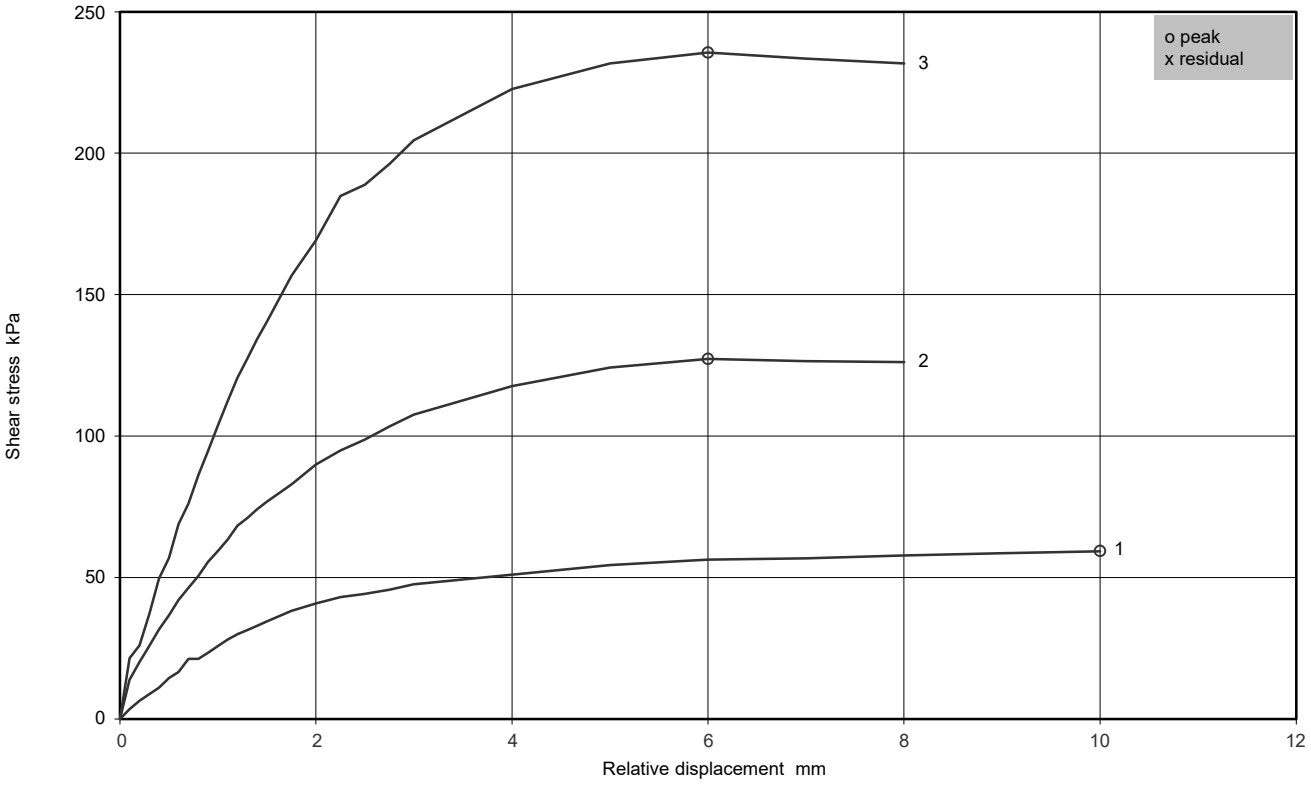
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH111
Project Name	Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	11.7
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026021612

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	24/02/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey brown SAND			Depth m	6.3
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511250
Test Method	BS EN ISO 17892-10:2018			Date of test	25/11/2025

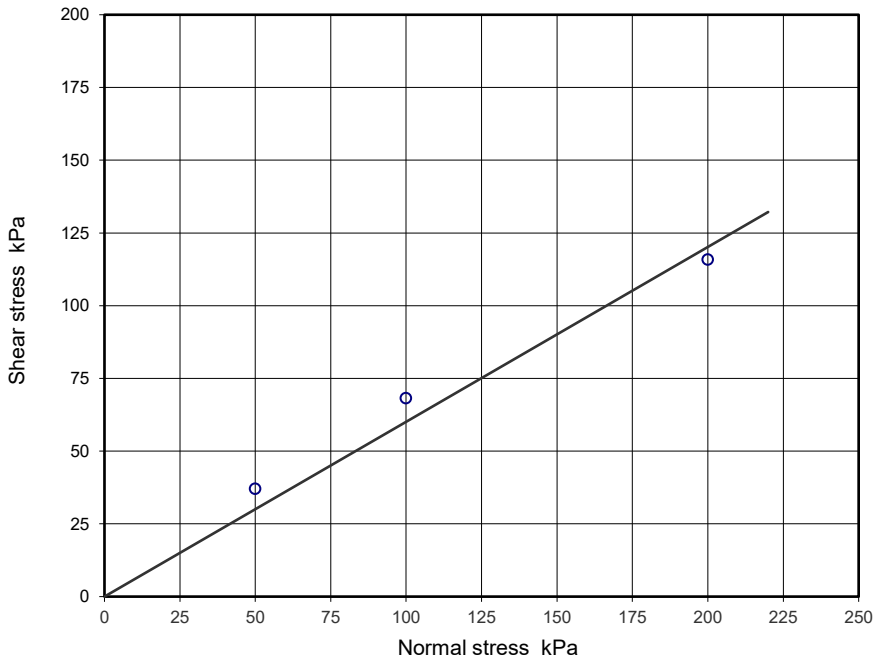
Preparation Details -2mm material. Recompacted to 65% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.2	23.2				mm
	Bulk Density		1.91	1.91	1.91				Mg/m³
	Moisture Content		22.7	22.7	22.7				%
	Dry density		1.56	1.56	1.56				Mg/m³
	Voids ratio		0.699	0.699	0.699				
	Degree of Saturation		86	86	86				%
Consolidation	Consolidation / Normal Stress applied		**50**	**100**	**200**				kPa
	Change in height during consolidation*		-0.218	-0.960	-2.882				mm
	Voids ratio after consolidation		0.683	0.629	0.488				
After test	Final Moisture content		23.8	23.7	23.6				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	7.00	8.00	5.00				mm
	Shear stress	37.0	68.2	115.8				kPa
	Vertical Movement at peak shear stress*	-0.44	-1.44	-3.26				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[13]	0
Ø '	degrees	[27.5]	31

Residual strength, (x)

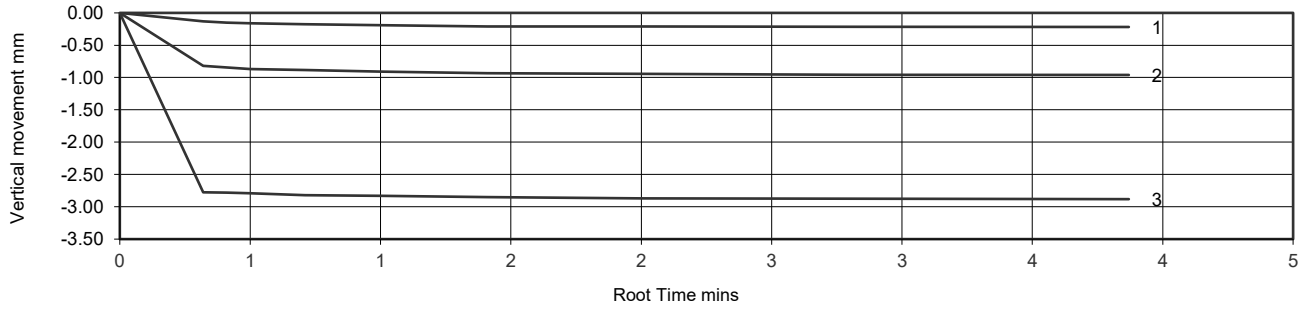
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

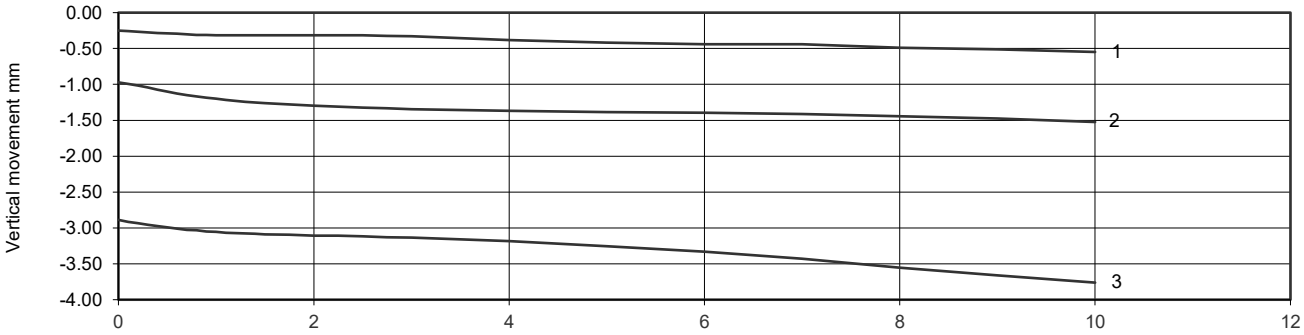
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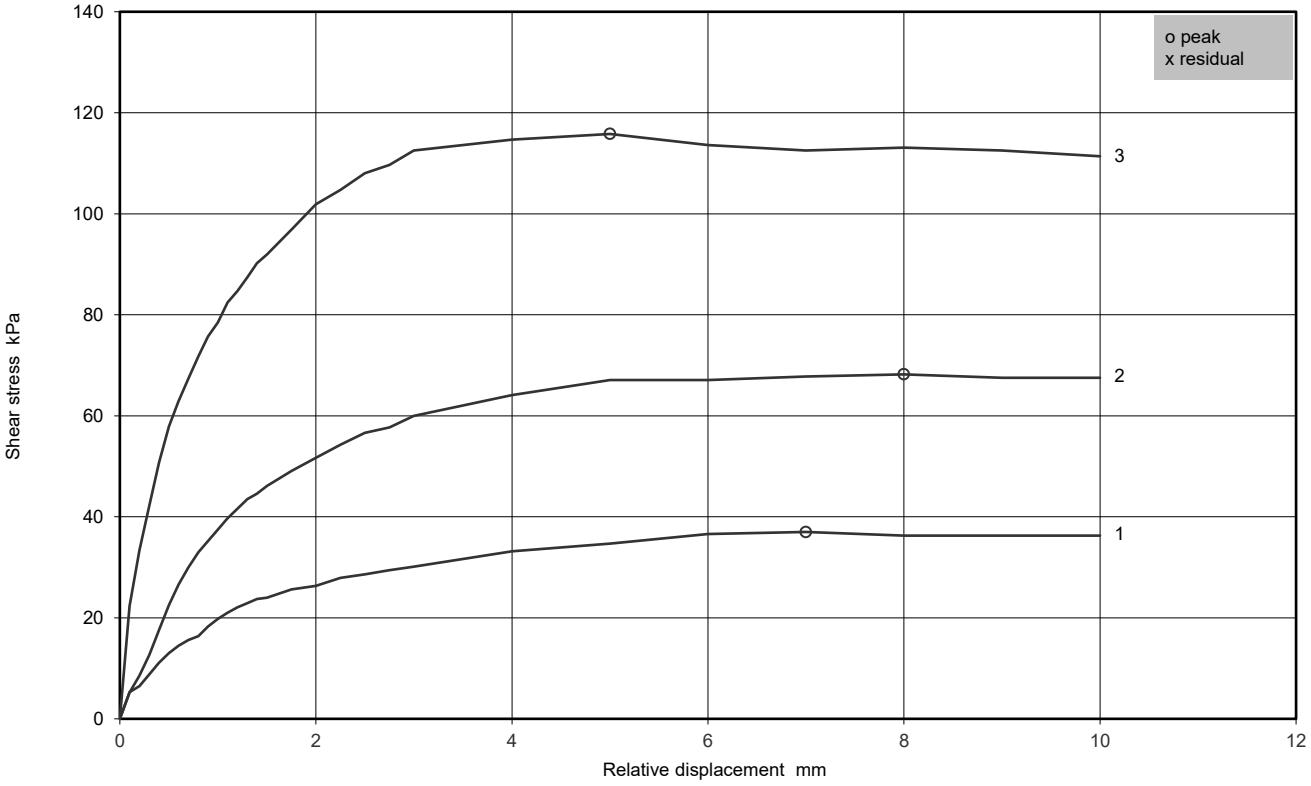
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey brown SAND				Depth m	6.3
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511250

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey brown SAND			Depth m	12.3
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511251
Test Method	BS EN ISO 17892-10:2018			Date of test	26/11/2025

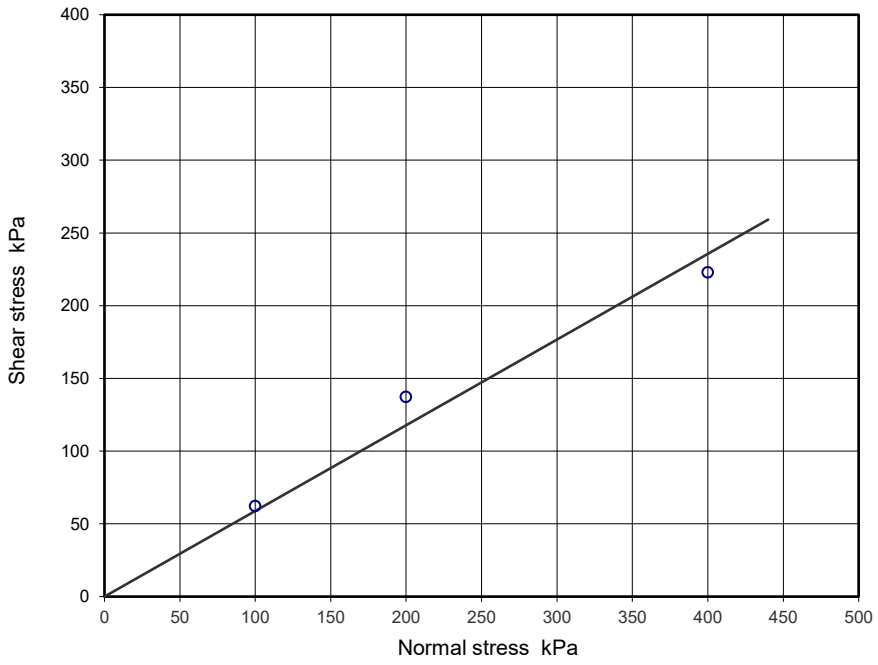
Preparation Details -2mm material. Recompacted to 65% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.1				mm
	Bulk Density		1.87	1.87	1.87				Mg/m³
	Moisture Content		19.2	19.2	19.2				%
	Dry density		1.57	1.57	1.57				Mg/m³
	Voids ratio		0.688	0.688	0.688				
	Degree of Saturation		74	74	74				%
Consolidation	Consolidation / Normal Stress applied		**100**	**200**	**400**				kPa
	Change in height during consolidation*		-0.462	-0.694	-1.048				mm
	Voids ratio after consolidation		0.654	0.637	0.611				
After test	Final Moisture content		22.9	22.0	22.3				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	9.00	8.00	4.00				mm
	Shear stress	62.2	137.2	222.8				kPa
	Vertical Movement at peak shear stress*	-1.29	-1.31	-1.40				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[19]	0
Ø '	degrees	[27.5]	30.5

Residual strength, (x)

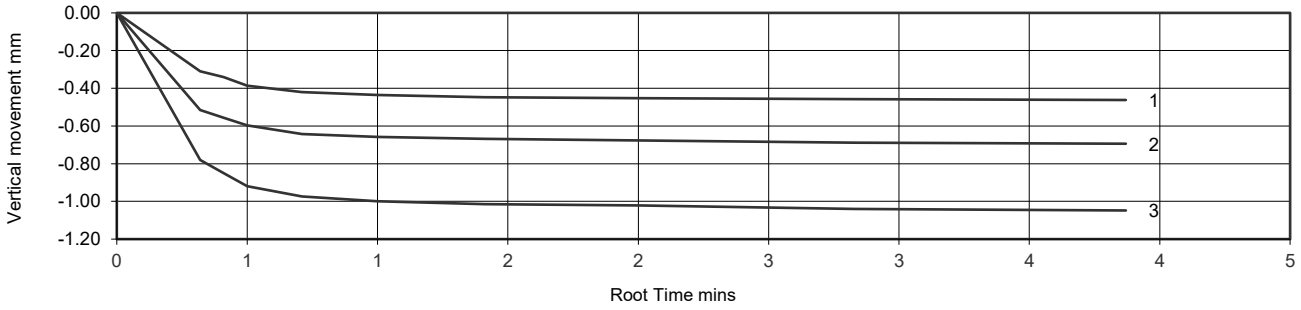
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

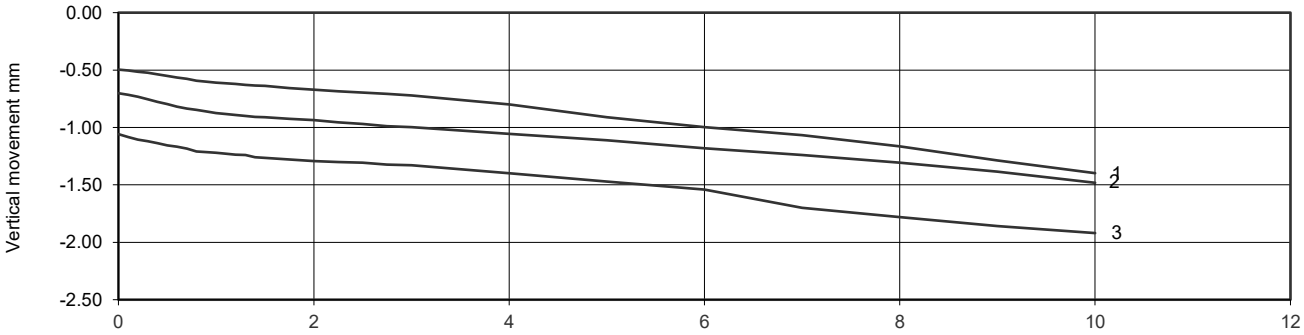
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

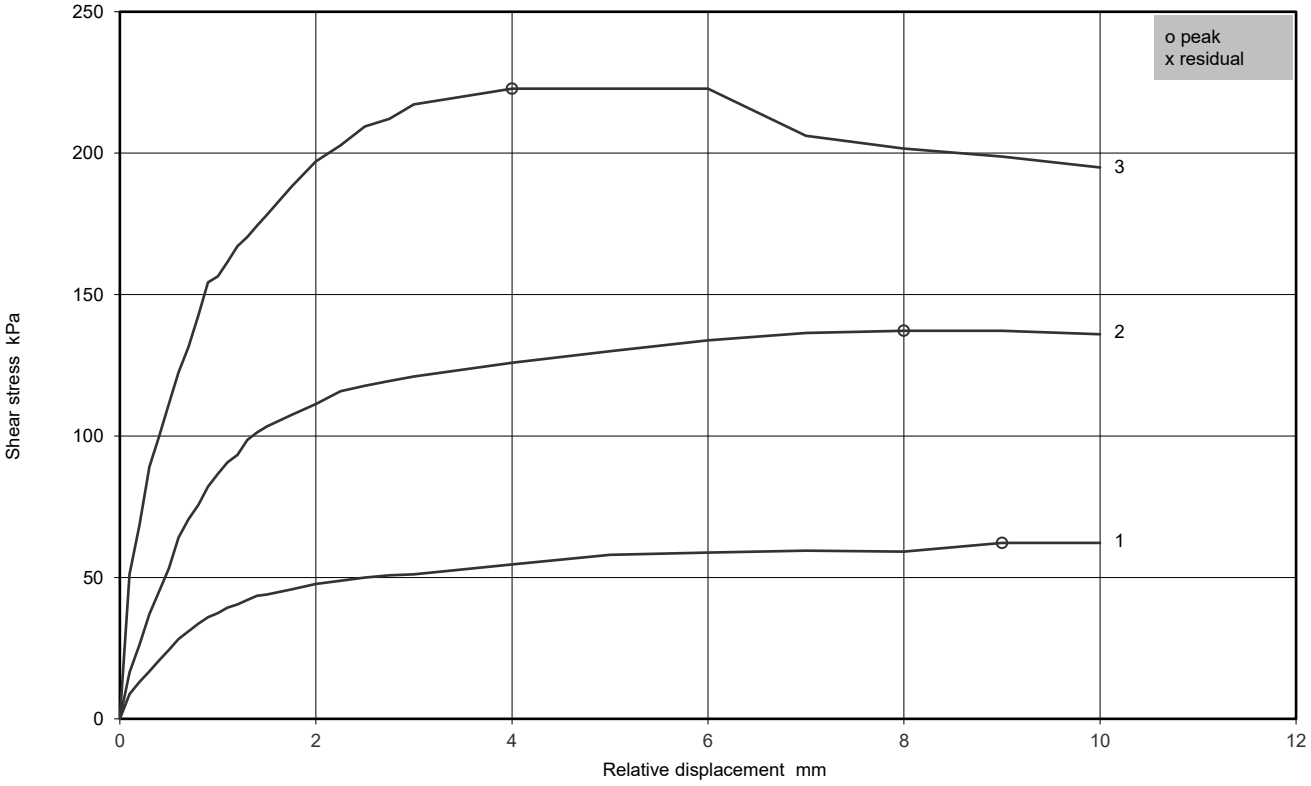
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey brown SAND				Depth m	12.3
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511251

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	19.8
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511252
Test Method	BS EN ISO 17892-10:2018			Date of test	12/02/2025

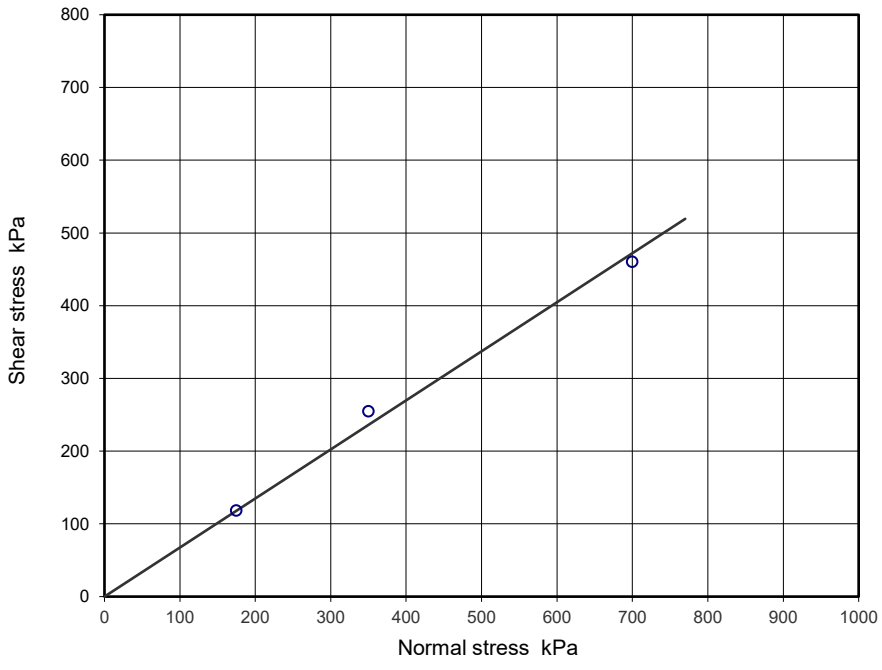
Preparation Details -2mm material. Recompacted to 45% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.1				mm
	Bulk Density		1.79	1.79	1.79				Mg/m³
	Moisture Content		18.3	18.3	18.3				%
	Dry density		1.51	1.51	1.51				Mg/m³
	Voids ratio		0.755	0.755	0.755				
	Degree of Saturation		64	64	64				%
Consolidation	Consolidation / Normal Stress applied		**175**	**350**	**700**				kPa
	Change in height during consolidation*		-0.848	-1.392	-1.674				mm
	Voids ratio after consolidation		0.691	0.649	0.628				
After test	Final Moisture content		19.8	18.7	19.2				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	8.00	4.00	5.00				mm
	Shear stress	118.3	254.8	460.0				kPa
	Vertical Movement at peak shear stress*	-1.12	-1.54	-1.97				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[16]	0
Ø '	degrees	[32.5]	34

Residual strength, (x)

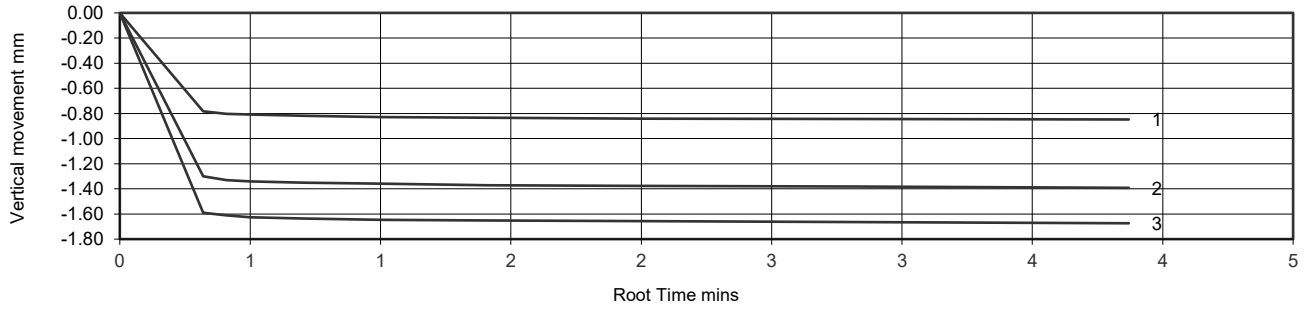
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

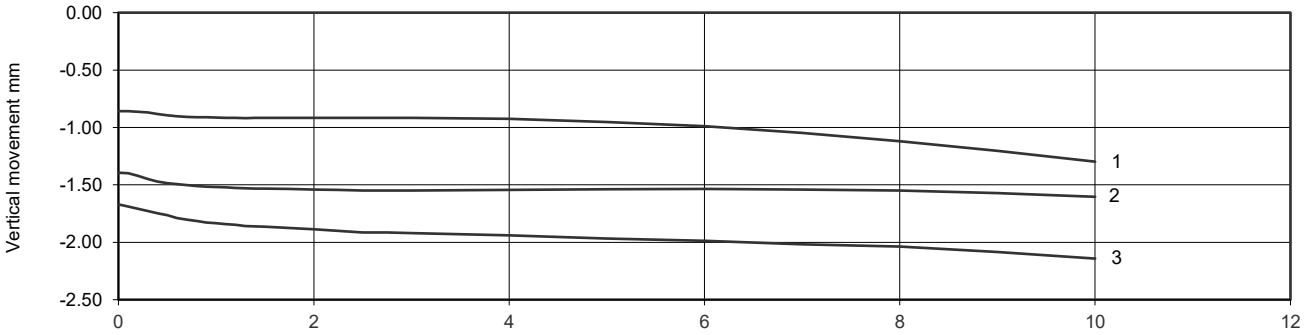
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

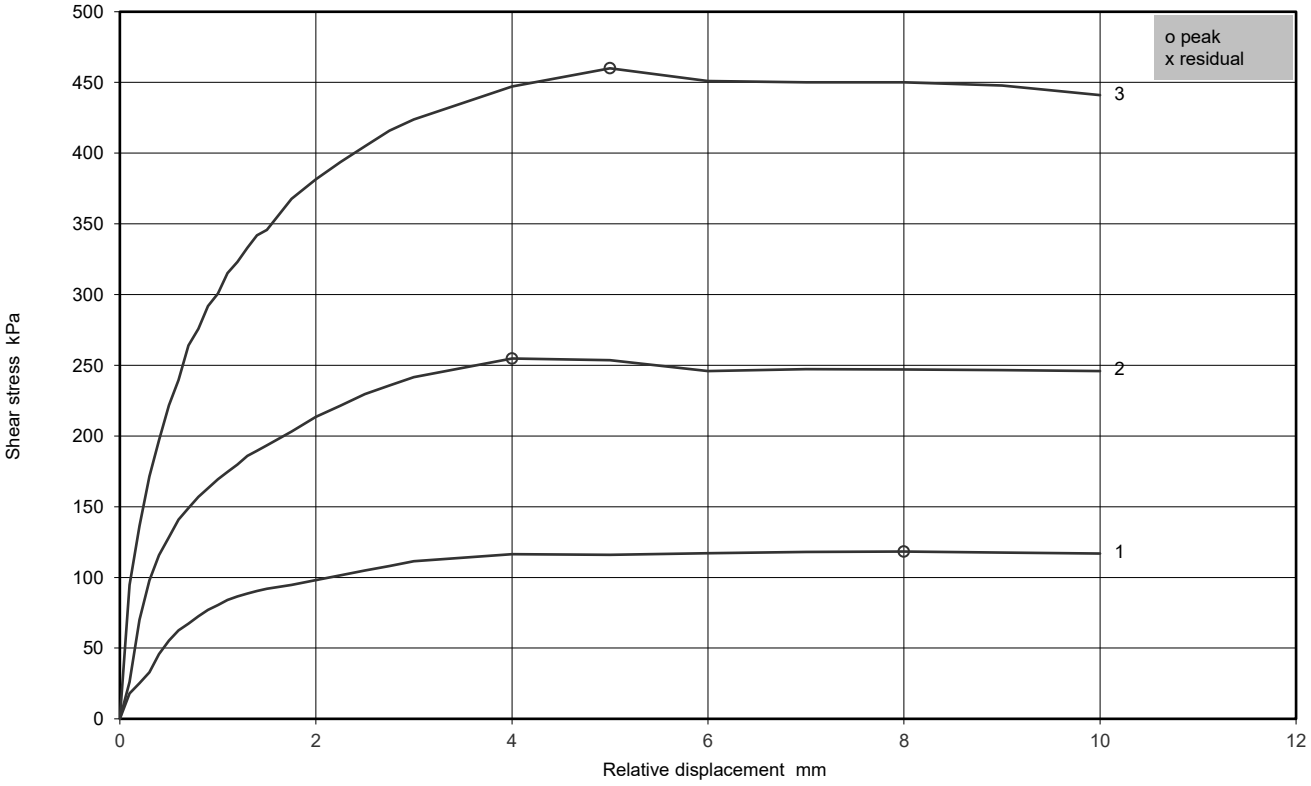
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown slightly gravelly silty SAND				Depth m	19.8
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511252

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly SAND			Depth m	21.3
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511253
Test Method	BS EN ISO 17892-10:2018			Date of test	12/02/2025

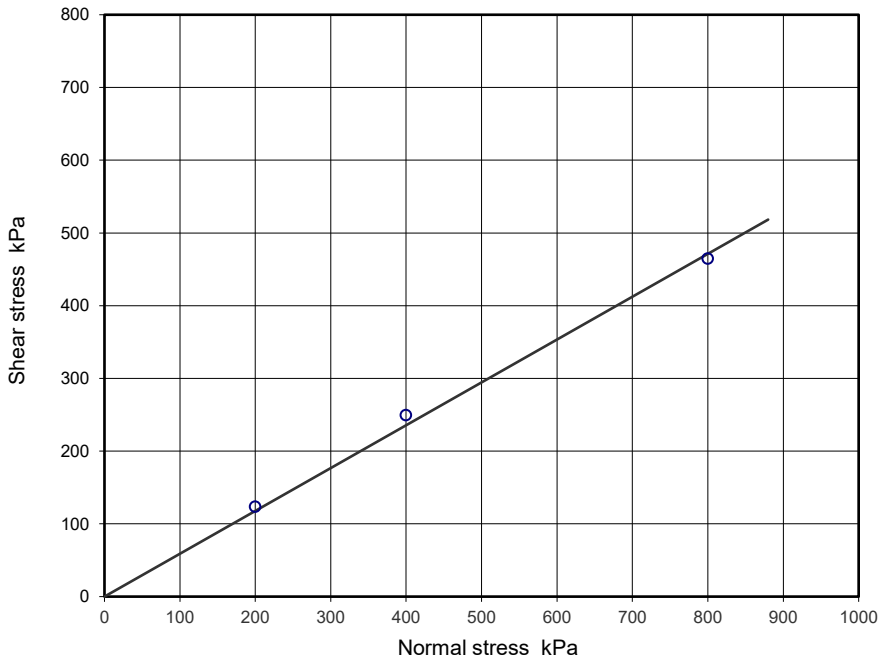
Preparation Details -2mm material. Recompacted to 40% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.2	23.2	23.2				mm
	Bulk Density		1.77	1.77	1.77				Mg/m³
	Moisture Content		14.9	14.9	14.9				%
	Dry density		1.54	1.54	1.54				Mg/m³
	Voids ratio		0.721	0.721	0.721				
	Degree of Saturation		55	55	55				%
Consolidation	Consolidation / Normal Stress applied		**200**	**400**	**800**				kPa
	Change in height during consolidation*		-2.006	-1.946	-2.208				mm
	Voids ratio after consolidation		0.572	0.576	0.557				
After test	Final Moisture content		17.7	17.8	16.9				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	7.00	7.00	5.00				mm
	Shear stress	123.6	249.6	464.5				kPa
	Vertical Movement at peak shear stress*	-2.65	-2.86	-2.74				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[16]	0
Ø '	degrees	[29.5]	30.5

Residual strength, (x)

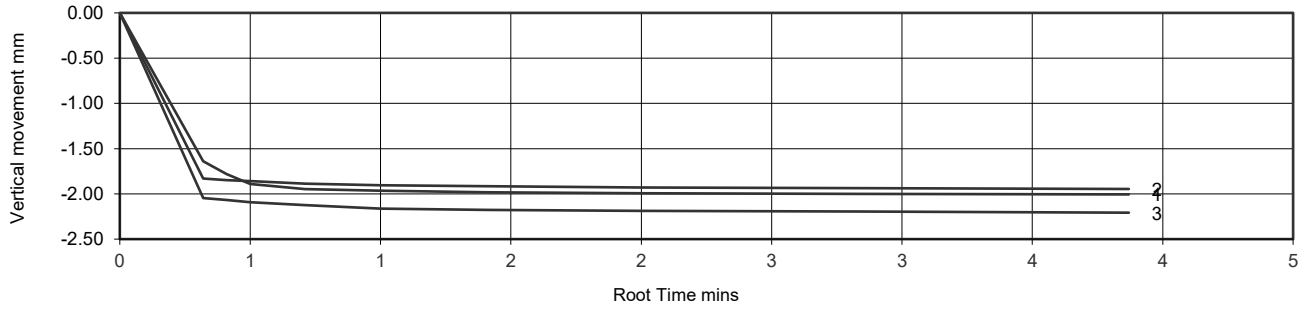
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

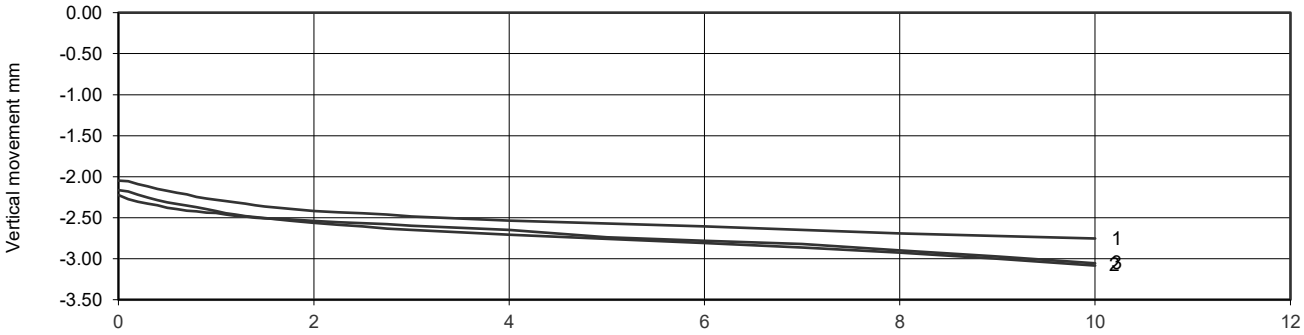
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	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

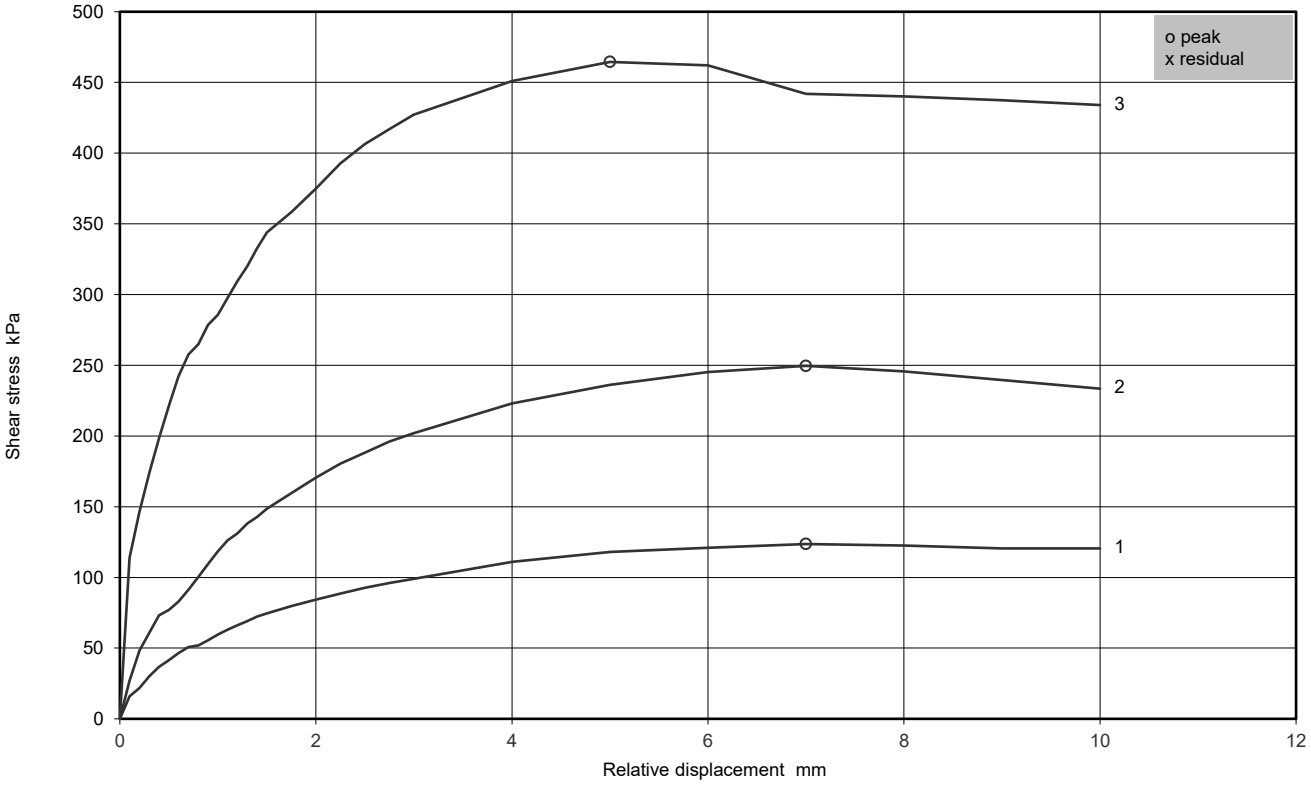
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown slightly gravelly SAND				Depth m	21.3
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511253

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH201
Project Name	Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	6.5
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202602164
Test Method	BS EN ISO 17892-10:2018			Date of test	23/02/2026

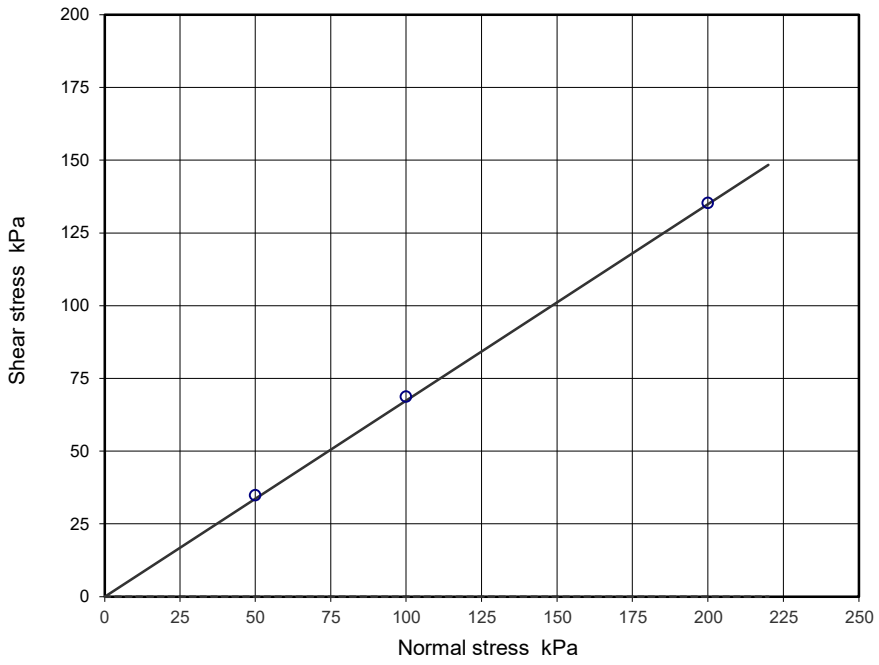
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.3	26.3				mm
	Bulk Density		1.80	1.80	1.80				Mg/m³
	Moisture Content		29.7	29.7	29.7				%
	Dry density		1.39	1.39	1.39				Mg/m³
	Voids ratio		0.906	0.906	0.906				
	Degree of Saturation		87	87	87				%
Consolidation	Consolidation / Normal Stress applied		**50**	**100**	**200**				kPa
	Change in height during consolidation*		-0.276	-0.372	-0.604				mm
	Voids ratio after consolidation		0.886	0.879	0.862				
After test	Final Moisture content		26.0	25.5	25.5				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	2.75	2.25	3.00				mm
	Shear stress	34.8	68.7	135.3				kPa
	Vertical Movement at peak shear stress*	-0.27	-0.34	-0.65				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[1.5]	0
Ø '	degrees	[34.0]	34

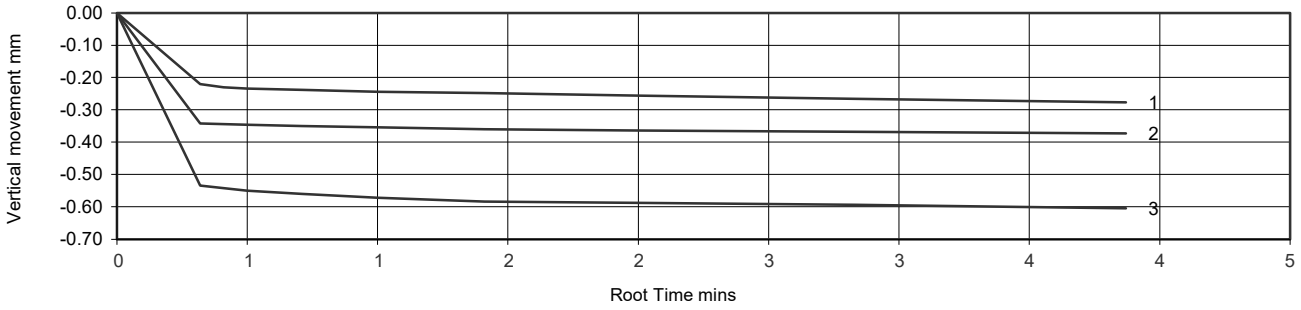
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

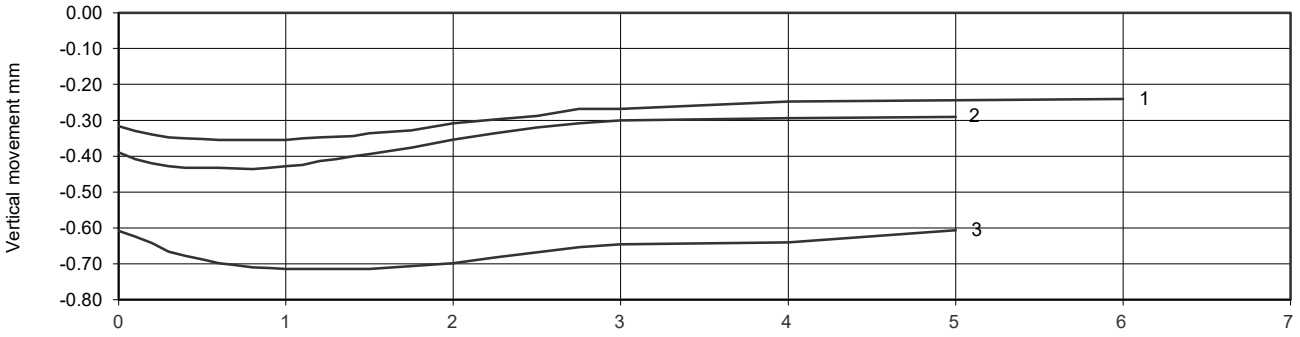
	Date Printed			
	24/02/2026	UKAS TESTING 7758	TTL	**SSB**

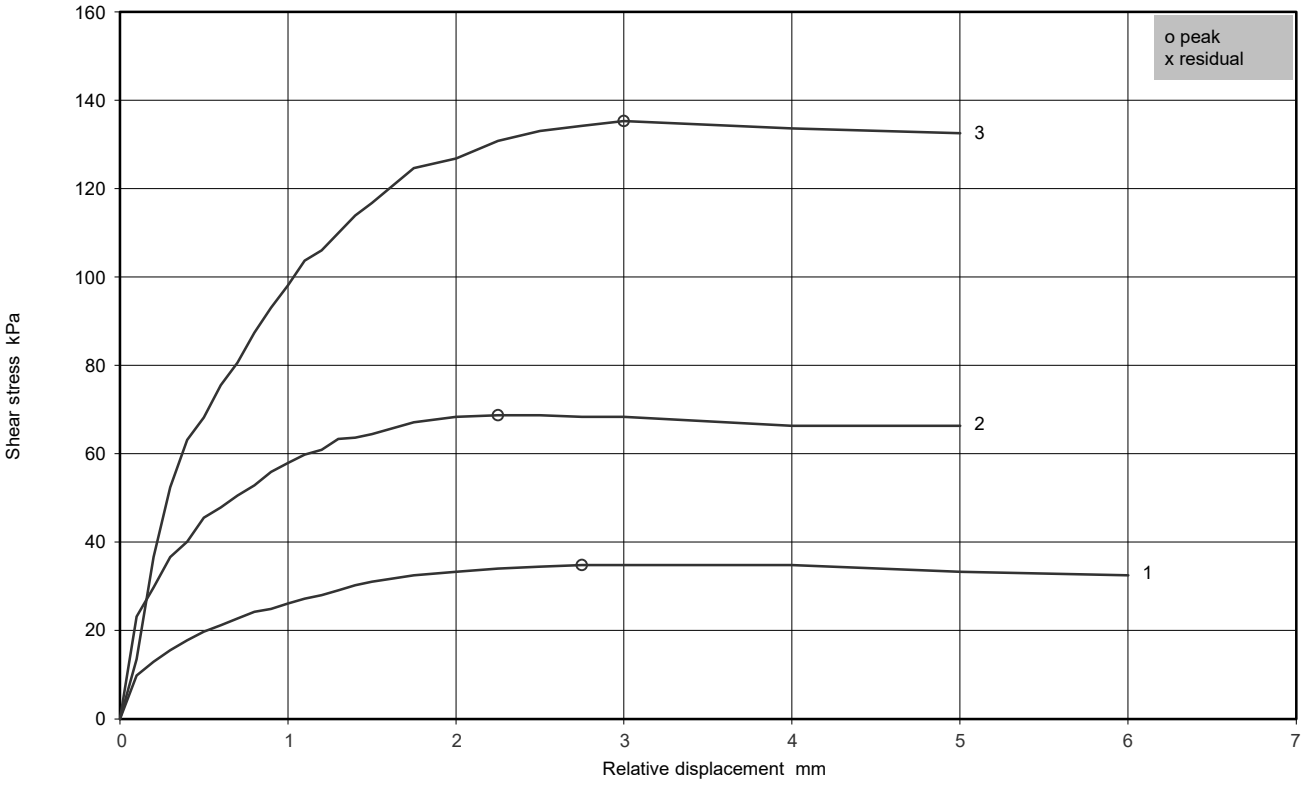
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH201
Project Name	Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	6.5
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202602164

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
24/02/2026			SSB

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH201
Project Name	Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	5
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202602163
Test Method	BS EN ISO 17892-10:2018			Date of test	23/02/2026

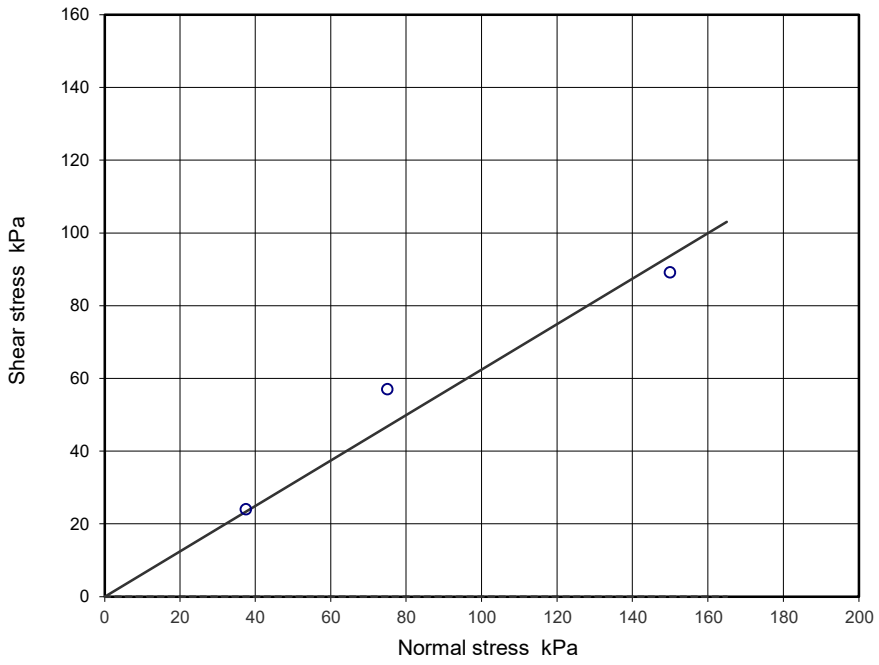
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.1	26.1				mm
	Bulk Density		1.67	1.67	1.67				Mg/m³
	Moisture Content		26.7	26.7	26.7				%
	Dry density		1.32	1.32	1.32				Mg/m³
	Voids ratio		1.008	1.008	1.008				
	Degree of Saturation		70	70	70				%
Consolidation	Consolidation / Normal Stress applied		**38**	**75**	**150**				kPa
	Change in height during consolidation*		-0.154	-0.826	-0.628				mm
	Voids ratio after consolidation		0.996	0.944	0.960				
After test	Final Moisture content		26.3	27.3	27.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	10.00	10.00	10.00				mm
	Shear stress	24.0	57.0	89.1				kPa
	Vertical Movement at peak shear stress*	-0.76	-1.35	-1.03				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[8.0]	0
Ø '	degrees	[29.0]	32

Residual strength, (x)

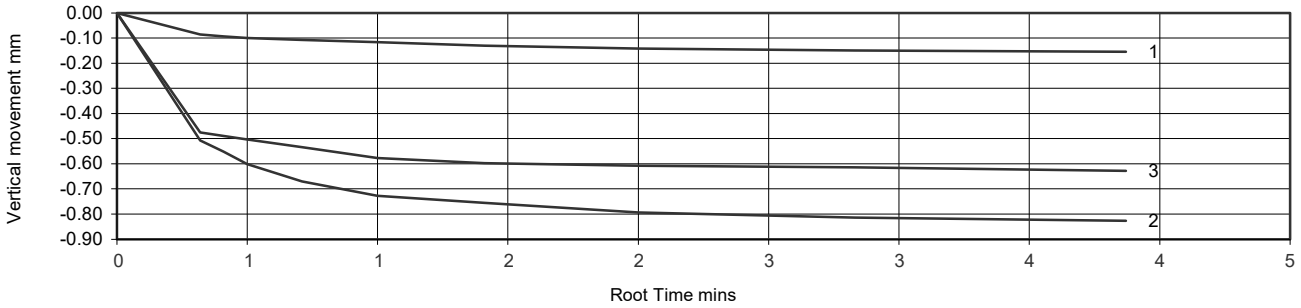
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

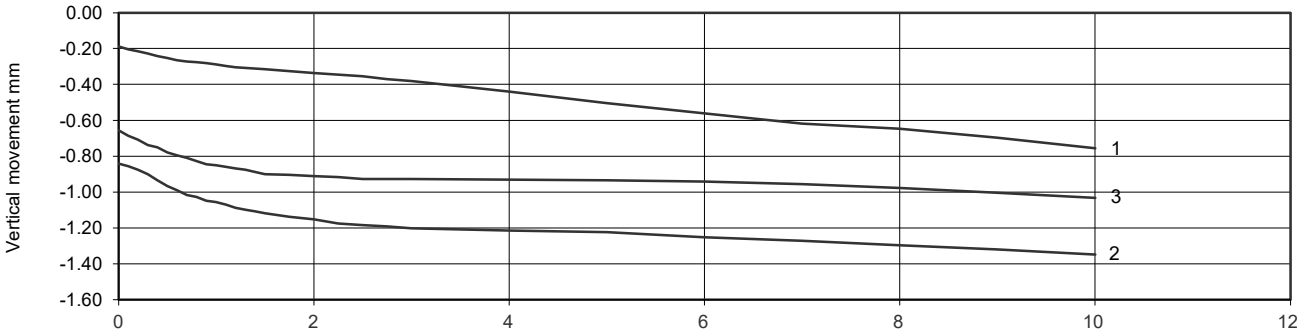
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	24/02/2026	UKAS TESTING 7758	TTL	**SSB**

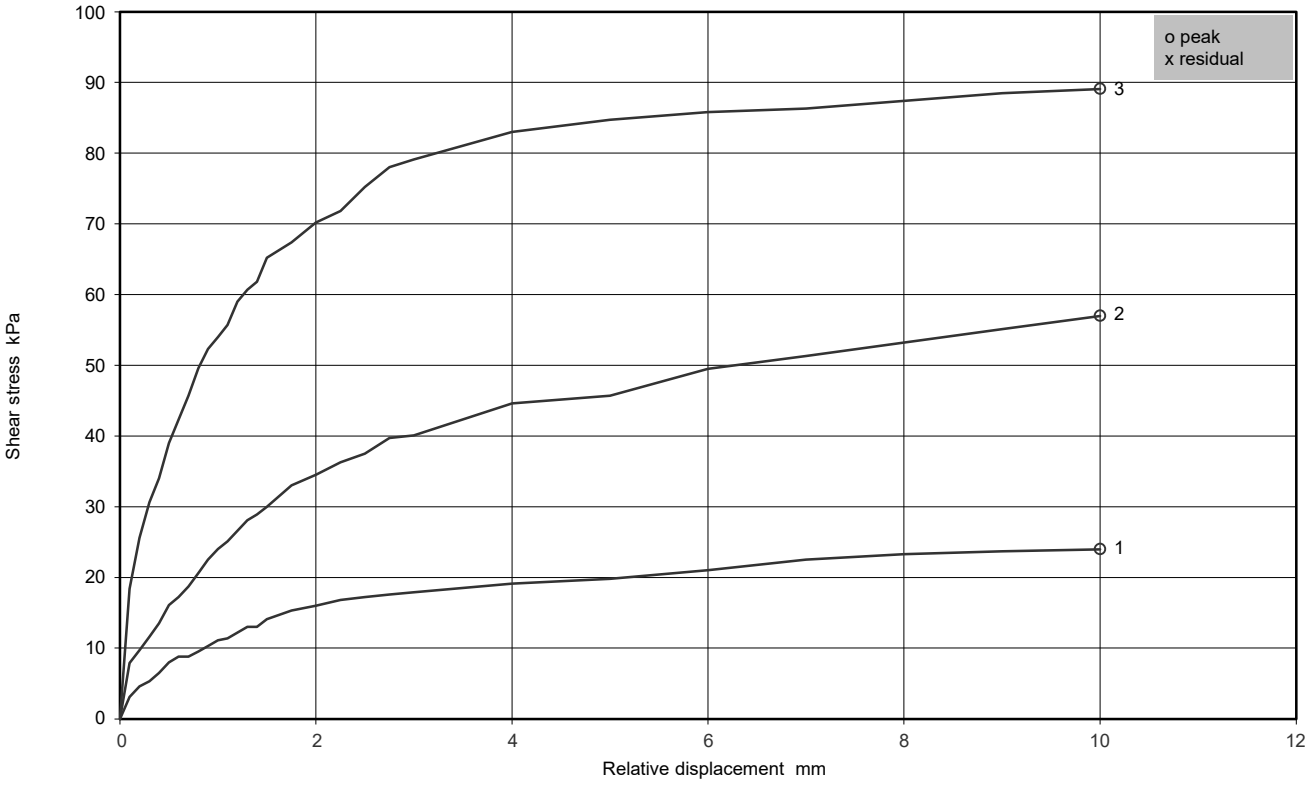
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH201
Project Name	Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	5
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202602163

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
24/02/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly silty SAND			Depth m	2.1
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511254
Test Method	BS EN ISO 17892-10:2018			Date of test	12/04/2025

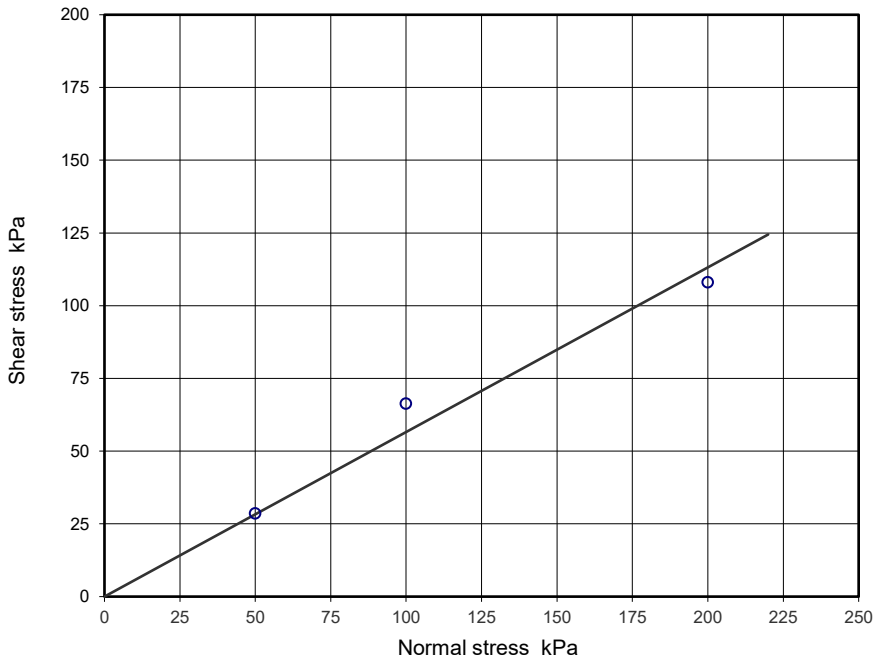
Preparation Details -2mm material. Recompacted to 45% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.1				mm
	Bulk Density		1.72	1.72	1.72				Mg/m³
	Moisture Content		13.3	13.3	13.3				%
	Dry density		1.52	1.52	1.52				Mg/m³
	Voids ratio		0.743	0.743	0.743				
	Degree of Saturation		47	47	47				%
Consolidation	Consolidation / Normal Stress applied		**50**	**100**	**200**				kPa
	Change in height during consolidation*		-0.688	-0.834	-0.968				mm
	Voids ratio after consolidation		0.691	0.680	0.670				
After test	Final Moisture content		25.8	25.1	24.5				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	10.00	9.00	7.00				mm
	Shear stress	28.6	66.3	108.0				kPa
	Vertical Movement at peak shear stress*	-1.17	-1.48	-1.64				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[7.8]	0
Ø '	degrees	[27.0]	29.5

Residual strength, (x)

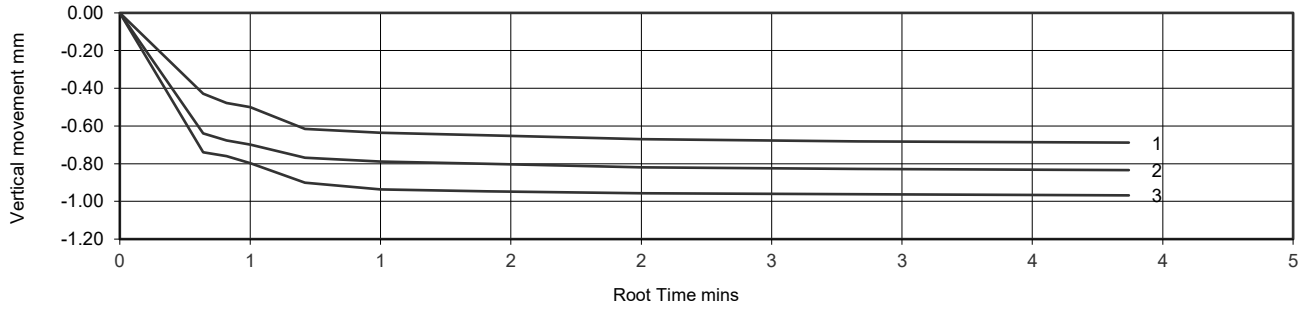
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

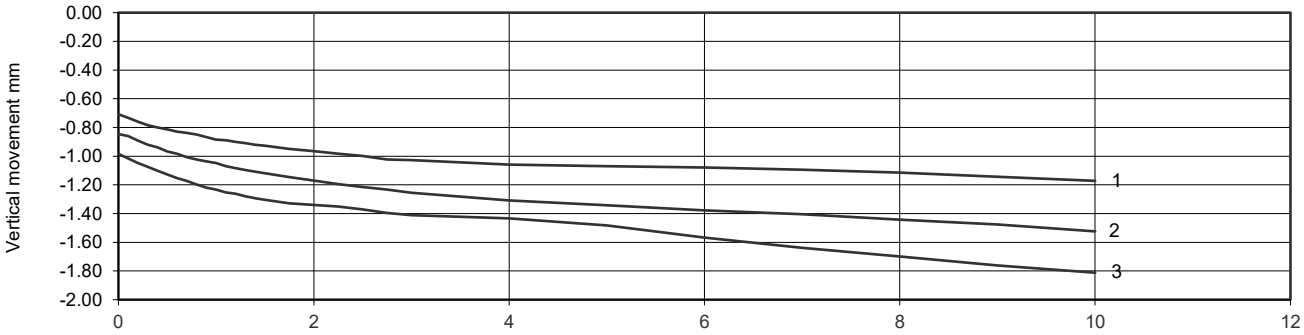
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

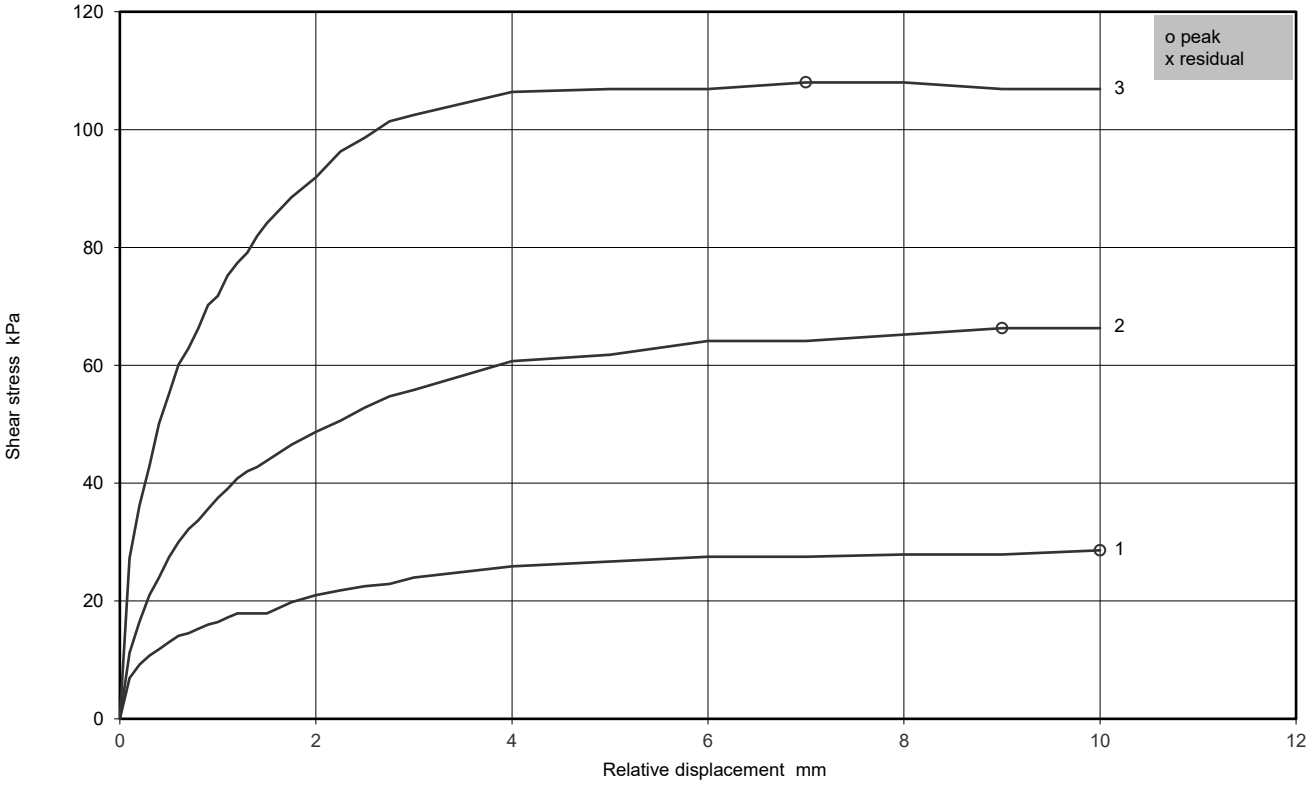
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Light brown slightly gravelly silty SAND				Depth m	2.1
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511254

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly SAND			Depth m	5.4
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511255
Test Method	BS EN ISO 17892-10:2018			Date of test	12/02/2025

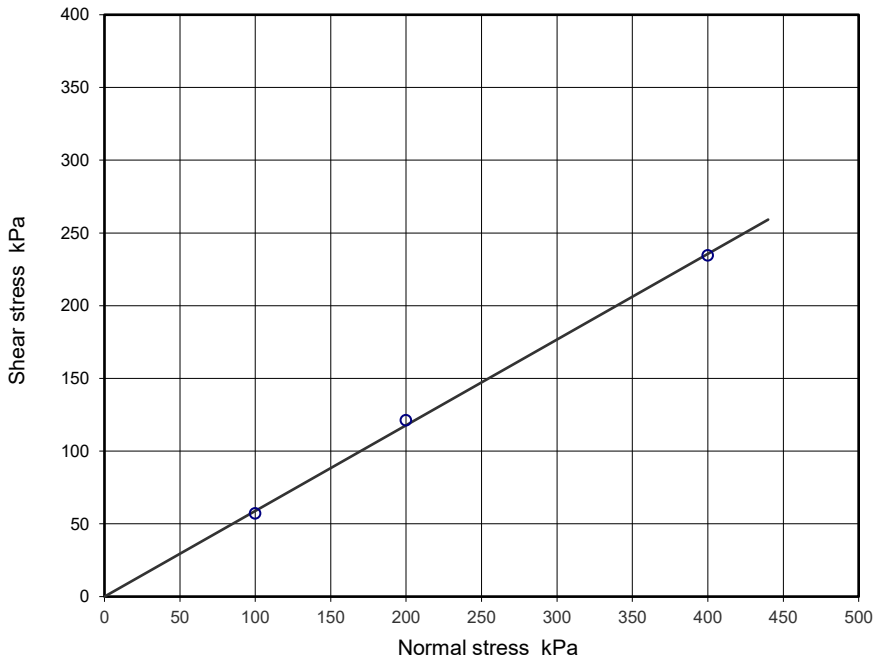
Preparation Details -2mm material. Recompacted to 65% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.2	23.3	23.2				mm
	Bulk Density		1.72	1.72	1.72				Mg/m³
	Moisture Content		21.9	21.9	21.9				%
	Dry density		1.41	1.41	1.41				Mg/m³
	Voids ratio		0.879	0.879	0.879				
	Degree of Saturation		66	66	66				%
Consolidation	Consolidation / Normal Stress applied		**100**	**200**	**400**				kPa
	Change in height during consolidation*		-0.616	-0.710	-0.846				mm
	Voids ratio after consolidation		0.829	0.822	0.810				
After test	Final Moisture content		25.0	24.2	24.1				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	5.00	10.00	7.00				mm
	Shear stress	57.1	121.1	234.5				kPa
	Vertical Movement at peak shear stress*	-0.92	-1.06	-1.11				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[0.4]	0
Ø '	degrees	[30.5]	30.5

Residual strength, (x)

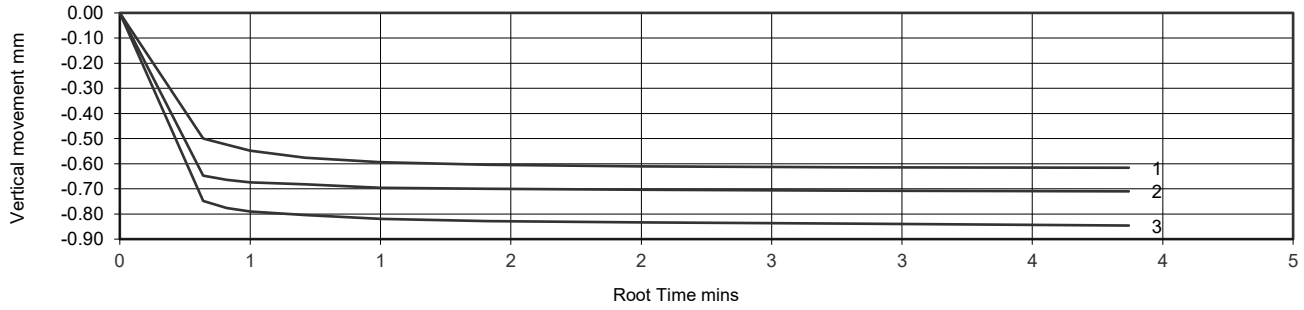
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

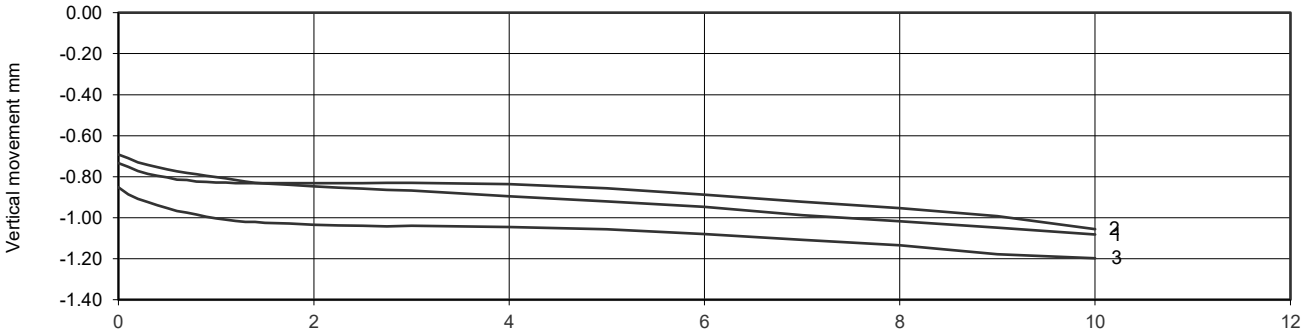
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

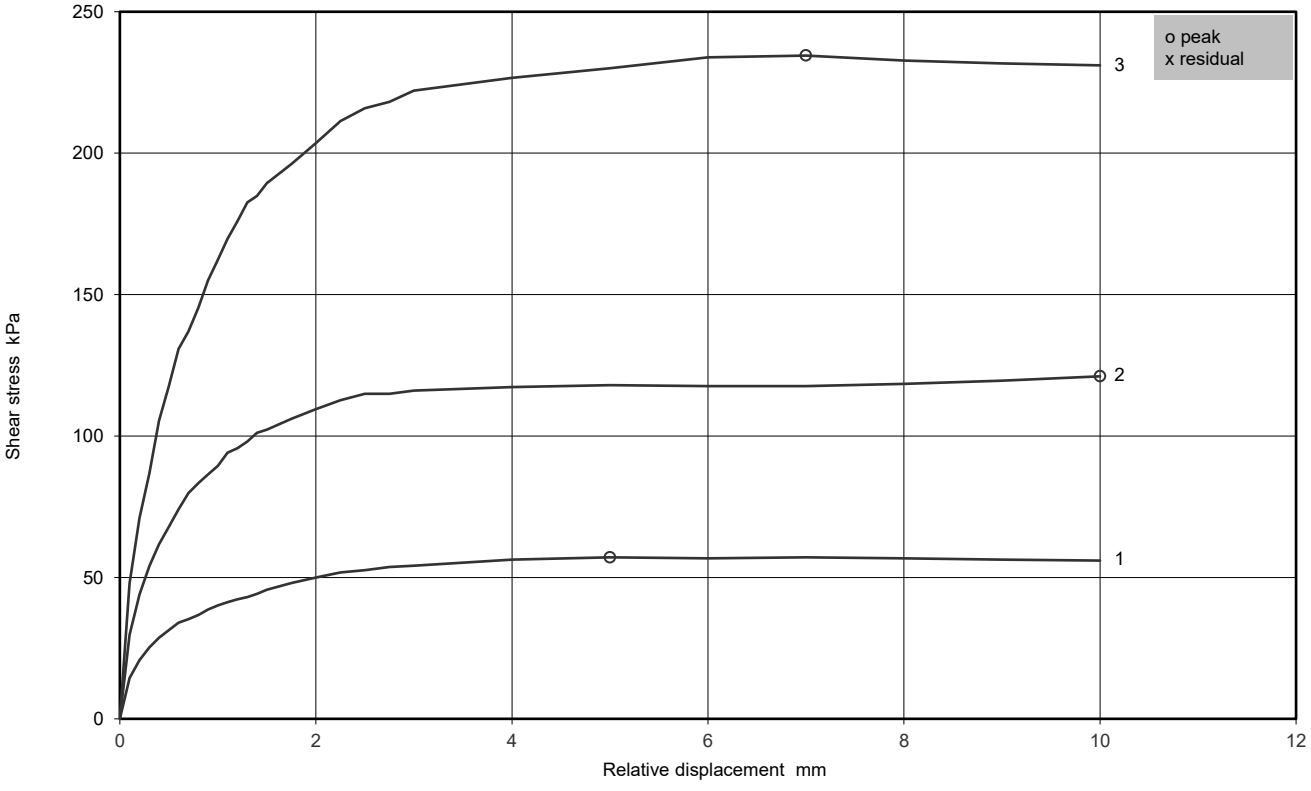
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown slightly gravelly SAND				Depth m	5.4
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511255

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	8.4
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511256
Test Method	BS EN ISO 17892-10:2018			Date of test	12/12/2025

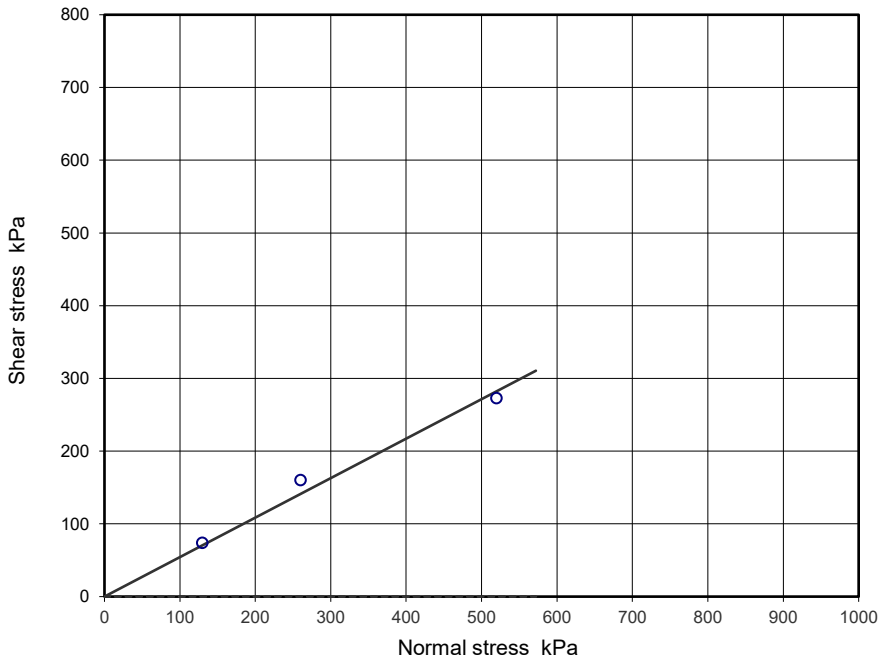
Preparation Details -2mm material. Recompacted to 55% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.1				mm
	Bulk Density		1.78	1.78	1.78				Mg/m³
	Moisture Content		26.9	26.9	26.9				%
	Dry density		1.40	1.40	1.40				Mg/m³
	Voids ratio		0.893	0.893	0.893				
	Degree of Saturation		80	80	80				%
Consolidation	Consolidation / Normal Stress applied		**130**	**260**	**520**				kPa
	Change in height during consolidation*		-0.914	-1.162	-1.224				mm
	Voids ratio after consolidation		0.818	0.798	0.793				
After test	Final Moisture content		27.6	27.0	26.6				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	5.00	7.00	4.00				mm
	Shear stress	73.6	160.0	272.9				kPa
	Vertical Movement at peak shear stress*	-1.27	-1.62	-1.60				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[17]	0
Ø '	degrees	[26.5]	28.5

Residual strength, (x)

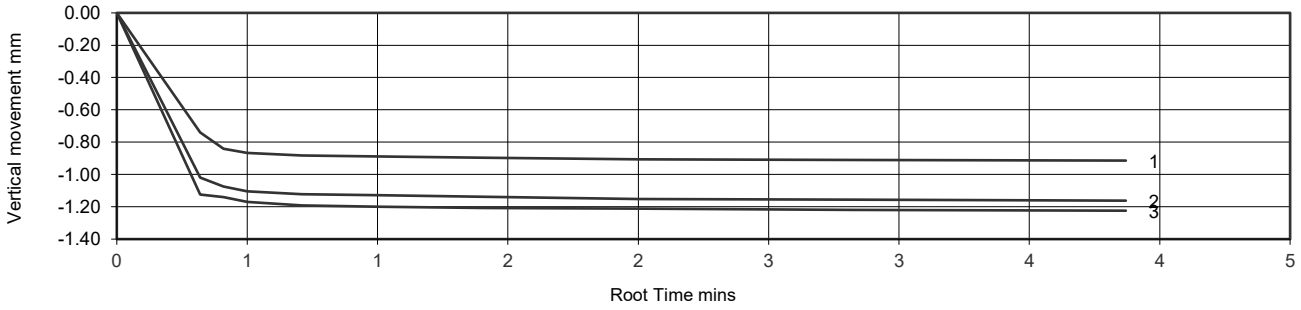
c 'R	kPa	[0.0]	0
Ø 'R	degrees	[ ]	0

Remarks

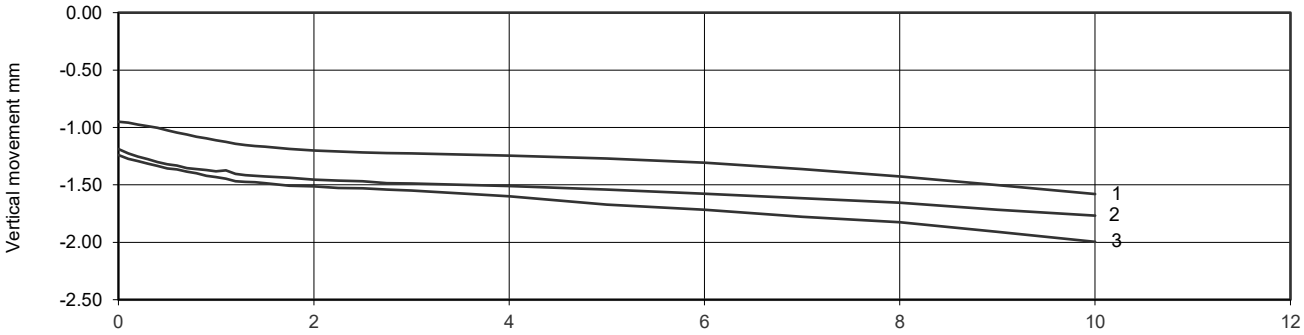
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

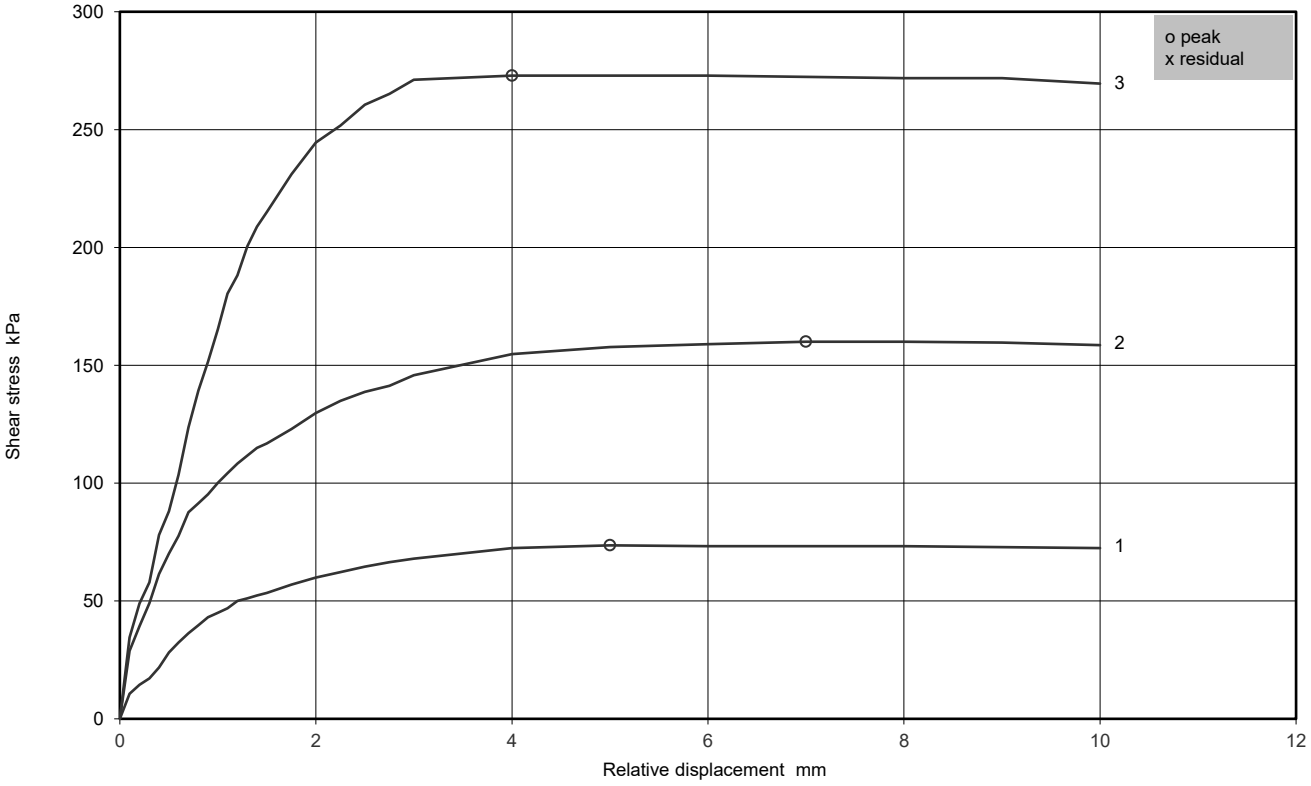
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	8.4
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511256

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey brown SAND			Depth m	11.4
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511257
Test Method	BS EN ISO 17892-10:2018			Date of test	16/12/2025

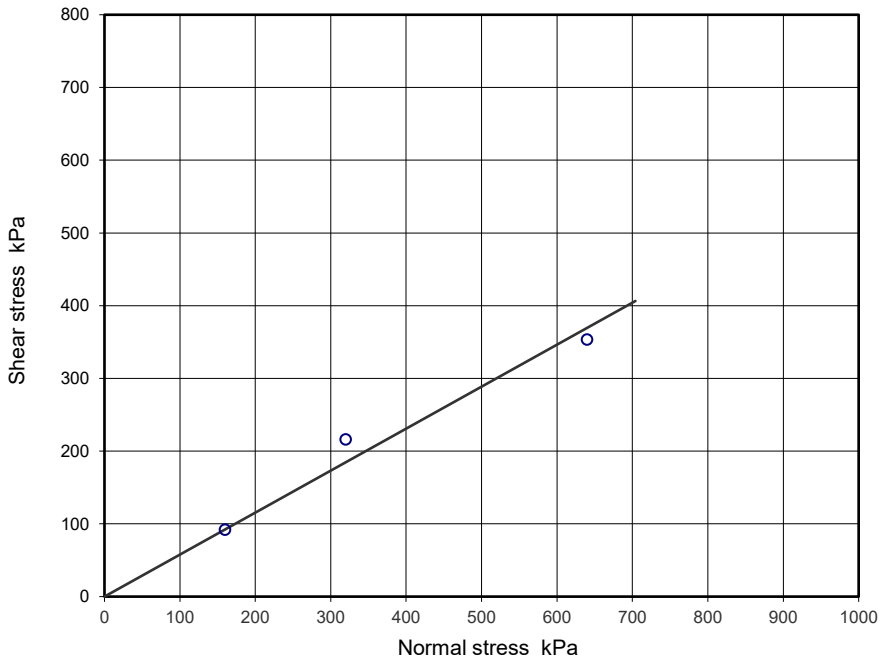
Preparation Details -2mm material. Recompacted to 45% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.1				mm
	Bulk Density		1.70	1.70	1.70				Mg/m³
	Moisture Content		24.2	24.2	24.2				%
	Dry density		1.37	1.37	1.37				Mg/m³
	Voids ratio		0.934	0.934	0.934				
	Degree of Saturation		69	69	69				%
Consolidation	Consolidation / Normal Stress applied		**160**	**320**	**640**				kPa
	Change in height during consolidation*		-1.196	-1.696	-1.924				mm
	Voids ratio after consolidation		0.834	0.792	0.773				
After test	Final Moisture content		27.0	26.6	26.3				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	8.00	7.00	6.00				mm
	Shear stress	91.6	215.8	353.1				kPa
	Vertical Movement at peak shear stress*	-1.99	-2.22	-2.57				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[23]	0
Ø '	degrees	[28.0]	30

Residual strength, (x)

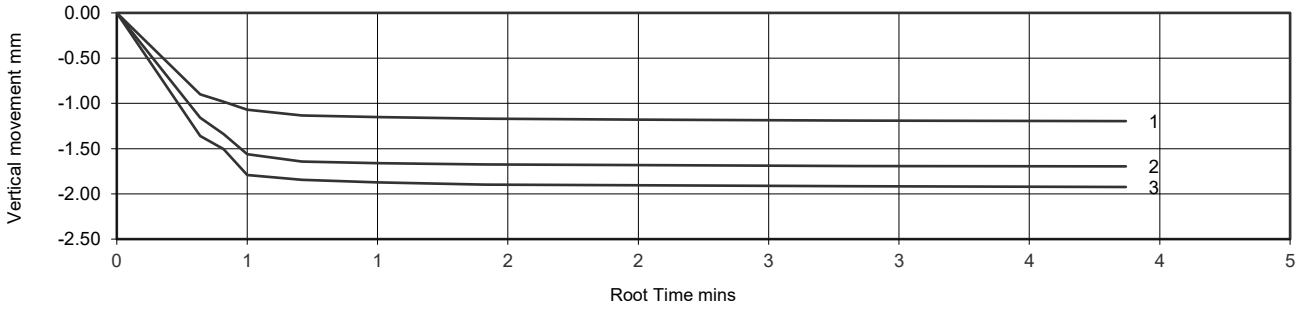
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

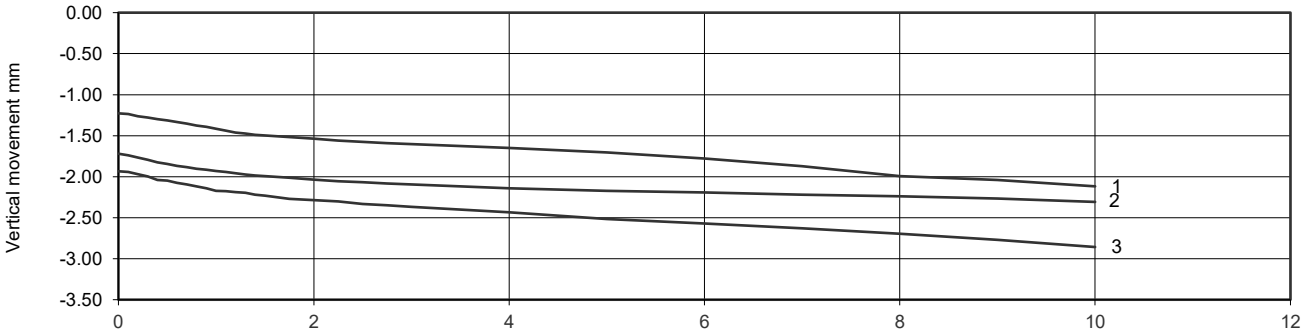
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

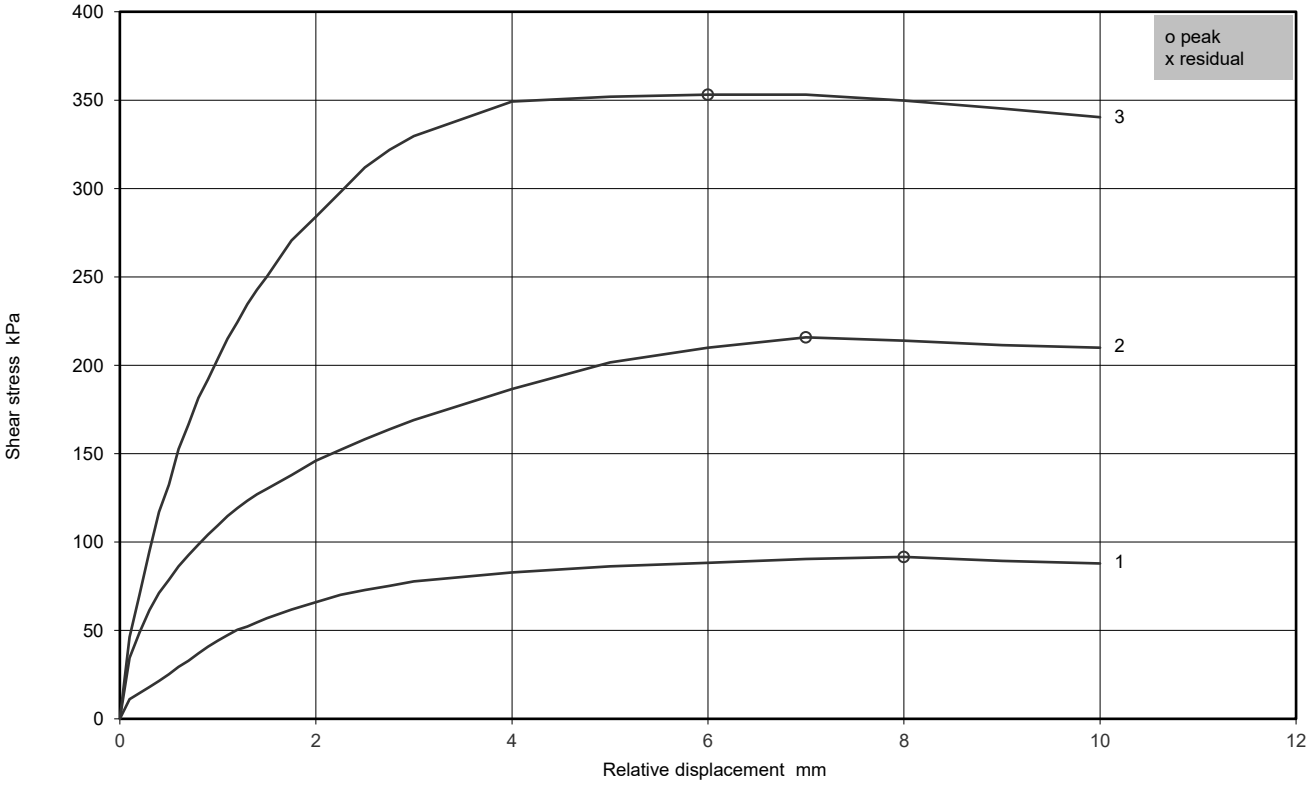
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey brown SAND				Depth m	11.4
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511257

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	CP-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	9.1
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511259
Test Method	BS EN ISO 17892-10:2018			Date of test	18/12/2025

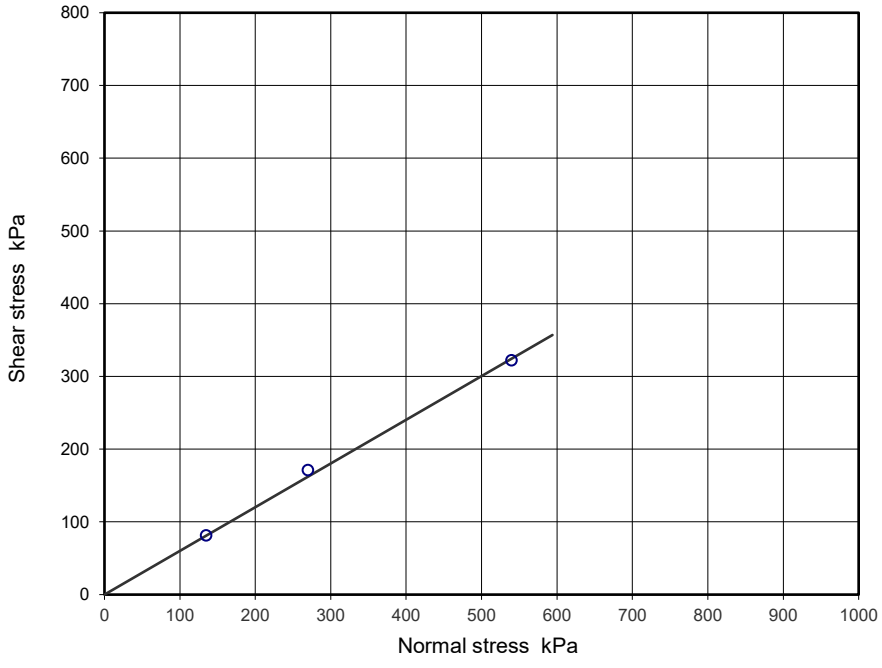
Preparation Details -2mm material. Recompacted to 45% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.2				mm
	Bulk Density		1.73	1.73	1.73				Mg/m³
	Moisture Content		23.9	23.9	23.9				%
	Dry density		1.40	1.40	1.40				Mg/m³
	Voids ratio		0.893	0.893	0.893				
	Degree of Saturation		71	71	71				%
Consolidation	Consolidation / Normal Stress applied		**135**	**270**	**540**				kPa
	Change in height during consolidation*		-0.864	-1.058	-1.436				mm
	Voids ratio after consolidation		0.822	0.806	0.776				
After test	Final Moisture content		25.2	25.1	25.5				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	6.00	7.00	5.00				mm
	Shear stress	81.3	170.9	321.9				kPa
	Vertical Movement at peak shear stress*	-1.38	-1.63	-1.72				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[5.8]	0
Ø '	degrees	[30.5]	31

Residual strength, (x)

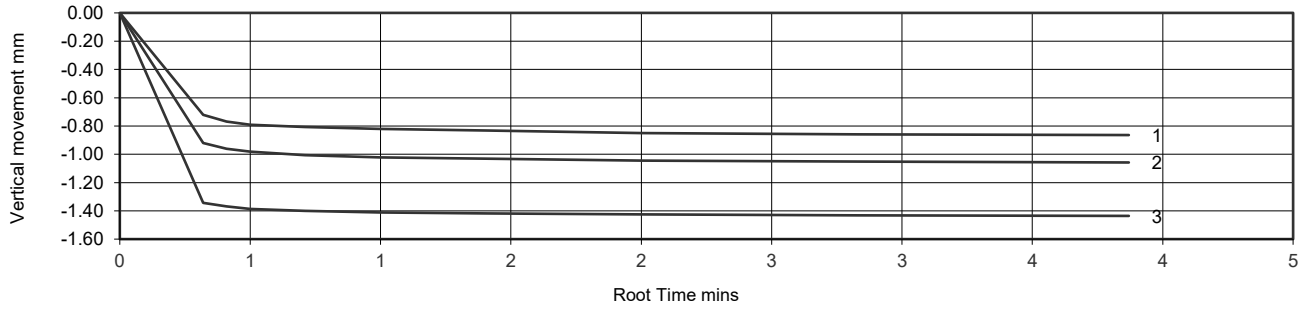
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

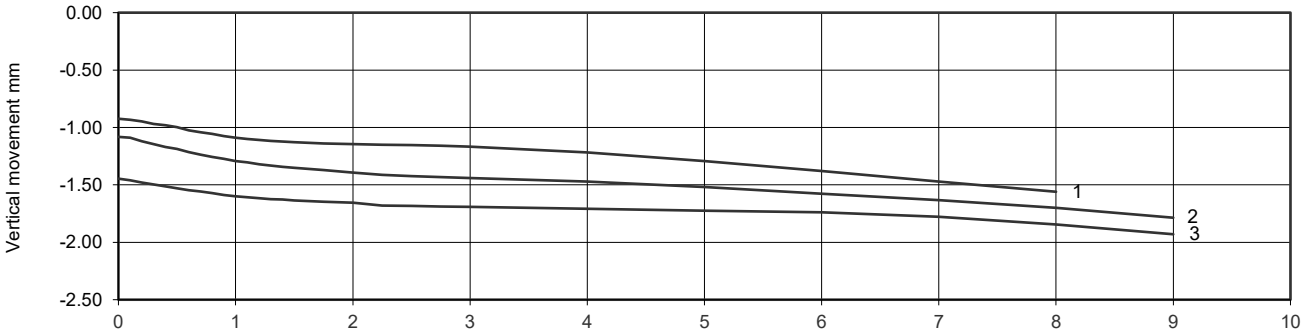
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

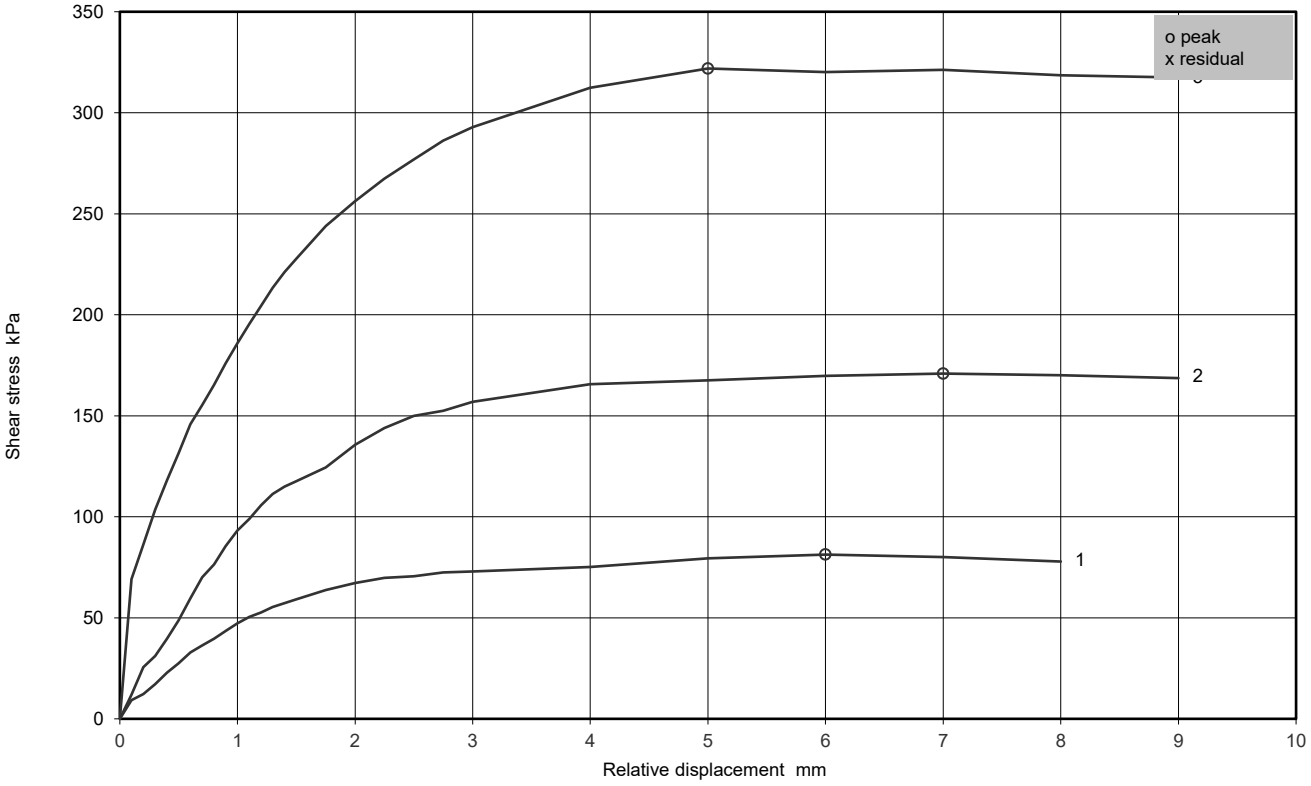
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	CP-102
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	9.1
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511259

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
30/12/2025			SSB

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	CP-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	13.6
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2025112510
Test Method	BS EN ISO 17892-10:2018			Date of test	19/12/2025

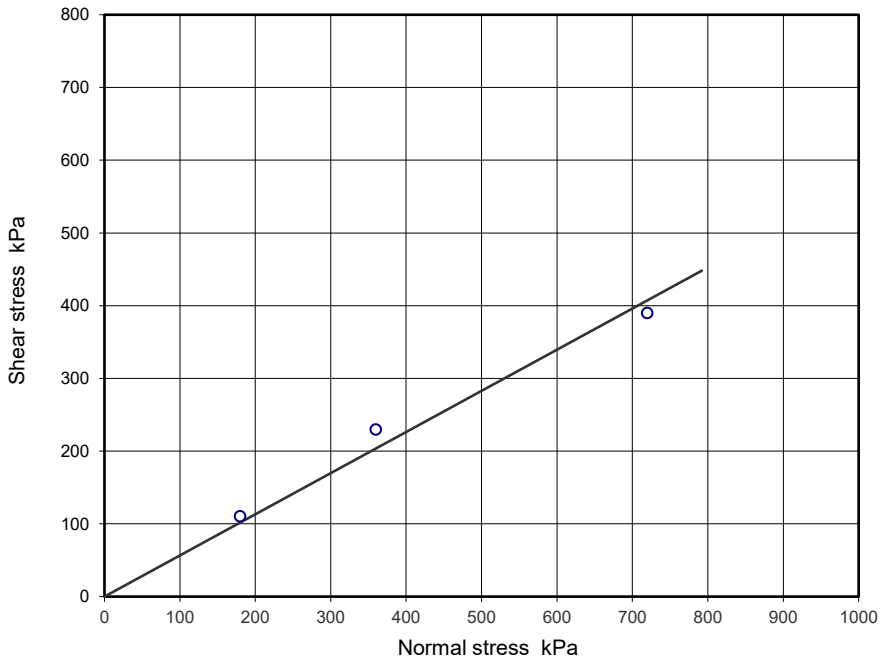
Preparation Details -2mm material. Recompacted to 45% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.1				mm
	Bulk Density		1.72	1.72	1.72				Mg/m³
	Moisture Content		24.6	24.6	24.6				%
	Dry density		1.38	1.38	1.38				Mg/m³
	Voids ratio		0.920	0.920	0.920				
	Degree of Saturation		71	71	71				%
Consolidation	Consolidation / Normal Stress applied		**180**	**360**	**720**				kPa
	Change in height during consolidation*		-0.950	-1.204	-2.106				mm
	Voids ratio after consolidation		0.841	0.820	0.745				
After test	Final Moisture content		25.2	24.4	25.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	10.00	5.00	3.00				mm
	Shear stress	110.3	229.7	389.8				kPa
	Vertical Movement at peak shear stress*	-1.99	-1.62	-2.53				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[30]	0
Ø '	degrees	[27.0]	29.5

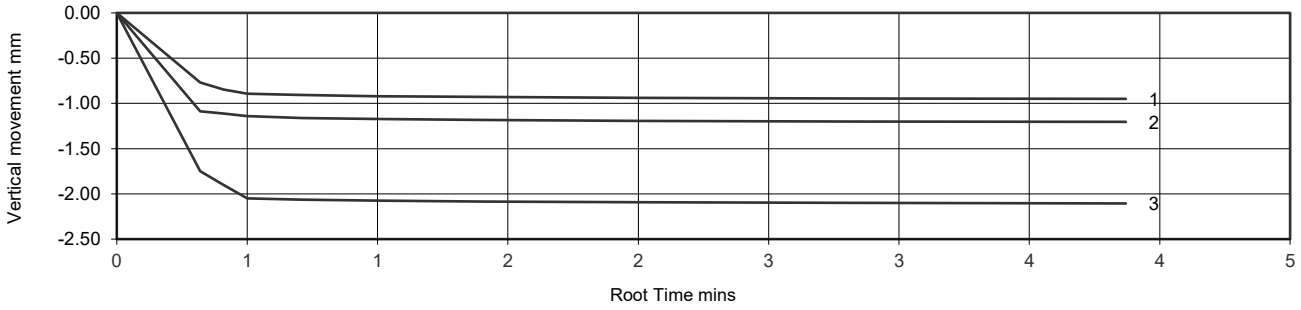
Residual strength, (x)			
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

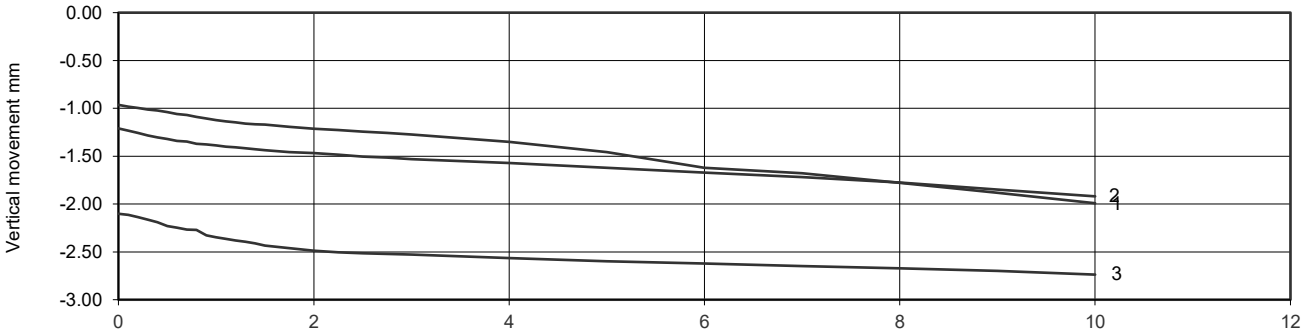
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	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

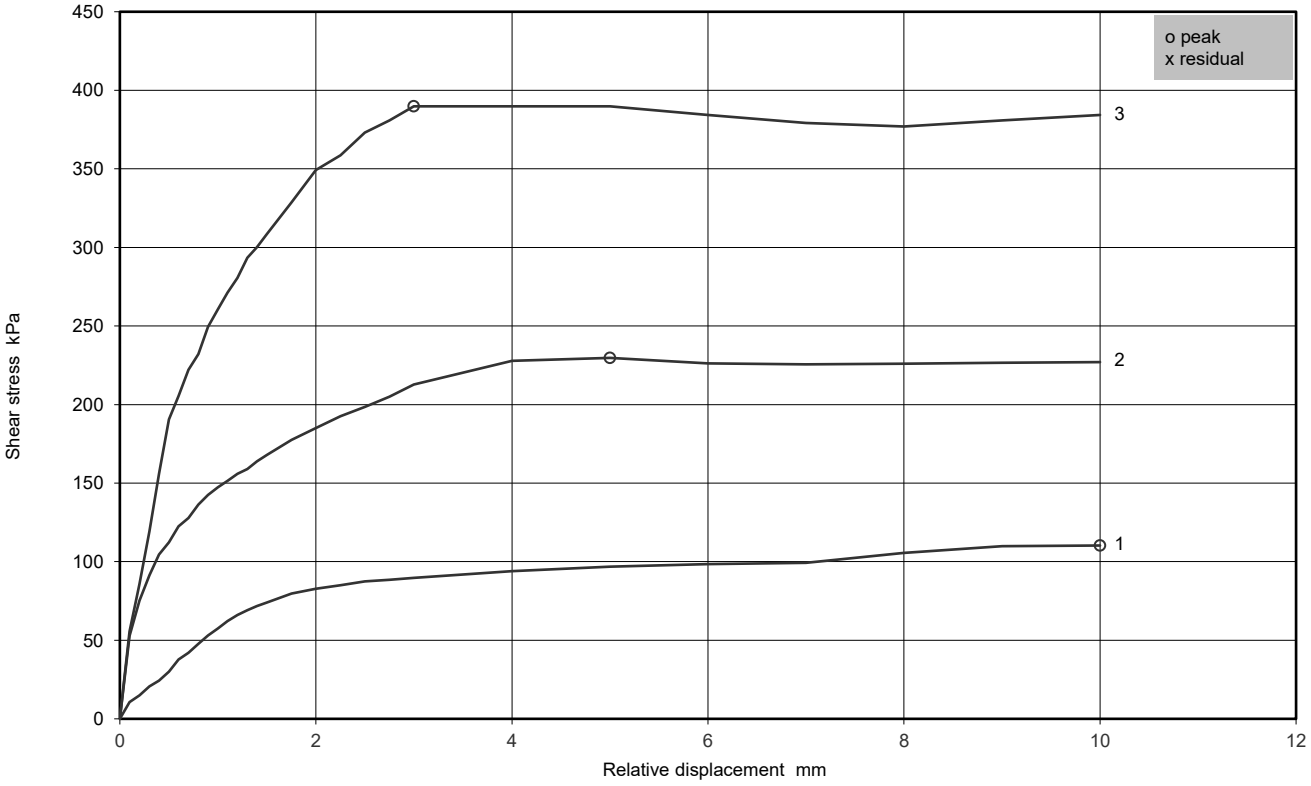
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	CP-102
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	13.6
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2025112510

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

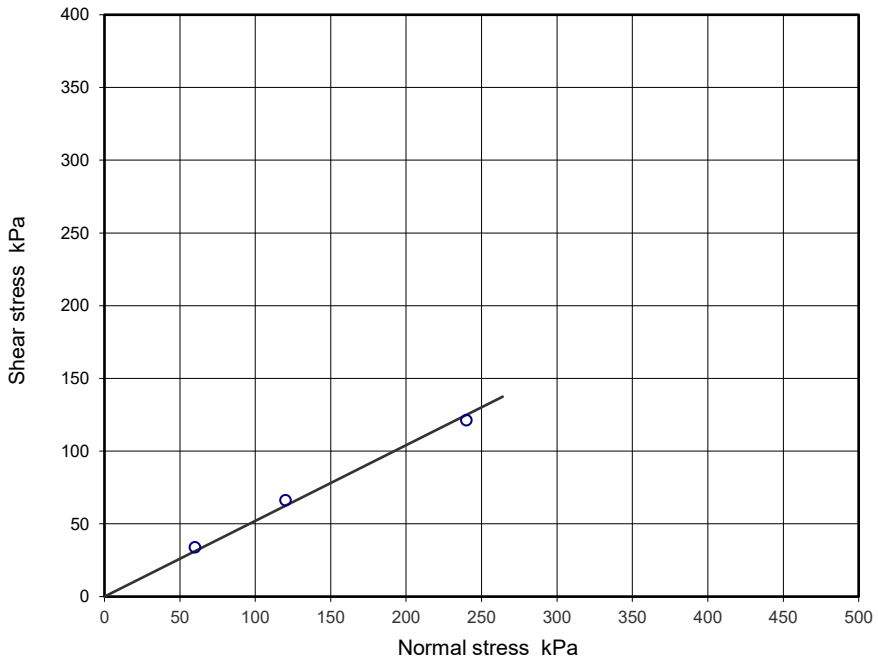
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-103
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown silty SAND			Depth m	1.2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010620
Test Method	BS EN ISO 17892-10:2018			Date of test	26/02/2026

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details	Test No.	**1**	**2**	**3**				
Initial	Height	26.1	26.0	26.1				mm
	Bulk Density	1.68	1.68	1.68				Mg/m³
	Moisture Content	18.9	18.9	18.9				%
	Dry density	1.41	1.41	1.41				Mg/m³
	Voids ratio	0.879	0.879	0.879				
	Degree of Saturation	57	57	57				%
Consolidation	Consolidation / Normal Stress applied	**60**	**120**	**240**				kPa
	Change in height during consolidation*	-0.614	-0.726	-0.692				mm
	Voids ratio after consolidation	0.835	0.827	0.829				
After test	Final Moisture content	23.0	22.8	22.2				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	7.00	6.00	4.00				mm
	Shear stress	33.9	66.2	121.2				kPa
	Vertical Movement at peak shear stress*	-1.24	-1.24	-1.14				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[6.4]	0
Ø '	degrees	[25.5]	27.5

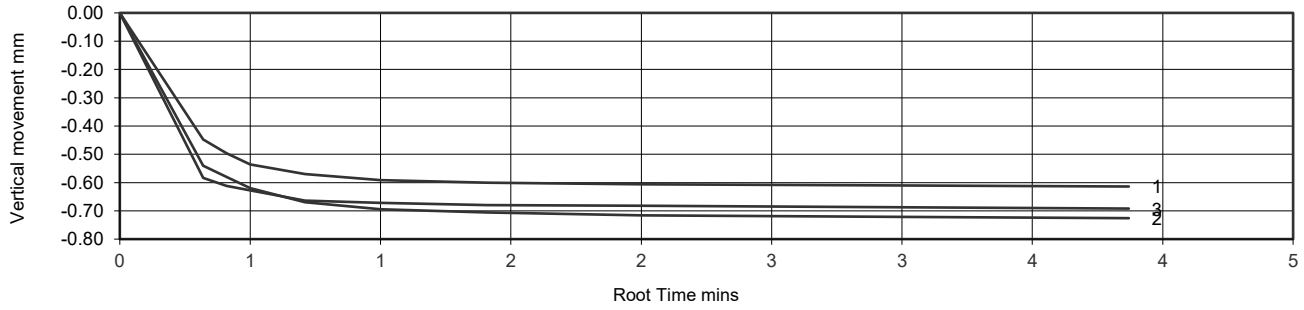
Residual strength, (x)			
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Ø 'R	degrees	not assessed	-

Remarks

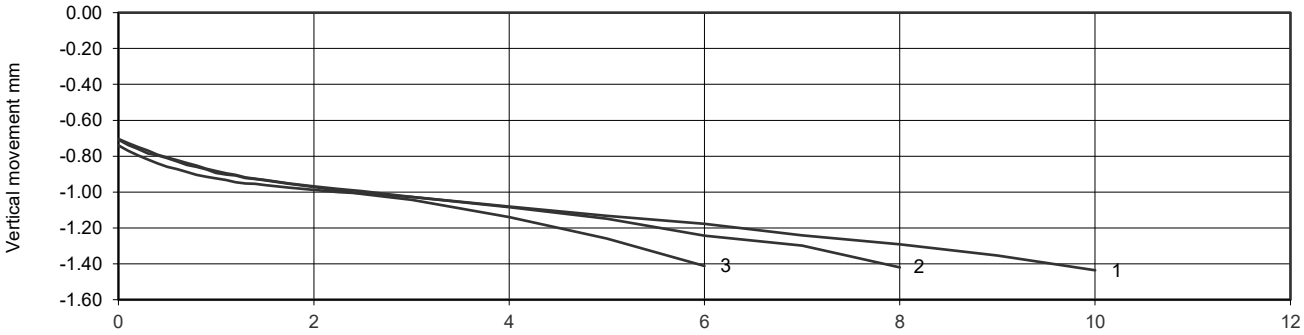
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	27/02/2026	UKAS TESTING 7758	TTL	**SSB**

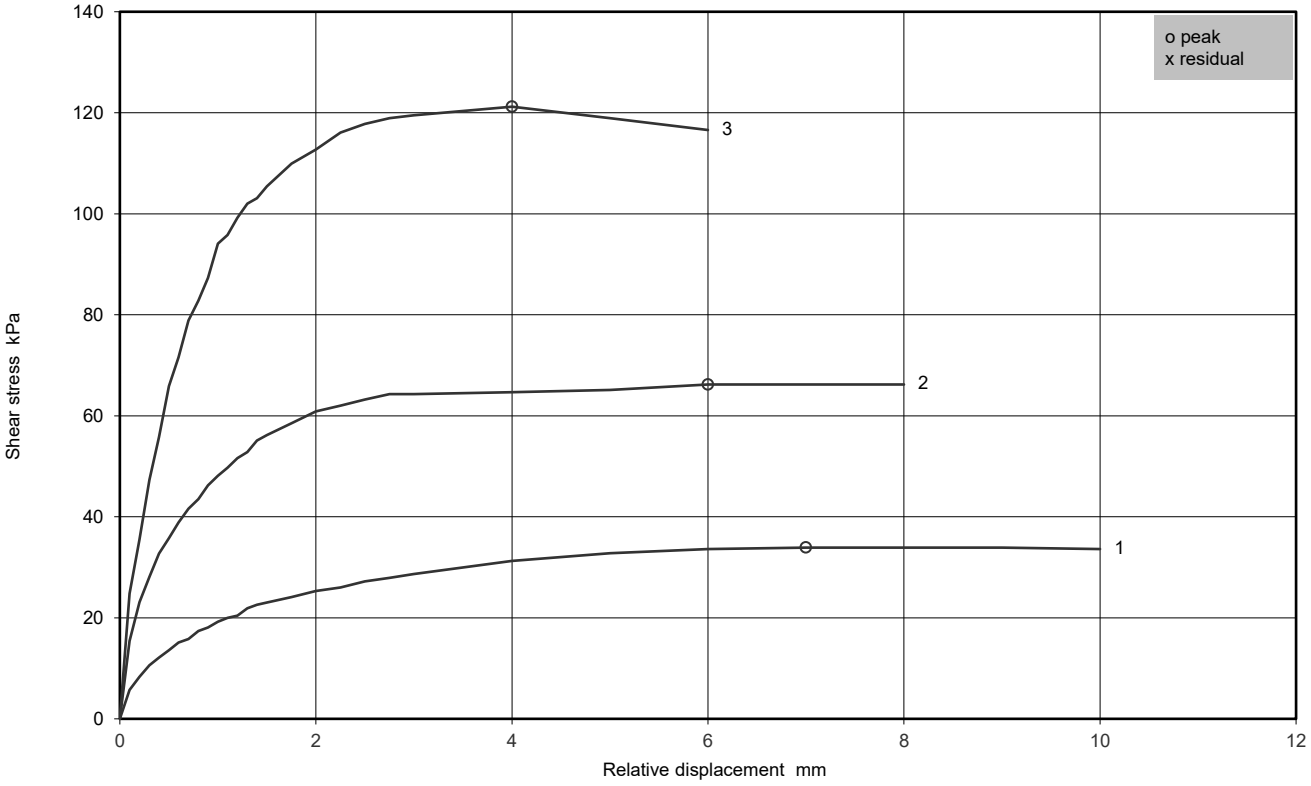
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-103
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown silty SAND				Depth m	1.2
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010620

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
27/02/2026			SSB

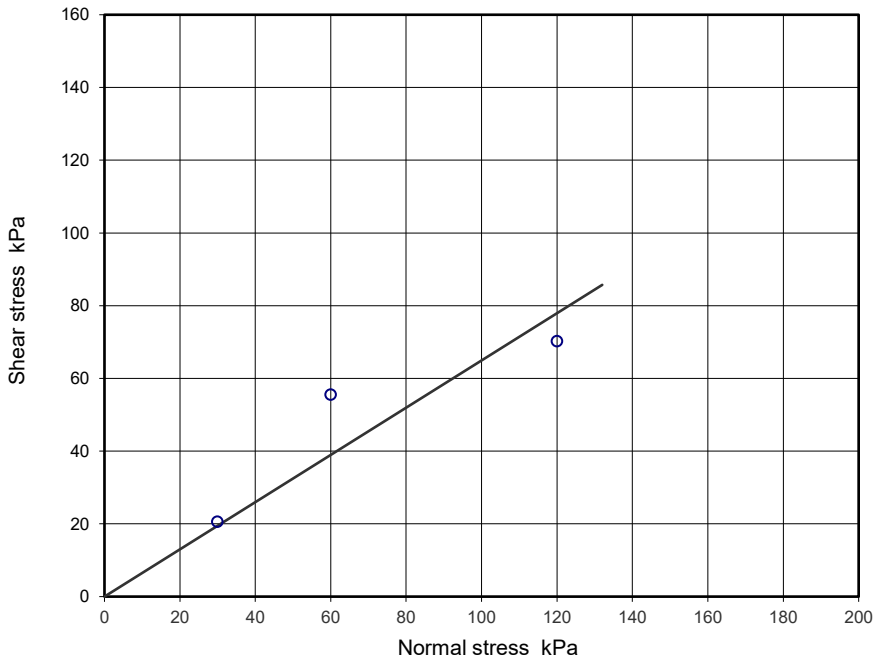
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly SAND			Depth m	2.5
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010621
Test Method	BS EN ISO 17892-10:2018			Date of test	26/02/2026

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details	Test No.	**1**	**2**	**3**				
Initial	Height	26.3	26.3	26.3				mm
	Bulk Density	1.95	1.95	1.95				Mg/m³
	Moisture Content	21.0	21.0	21.0				%
	Dry density	1.61	1.61	1.61				Mg/m³
	Voids ratio	0.646	0.646	0.646				
	Degree of Saturation	86	86	86				%
Consolidation	Consolidation / Normal Stress applied	**30**	**60**	**120**				kPa
	Change in height during consolidation*	-0.008	-0.116	-0.254				mm
	Voids ratio after consolidation	0.646	0.639	0.630				
After test	Final Moisture content	21.8	21.6	22.1				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	1.10	1.30	2.00				mm
	Shear stress	20.6	55.5	70.2				kPa
	Vertical Movement at peak shear stress*	0.10	-0.01	-0.25				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[13]	0
Ø '	degrees	[27.0]	33

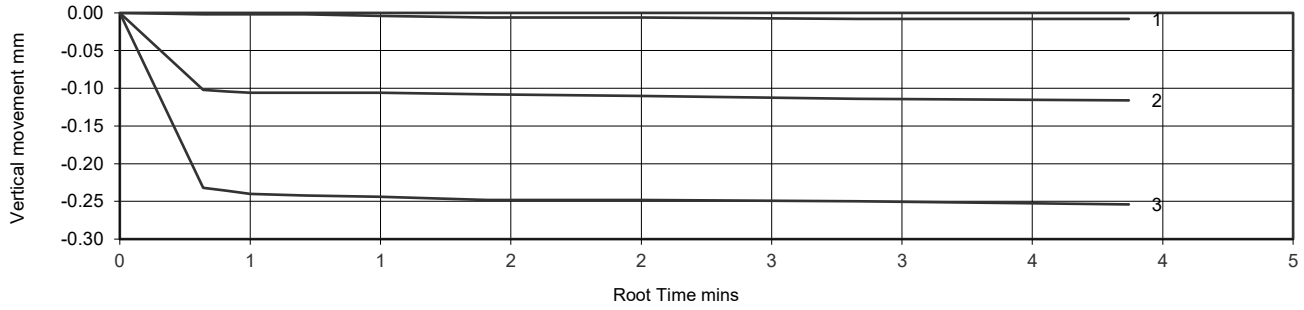
Residual strength, (x)			
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

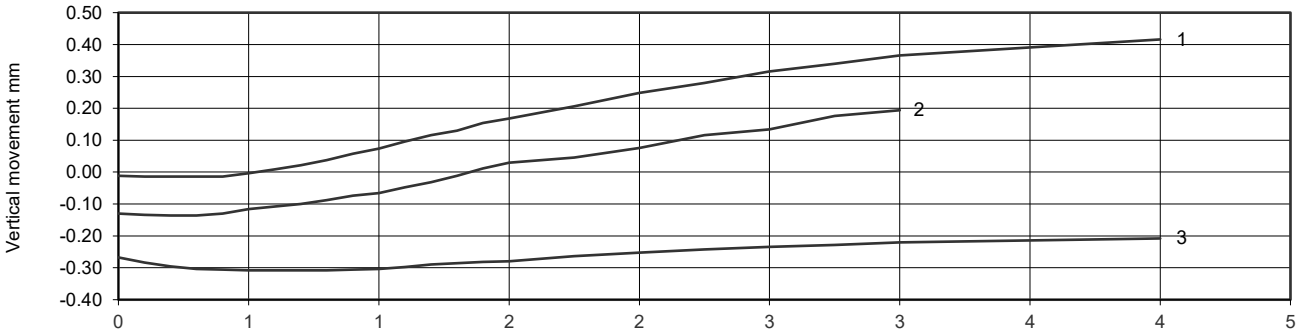
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	27/02/2026	UKAS TESTING 7758	TTL	**SSB**

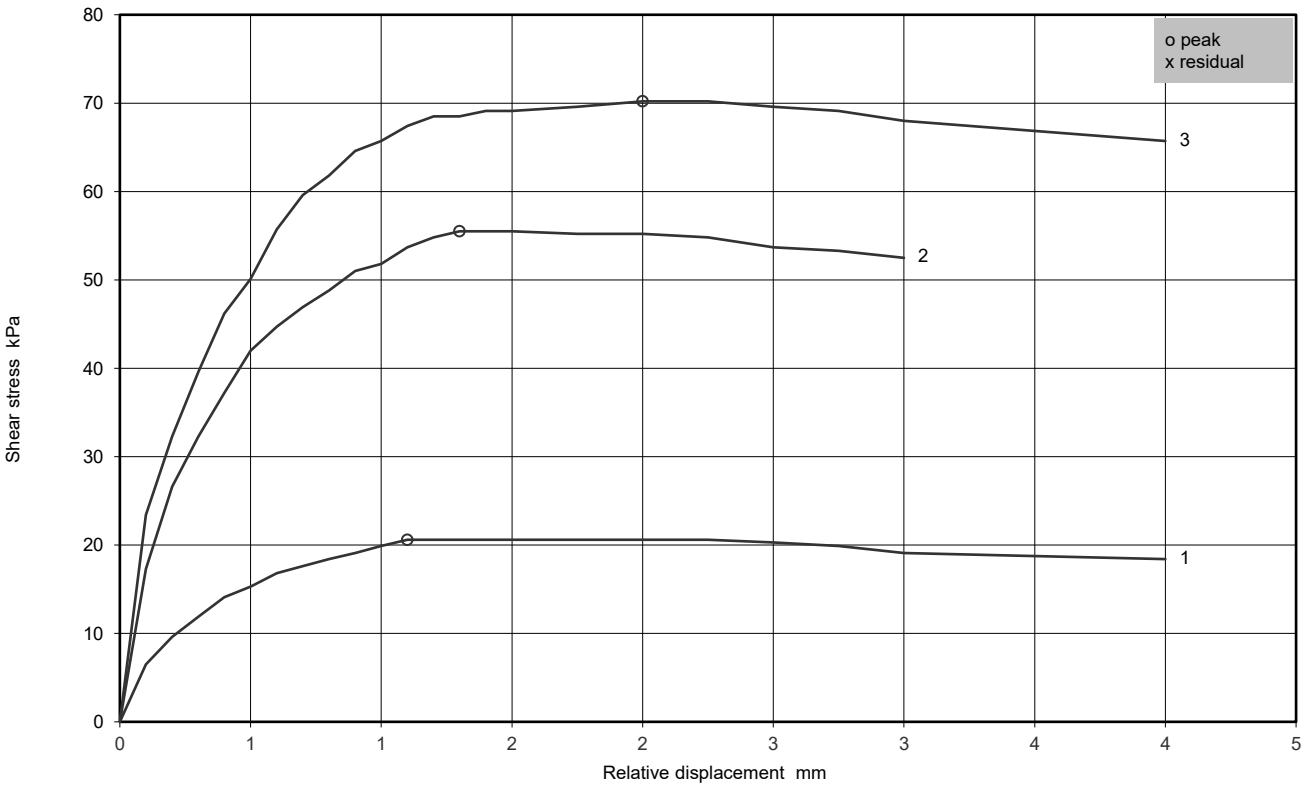
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Light brown slightly gravelly SAND				Depth m	2.5
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010621

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	27/02/2026			

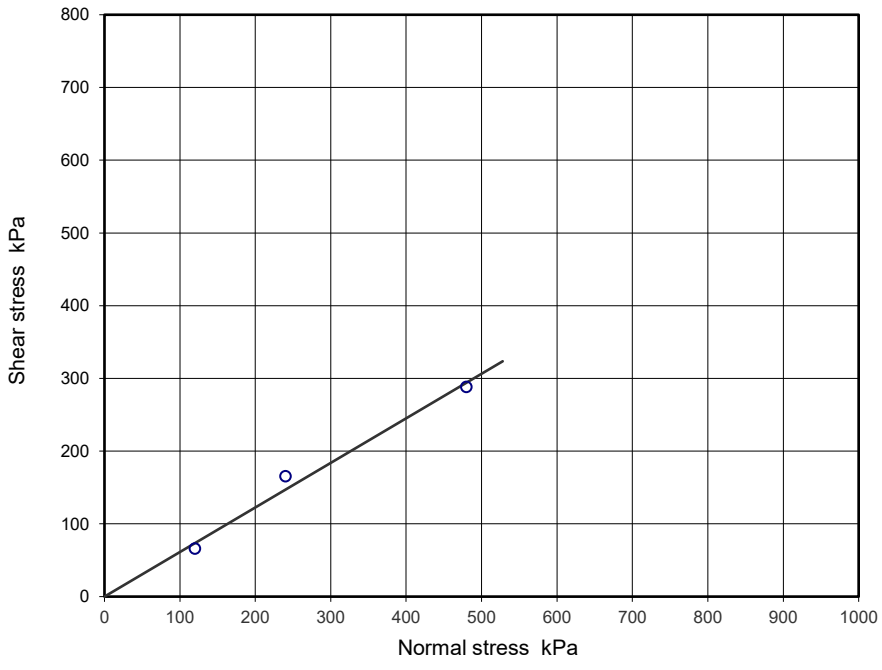
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	8
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010622
Test Method	BS EN ISO 17892-10:2018			Date of test	03/03/2026

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details	Test No.	**1**	**2**	**3**				
Initial	Height	26.1	26.1	26.1				mm
	Bulk Density	1.81	1.81	1.81				Mg/m³
	Moisture Content	23.2	23.2	23.2				%
	Dry density	1.47	1.47	1.47				Mg/m³
	Voids ratio	0.803	0.803	0.803				
	Degree of Saturation	77	77	77				%
Consolidation	Consolidation / Normal Stress applied	**120**	**240**	**480**				kPa
	Change in height during consolidation*	-0.498	-0.628	-0.712				mm
	Voids ratio after consolidation	0.769	0.760	0.754				
After test	Final Moisture content	23.4	22.3	21.7				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	5.00	4.00	3.00				mm
	Shear stress	66.0	165.3	287.9				kPa
	Vertical Movement at peak shear stress*	-0.63	-0.77	-0.87				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[4.7]	0
Ø '	degrees	[31.0]	31.5

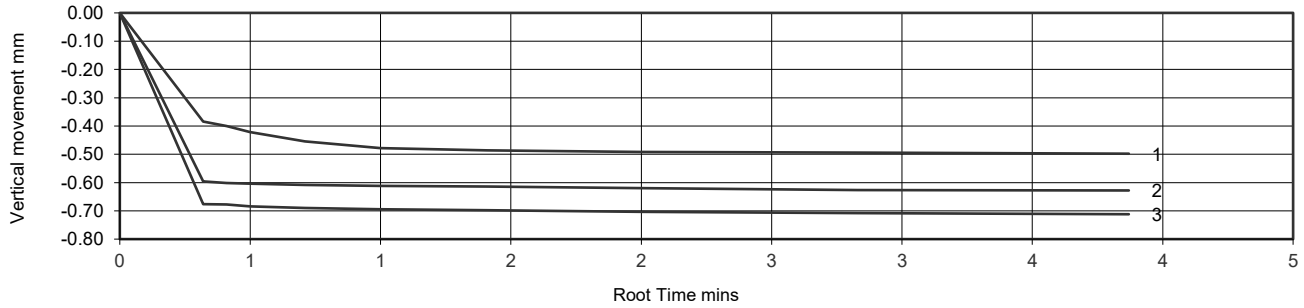
Residual strength, (x)			
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

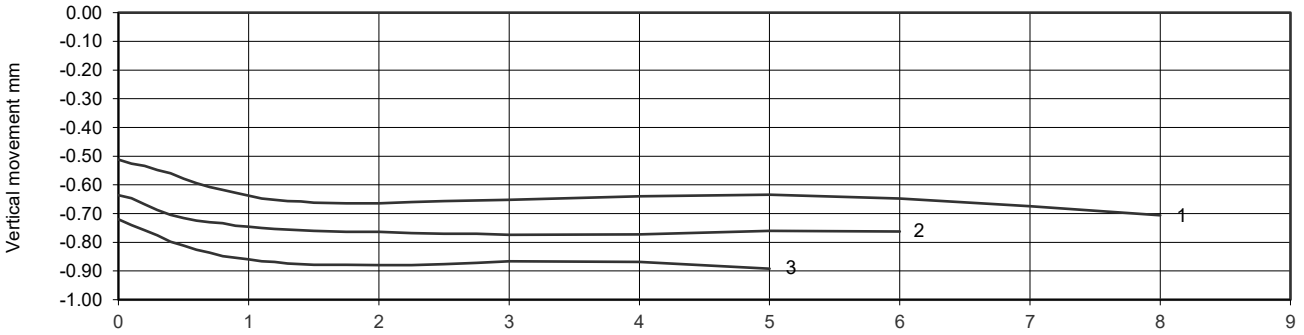
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	04/03/2026	UKAS TESTING 7758	TTL	**SSB**

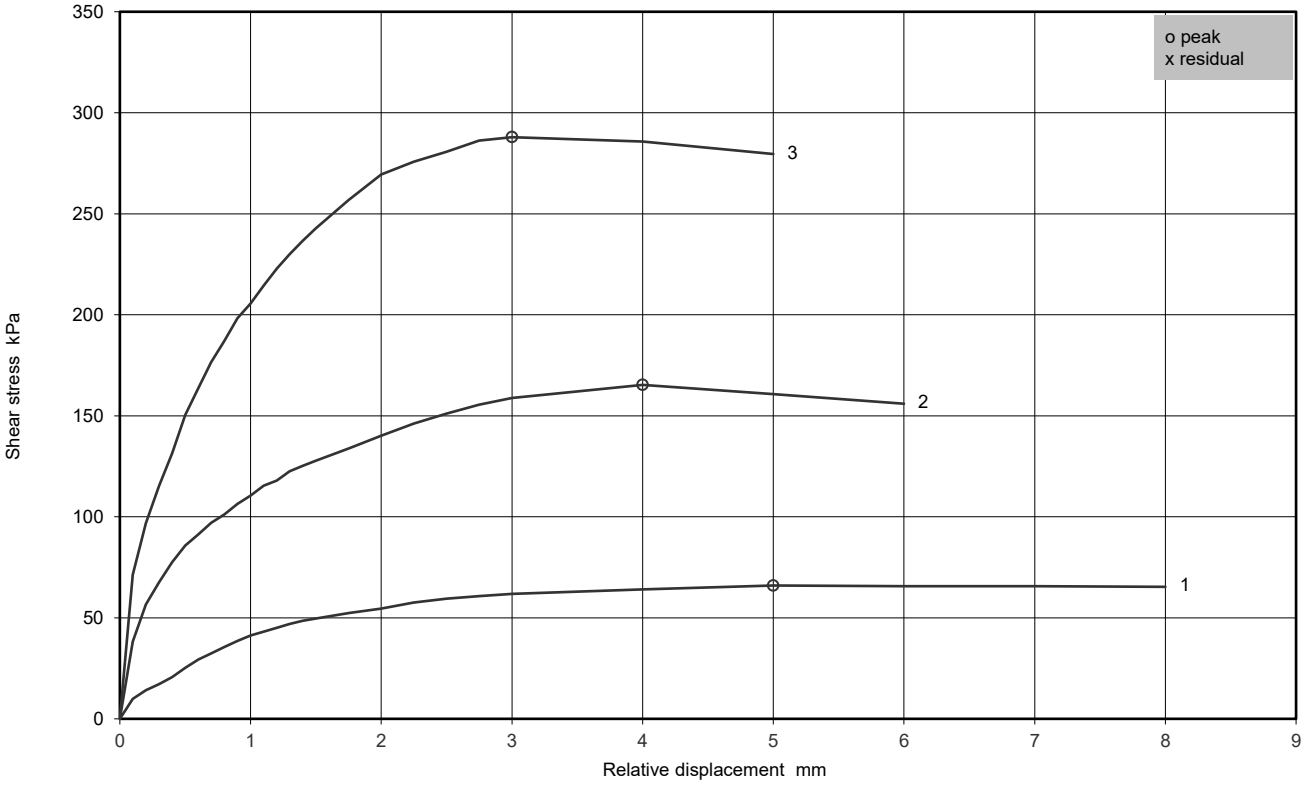
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	8
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010622

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
04/03/2026			SSB

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	11
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010623
Test Method	BS EN ISO 17892-10:2018			Date of test	03/03/2026

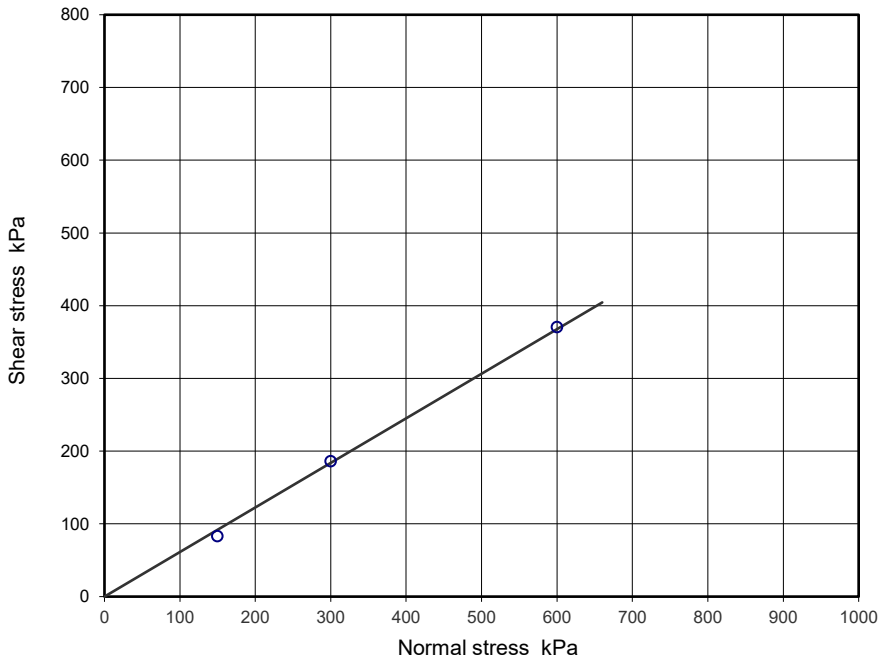
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.3	26.3				mm
	Bulk Density		1.75	1.75	1.75				Mg/m³
	Moisture Content		15.0	15.0	15.0				%
	Dry density		1.52	1.52	1.52				Mg/m³
	Voids ratio		0.743	0.743	0.743				
	Degree of Saturation		53	53	53				%
Consolidation	Consolidation / Normal Stress applied		**150**	**300**	**600**				kPa
	Change in height during consolidation*		-1.172	-1.342	-2.004				mm
	Voids ratio after consolidation		0.665	0.654	0.610				
After test	Final Moisture content		18.6	18.6	18.6				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	6.00	6.00	5.00				mm
	Shear stress	83.2	185.9	370.3				kPa
	Vertical Movement at peak shear stress*	-1.83	-1.81	-2.36				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[-9.0]	0
Ø '	degrees	[32.5]	31.5

Residual strength, (x)

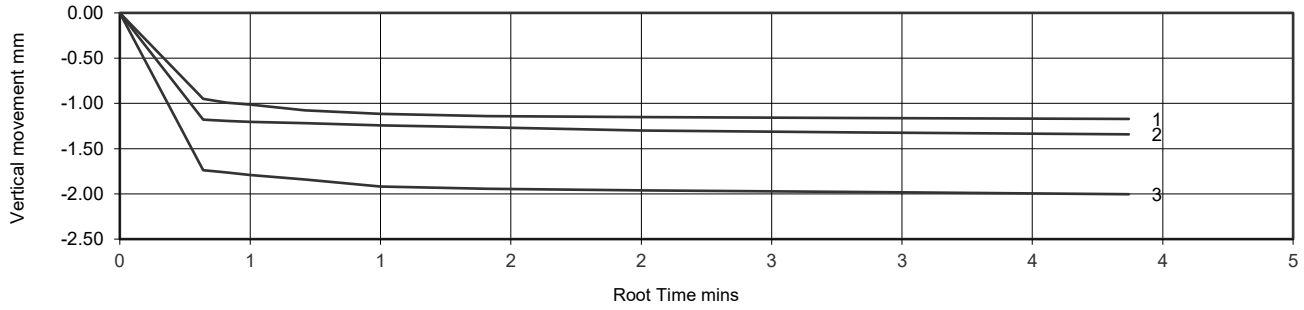
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

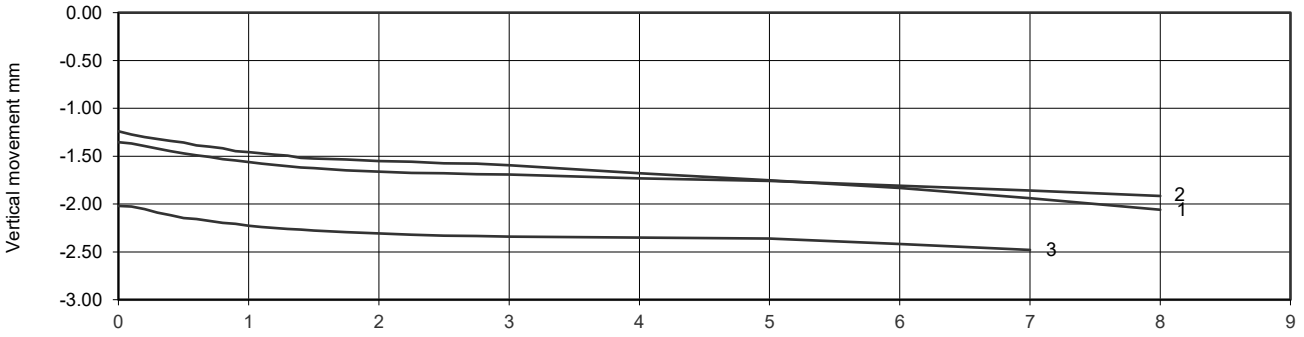
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	04/03/2026	UKAS TESTING 7758	TTL	**SSB**

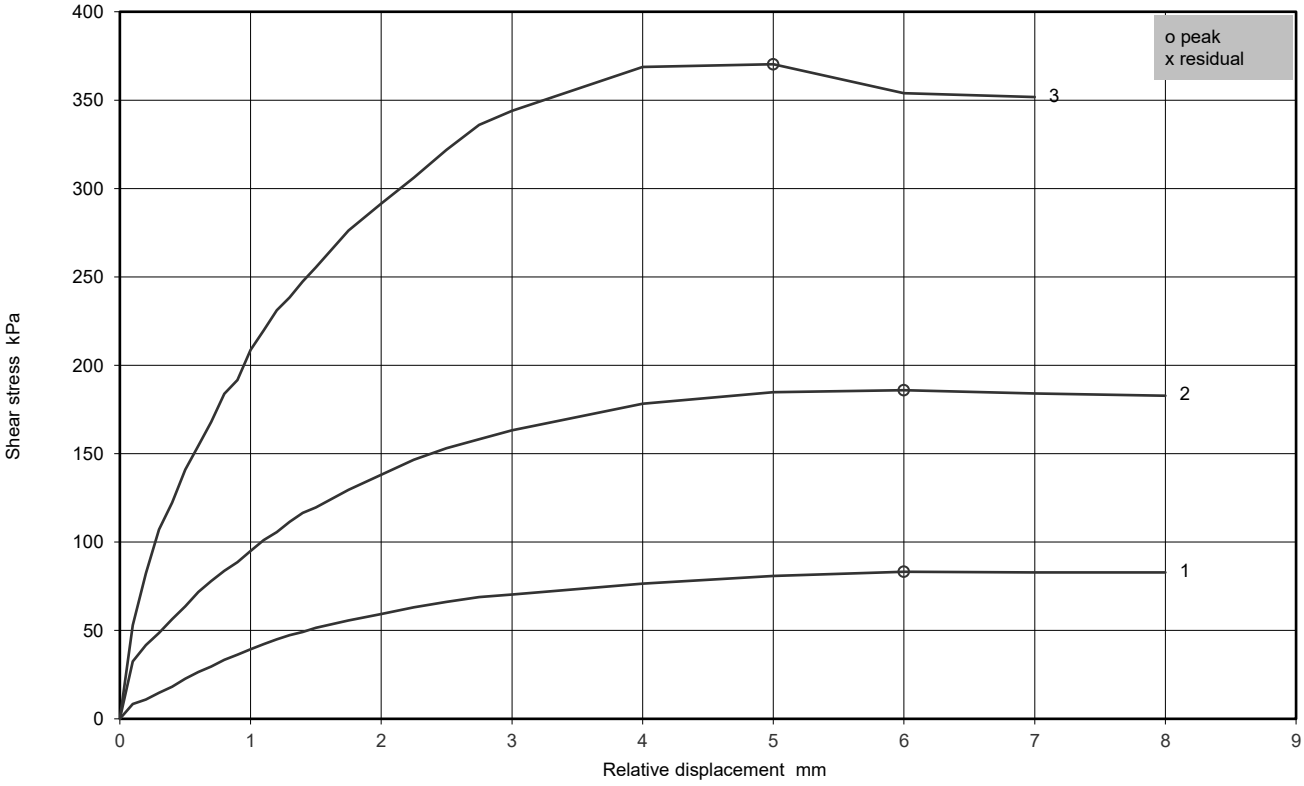
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	11
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010623

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	04/03/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-201
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010627
Test Method	BS EN ISO 17892-10:2018			Date of test	26/02/2026

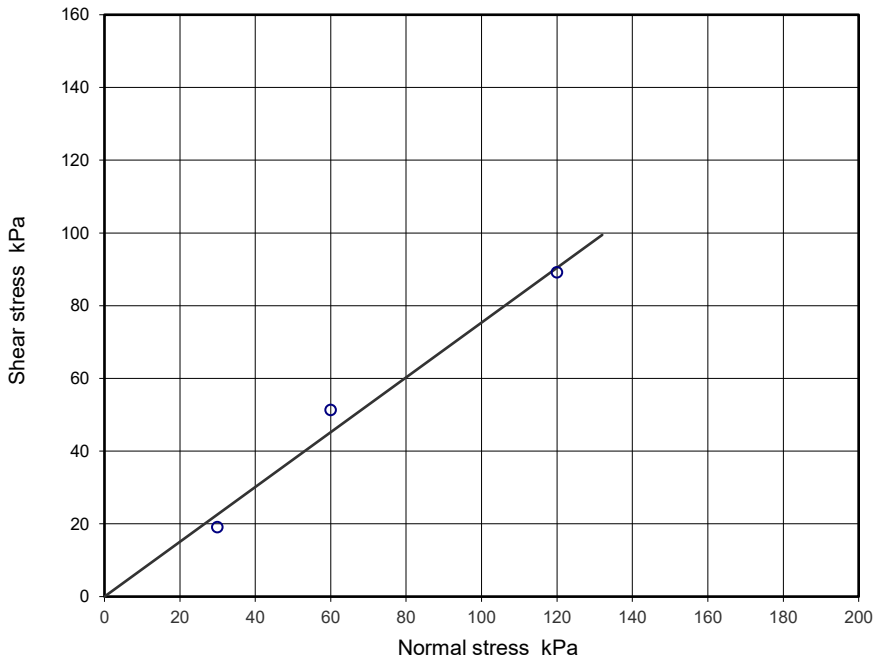
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.1	26.1				mm
	Bulk Density		1.72	1.72	1.72				Mg/m³
	Moisture Content		11.8	11.8	11.8				%
	Dry density		1.54	1.54	1.54				Mg/m³
	Voids ratio		0.721	0.721	0.721				
	Degree of Saturation		43	43	43				%
Consolidation	Consolidation / Normal Stress applied		**30**	**60**	**120**				kPa
	Change in height during consolidation*		-0.162	-0.228	-0.448				mm
	Voids ratio after consolidation		0.710	0.706	0.691				
After test	Final Moisture content		23.7	23.2	22.4				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	2.00	2.25	2.00				mm
	Shear stress	19.1	51.3	89.1				kPa
	Vertical Movement at peak shear stress*	-0.08	-1.94	-0.37				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[0.2]	0
Ø '	degrees	[37.0]	37

Residual strength, (x)

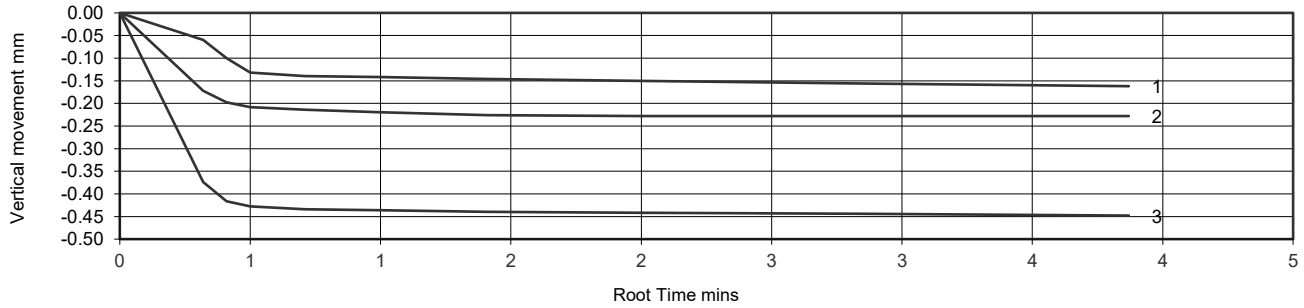
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

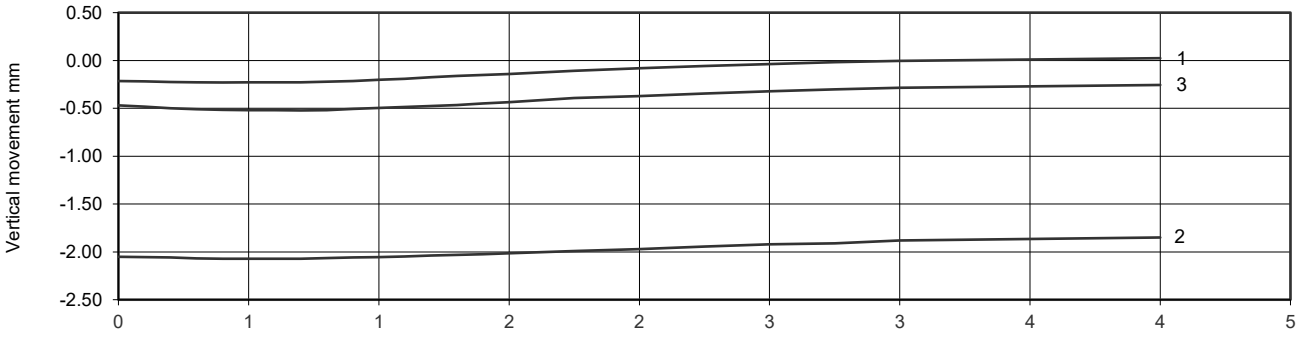
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	27/02/2026	UKAS TESTING 7758	TTL	**SSB**

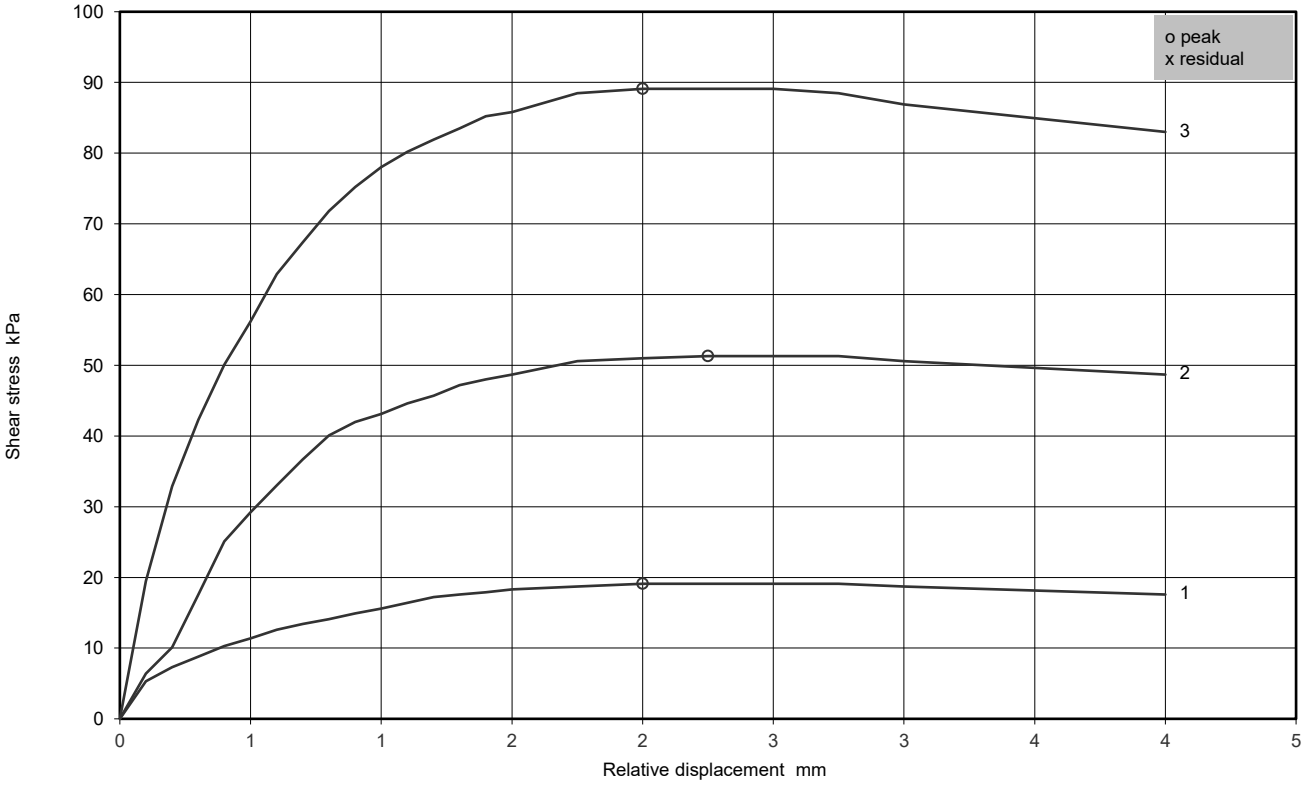
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-201
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown slightly gravelly silty SAND				Depth m	2
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010627

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	27/02/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-201
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	4
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010628
Test Method	BS EN ISO 17892-10:2018			Date of test	03/03/2026

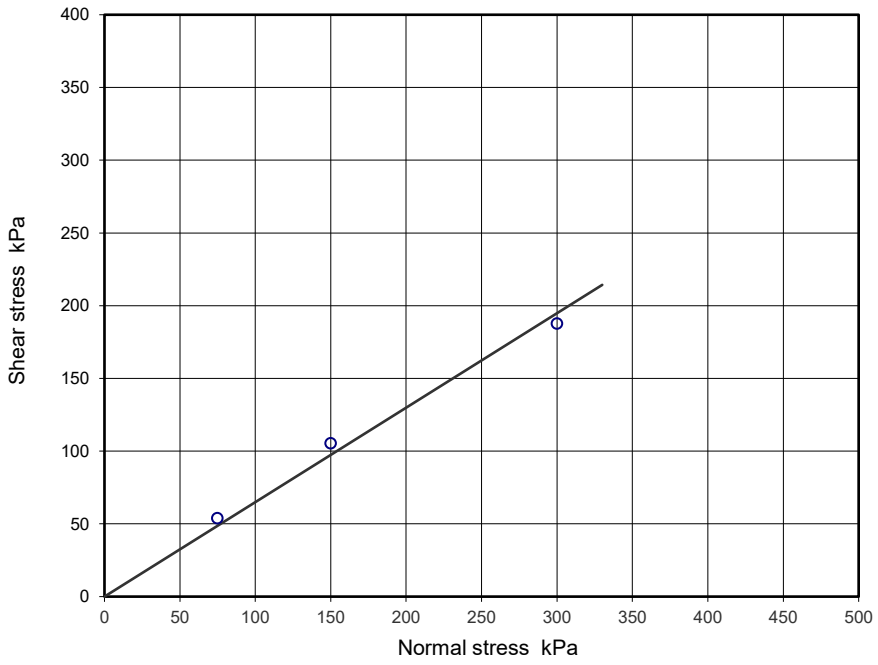
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.0	26.1				mm
	Bulk Density		1.92	1.92	1.92				Mg/m³
	Moisture Content		27.1	27.1	27.1				%
	Dry density		1.51	1.51	1.51				Mg/m³
	Voids ratio		0.755	0.755	0.755				
	Degree of Saturation		95	95	95				%
Consolidation	Consolidation / Normal Stress applied		**75**	**150**	**300**				kPa
	Change in height during consolidation*		-0.146	-0.320	-0.498				mm
	Voids ratio after consolidation		0.745	0.733	0.721				
After test	Final Moisture content		24.8	24.7	24.7				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	1.75	2.75	2.75				mm
	Shear stress	53.8	105.3	187.7				kPa
	Vertical Movement at peak shear stress*	-0.22	-0.43	-0.59				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[13]	0
Ø '	degrees	[30.5]	33

Residual strength, (x)

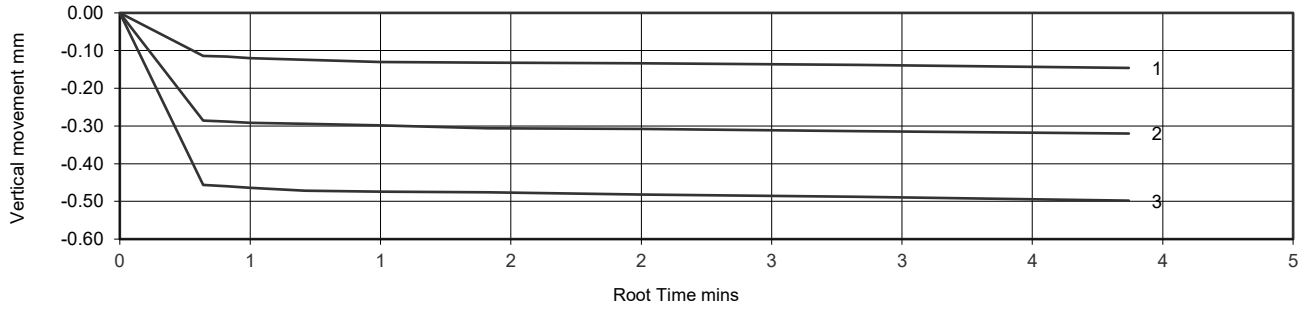
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

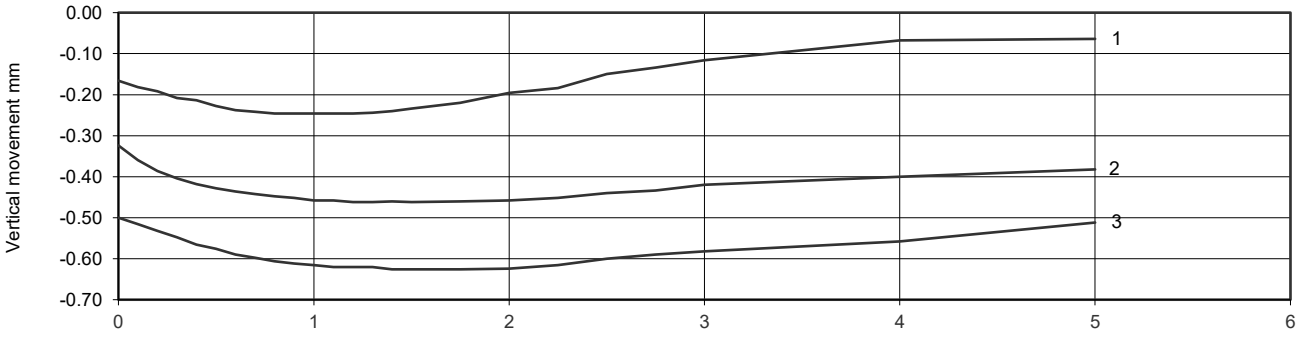
	Date Printed			
	04/03/2026	UKAS TESTING 7758	TTL	**SSB**

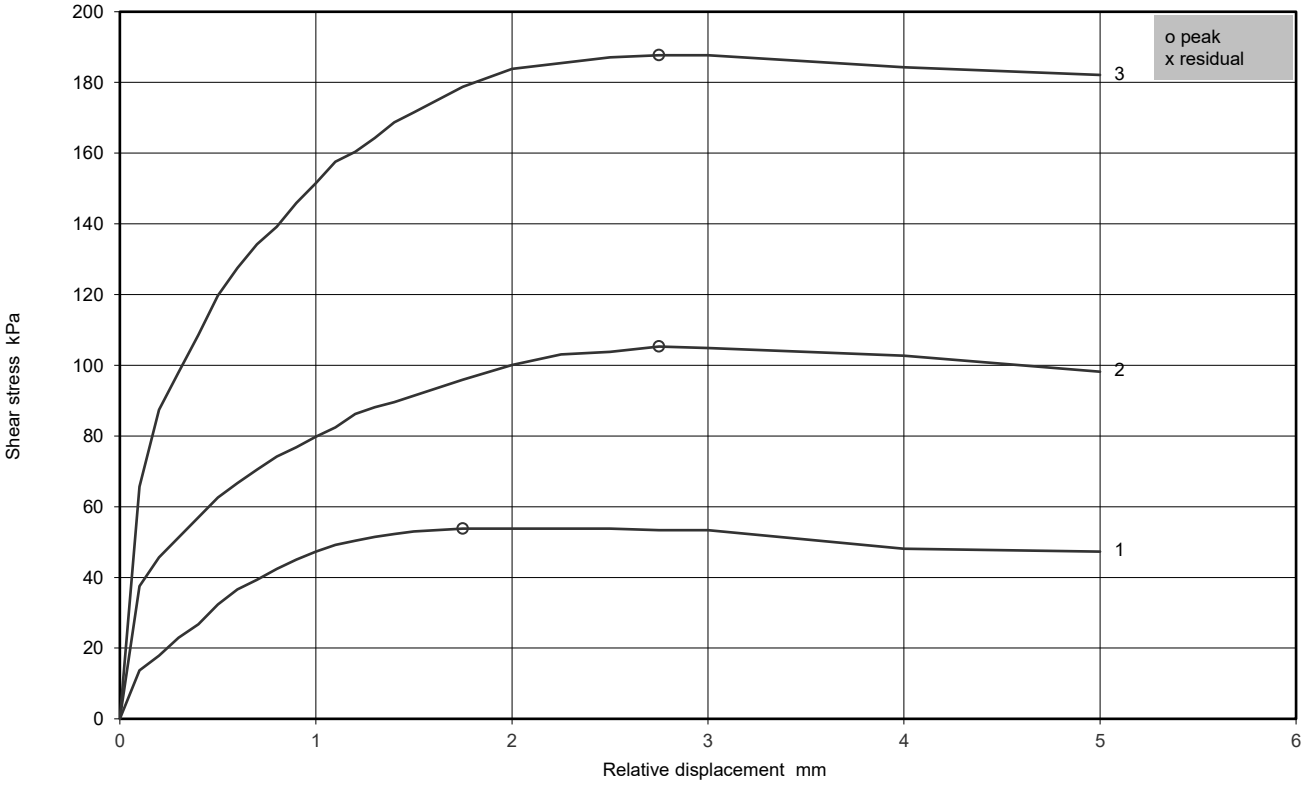
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-201
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	4
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010628

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	04/03/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-202
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010629
Test Method	BS EN ISO 17892-10:2018			Date of test	26/02/2026

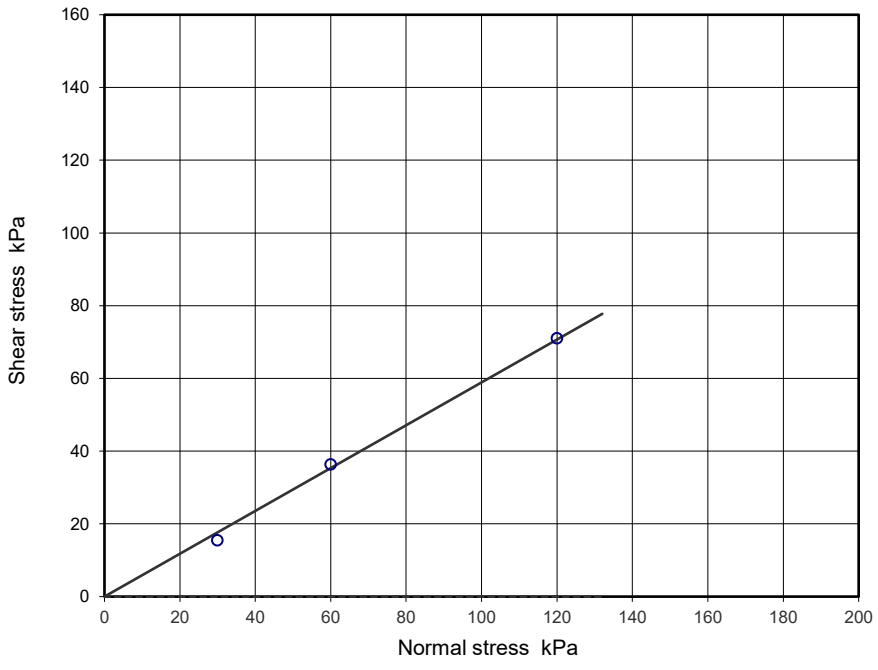
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.4	26.4				mm
	Bulk Density		1.67	1.67	1.67				Mg/m³
	Moisture Content		15.5	15.5	15.5				%
	Dry density		1.45	1.45	1.45				Mg/m³
	Voids ratio		0.828	0.828	0.828				
	Degree of Saturation		50	50	50				%
Consolidation	Consolidation / Normal Stress applied		**30**	**60**	**120**				kPa
	Change in height during consolidation*		-0.304	-0.320	-0.448				mm
	Voids ratio after consolidation		0.807	0.806	0.797				
After test	Final Moisture content		24.3	24.5	24.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	5.00	4.00	6.00				mm
	Shear stress	15.5	36.3	71.0				kPa
	Vertical Movement at peak shear stress*	-0.52	-0.51	-0.63				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[-1.9]	0
Ø '	degrees	[31.5]	30.5

Residual strength, (x)

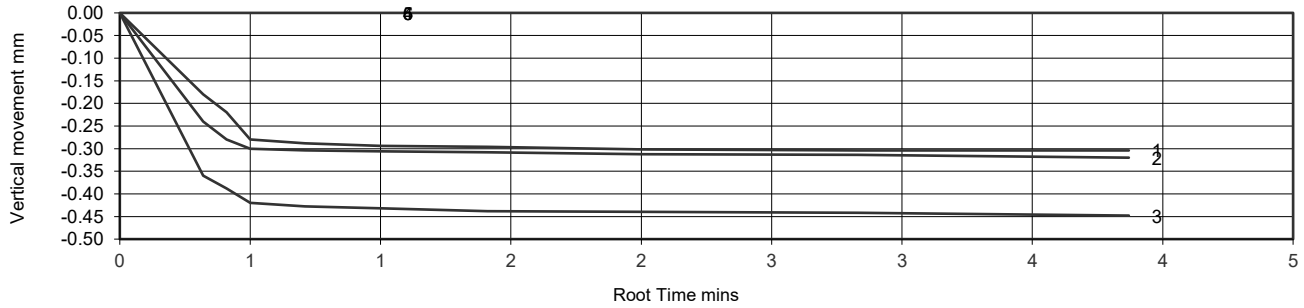
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

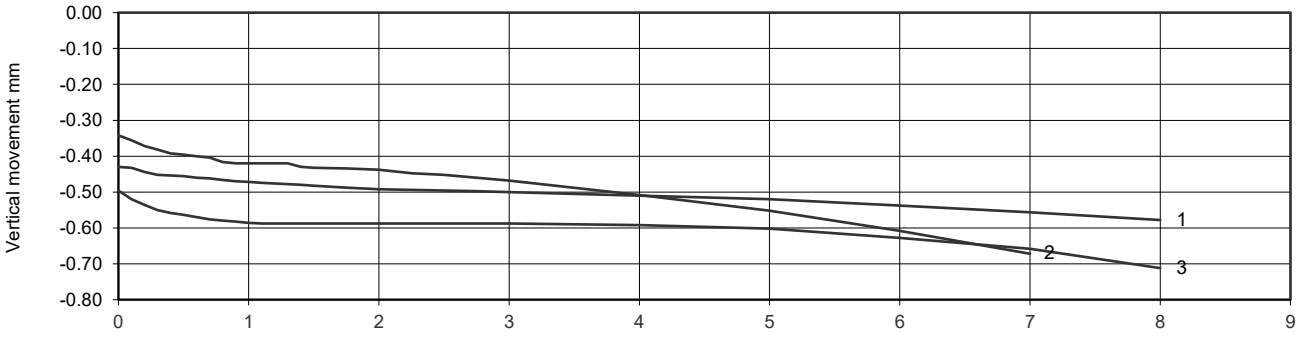
	Date Printed			
	27/02/2026	UKAS TESTING 7758	TTL	**SSB**

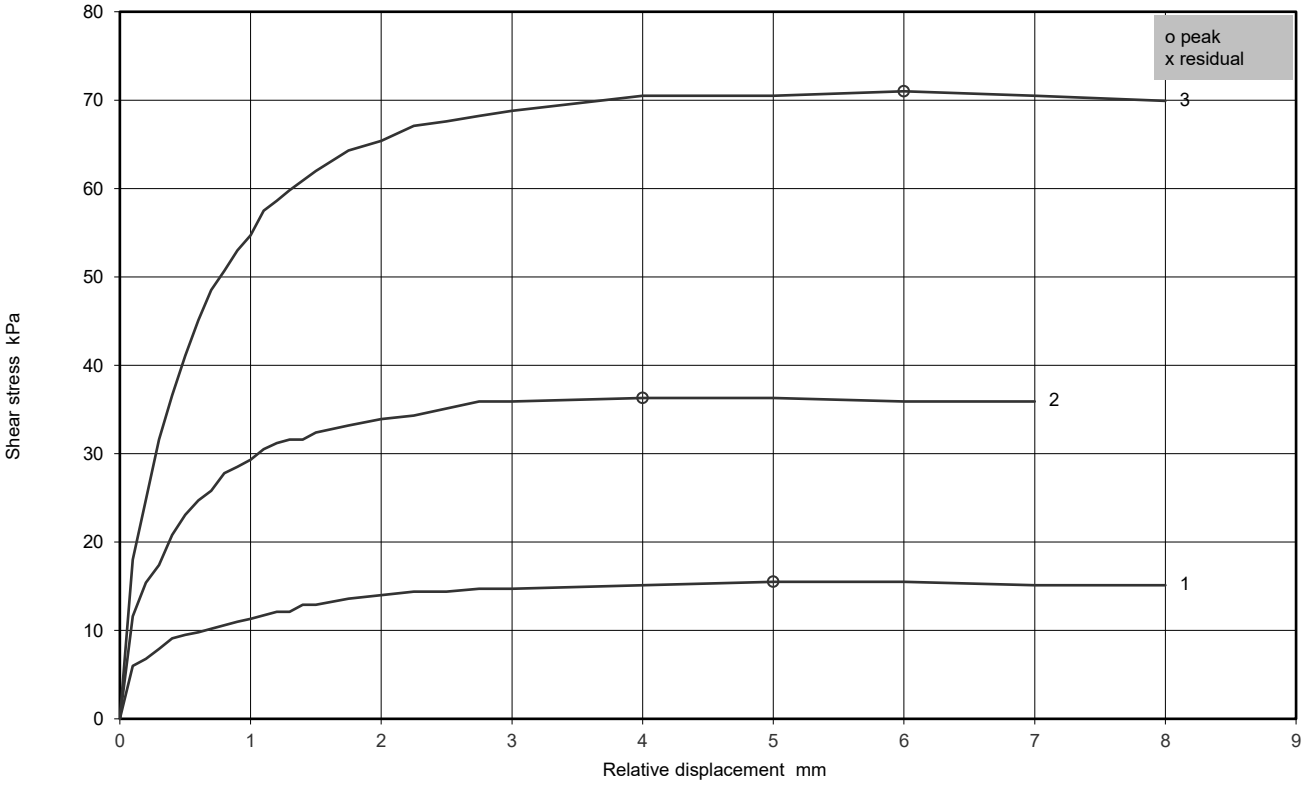
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-202
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown slightly gravelly silty SAND				Depth m	2
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010629

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	27/02/2026			

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey and brown silty SAND			Depth m	2.20
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Greyish brown silty SAND.			KeyLAB ID	TTLP2026010624
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

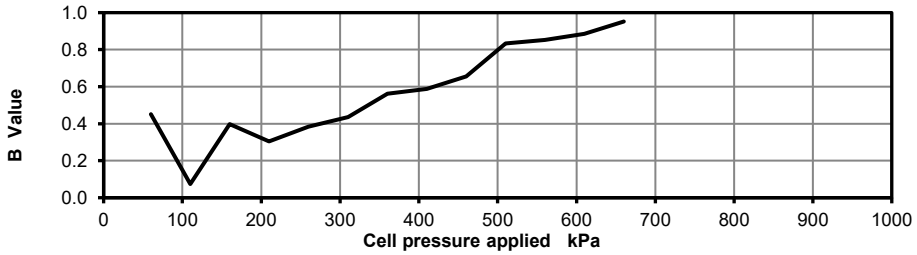
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.78	1.78	Mg/m³
Water Content				20.9	27.3	%
Average Length	96.0	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.48	1.40	Mg/m³
Voids ratio				0.796	0.892	
Degree of saturation				70	81	%

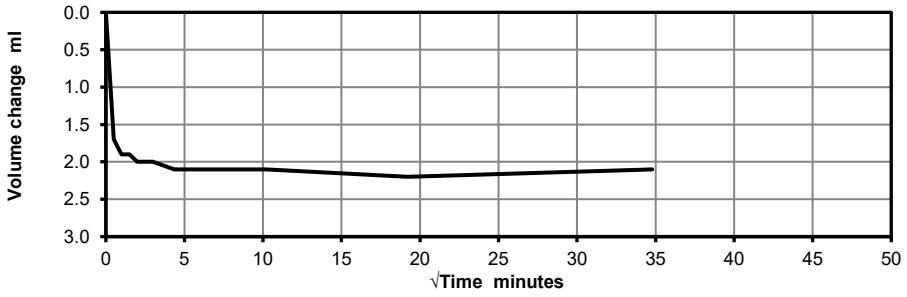
Saturation



Method: Increments of cell and back pressure

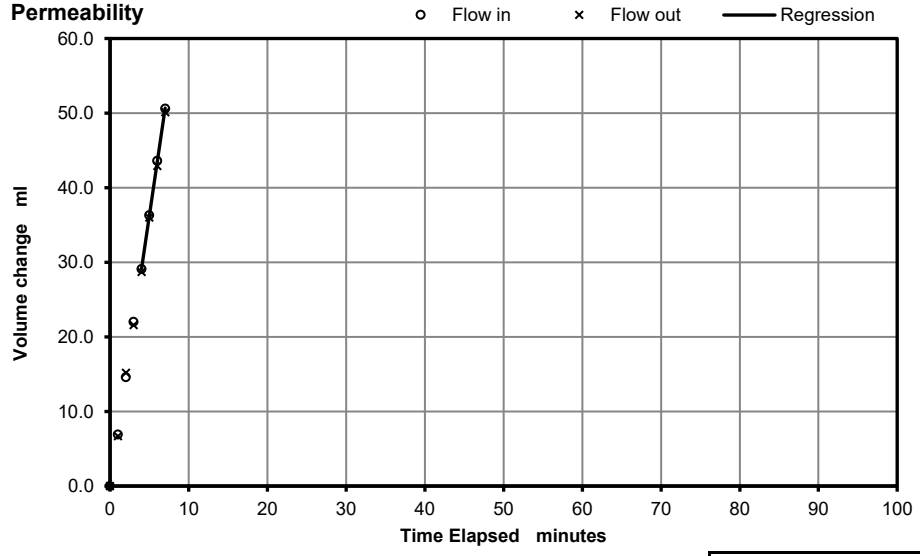
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	660	kPa
Final pore water pressure	651	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	700	kPa
Back pressure applied	650	kPa
Effective stress	50	kPa
Initial PWP	686	kPa
Final PWP	651	kPa
PWP dissipation	98	%

Permeability



Direction of Flow		
Cell Pressure	700	kPa
Top Pressure	655	kPa
Base Pressure	645	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	7.2	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.4×10^{-6} m/s

Remarks	H.G 10 kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey and brown silty SAND			Depth m	3.50
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Grey and brown silty SAND.			KeyLAB ID	TTLP2026010630
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

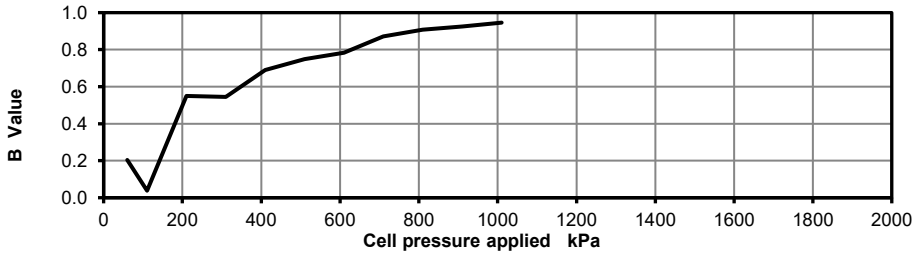
Specimen Details

Specimen Type /Preparation: REMOULDED using 2.5KG effort @ a workable MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.50	1.70	Mg/m³
Water Content				6.6	26.8	%
Average Length	96.0	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.40	1.34	Mg/m³
Voids ratio				0.887	0.973	
Degree of saturation				20	73	%

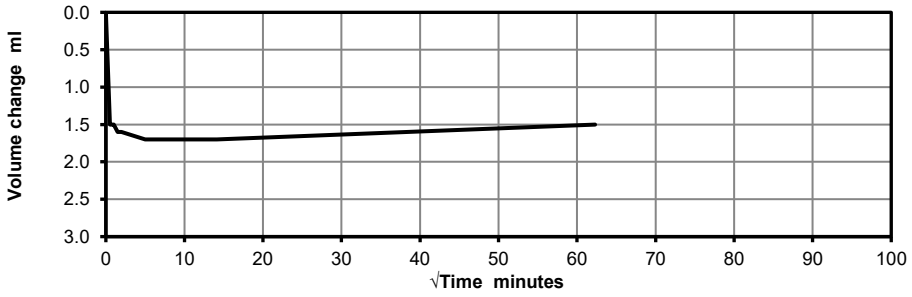
Saturation



Method: Increments of cell and back pressure

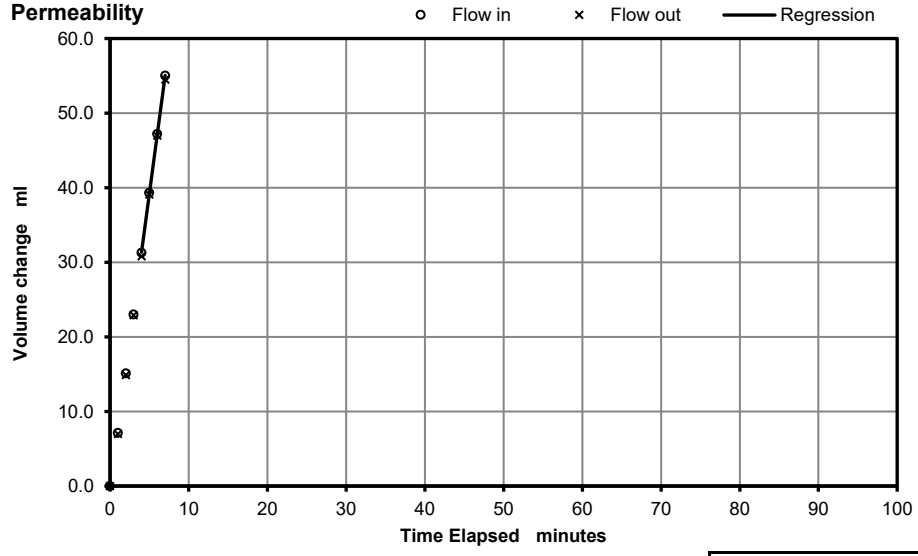
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	1010	kPa
Final pore water pressure	996	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	1050	kPa
Back pressure applied	1000	kPa
Effective stress	50	kPa
Initial PWP	1030	kPa
Final PWP	1001	kPa
PWP dissipation	96	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	1050	kPa
Top Pressure	1005	kPa
Base Pressure	995	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	7.9	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.5 x 10^{-6} m/s

Remarks	
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J328106
				Borehole/Pit No.	BH-116
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Dark brown slightly gravelly sandy organic CLAY			Depth m	4.50
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Dark brown slightly gravelly sandy organic CLAY.			KeyLAB ID	TTLP20251127122
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received mc

Size of material removed > 20 mm Proportion 0 %

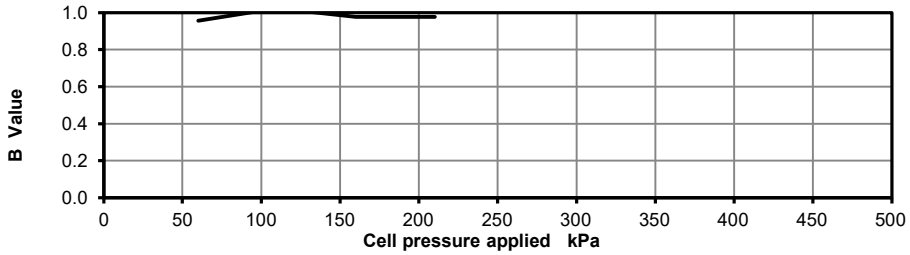
Average Length 96.0 mm

Average Diameter 103.2 mm

Particle density 2.65 Mg/m³ Assumed

	Initial	Final	
Bulk Density	1.83	1.94	Mg/m³
Water Content	30.1	30.5	%
Dry density	1.40	1.48	Mg/m³
Voids ratio	0.888	0.785	
Degree of saturation	90	103	%

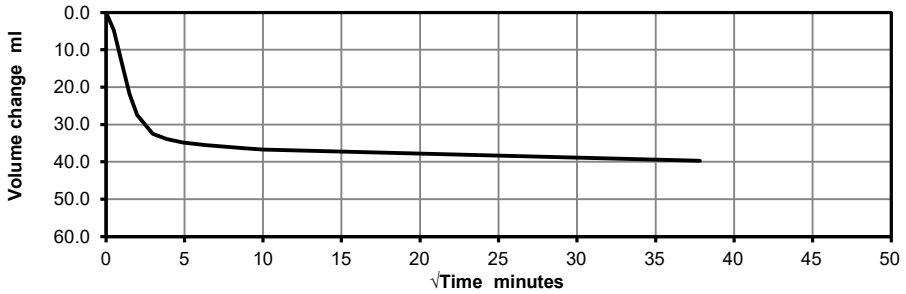
Saturation



Method: Increments of cell pressure only

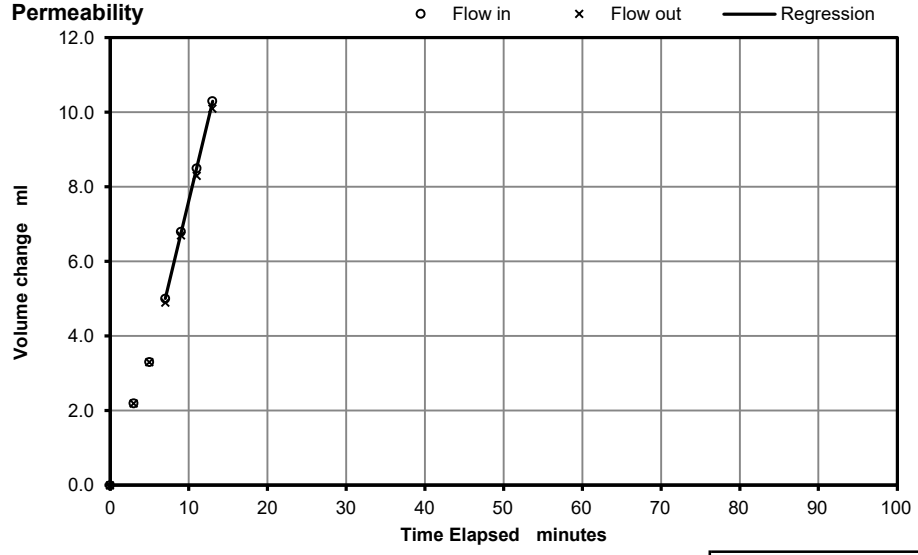
Cell pressure increments	50	kPa
Differential Pressure		kPa
Final Cell Pressure	210	kPa
Final pore water pressure	206	kPa
Final B Value	0.98	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	400	kPa
Back pressure applied	350	kPa
Effective stress	50	kPa
Initial PWP	394	kPa
Final PWP	349	kPa
PWP dissipation	103	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	400	kPa
Top Pressure	355	kPa
Base Pressure	345	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	11.1	
Mean rate of flow	0.88	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*

(at 20°C)

1.7×10^{-7} m/s

Remarks	H.G 10kPa
Date Printed	28/11/2025

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J327997
				Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly silty SAND			Depth m	2.10
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Light brown slightly gravelly silty SAND			KeyLAB ID	TTLP202511254
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

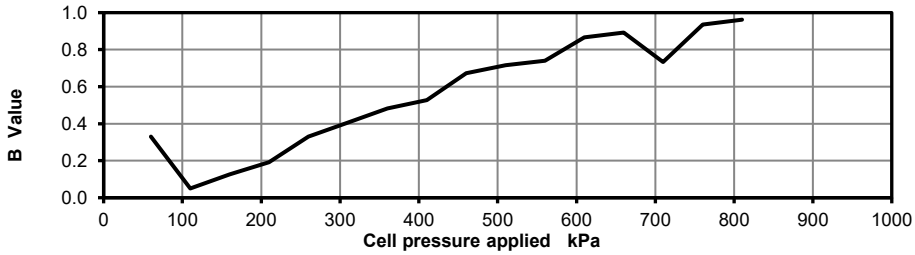
Specimen Type /Preparation: REMOULDED using 2.5KG effort @ received MC

Size of material removed > 16 mm Proportion 0 %

Average Length	96.0	mm	
Average Diameter	103.2	mm	
Particle density	2.65	Mg/m³	Assumed

	Initial	Final	
Bulk Density	1.79	1.77	Mg/m³
Water Content	23.1	26.0	%
Dry density	1.46	1.41	Mg/m³
Voids ratio	0.819	0.886	
Degree of saturation	75	78	%

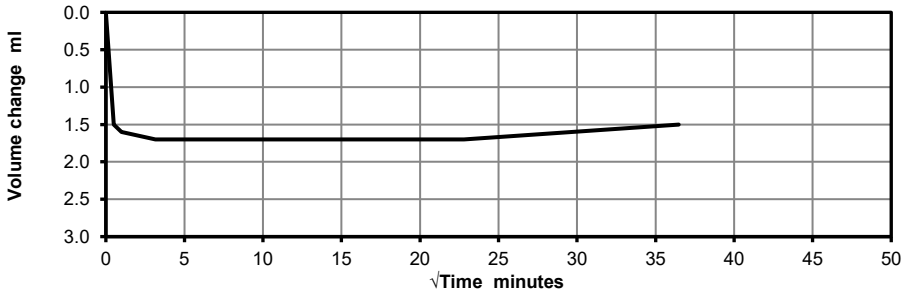
Saturation



Method: Increments of cell and back pressure

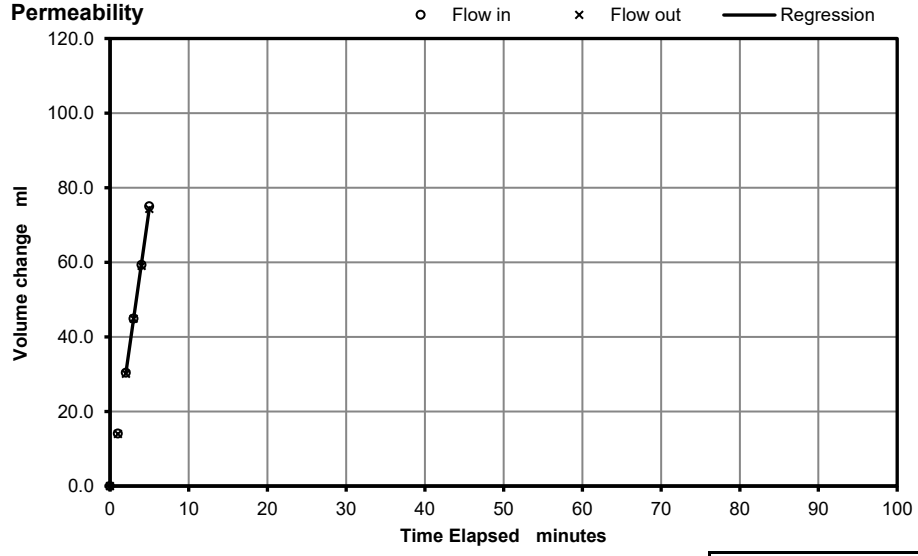
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	810	kPa
Final pore water pressure	802	kPa
Final B Value	0.96	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	850	kPa
Back pressure applied	800	kPa
Effective stress	50	kPa
Initial PWP	835	kPa
Final PWP	800	kPa
PWP dissipation	99	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	850	kPa
Top Pressure	805	kPa
Base Pressure	795	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	15	ml/min
Temperature during test	20	°C

PERMEABILITY, *kv*
(at 20°C)

2.8 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	25/11/2025

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J327997
				Borehole/Pit No.	CP-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly silty SAND			Depth m	1.40
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Light brown slight gravelly silty SAND.			KeyLAB ID	TTLP202511258
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

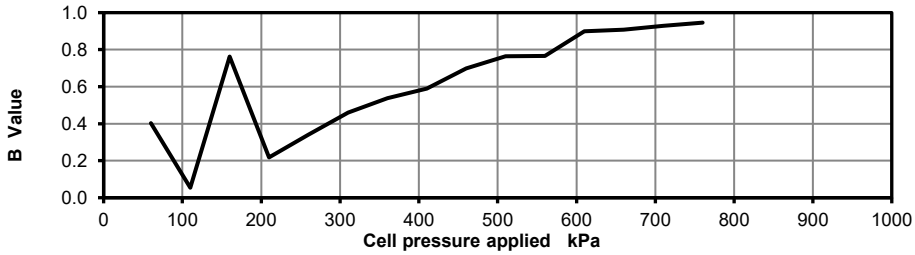
Specimen Type /Preparation: REMOULDED using 2.5KG effort @ received MC

Size of material removed > 16 mm Proportion 0 %

Average Length	96.0	mm	
Average Diameter	103.2	mm	
Particle density	2.65	Mg/m³	Assumed

	Initial	Final	
Bulk Density	1.78	1.80	Mg/m³
Water Content	24.5	27.3	%
Dry density	1.43	1.41	Mg/m³
Voids ratio	0.852	0.874	
Degree of saturation	76	83	%

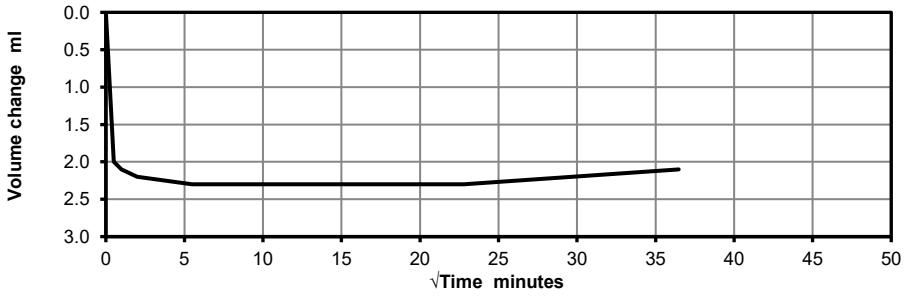
Saturation



Method: Increments of cell and back pressure

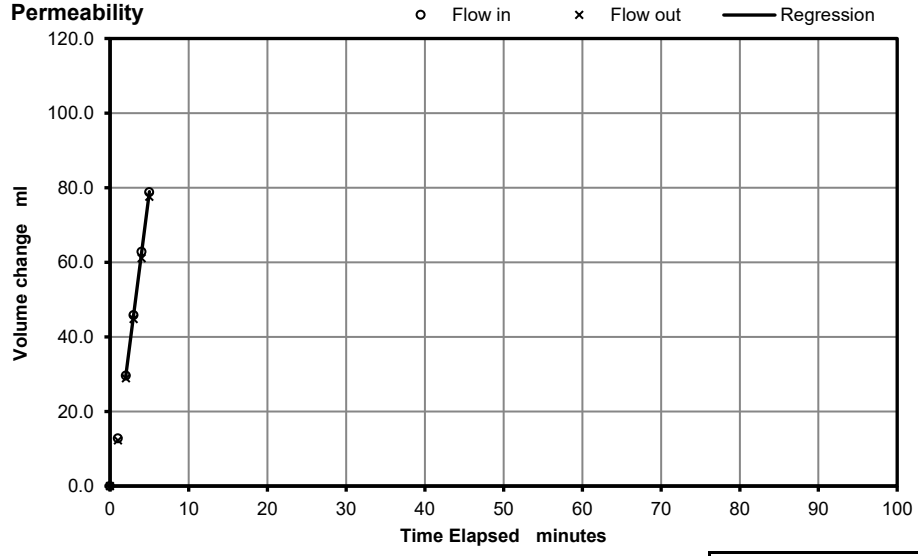
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	760	kPa
Final pore water pressure	750	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	810	kPa
Back pressure applied	750	kPa
Effective stress	60	kPa
Initial PWP	795	kPa
Final PWP	752	kPa
PWP dissipation	96	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	810	kPa
Top Pressure	755	kPa
Base Pressure	745	kPa
Mean Effective Stress	60	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	16	ml/min
Temperature during test	20	°C

PERMEABILITY, *kv*
(at 20°C)

3.1 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	25/11/2025

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-103
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown silty SAND			Depth m	1.20
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown silty SAND.			KeyLAB ID	TTLP2026010620
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

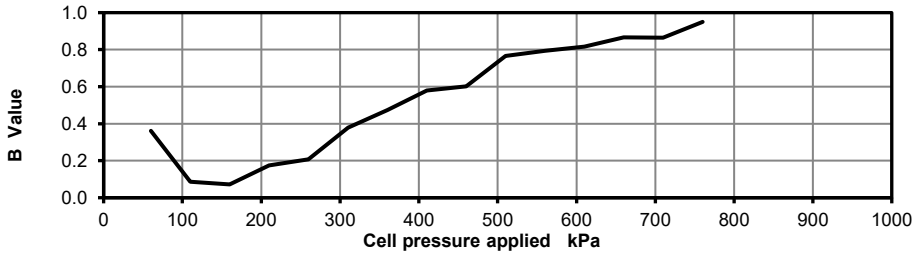
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.79	1.80	Mg/m³
Water Content				22.3	26.6	%
Average Length	95.7	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.46	1.42	Mg/m³
Voids ratio				0.812	0.863	
Degree of saturation				73	82	%

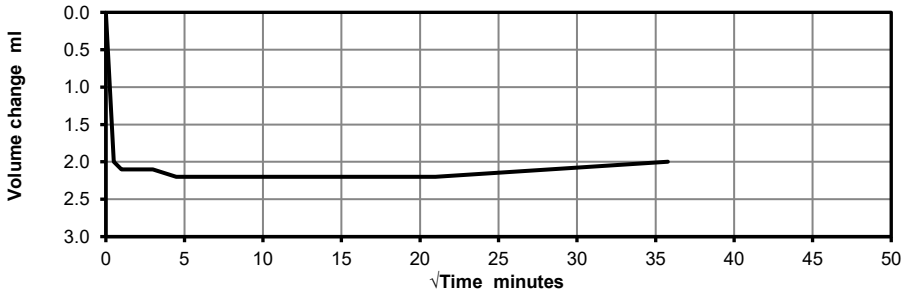
Saturation



Method: Increments of cell and back pressure

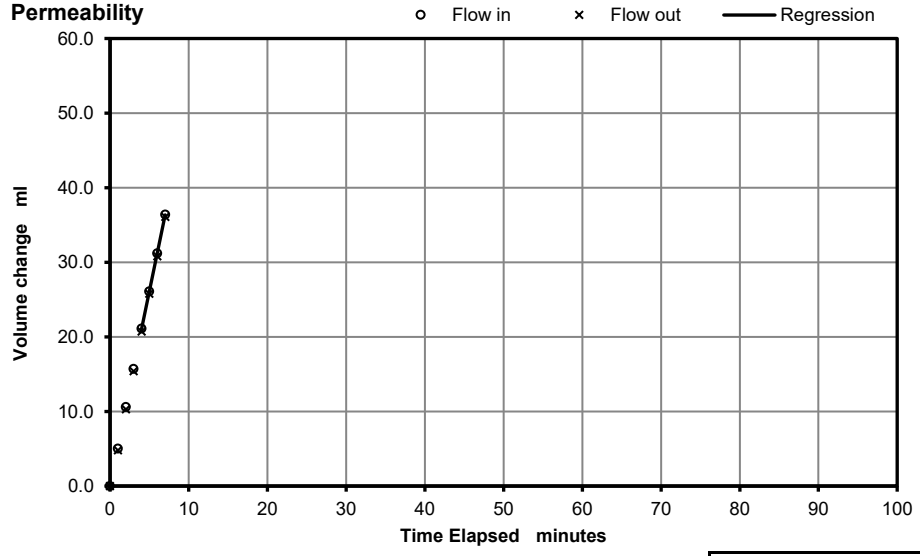
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	760	kPa
Final pore water pressure	746	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	800	kPa
Back pressure applied	750	kPa
Effective stress	50	kPa
Initial PWP	781	kPa
Final PWP	749	kPa
PWP dissipation	104	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	800	kPa
Top Pressure	755	kPa
Base Pressure	745	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.5	
Mean rate of flow	5.1	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

9.8×10^{-7} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-103
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	4.20
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown slightly gravelly silty SAND.			KeyLAB ID	TTLP2026010619
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

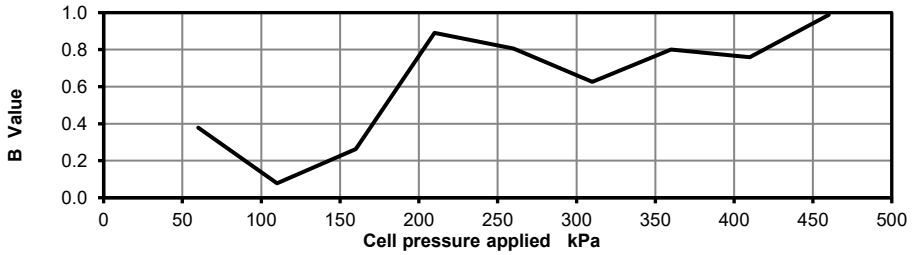
Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 14 %

Average Length	96.4	mm	
Average Diameter	103.2	mm	
Particle density	2.65	Mg/m³	Assumed

	Initial	Final	
Bulk Density	1.85	1.86	Mg/m³
Water Content	25.0	24.9	%
Dry density	1.48	1.49	Mg/m³
Voids ratio	0.794	0.784	
Degree of saturation	83	84	%

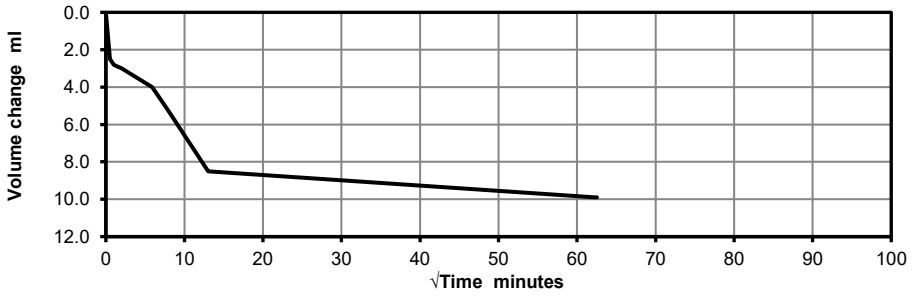
Saturation



Method: Increments of cell and back pressure

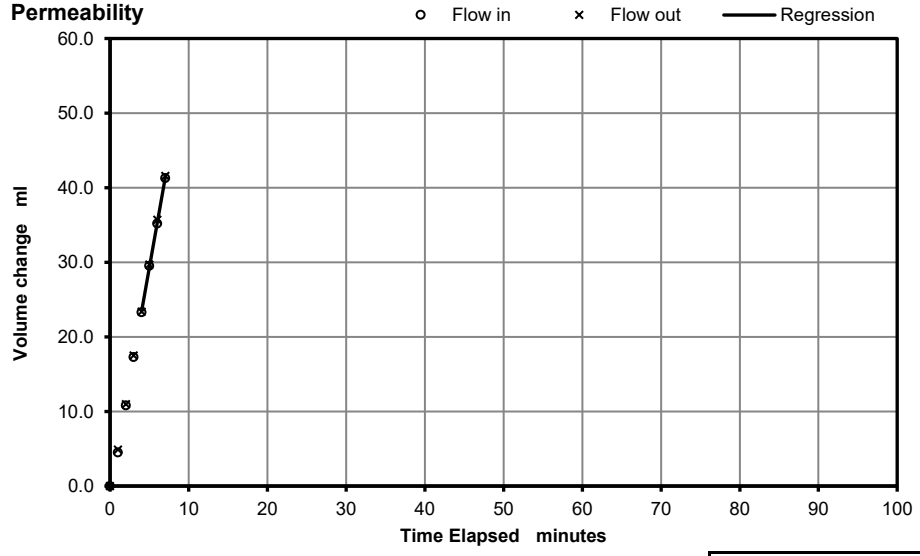
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	460	kPa
Final pore water pressure	449	kPa
Final B Value	0.99	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	500	kPa
Back pressure applied	450	kPa
Effective stress	50	kPa
Initial PWP	488	kPa
Final PWP	450	kPa
PWP dissipation	100	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	500	kPa
Top Pressure	455	kPa
Base Pressure	445	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	6.0	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.1 x 10^{-6} m/s

Remarks	
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly SAND			Depth m	2.50
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Light brown slightly gravelly SAND.			KeyLAB ID	TTLP2026010621
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

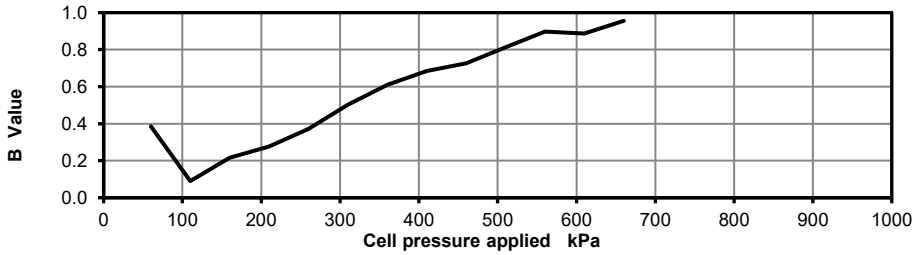
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.82	1.82	Mg/m³
Water Content				21.0	26.4	%
Average Length	96.0	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.50	1.44	Mg/m³
Voids ratio				0.763	0.841	
Degree of saturation				73	83	%

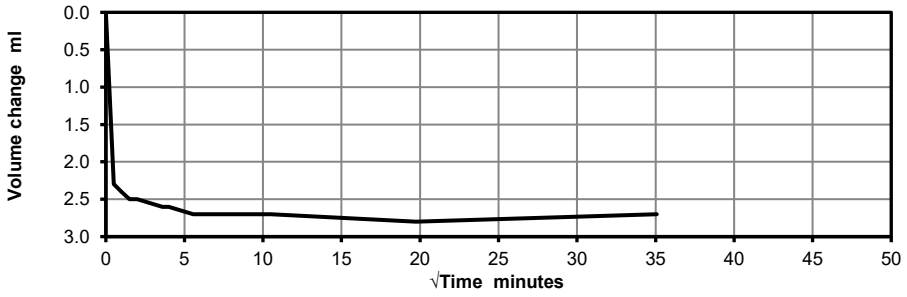
Saturation



Method: Increments of cell and back pressure

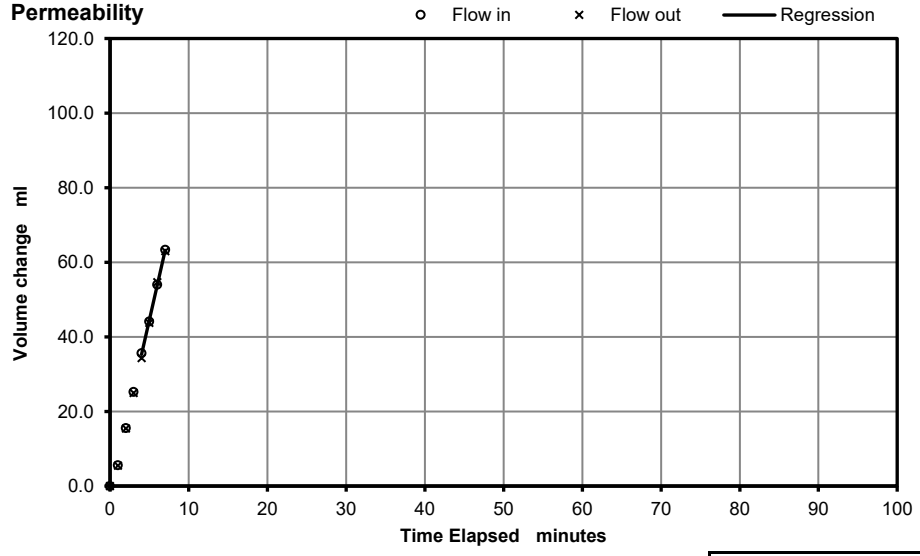
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	660	kPa
Final pore water pressure	648	kPa
Final B Value	0.96	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	700	kPa
Back pressure applied	650	kPa
Effective stress	50	kPa
Initial PWP	686	kPa
Final PWP	650	kPa
PWP dissipation	100	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	700	kPa
Top Pressure	655	kPa
Base Pressure	645	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	9.3	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.8×10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-201
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	2.00
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown slightly gravelly silty SAND.			KeyLAB ID	TTLP2026010627
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

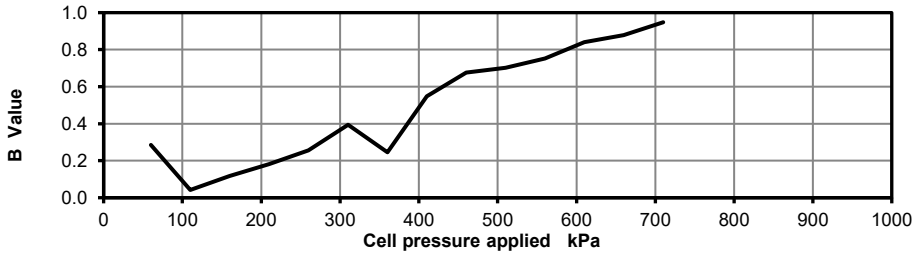
Specimen Details

Specimen Type /Preparation: REMOULDED using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.64	1.74	Mg/m³
Water Content				14.5	25.8	%
Average Length	96.0	mm				
Average Diameter	103.3	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.44	1.38	Mg/m³
Voids ratio				0.845	0.918	
Degree of saturation				45	75	%

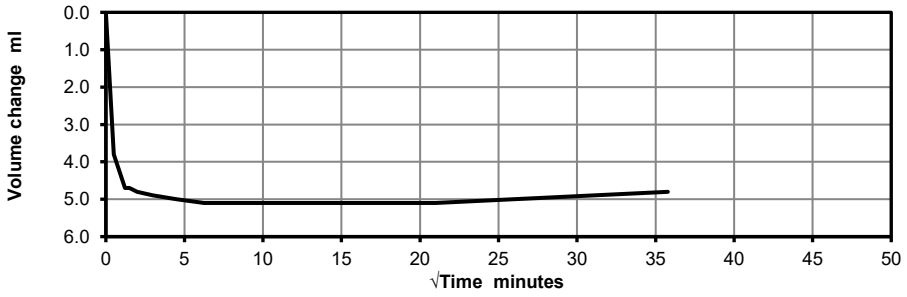
Saturation



Method: Increments of cell and back pressure

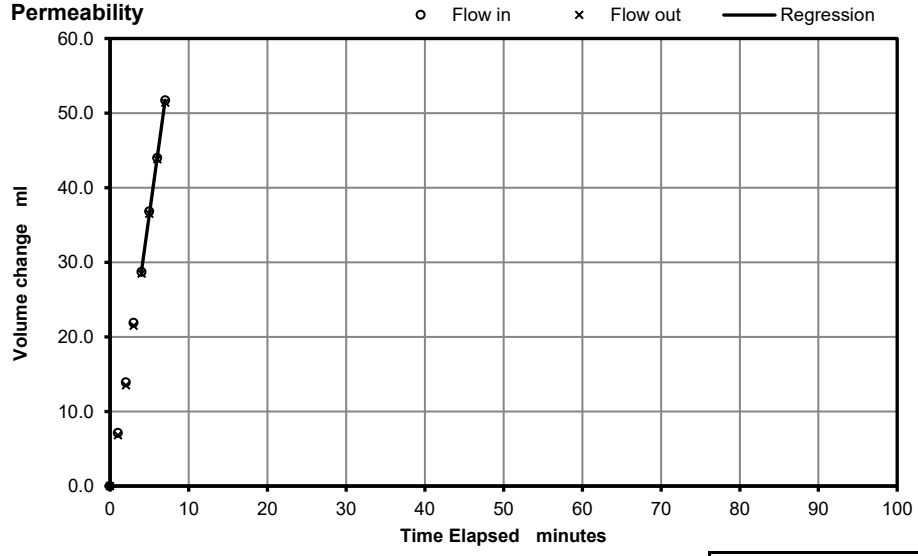
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	710	kPa
Final pore water pressure	698	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	750	kPa
Back pressure applied	700	kPa
Effective stress	50	kPa
Initial PWP	735	kPa
Final PWP	701	kPa
PWP dissipation	97	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	750	kPa
Top Pressure	705	kPa
Base Pressure	695	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	7.6	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.4 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-202
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	2.00
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown slightly gravelly silty SAND.			KeyLAB ID	TTLP2026010629
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

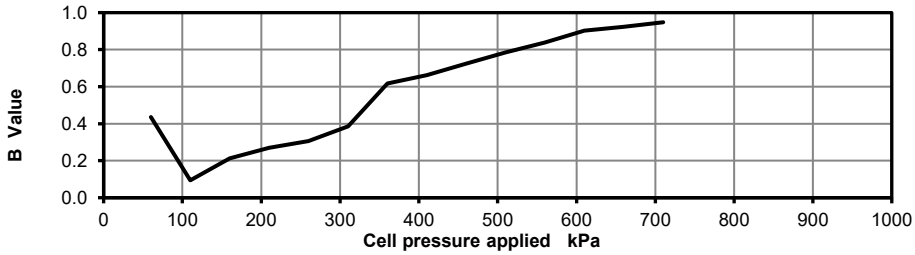
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > mm Proportion %

				Initial	Final	
Bulk Density				1.82	1.83	Mg/m³
Water Content				19.1	26.2	%
Average Length	96.0	mm		1.52	1.45	Mg/m³
Average Diameter	103.2	mm		0.738	0.832	
Particle density	2.65	Mg/m³	Assumed	69	83	%

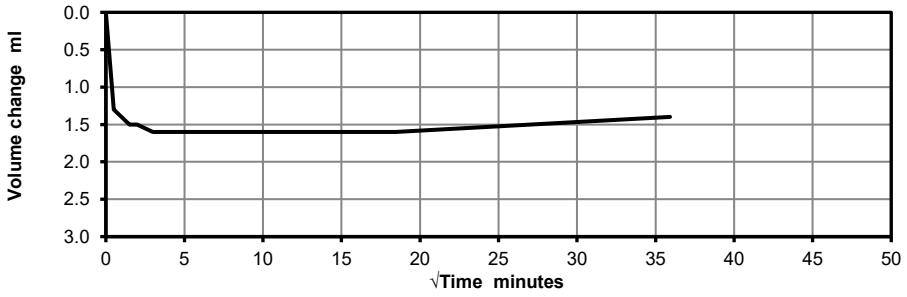
Saturation



Method: Increments of cell and back pressure

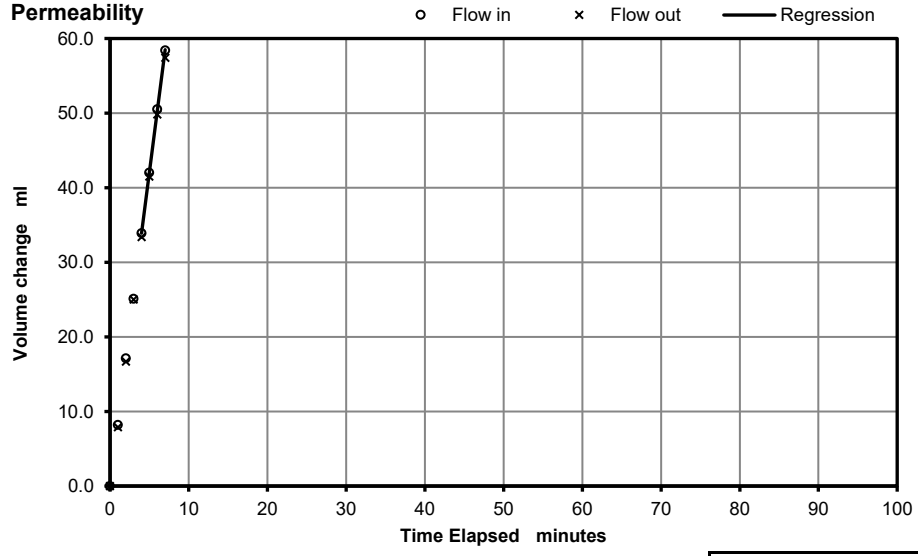
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	710	kPa
Final pore water pressure	699	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	750	kPa
Back pressure applied	700	kPa
Effective stress	50	kPa
Initial PWP	734	kPa
Final PWP	701	kPa
PWP dissipation	97	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	750	kPa
Top Pressure	705	kPa
Base Pressure	695	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	8.2	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.6 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-52 Issue 01 - Oct 22	Summary of Results for Maximum and Minimum Dry Density Tests
Project No. J331504	Project Name Marine GI - Ardersier Port

	Sample						Oversize material (as appropriate)			Dry density		
Hole No.	Ref	Top	Base	Type	Soil Description	Test Method	>37.5mm %	>6.3mm %	>2mm %	Maximum Mg/m_3	Minimum Mg/m_3	Remarks
BH-101		0.80	1.30	B	Brown SAND	4.2, 4.4	0	6	5	1.67	1.56	
BH-101		2.20	1.70	B	Grey and brown silty SAND	4.2, 4.4	0	0	0	1.54	1.43	
BH-101		5.30	5.80	B	Brown SAND	4.2, 4.4	0	3	2	1.47	1.35	
BH-102		1.00	1.50	B	Brown SAND	4.2, 4.4	0	2	1	1.55	1.43	
BH-102		3.50	3.00	B	Grey and brown silty SAND	4.2, 4.4	0	0	0	1.55	1.43	
BH-102		7.00	7.50	B	Brown SAND	4.2, 4.4	0	0	0	1.49	1.39	
BH-102		12.00	12.50	B	Brown SAND	4.2, 4.4	0	0	1	1.50	1.39	
BH-108		11.20	11.70	B	Grey brown SAND	4.2, 4.4	0	0	0	1.45	1.35	
BH-108		18.70	19.20	B	Grey brown SAND	4.2, 4.4	0	0	0	1.63	1.52	
BH-112		12.60	13.10	B	Brown slightly gravelly SAND		0	0	0	1.60	1.33	
BH-112		17.00	17.50	B	Brown slightly gravelly SAND		0	1	0	1.52	1.32	
BH-112		20.00	20.50	B	Brown slightly gravelly SAND		0	1	0	1.47	1.28	
BH-113		9.50	10.00	B	Brown slightly gravelly SAND		0	0	0	1.45	1.28	
BH-113		15.50	16.00	B	Brown slightly gravelly SAND		0	0	0	1.44	1.25	
BH-113		23.00	23.50	B	Grey and brown SAND		0	2	0	1.50	1.39	
BH-114		3.20	3.70	B	Grey brown SAND		0	0	0	1.37	1.25	
BH-114		7.70	8.20	B	Grey brown SAND		0	0	0	1.49	1.39	
BH-119		6.30	6.80	B	Grey brown SAND		0	1	0	1.64	1.41	
BH-119		12.30	12.80	B	Grey brown SAND		0	1	1	1.66	1.47	
BH-119		19.80	20.30	B	Brown slightly gravelly silty SAND		0	7	4	1.73	1.33	
BH-119		21.30	21.80	B	Brown slightly gravelly SAND		0	0	0	1.65	1.47	
BH-203		7.50	8.00	B	Brown slightly gravelly SAND		0	0	0	1.48	1.39	
BH-207		6.70	7.20	B	Brown slightly gravelly SAND		0	0	0	1.46	1.33	
BH-207		15.70	16.20	B	Brown slightly gravelly SAND		0	0	0	1.51	1.25	
BH-207		27.70	28.20	B	Brown SAND		0	0	0	1.47	1.20	
CP-101		2.10	1.60	B	Light brown slightly gravelly silty SAND		4	18	0	1.53	1.27	
CP-101		5.40	5.90	B	Brown slightly gravelly SAND		0	1	0	1.51	1.23	
CP-101		8.40	8.90	B	Brown SAND		0	0	0	1.44	1.35	
CP-101		11.40	11.90	B	Grey brown SAND		0	1	0	1.41	1.33	
CP-102		9.10	9.60	B	Brown SAND		0	0	0	1.45	1.32	
CP-102		13.60	14.10	B	Brown SAND		0	0	0	1.46	1.35	
CP-103		1.20	0.70	B	Brown silty SAND	4.2, 4.4	0	0	0	1.45	1.35	
CP-104		2.50	2.00	B	Light brown slightly gravelly SAND	4.2, 4.4	0	0	0	1.63	1.52	
CP-104		8.00	8.50	B	Brown SAND	4.2, 4.4	0	0	1	1.53	1.43	
CP-104		11.00	11.50	B	Brown SAND	4.2, 4.4	0	0	2	1.59	1.47	
CP-201		2.00	1.50	B	Brown slightly gravelly silty SAND	4.2, 4.4	0	0	0	1.58	1.47	
CP-201		4.00	4.50	B	Brown SAND	4.2, 4.4	1	18	2	1.59	1.43	
CP-202		2.00	1.50	B	Brown slightly gravelly silty SAND	4.2, 4.4	0	4	1	1.49	1.39	

Notes
Tests performed in accordance with BS 1377 : Part 4 : 1990 and clauses : 4.2, 4.4 sandy soil
4.3, 4.5 gravelly soil

UKAS TESTING

MAX MIN

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey and brown silty SAND			Depth m	2.20
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Greyish brown silty SAND.			KeyLAB ID	TTLP2026010624
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

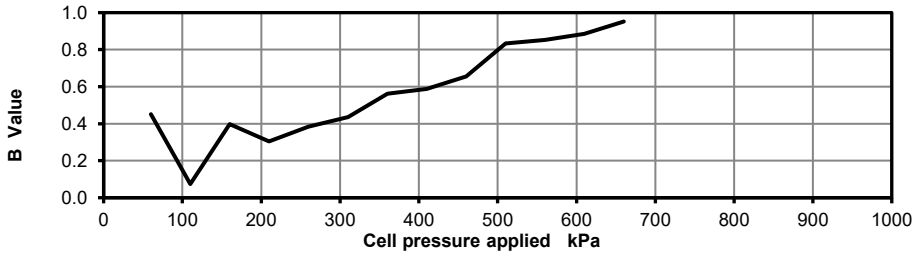
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.78	1.78	Mg/m³
Water Content				20.9	27.3	%
Average Length	96.0	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.48	1.40	Mg/m³
Voids ratio				0.796	0.892	
Degree of saturation				70	81	%

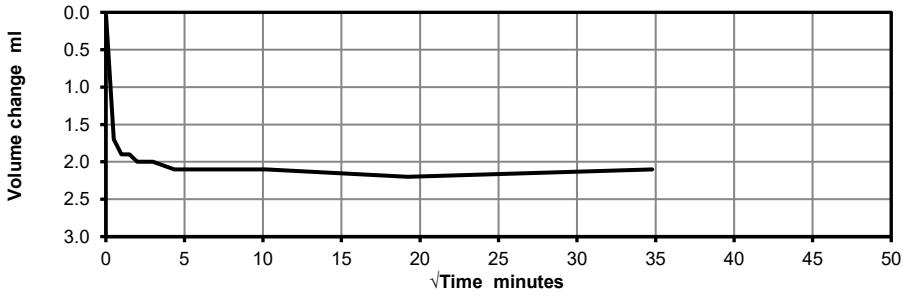
Saturation



Method: Increments of cell and back pressure

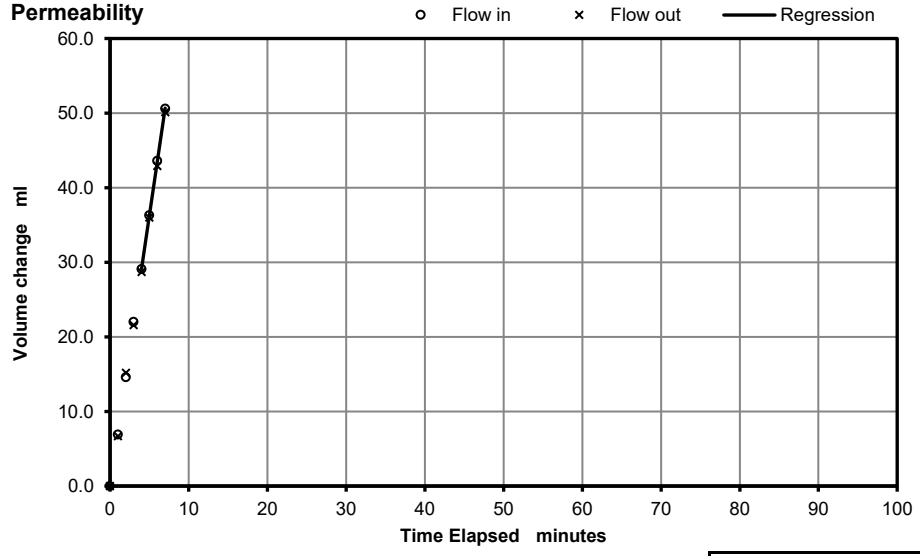
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	660	kPa
Final pore water pressure	651	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	700	kPa
Back pressure applied	650	kPa
Effective stress	50	kPa
Initial PWP	686	kPa
Final PWP	651	kPa
PWP dissipation	98	%

Permeability



Direction of Flow		
Cell Pressure	700	kPa
Top Pressure	655	kPa
Base Pressure	645	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	7.2	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.4 x 10^{-6} m/s

Remarks	H.G 10 kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey and brown silty SAND			Depth m	3.50
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Grey and brown silty SAND.			KeyLAB ID	TTLP2026010630
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

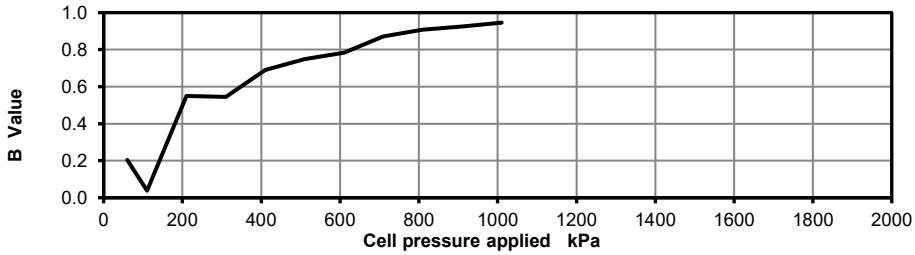
Specimen Details

Specimen Type /Preparation: REMOULDED using 2.5KG effort @ a workable MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.50	1.70	Mg/m³
Water Content				6.6	26.8	%
Average Length	96.0	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.40	1.34	Mg/m³
Voids ratio				0.887	0.973	
Degree of saturation				20	73	%

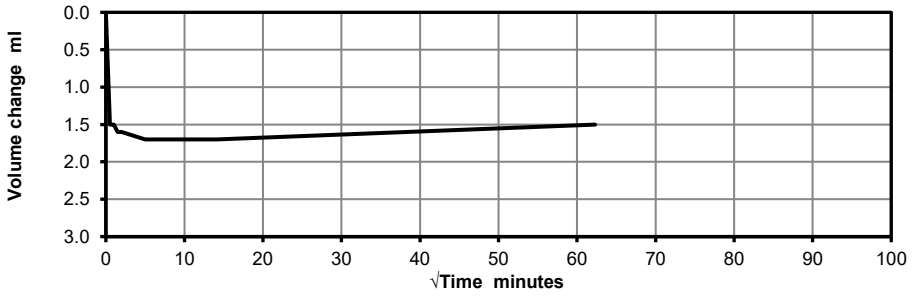
Saturation



Method: Increments of cell and back pressure

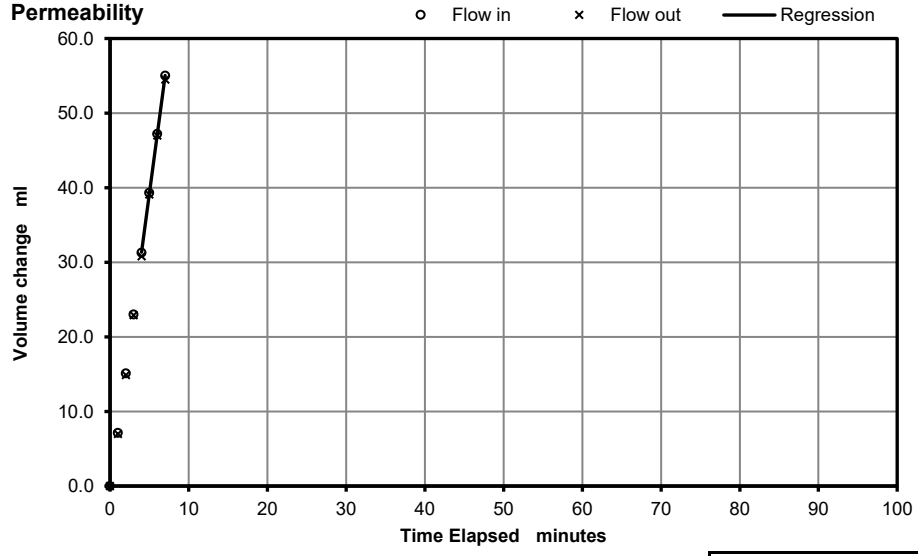
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	1010	kPa
Final pore water pressure	996	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	1050	kPa
Back pressure applied	1000	kPa
Effective stress	50	kPa
Initial PWP	1030	kPa
Final PWP	1001	kPa
PWP dissipation	96	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	1050	kPa
Top Pressure	1005	kPa
Base Pressure	995	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	7.9	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.5 x 10^{-6} m/s

Remarks	
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J328106
				Borehole/Pit No.	BH-116
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Dark brown slightly gravelly sandy organic CLAY			Depth m	4.50
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Dark brown slightly gravelly sandy organic CLAY.			KeyLAB ID	TTLP20251127122
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received mc

Size of material removed > 20 mm Proportion 0 %

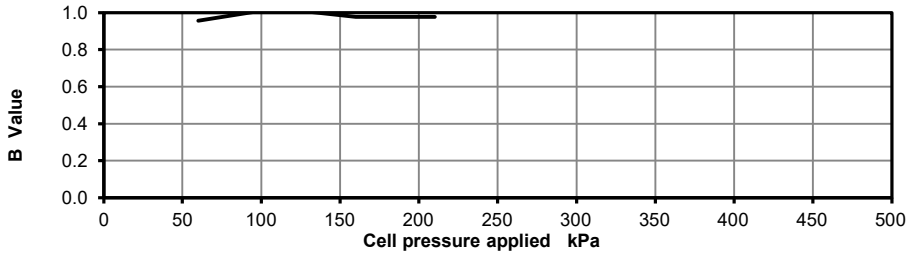
Average Length 96.0 mm

Average Diameter 103.2 mm

Particle density 2.65 Mg/m³ Assumed

	Initial	Final	
Bulk Density	1.83	1.94	Mg/m³
Water Content	30.1	30.5	%
Dry density	1.40	1.48	Mg/m³
Voids ratio	0.888	0.785	
Degree of saturation	90	103	%

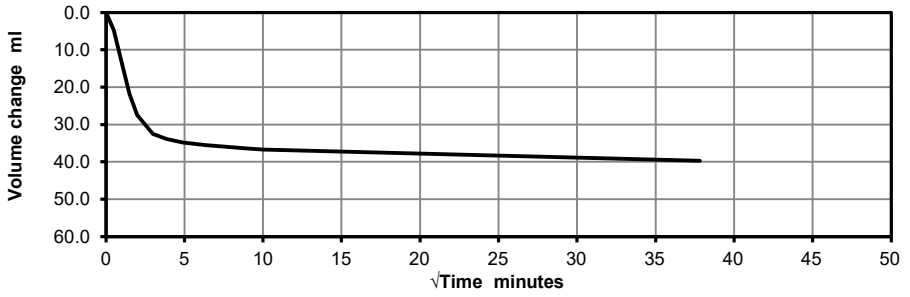
Saturation



Method: Increments of cell pressure only

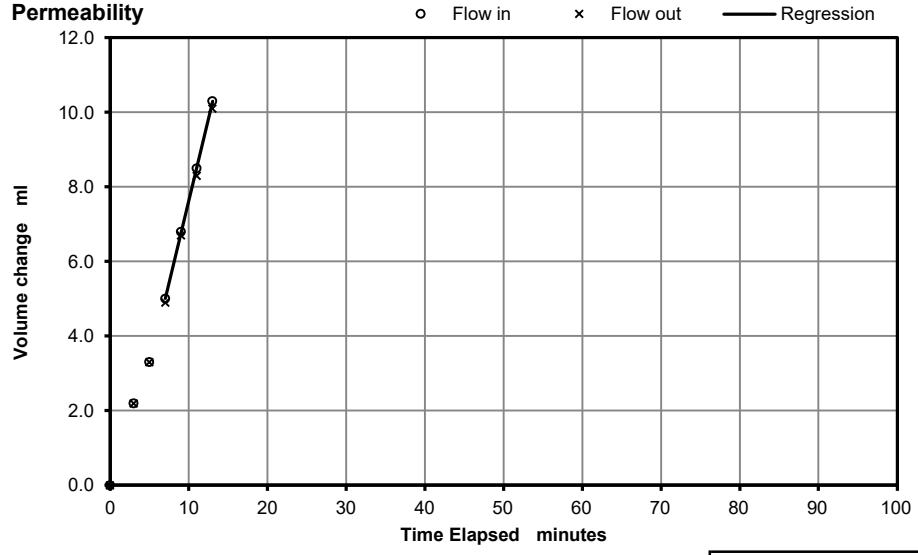
Cell pressure increments	50	kPa
Differential Pressure		kPa
Final Cell Pressure	210	kPa
Final pore water pressure	206	kPa
Final B Value	0.98	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	400	kPa
Back pressure applied	350	kPa
Effective stress	50	kPa
Initial PWP	394	kPa
Final PWP	349	kPa
PWP dissipation	103	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	400	kPa
Top Pressure	355	kPa
Base Pressure	345	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	11.1	
Mean rate of flow	0.88	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*

(at 20°C)

1.7×10^{-7} m/s

Remarks	H.G 10kPa
Date Printed	28/11/2025

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J327997
				Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly silty SAND			Depth m	2.10
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Light brown slightly gravelly silty SAND			KeyLAB ID	TTLP202511254
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

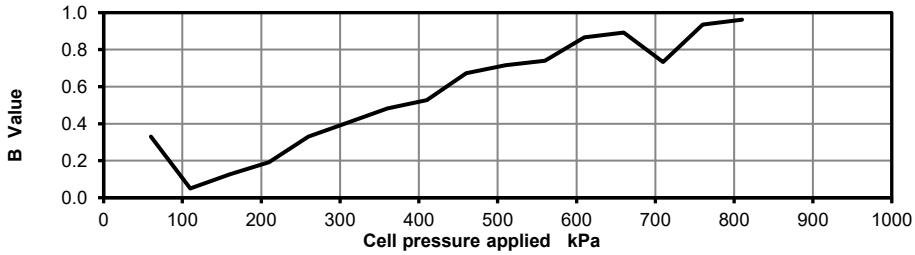
Specimen Type /Preparation: REMOULDED using 2.5KG effort @ received MC

Size of material removed > 16 mm Proportion 0 %

Average Length	96.0	mm	
Average Diameter	103.2	mm	
Particle density	2.65	Mg/m³	Assumed

	Initial	Final	
Bulk Density	1.79	1.77	Mg/m³
Water Content	23.1	26.0	%
Dry density	1.46	1.41	Mg/m³
Voids ratio	0.819	0.886	
Degree of saturation	75	78	%

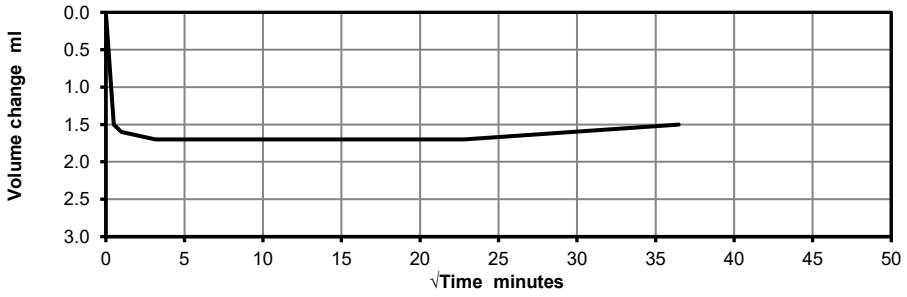
Saturation



Method: Increments of cell and back pressure

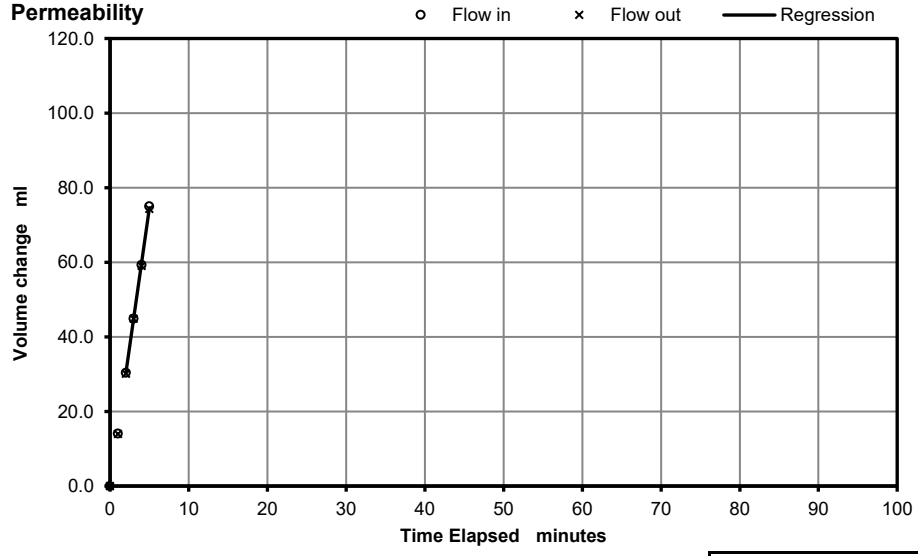
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	810	kPa
Final pore water pressure	802	kPa
Final B Value	0.96	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	850	kPa
Back pressure applied	800	kPa
Effective stress	50	kPa
Initial PWP	835	kPa
Final PWP	800	kPa
PWP dissipation	99	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	850	kPa
Top Pressure	805	kPa
Base Pressure	795	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	15	ml/min
Temperature during test	20	°C

PERMEABILITY, *kv*
(at 20°C)

2.8 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	25/11/2025

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J327997
				Borehole/Pit No.	CP-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly silty SAND			Depth m	1.40
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Light brown slight gravelly silty SAND.			KeyLAB ID	TTLP202511258
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

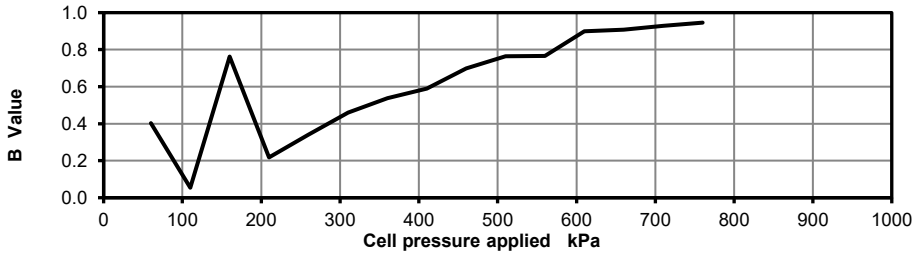
Specimen Type /Preparation: REMOULDED using 2.5KG effort @ received MC

Size of material removed > 16 mm Proportion 0 %

Average Length	96.0	mm	
Average Diameter	103.2	mm	
Particle density	2.65	Mg/m³	Assumed

	Initial	Final	
Bulk Density	1.78	1.80	Mg/m³
Water Content	24.5	27.3	%
Dry density	1.43	1.41	Mg/m³
Voids ratio	0.852	0.874	
Degree of saturation	76	83	%

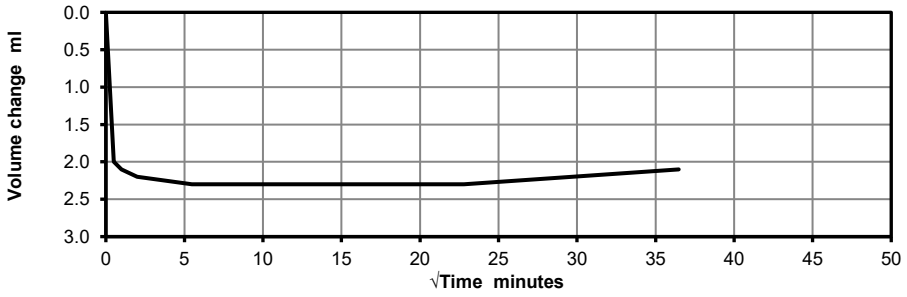
Saturation



Method: Increments of cell and back pressure

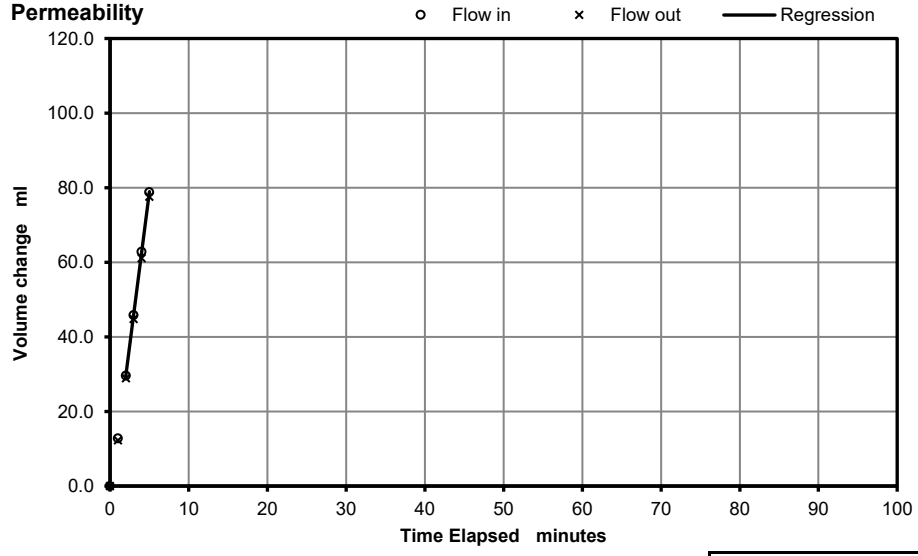
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	760	kPa
Final pore water pressure	750	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	810	kPa
Back pressure applied	750	kPa
Effective stress	60	kPa
Initial PWP	795	kPa
Final PWP	752	kPa
PWP dissipation	96	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	810	kPa
Top Pressure	755	kPa
Base Pressure	745	kPa
Mean Effective Stress	60	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	16	ml/min
Temperature during test	20	°C

PERMEABILITY, *kv*
(at 20°C)

3.1×10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	25/11/2025

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-103
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown silty SAND			Depth m	1.20
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown silty SAND.			KeyLAB ID	TTLP2026010620
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

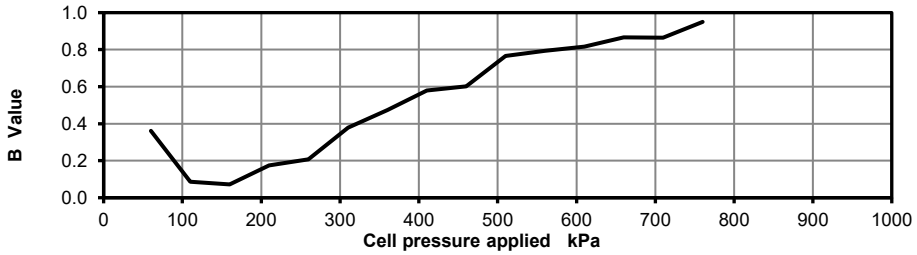
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.79	1.80	Mg/m³
Water Content				22.3	26.6	%
Average Length	95.7	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.46	1.42	Mg/m³
Voids ratio				0.812	0.863	
Degree of saturation				73	82	%

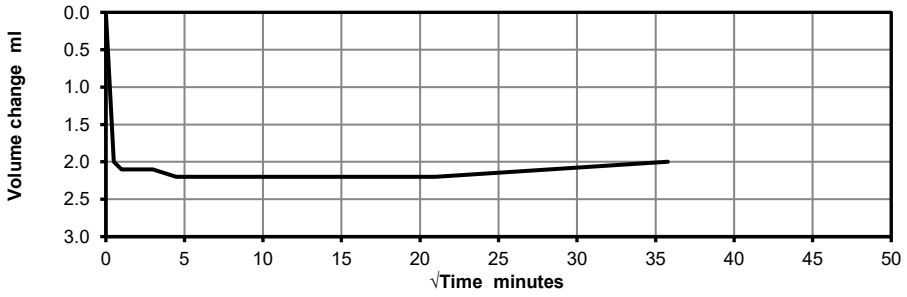
Saturation



Method: Increments of cell and back pressure

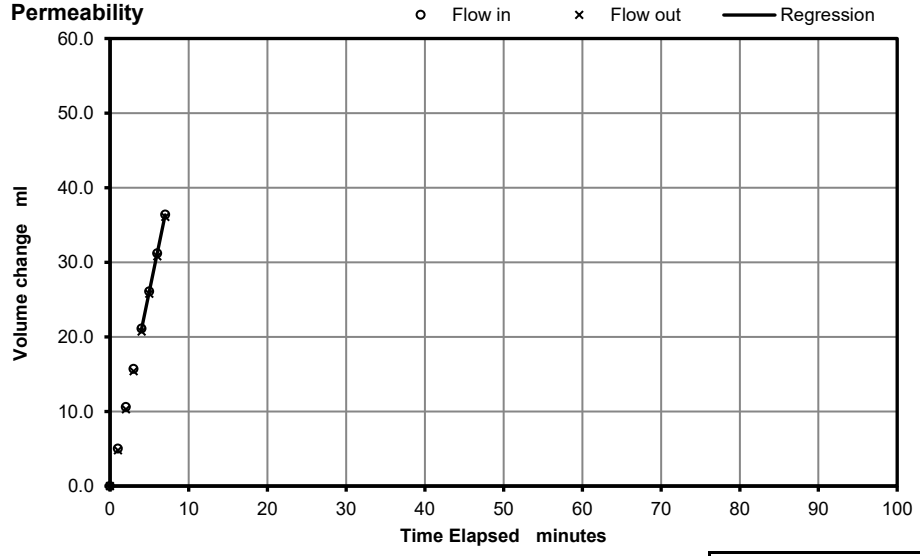
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	760	kPa
Final pore water pressure	746	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	800	kPa
Back pressure applied	750	kPa
Effective stress	50	kPa
Initial PWP	781	kPa
Final PWP	749	kPa
PWP dissipation	104	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	800	kPa
Top Pressure	755	kPa
Base Pressure	745	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.5	
Mean rate of flow	5.1	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

9.8×10^{-7} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-103
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	4.20
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown slightly gravelly silty SAND.			KeyLAB ID	TTLP2026010619
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

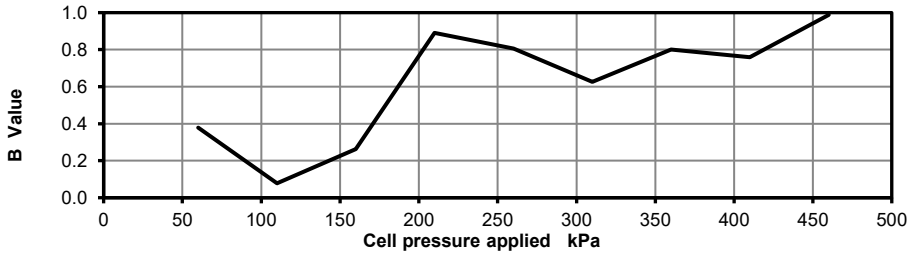
Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 14 %

Average Length	96.4	mm	
Average Diameter	103.2	mm	
Particle density	2.65	Mg/m³	Assumed

	Initial	Final	
Bulk Density	1.85	1.86	Mg/m³
Water Content	25.0	24.9	%
Dry density	1.48	1.49	Mg/m³
Voids ratio	0.794	0.784	
Degree of saturation	83	84	%

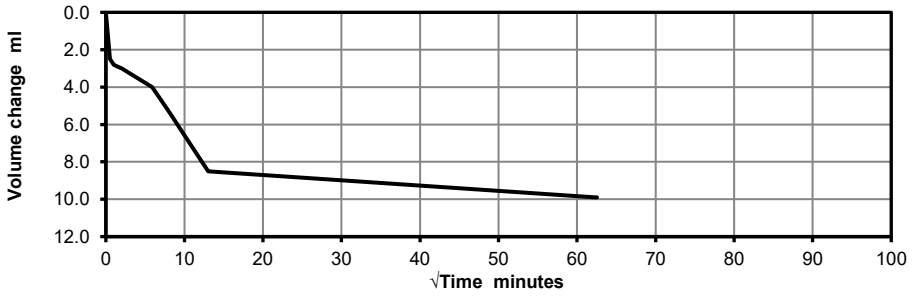
Saturation



Method: Increments of cell and back pressure

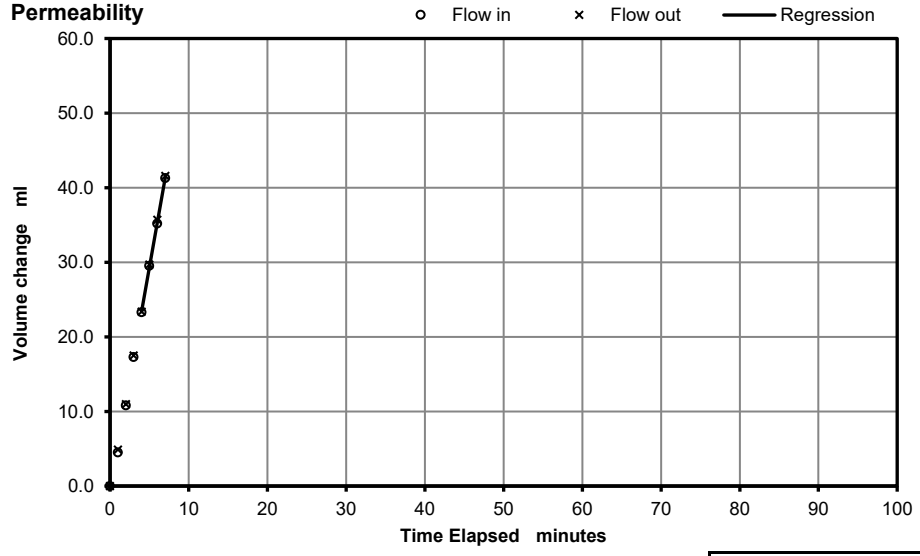
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	460	kPa
Final pore water pressure	449	kPa
Final B Value	0.99	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	500	kPa
Back pressure applied	450	kPa
Effective stress	50	kPa
Initial PWP	488	kPa
Final PWP	450	kPa
PWP dissipation	100	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	500	kPa
Top Pressure	455	kPa
Base Pressure	445	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	6.0	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.1 x 10^{-6} m/s

Remarks	
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly SAND			Depth m	2.50
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Light brown slightly gravelly SAND.			KeyLAB ID	TTLP2026010621
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

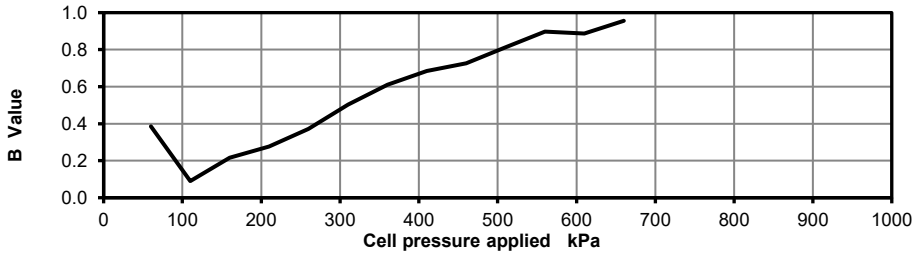
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.82	1.82	Mg/m³
Water Content				21.0	26.4	%
Average Length	96.0	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.50	1.44	Mg/m³
Voids ratio				0.763	0.841	
Degree of saturation				73	83	%

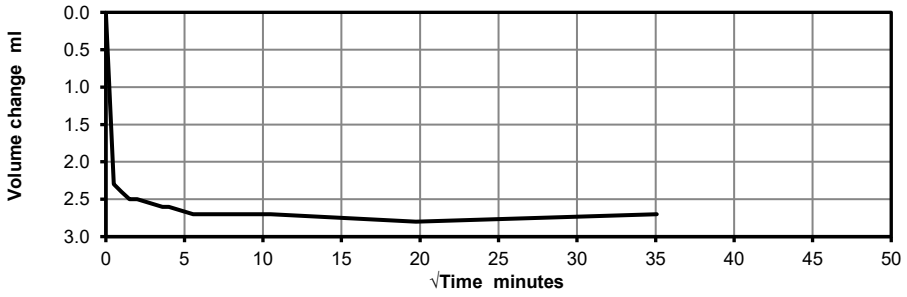
Saturation



Method: Increments of cell and back pressure

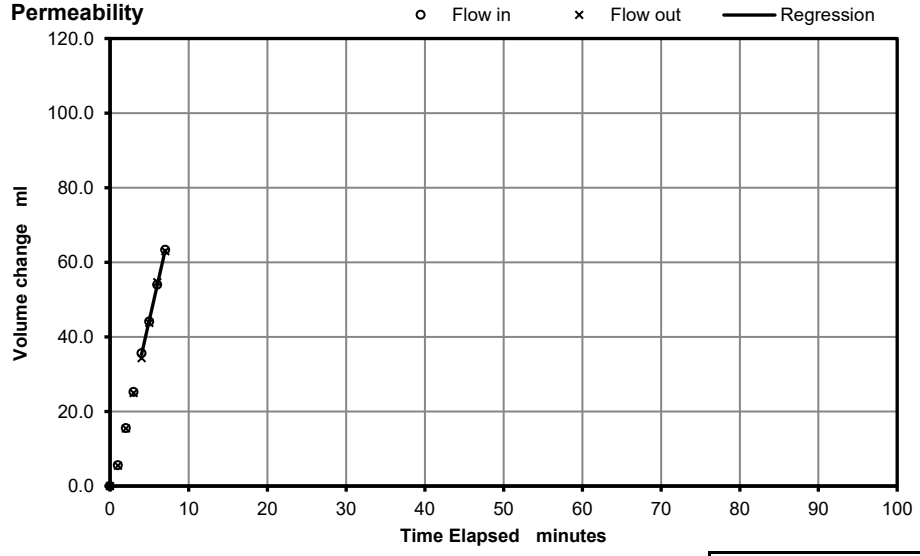
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	660	kPa
Final pore water pressure	648	kPa
Final B Value	0.96	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	700	kPa
Back pressure applied	650	kPa
Effective stress	50	kPa
Initial PWP	686	kPa
Final PWP	650	kPa
PWP dissipation	100	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	700	kPa
Top Pressure	655	kPa
Base Pressure	645	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	9.3	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.8×10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-201
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	2.00
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown slightly gravelly silty SAND.			KeyLAB ID	TTLP2026010627
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

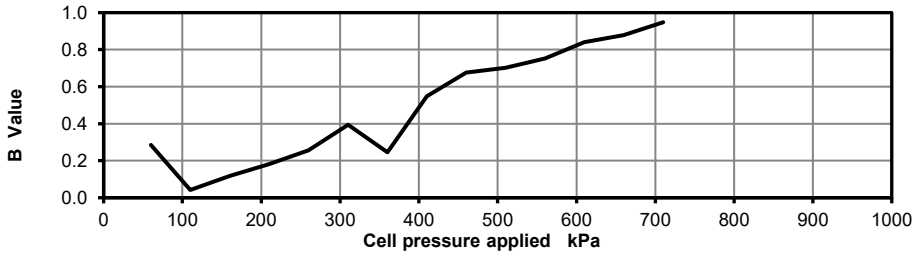
Specimen Details

Specimen Type /Preparation: REMOULDED using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.64	1.74	Mg/m³
Water Content				14.5	25.8	%
Average Length	96.0	mm				
Average Diameter	103.3	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.44	1.38	Mg/m³
Voids ratio				0.845	0.918	
Degree of saturation				45	75	%

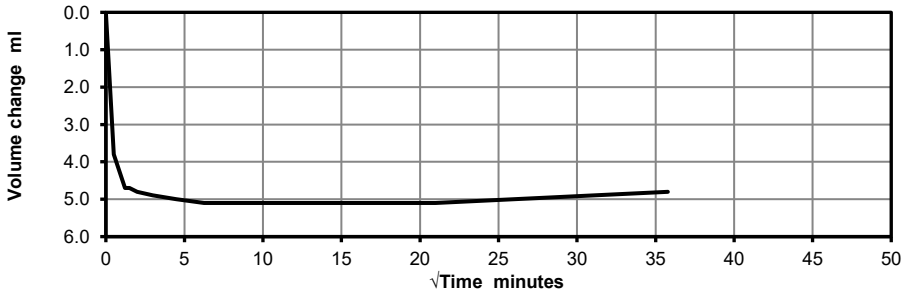
Saturation



Method: Increments of cell and back pressure

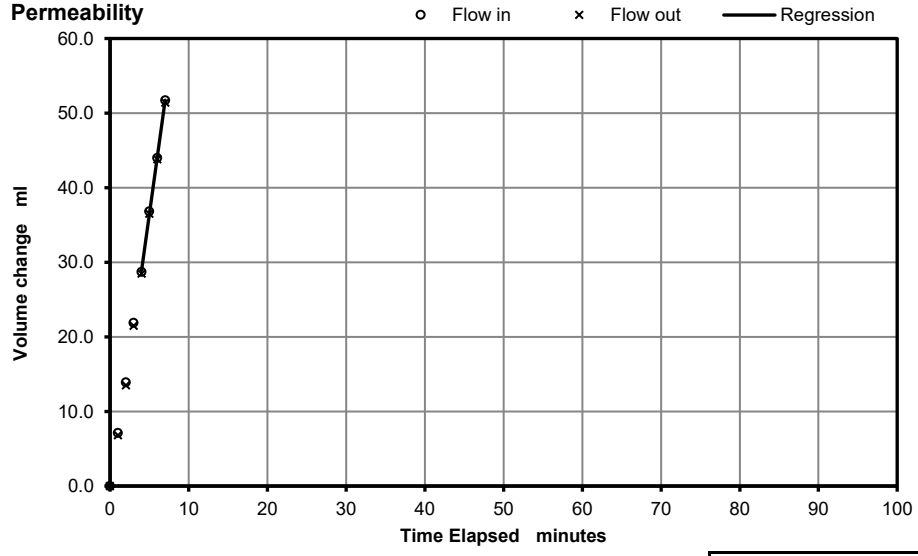
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	710	kPa
Final pore water pressure	698	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	750	kPa
Back pressure applied	700	kPa
Effective stress	50	kPa
Initial PWP	735	kPa
Final PWP	701	kPa
PWP dissipation	97	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	750	kPa
Top Pressure	705	kPa
Base Pressure	695	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	7.6	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.4 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-202
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	2.00
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown slightly gravelly silty SAND.			KeyLAB ID	TTLP2026010629
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

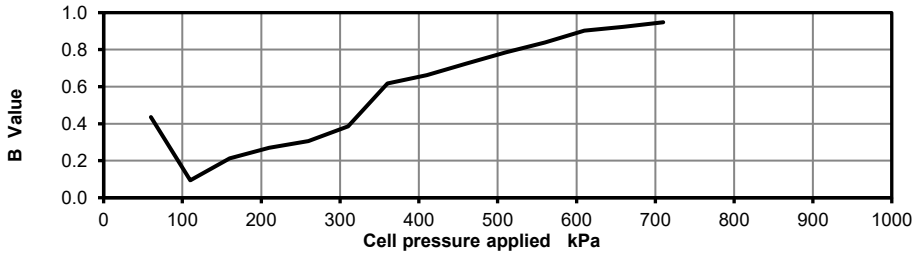
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > mm Proportion %

				Initial	Final	
Bulk Density				1.82	1.83	Mg/m³
Water Content				19.1	26.2	%
Average Length	96.0	mm		1.52	1.45	Mg/m³
Average Diameter	103.2	mm		0.738	0.832	
Particle density	2.65	Mg/m³	Assumed	69	83	%

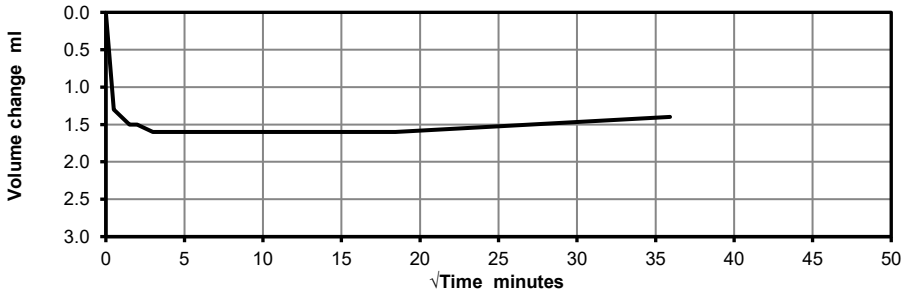
Saturation



Method: Increments of cell and back pressure

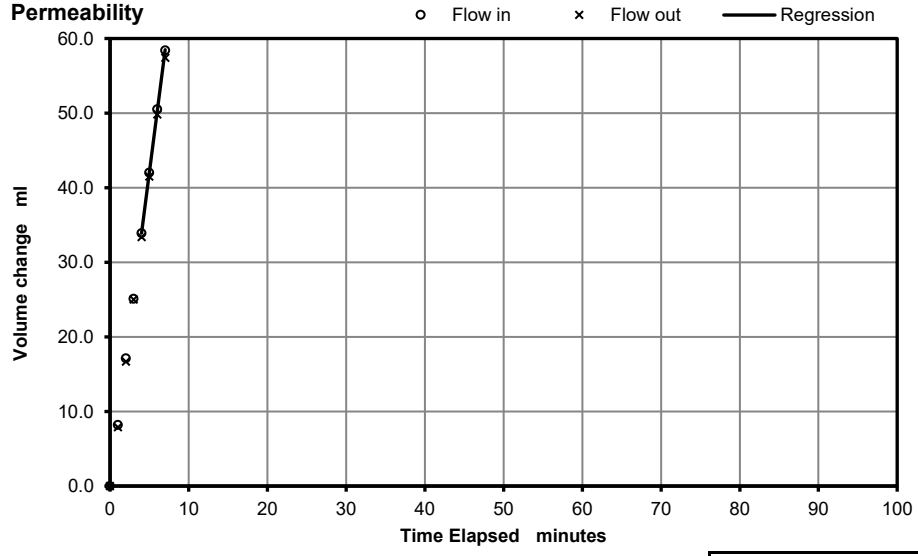
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	710	kPa
Final pore water pressure	699	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	750	kPa
Back pressure applied	700	kPa
Effective stress	50	kPa
Initial PWP	734	kPa
Final PWP	701	kPa
PWP dissipation	97	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	750	kPa
Top Pressure	705	kPa
Base Pressure	695	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	8.2	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.6 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

APPENDIX D

♣Solmek conditions of offer, notes on limitations & basis for contract (ref: version1/2026)

These conditions accompany our tender and supercede any previous conditions issued. Solmek will prepare a report solely for the use of the Client (the party invoiced) and its agent(s). No reliance should be placed on the contents of this report, in whole or in part by 3rd parties. The report, its content and format and associated data are copyright, and the property of Solmek. Photocopying of part or all of the contents, transfer or reproduction of any kind is forbidden without written permission from Solmek. A charge may be levied against such approval, the same to be made at the discretion of Solmek.

Solmek cannot be held liable and do not warrant, or otherwise guarantee the validity of information provided by third parties and subsequently used in our reports. Solmek are not responsible for the action negligent of otherwise of subcontractors or third parties.

Site investigation is a process of sampling. The scope and size of an investigation may be considered proportional to levels of confidence regarding the ground and groundwater conditions. The exploratory holes undertaken investigate only a small volume of the ground in relation to the overall size of the site, and can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions as encountered within each of the exploratory holes. There may be different ground conditions elsewhere on the site which have not been identified by this investigation and which therefore have not been taken into account in this report. Reports are generally subject to the comments of the local authority and Environment Agency. The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that mobile contamination, ground gas levels and groundwater levels may vary owing to seasonal, tidal and/or weather related effects. Solmek cannot be held liable for any unrecorded or unforeseen obstructions between exploratory boreholes and trial pits. This includes instances where previous structures on the site (buried man made structures) or the presence of boulder clay (cobbles and/or boulder obstructions) have been anticipated. All types of piling operations should make allowance for obstructions within the construction budget to accommodate this. Unrecorded ancient mining may occur anywhere where seams that have been worked and influence the rock and soil above. Dissolution cavities can occur where gypsum or chalk is present. Rotary drilling is the recommended technique to prove the integrity of the rock.

Where the scope of the investigation is limited via access to information, time constraints, equipment limitations, testing, interpretation or by the client or his agents budgetary constraints, elements not set out in the proposal and excluded from the report are deemed to be omitted from the scope of the investigation.

Desk studies are generally prepared in accordance with RICS guidelines. Environmental site investigations are generally undertaken as 'exploratory investigations' in accordance with the definitions provided in paragraph 5.4 of BS 10175:2011 in order to confirm the conceptual assumptions. You are advised to familiarize yourself with the typical scope of such an investigation. No pumping of water will be undertaken unless a licence or facilities/equipment have been arranged by others.

Where the type, number or/and depth of exploratory hole is specified by others, Solmek cannot and will not be responsible for any subsequent shortfall or inadequacy in data, and any consequent shortfall in interpretation of environmental and geotechnical aspects which may be required at a later date in order to facilitate the design of permanent or temporary works.

All information acquired by Solmek in the course of investigation is the property of Solmek, and, only also becomes the joint property of the Client only on the complete settlement of all invoices relating to the project. Solmek reserve the right to use the information in commercial tendering and marketing, unless the Client expressly wishes otherwise in writing. The quoted rates do not include VAT, and payment terms are 30 days from dispatch of invoice from our offices. Quotes are subject to a site visit.

We have allowed for 1 mobilisation and normal working hours unless otherwise stated. The scope of the investigation may be reviewed following the desk study and/or fieldwork. The presence or otherwise of Japanese Knotweed or other invasive plants can be difficult to identify especially during winter months. If Japanese Knotweed or other invasive species are suspect, it should be confirmed by an ecologist. We have not allowed for acquiring services information, and cannot be responsible for damage to underground services or pipes not shown to us or not clearly shown on plans. Costs incurred will be passed on to you, and in commissioning Solmek you understand and accept that you/your agent have a contractual relationship with Solmek & you accept this. Our rates assume unobstructed, reasonably level and firm access to the exploratory positions and adequate clear working areas and headroom. We have priced on the basis that you or your client have the necessary permissions, wayleaves and approvals to access land. All boreholes and pits are backfilled with arisings except where gas monitoring pipes are installed with stopcock covers. Solmek are not responsible for any uneven surfaces as a result of siteworks and rutting and backfilled excavations may require re-levelling and/or making good by others after fieldwork is complete, and Solmek has not allowed for this. No price has been provided or requested for a return visit to remove pipework and covers. Hourly rates apply to consultancy only and do not include expenses unless otherwise shown. If warranties are required, legal costs incurred will be passed on to you assuming Solmek agree to complete such warranties, modified or otherwise and you understand and agree to pay all costs.

We reserve the right to pursue full payment of the invoice prior to release of any information including reports. We advise you/your client that we may elect to pursue our statutory rights under late payment legislation, and will apply 8% to the base rate for unreasonably late payments. Solmek are exempt from the CIS Scheme. Solmek offer to undertake work only in strict accordance with conditions covered by our current insurances, which are available for inspection. Solmek are not responsible for acts, negligent or otherwise of subcontractors and as a matter of policy cannot indemnify any other parties. Professional indemnity Insurance is limited to ten times the invoice net total except where stated otherwise by Solmek. Solmek give notice that consequential loss as a direct or indirect result of Solmek's activities or omission of the same are excluded.

SOLMEK NOTES ON CONTAMINATION GUIDANCE (REF: VERSION 1/2026)

UK BACKGROUND

Environmental Protection Act 1990: Part 2A Revised Statutory Guidance (April 2012)

This revised document explains how the Local Authority should decide if land, based on a legal interpretation, is contaminated. The document replaces the previous guidance given in Annex 3 of DEFRA Circular 01/2006, issued in accordance with section 78YA of the 1990 Environmental Protection Act.

The main objectives of the Part 2A regime are to *"identify and remove unacceptable risks to human health and the environment" and* to *"seek to ensure that contaminated land is made suitable for its current use".*

Part 2A uses a risk based approach to defining contaminated land whereby the "risk" is interpreted as *"the likelihood that harm, or pollution of water, will occur as a result of contaminants in, on or under the land"* and by *"the scale and seriousness of such harm or pollution if it did occur".*

For a relevant risk to exist a contaminant, pathway and receptor linkage must be present before the land can be considered to be contaminated. The document explains that *"for a risk to exist there must be contaminants present in, on or under the land in a form and quantity that poses a hazard, and one or more pathways by which they might significantly harm people, the environment, or property; or significantly pollute controlled waters."*

A conceptual model is used to develop and communicate the risks associated with a particular site.

To determine if land is contaminated the local authority use various categories from 1 to 4. Categories 1 and 2 include *"land which is capable of being determined as contaminated land on grounds of significant possibility of significant harm to human health."*

Categories 3 and 4 *"encompass land which is not capable of being determined on such grounds".*

PRELIMINARY CONCEPTUAL MODEL

Preliminary Conceptual Models are undertaken in accordance with CIRIA C552. The Preliminary Conceptual Model assesses the consequence and the likelihood of a risk being realised to provide a risk classification, using the tables detailed below.

CONSEQUENCE OF RISK BEING REALISED (Based on C552 CIRIA, 2001)

Classification	Definition	Example
Severe	Short-term (acute) risk to human health, the environment, an element of the development or other aspect with is likely to result in *significant harm*, damage or both.	High concentrations of cyanide on the surface of an informal recreational area. Major spills of contaminants from site into controlled water. High concentrations of explosive gas in the subsurface environment that have a clear unobstructed pathway into buildings.
Moderate	Chronic damage to human health, a plausible chance that an event will occur, although the timeline is not immediate to be in the short-term.	Appreciable concentration of contamination that over the longer-term will cause significant harm i.e. high lead concentration in topsoil. Shallow mine workings that are potentially unstable but may remain in a satisfactory or stable conditions for a number of years.
Mild	Low level pollution of non-sensitive water, a feasible hazardous scenario although the timeline of such occurring can probably be considered in 10's of years.	The effect of high sulphate concentrations on structural concrete. Pollution of non-classified groundwater.
Minor	Harm, although not necessarily significant to human health, or with respect to other aspects of the development, which are considered implausible in terms of occurrence, or will have little consequential impact.	The presence of contaminants at such low concentrations that protective equipment is required during site works. Any damage to structures is minimal and will not be structural in characteristics.

PROBABILITY OF RISK BEING REALISED (C552 CIRIA, 2001)

Classification	Definition
High Likelihood	There is a viable pollutant linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence that the receptor has been harmed or polluted.
Likely	There is a viable pollutant linkage and all elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a viable pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely	There is a viable pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

RISK CLASSIFICATION MATRIX (C552 CIRIA, 2001)

Risk = Probability x Consequence		Consequence			
		Severe	Moderate	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Moderate/low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

HUMAN RECEPTORS

Human exposure to contaminants present in soils can occur via several pathways. Direct exposure pathways include dermal absorption after contact with contaminated ground, inhalation of soil or dust, inhalation of volatised compounds, and inadvertent soil ingestion (or deliberate soil ingestion in the case of some children). Other indirect pathways include human ingestion of plants grown in contaminated soil or contaminated ground or surface water. Contaminants associated with wind blown dust can affect humans on surrounding sites.

VEGETATION

Plants can be affected by soil contamination in a number of ways resulting in growth inhibition, nutrient deficiencies and yellowing of leaves. Contaminants are taken up by plants through the roots and through foliage. Contaminants identified as being highly phytotoxic include boron, cadmium, copper, lead, nickel, and zinc.

To establish if the levels of contaminants present on a site may pose a risk to vegetation the results of the contamination testing are compared to a series of threshold values published in 'Code of Good Agricultural Practice for the Protection of Soil'.

GROUNDWATER AND SURFACE WATER RECEPTORS

The principal pathway by which soil contamination may reach the water environment is through a slow seepage or leaching to groundwater or surface water. The potential for contaminants to migrate along such pathways is dependent on the chemical and physical characteristics of the contaminants and the local hydrogeology. Surface watercourses may also accumulate contamination as contaminated sediments are deposited within the water body.

Where the site investigated overlies major/principal aquifers (and in some cases minor/secondary aquifers depending on certain conditions), groundwater Source Protection Zones and areas in close proximity to groundwater abstractions, contamination test results have been compared with the Water Supply (Water Quality) Regulations 1989 and The Water Supply (Water Quality) Regulations 2000.

Should a surface water receptor, such as a fresh water environment (river, canal, stream, lake etc), or marine environment be considered sensitive in relation to a site, then test results are compared with DEFRA & SEPA Environmental Quality Standards (2004). Many of the Environmental Quality Standards are hardness ($CaCO_3$) depended. Where no hardness values are available, Solmek assume conservative values (of between 0 and 50mg/l).

In the absence of vulnerable ground and surface water environments, Solmek may compare any test results with the Environment Agency Leachate Quality Threshold Values.

DETAILED QUANTITATIVE RISK ASSESSMENT (DQRA)

In line with Environment Agency's guidance document Environment Agency *Land Contamination Risk Management*, which replaced the now-withdrawn *Contaminated Land Report 11 – Model Procedures for the Management of Land Contamination (2004)*, a DQRA for groundwater/human health may be required following a Phase 2 investigation and before the preparation of a Phase 3 Remediation Strategy. For human health DQRA, a site specific assessment criteria is undertaken using CLEA Software Version 1.06. For groundwater DQRA, the Environment Agency Remedial Targets Worksheet Version 3.1 is used.

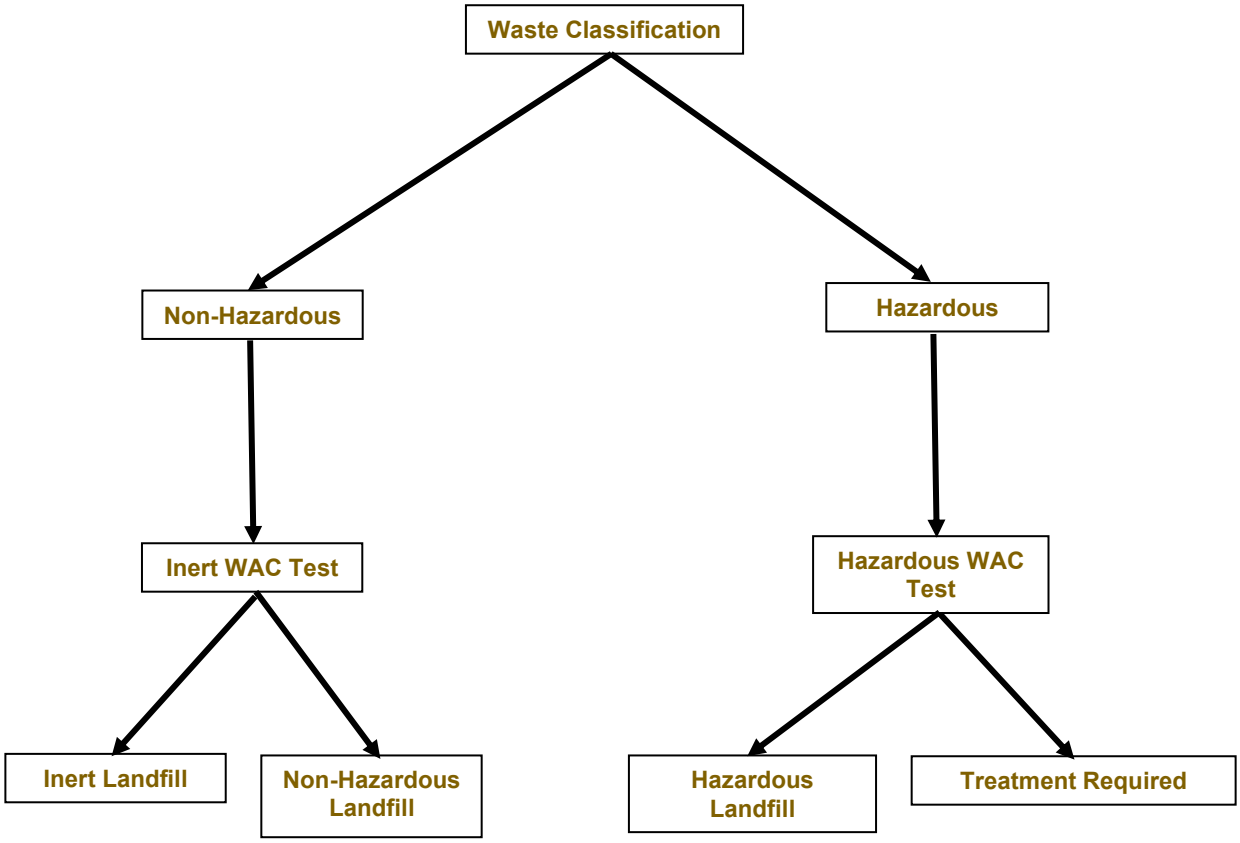
WASTE CLASSIFICATION AND WASTE ACCEPTANCE CRITERIA

During the site strip and construction activities, material may be required to be removed from site. Any such material would require classification, in line with Environment Agency Technical Guidance *Waste Classification: Guidance on the classification and assessment of waste (2015)*. This would classify the material as either Non-Hazardous or Hazardous Waste.

Once the material has been classified, determining the suitable landfill for disposal is governed by landfill directive Waste Acceptance Criteria (WAC) testing, with landfills categorized as Inert Waste, Stable Non-Reactive Hazardous Waste and Hazardous Waste. The WAC testing relates to materials that are to be exported from a site/development to landfill, and do not directly relate to human health specifically. The testing results are generally presented as certificates which can be used by site owners/contractors etc, which should be presented to the accepting waste facility or waste contractor.

If waste classification and/or WAC testing are not undertaken, material taken off site may be subject to WAC testing by the appropriate waste disposal company. The decision on whether or not to accept waste, or whether further testing is required, is at the discretion of the waste disposal company.

The below flow chart provides further information on the waste classification process.



CONSTRUCTION MATERIALS

Materials at risk from possible soil contaminants include inorganic matrices such as cement and concrete and also organic material such as plastics and rubbers. Acid ground conditions and high levels of sulphates can accelerate the corrosion of building materials. Where pH and soluble sulphate analysis has been undertaken, Solmek compare the test results with the guidelines presented within BRE Special Digest 1, 2005 (3rd Edition) 'Concrete in Aggressive Ground'. Plastics and rubbers are generally used for piping and service ducts and are potentially attacked by a range of chemicals, most of which are organic, particularly petroleum based substances. Drinking water supplies can be tainted by substances that can penetrate piping and water companies enforce stringent threshold values.

The levels of potential contaminants should be compared to thresholds supplied in the UK Water Industry Research (UKWIR) publication "Guidance for the selection of Water Supply Pipes to be used in Brownfield Sites" (January 2011). A Brownfield Site is defined in the document as "Land or premises that have not previously been used or developed that may be vacant or derelict". It should be noted that Brownfield sites may not be contaminated. The guidance does not apply to Greenfield Sites however water companies may have their own assessment criteria which should be checked by the developer. The table below outlines the pipe material selection threshold concentrations.

	Pipe Material (Threshold concentrations in mg/kg)					
Parameter group	**PE**	**PVC**	**Barrier pipe (PE-AL-PE)**	**Wrapped Steel**	**Wrapped Ductile Iron**	**Copper**
Extended VOC suite by purge and trap or head space and GC-MS with TIC	0.5	0.125	Pass	Pass	Pass	Pass
+ BTEX + MTBE	0.1	0.03	Pass	Pass	Pass	Pass
SVOCs TIC by purge and trap or head space and GC-MS with TIC (aliphatic and aromatic C5-C10)	2	1.4	Pass	Pass	Pass	Pass
+ Phenols	2	0.4	Pass	Pass	Pass	Pass
+ Cresols and chlorinated phenols	2	0.04	Pass	Pass	Pass	Pass
Mineral oil C11-C20	10	Pass	Pass	Pass	Pass	Pass
Mineral oil C21-C40	500	Pass	Pass	Pass	Pass	Pass
Corrosive (Conductivity, Redox and pH)	Pass	Pass	Pass	Corrosive if pH <7 and conductivity >400µS/cm	Corrosive if pH <5, Eh not neutral and conductivity >400µS/cm	Corrosive if pH <5 or >8 and Eh positive
Specific suite identified as relevant following site investigation						
Ethers	0.5	1	Pass	Pass	Pass	Pass
Nitrobenzene	0.5	0.4	Pass	Pass	Pass	Pass
Ketones	0.5	0.02	Pass	Pass	Pass	Pass
Aldehydes	0.5	0.02	Pass	Pass	Pass	Pass
Amines	Fail	Pass	Pass	Pass	Pass	Pass

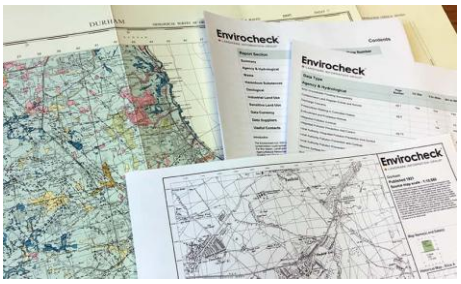
REQUIREMENTS OF PARTIES WITHIN THE DEVELOPMENT PROCESS

Interested parties involved in the development process may use the data in different ways and there may be varying views and interpretation of the factual data. Local Authority staff may have a view on contamination and human health and the wider environment. The Environment Agency are concerned principally with the protection of Controlled waters. Building insurers, funders and purchasers may be primarily concerned with issues of potential commercial blight. Purchasers are also not always fully informed, and perceptions on issues associated with risk can affect the decision to purchase. Developers and construction organisations will focus on financial aspects of dealing with the contamination in the context of the development and construction programme.

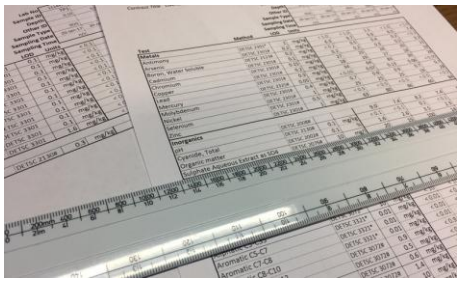
RISKS & LIABILITIES FROM CONTAMINATION

In simple terms, risks associated with contamination may be considered in terms of 1) statutory risks and 2) development related risks. If contamination is severe or forms a potential hazard based on its potential to affect groundwater, surface water or human health, a statutory risk may be present, and as such, if the risk is not reduced, criminal proceedings may be instigated by a government body or local authority.

If the contamination is less severe or not considered to be mobile, it may be considered a commercial liability which could, in theory remain untreated, but which may at a later date affect the value of the property, or, with changing legislation, become a statutory risk. Commercial liabilities could give rise to civil proceedings by third parties if there are grounds for action.







Factual Site Investigation

Phase 2 Marine & Landside Ground Investigation, Ardersier Port, Inverness

Haventus Ardersier Port

S250403

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DRAFT FACTUAL SITE INVESTIGATION REPORT

PHASE 2 MARINE & LANDSIDE GI

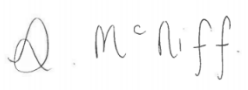
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3 GROUND CONDITIONS 3
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APPENDICES

Appendix A: Drawings
Appendix B: Sonic Borehole Logs
Appendix C: Contamination Laboratory Results
Appendix D: Geotechnical Laboratory Results
Appendix E: Notes on Limitations & Contamination Guidance

Revision	Date	Prepared by	Signed
Final	March 2026	S. McNiff *Contracts Manager*	
		Checked by	
		R Woods *Managing Director*	
		Approved by	
		R Woods *Managing Director*	

1 INTRODUCTION

1.1 Authorisation

The site investigation described in this report was carried out by Solmek to the instructions of Fairhurst on behalf of Haventus Ardersier Port, on land located to the south of Ardersier Port to the east of Inverness. A site location plan is presented in Appendix A, Figure 1. All borehole co-ordinates and elevations are referenced to Ordnance Datum (AOD).

Sources of information, including previous work undertaken at the site, are detailed below:

- *Blake Geoservices Ltd, Whiteness Yard & Spit Factual Report, 12159-01 (July 2013)*
- *Solmek Phase 2 Site Investigation, Phase 1 Quay Wall, S221111 (June 2023)*
- *Solmek Phase 2 Site Investigation, Marine Scotland Boreholes, S230232 (June 2023)*
- *Solmek Phase 2 Site Investigation, Phase 3 Quay Wall, S231026 (June 2024)*
- *Solmek Phase 2 Site Investigation, Phase 2 Quay Wall, S240936 (February 2025)*
- *Solmek Phase 2 Site Investigation, Launch Pocket Phase 2 Quay Wall, S250401 (August 2025)*
- *Solmek Phase 2 Site Investigation, Phase 2 Onshore GI Areas 1 to 5, S250402 (October 2025)*

Reference should be made to the above report for details of the site's previous ground conditions.

The scope of the site investigation undertaken was set out within Fairhurst: Contract for Phase 2 marine Development Ground Investigation at Ardersier Port (BIM Ref: APP2-FHT-XX-CHA-SP-G-000001, March 2025).

1.2 Background & Scope of Works

The port is to become an Energy Transition Facility. The proposed development will also include a concrete production plant using dredged sand from the port inlet. This report covers ground investigation works to support the design of wider platform/ lay-down zones.

The following steps may be required in the investigation and remediation of potentially contaminated land:

- Phase 1: Desk Study
- Phase 2: Intrusive Investigation
- Phase 3: Remediation Statement
- Phase 4: Validation Reports

Phases 1 and 2 are generally required in the redevelopment of most sites. Phases 3 and 4 are subject to the findings of the initial stages.

A factual geotechnical report and contamination assessment (Phase 2) was requested. The fieldwork and testing was generally carried out according to:

- BS 5930:2015+A1:2020 Code of Practice for Ground Investigations
- BS 10175:2011+A1:2013 Investigation of Potentially Contaminated Sites – Code of Practice.
- Rock and soil descriptions shall be in accordance with BS EN ISO 14689-1:2003, BS EN ISO 14688-1:2002 and BS EN ISO 14688-2:2004

This report forms part of a Stage 1 Risk Assessment (Generic Quantitative Risk Assessment) with respect to the Environment Agency's guidance document Environment Agency *Land Contamination Risk Management*, which replaced the now-withdrawn *Contaminated Land Report 11 – Model Procedures for the Management of Land Contamination (2004)*.

The information provided in this report is based on the investigation fieldwork and is subject to the comments and approval of the various regulatory authorities. There may be other conditions prevailing on the site which have not been disclosed by this investigation, and which have not been considered by this report. Solmek, reserve the right to alter conclusions and recommendations should further information be available or

provided.

Any schematic representation or opinion of the possible configuration of ground conditions between exploratory holes is conjectural and given for guidance only and confirmation of intermediate ground conditions should be considered if deemed necessary.

2 SITE DESCRIPTION AND FIELDWORK

An initial site inspection, as recommended in BS 5930 and BS 10175, was undertaken on 23rd April 2025.

The site is approximately centred at Ordnance Survey Co-ordinates 280829E, 857204N and lies south adjacent to current Ardersier Port boundaries. Ardersier Port is situated around an inlet at the mouth of the Moray Firth. The site comprises the dock area and a stretch of water separated by a sand spit.

The area of the proposed development is generally triangular with a mostly flat and even topography. The site generally comprises an area of mature forestry. Across central areas, a small farmstead is present with land designated to crop cultivation and rearing of livestock (pheasants and ducks). Several smaller residential premises are also located within central and southern areas of the site. Trending roughly north-south across the site there is a clearing in which overhead power lines run.

2.1 Fieldwork

The drilling fieldwork was carried out between August and Septemer 2025. The extent of the investigation was:

Marine Positions

- 19no. overwater sonic boreholes (ref: BH-106-119, 201-203, 205 & 207) drilled to depths of -34.30m below chart datum (CD).
- The boreholes were positioned by Fairhurst
- In-situ testing in the boreholes as Standard Penetration Tests (SPTs) throughout the entire borehole depth.
- Retrieval of disturbed and undisturbed samples for geotechnical testing.
- Environmental samples taken for Marine Scotland testing.

Landside Positions

- 5no. sonic boreholes (ref: BH-301 to 305) drilled to depths of 22.95m below ground level (bgl)
- The boreholes were positioned by Fairhurst
- In-situ testing in the boreholes as Standard Penetration Tests (SPTs) throughout the entire borehole depth.
- Retrieval of disturbed and undisturbed samples for geotechnical testing.
- Environmental samples taken for Marine Scotland testing.

The boreholes were backfilled with bentonite grout upon completion.

Descriptions of the strata encountered in the boreholes together with details of sampling and groundwater are presented in Appendix B of this report.

3 GROUND CONDITIONS

A summary of the ground conditions encountered is given below.

3.1 Made Ground Deposits

Made ground was absent across all exploratory locations except for some shallow reworked sand at the landside borehole locations

3.2 Superficial Deposits

The superficial deposits generally comprised comprised SAND with varying levels of secondary constituents of gravel, silt and clay. The sand was recorded as medium dense to dense.

3.3 Bedrock

Not proven.

3.4 Groundwater

Groundwater strikes on the landside boreholes are shown in Table 1 below.

TABLE 1: GROUNDWATER RECORDS FROM BOREHOLES DURING FIELDWORK

Location	Depth of Strike (mbgl)	Stratum
BH-301	2.92	SAND
BH-302	2.89	SAND
BH-303	2.72	SAND
BH-304	2.95	SAND
BH-305	3.30	SAND

4 CONTAMINATION TESTING

This phase of works concerns the assessment of proposed dredge materials for possible off-shore disposal.

The chemical samples were generally retrieved in line with BS ISO 18400-105:2017 *Soil Quality. Sampling* and also in line with the testing laboratory specifications. The chemical results are presented in Appendix C.

4.1 Contamination Testing and Rationale

To provide information upon the possibility of ground contamination 68no samples of natural sand were selected for contamination testing. The depth of interest for testing was specified by Fairhurst.

- 68no. Marine Scotland Testing Suite

5 GEOTECHNICAL TESTING

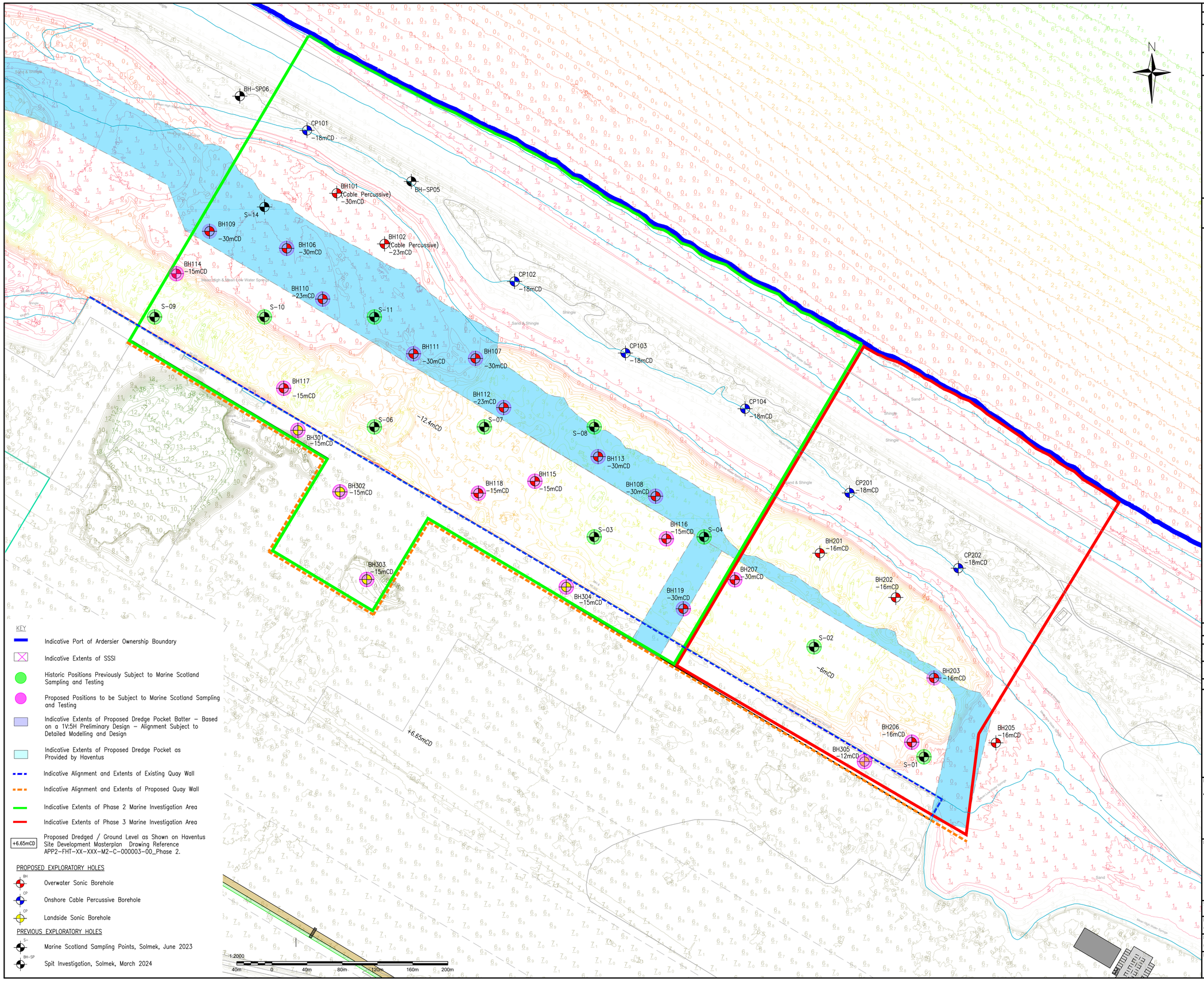
Samples taken from the boreholes underwent a series of geotechnical tests to aid platform design and soil description. In addition, insitu Standard Penetration Tests (SPTs) were undertaken at regular intervals across the entire borehole depth.

5.1 Laboratory Testing

The laboratory testing (requested and scheduled by Fairhurst) is presented in Appendix D (Geotechnical).

SOLMEK

APPENDIX A



KEY

- Indicative Port of Ardersier Ownership Boundary
- Indicative Extents of SSSI
- Historic Positions Previously Subject to Marine Scotland Sampling and Testing
- Proposed Positions to be Subject to Marine Scotland Sampling and Testing
- Indicative Extents of Proposed Dredge Pocket Batter – Based on a 1V:5H Preliminary Design – Alignment Subject to Detailed Modelling and Design
- Indicative Extents of Proposed Dredge Pocket as Provided by Haventus
- Indicative Alignment and Extents of Existing Quay Wall
- Indicative Alignment and Extents of Proposed Quay Wall
- Indicative Extents of Phase 2 Marine Investigation Area
- Indicative Extents of Phase 3 Marine Investigation Area
- +6.65mCD — Proposed Dredged / Ground Level as Shown on Haventus Site Development Masterplan Drawing Reference APP2–FHT–XX–XXX–M2–C–000003–00_Phase 2.

PROPOSED EXPLORATORY HOLES

- BH — Overwater Sonic Borehole
- CP — Onshore Cable Percussive Borehole
- CP — Landside Sonic Borehole

PREVIOUS EXPLORATORY HOLES

- SC — Marine Scotland Sampling Points, Solmek, June 2023
- SH–SP — Spit Investigation, Solmek, March 2024

Do not scale from this drawing.

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARD/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING RISKS AND INFORMATION.

RISKS LISTED HERE ARE NOT EXHAUSTIVE. REFER TO DESIGN ASSESSMENT FORM NO. 162855/DAF/01 – ISSUE 3

SITE INVESTIGATION

- Services and overhead cables
- Contamination (including hydrocarbons and asbestos)
- Adjacent activities and client operations
- Restricted site
- Ground instability
- Working at height
- Overwater works
- Working near to waterways
- Tidal working
- Inundation
- UXO
- Working within a protected area
- Working behind quay wall – Potential presence of tie rods/anchors

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

NOTES

1. Site plan is based on the Haventus Site Development Masterplan Drawing Reference APP2–FHT–XX–XXX–M2–C–000003–00_Phase 2.
2. No boreholes are to be positioned above Mean High Water Springs without Regulatory agreement.
3. Proposed scope of ground investigation is subject to receipt of relevant permissions, to be applied for by the Client team. This is not within Fairhurst's scope of works.
4. Exploratory hole positions and depths are subject to change to suit site conditions and constraints. Any changes are first to be agreed with the Engineer and Client.
5. Exploratory hole positions are provisional until such a time as utility information, to be procured by the Contractor, is provided for review by the Engineer.
6. Borehole positions at the crest or mid–slope are based on a 1V:5H preliminary design. Actual slope alignment is subject to detailed design.
7. All sediment sampling and sub–sampling in the dredge pocket and associated batters for the purposes of informing material suitability for offshore disposal is to be undertaken in accordance with the requirements of Marine Scotland. The Contractor is to review and comply fully with these requirements.
8. Scope of sediment sampling for offshore disposal is subject to an agreed sampling plan with Marine Scotland.
9. Testing laboratory used must be ISO17025 accredited for marine sediment analysis and take part in comparison exercises such as QUASIMEME. The laboratory should also meet the LOD and sensitivity requirements set out in CSEMP Green Book.
10. The Contractor is responsible for clearing services at all exploratory hole locations.
11. The Contractor is responsible for protection of the existing quay wall. All exploratory holes are to be cleared for associated infrastructure (i.e tie rods, anchor piles etc.).
12. The Contractor is responsible for all setting out and must record as build coordinates and levels as per the Ground Investigation Specification.

Rev.	Date	Description	Drwn.	Chkd.	Appd.
D	07/08/25	BH101 and BH102 updated to be cable percussive. BH108 and BH203 moved.	LB	AH	AKF
C	06/08/25	BH113, 108 and 205 moved.	LB	AH	AKF
B	31/07/25	BHs 101 & 102 moved to estimated mean high water springs line following spitreinstatement and depths updated. BH 103, 104, 105 & 204 removed. BH 105, 113 & 203 moved.	JD	AH	AKF
A	16/06/25	REVISED TO REFLECT CLIENT COMMENTS	OAU	CM	DD

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Tel: 0191 221 0505
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Client: Haventus

Project Title:
Ardersier Port Redevelopment

Drawing Title:
MARINE INVESTIGATION
EXPLORATORY HOLE LOCATION PLAN
PHASE 2 AND PHASE 3

Scale at A1:	Status:	
1:2000	Tender	
Drawn: OAU	Checked: CM/CL	Approved: JMM
Date: 06/06/25	Date: 06/06/25	Date: 06/06/25

Drawing No.: APP2–FHT–DD–CHA–DR–G–009106 Revision: D

APPENDIX B

SOLMEK
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Borehole Log

Scale 1:50 Sheet 1 of 4

BH-106

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	16/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	17/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	17/09/2025

GL (AOD):	1.79m	
Easting:	280659	
Northing:	858400	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Void comprising moonpool of drilling platform and dpeth of water prior to encountering sea bed			
		2.82	1.07	Organic, black, very silty SAND. Sand is fine to medium grained.	2.80 - 2.95	ES	
		3.10	0.79	Medium dense grey, silty SAND. Sand is fine to medium grained. Rare, fine gravel grained shell fragments.	3.30 - 3.45	ES	
					3.80 - 3.95	ES	
					4.30 - 4.75	SPT (S)	N=9 (2,2/2,2,2,3)
					4.30 - 4.45	ES	
					4.30 - 4.75	SPTLS	
					4.80 - 4.95	ES	
					5.30 - 5.45	ES	
					5.80 - 6.25	SPT (S)	N=8 (1,2/2,2,2,2)
					5.80 - 6.25	SPTLS	
					5.89 - 6.39	ES	
					6.30 - 6.45	ES	
					6.80 - 6.95	ES	
					7.30 - 7.75	SPT (S)	N=11 (2,3/2,3,3,3)
					7.30 - 7.45	ES	
					7.30 - 7.75	SPTLS	
					7.80 - 7.95	ES	
		8.30	-4.41	Medium dense grey, silty, gravelly SAND. Sand is fine to medium grained. Gravel is fine to coarse gained, rounded to well-rounded of mudstone sandstone and limestone.	8.30 - 8.45	ES	
		8.70	-4.81	Medium dense light Brown, silty , gravelly SAND. Sand is fine to medium grained. Gravel is fine to medium gained, rounded to well-rounded of mudstone sandstone and limestone.	8.80 - 9.25	SPT (S)	N=14 (2,4/3,3,4,4)
		8.80	-4.91	Medium dense light brown, silty, slightly gravelly SAND. Sand is fine to medium grained. Gravel is fine gained, rounded to well-rounded of mudstone sandstone and limestone.	8.80 - 8.95	ES	
					8.80 - 9.25	SPTLS	
					9.09 - 9.59	ES	

Hole Diameter

Depth Base (m)	Diameter (mm)
34.75	177

Casing Depths

Depth Base (m)	Diameter (mm)
34.30	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

BH-106

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	16/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	17/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	17/09/2025

GL (AOD):	1.79m
Easting:	280659
Northing:	858400
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Medium dense light brown, silty, slightly gravelly SAND. Sand is fine to medium grained. Gravel is fine gained, rounded to well-rounded of mudstone sandstone and limestone.			
		10.30	-6.41	Medium dense brown to beige, silty SAND. Sand is fine to medium grained.	10.30 - 10.75	SPT (S)	N=23 (2,3/4,5,6,8)
					10.30 - 10.75	B	
					10.30 - 10.80	SPTLS	
					10.80 - 10.90	D	
					11.80 - 12.25	SPT (S)	N=25 (3,4/5,6,7,7)
					11.80 - 11.90	B	
					11.80 - 12.25	D	
					11.80 - 12.30	SPTLS	
					12.80 - 12.90	D	
					13.30 - 13.75	SPT (S)	N=19 (2,2/3,4,5,7)
					13.30 - 13.75	B	
					13.30 - 13.80	SPTLS	
					13.80 - 13.90	D	
		14.60	-10.71				
		14.80	-10.91	Medium dense to dense brown to orange brown, gravelly SAND. Sand is medium to coarse grained. Gravel is fine grained, sub-angular to sub-rounded of mudstone, sandstone, limestone and shell debris.	14.80 - 15.25	SPT (S)	N=31 (4,5/6,7,8,10)
					14.80 - 14.90	B	
				Dense light brown silty, SAND. Sand is fine grained.	14.80 - 15.25	D	
		15.30	-11.41		14.80 - 15.30	SPTLS	
				Dense greenish brown, slightly clayey, silty, gravelly SAND. Sand is medium to coarse grained. Gravel is fine to medium grained, sub-angular to rounded of mudstone, sandstone and limestone.			
		15.70	-11.81	Medium dense grey, silty SAND. Sand is fine to medium grained.	15.80 - 15.90	D	
					16.30 - 16.75	SPT (S)	N=27 (4,4/6,6,7,8)
					16.30 - 16.75	B	
					16.30 - 16.80	SPTLS	
					16.80 - 16.90	D	
		17.00	-13.11				
		17.20	-13.31	Medium dense greenish brown, slightly clayey, silty, gravelly SAND. Sand is medium to coarse grained. Gravel is fine to medium grained, sub-angular to rounded of mudstone, sandstone and limestone.			
				Medium dense to dense grey, silty SAND. Sand is fine to medium grained.			
					17.80 - 17.90	B	
					17.80 - 18.30	D	
					18.80 - 18.90	D	
					19.30 - 19.75	SPT (S)	N=28 (3,5/5,7,8,8)
					19.30 - 19.75	B	
					19.30 - 19.80	SPTLS	
					19.80 - 19.90	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
34.75	177

Casing Depths

Depth Base (m)	Diameter (mm)
34.30	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 3 of 4

BH-106

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	16/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	17/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	17/09/2025

GL (AOD):	1.79m	
Easting:	280659	
Northing:	858400	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to dense grey, silty SAND. Sand is fine to medium grained.			
					20.80 - 21.25	SPT (S)	N=28 (4,5/6,7,7,8)
					20.80 - 20.90	B	
					20.80 - 21.25	D	
					20.80 - 21.30	SPTLS	
					21.80 - 21.90	D	
					22.30 - 22.75	SPT (S)	N=27 (4,6/7,6,7,7)
					22.30 - 22.75	B	
					22.30 - 22.80	B+ES	
					22.80 - 22.90	D	
					23.80 - 24.25	SPT (S)	N=28 (4,6/7,7,6,8)
					23.80 - 23.90	B	
					23.80 - 24.25	B+ES	
					23.80 - 24.30	D	
					24.80 - 24.90	D	
					25.30 - 25.75	SPT (S)	N=28 (4,6/7,7,6,8)
					25.30 - 25.75	B	
					25.30 - 25.80	SPTLS	
					25.80 - 25.90	D	
					26.80 - 27.25	SPT (S)	N=31 (5,6/7,8,8,8)
					26.80 - 26.90	B	
					26.80 - 27.25	D	
					26.80 - 27.30	SPTLS	
					27.80 - 27.90	D	
					28.30 - 28.75	SPT (S)	N=36 (5,7/8,9,9,10)
					28.30 - 28.75	B	
					28.30 - 28.80	SPTLS	
					28.80 - 28.90	D	
					29.80 - 30.25	SPT (S)	N=36 (6,7/8,9,10,9)
					29.80 - 29.90	B	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
34.75	177	34.30	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 4 of 4

BH-106

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	16/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	17/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	17/09/2025

GL (AOD):	1.79m
Easting:	280659
Northing:	858400
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to dense grey, silty SAND. Sand is fine to medium grained.	29.80 - 30.25	D	
					29.80 - 30.30	SPTLS	
					30.80 - 30.90	D	
					31.30 - 31.75	SPT (S)	N=35 (6,7/8,9,8,10)
					31.30 - 31.75	B	
					31.30 - 31.80	SPTLS	
					31.80 - 31.90	D	
					32.80 - 33.25	SPT (S)	N=39 (6,7/9,10,10,10)
					32.80 - 32.90	B	
					32.80 - 33.25	D	
					32.80 - 33.30	SPTLS	
					33.80 - 33.90	D	
					34.30 - 34.75	SPT (S)	N=41 (6,8/9,10,11,11)
					34.30 - 34.75	SPTLS	
		34.75	-30.86	End of Borehole at 34.750m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
34.75	177	34.30	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 4

BH-107

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	15/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	18/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	18/09/2025

GL (AOD):	1.64m	
Easting:	280869	
Northing:	858269	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Void comprising moonpool on drilling platform and depth of water before encountering seabed.			
		3.12	0.62	Black, locally dark grey very silty organic-rich SAND. Sand is fine to medium grained.	3.12 - 3.27	ES	
		3.64	0.10	Loose to medium dense dark grey silty SAND, with occasional organic lenses. Sand is fine to medium grained.	3.62 - 3.77	ES	
					3.84 - 4.04	B	
					4.12 - 4.27	ES	
					4.62 - 4.77	ES	
					5.12 - 5.27	ES	
					5.62 - 5.77	ES	
					5.74 - 6.24	ES	
					6.12 - 6.57	SPT (S)	N=1 (1,0/0,0,1,0)
					6.24 - 6.39	ES	
		6.64	-2.90	Loose to medium dense light brown, locally grey slightly gravely silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, sandstone, granite and quartz.	6.74 - 6.89	ES	
					7.24 - 7.39	ES	
					7.74 - 7.89	ES	
					8.34 - 8.89	ES	
		8.94	-5.00	Medium dense to dense grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, sandstone, micro granite and quartz.	9.12 - 9.57	SPT (S)	N=16 (5,5/6,3,3,4)
					9.14 - 9.24	D	
					9.24 - 9.74	B	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
33.57	177	33.12	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 2 of 4

BH-107

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	15/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	18/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	18/09/2025

GL (AOD):	1.64m	
Easting:	280869	
Northing:	858269	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to dense grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, sandstone, micro granite and quartz.	10.14 - 10.24	D	
					10.74 - 11.24	B	
					11.14 - 11.24	D	
					12.12 - 12.57	SPT (S)	N=21 (5,5/4,5,6,6)
					12.12 - 12.57	SPTLS	
					12.14 - 12.24	D	
					12.24 - 12.74	B	
					13.14 - 13.24	D	
					13.62 - 14.07	SPT (S)	N=47 (6,6/7,10,12,18)
					13.62 - 14.07	SPTLS	
					13.74 - 14.24	B	
					14.14 - 14.24	D	
					15.12 - 15.57	SPT (S)	N=30 (5,5/6,6,7,11)
					15.12 - 15.57	SPTLS	
					15.14 - 15.24	D	
					15.24 - 15.74	B	
					16.14 - 16.24	D	
					16.62 - 17.07	SPT (S)	N=30 (6,7/7,8,7,8)
					18.14 - 18.24	D	
					18.24 - 18.74	B	
					19.14 - 19.24	D	
					19.62 - 20.07	SPT (S)	N=23 (4,4/5,5,6,7)
					19.62 - 20.07	SPTLS	
					19.74 - 20.24	B	

Hole Diameter

Depth Base (m)	Diameter (mm)
33.57	177

Casing Depths

Depth Base (m)	Diameter (mm)
33.12	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 3 of 4

BH-107

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	15/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	18/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	18/09/2025

GL (AOD):	1.64m
Easting:	280869
Northing:	858269
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to dense grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, sandstone, micro granite and quartz.	20.14 - 20.24	D	
					21.12 - 21.57	SPT (S)	N=30 (5,6/7,8,8,7)
					21.14 - 21.24	D	
					21.24 - 21.74	B	
		21.84	-18.10	Dense to very dense dark grey and grey slightly gravelly silty SAND. Sand is fine to medium gained. Gravel is sub-angular to rounded, fine to medium of siltstone, micro granite and quartz.			
					22.62 - 23.07	SPT (S)	N=33 (6,7/7,8,9,9)
					22.74 - 23.24	B	
					23.14 - 23.24	D	
					24.14 - 24.24	D	
					24.24 - 24.74	B	
					25.14 - 25.24	D	
					25.62 - 26.07	SPT (S)	N=42 (7,8/8,9,11,14)
					25.62 - 26.07	SPTLS	
					25.74 - 26.24	B	
					27.12 - 27.57	SPT (S)	N=49 (7,7/9,11,12,17)
					27.12 - 27.57	SPTLS	
					27.14 - 27.24	D	
					27.74 - 28.24	B	
					28.14 - 28.24	D	
					28.62 - 29.07	SPT (S)	N=40 (6,8/8,9,9,14)
					28.62 - 29.07	SPTLS	
					29.14 - 29.24	D	
					29.24 - 29.74	B	

Hole Diameter

Depth Base (m)	Diameter (mm)
33.57	177

Casing Depths

Depth Base (m)	Diameter (mm)
33.12	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 4 of 4

BH-107

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	15/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	18/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	18/09/2025

GL (AOD):	1.64m
Easting:	280869
Northing:	858269
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Dense to very dense dark grey and grey slightly gravelly silty SAND. Sand is fine to medium gained. Gravel is sub-angular to rounded, fine to medium of siltstone, micro granite and quartz.	30.12 - 30.43	SPT (S)	N=50+ (10,12/18,22,10 for 10mm)
					30.12 - 30.57	SPTLS	
					30.14 - 30.24	D	
					30.74 - 31.24	B	
					31.14 - 31.24	D	
					31.62 - 31.78	SPT (S)	N=50+ (15,10 for 5mm/25,25 for 10mm,0 for 0mm,0 for 0mm)
					32.14 - 32.24	D	
					32.24 - 32.74	B	
					32.94 - 33.04	D	
					33.12 - 33.36	SPT (S)	N=50+ (10,14/25,25 for 20mm,0 for 0mm,0 for 0mm)
					33.12 - 33.57	SPTLS	
		33.57	-29.83	End of Borehole at 33.570m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
33.57	177	33.12	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 4

BH-108

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	26/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	28/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	28/08/2025

GL (AOD):	0.54m	
Easting:	281074	
Northing:	858111	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		6.20	-3.56	Black clayey, slightly sandy organic SILT, with frequent organic and timber insertions. Sand is fine to coarse grained.	6.20 - 6.35	ES	
		6.46	-3.82		6.36 - 6.46	D	
				Medium dense brownish grey slightly gravelly silty micaceous SAND. Sand is fine to medium grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, sandstone, micro granite and quartz.	6.70 - 6.85	ES	
				Note: Occasional shell fragments noted	7.20 - 7.35	ES	
					7.70 - 7.85	ES	
					8.20 - 8.65	SPT (S)	N=6 (1,1/1,1,2,2)
					8.20 - 8.35	ES	
					8.70 - 9.20	ES	
		8.96	-6.32	Black clayey, slightly sandy organic SILT, with frequent organic insertions. Sand is fine to coarse grained.	9.00 - 9.45	SPT (S)	N=9 (2,2/3,2,2,2)
					9.20 - 9.35	ES	
		9.61	-6.97	Medium dense to dense dark grey silty SAND. Sand is fine to medium grained.	9.70 - 9.85	ES	

Hole Diameter

Depth Base (m)	Diameter (mm)
31.95	177

Casing Depths

Depth Base (m)	Diameter (mm)
31.50	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Scale 1:50 Sheet 2 of 4

BH-108

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	26/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	28/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	28/08/2025

GL (AOD):	0.54m	
Easting:	281074	
Northing:	858111	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to dense dark grey silty SAND. Sand is fine to medium grained.	10.20 - 10.35	ES	
					10.50 - 10.95	SPT (S)	N=27 (3,4/4,7,8,8)
					10.50 - 10.95	D	
					10.70 - 10.85	ES	
					11.06 - 11.56	ES	
		11.96	-9.32	Medium dense to dense greyish brown silty SAND. Sand is fine to medium grained.	12.00 - 12.45	SPT (S)	N=30 (4,5/6,7,8,9)
					12.00 - 12.45	D	
					12.66 - 12.76	D	
					12.76 - 13.26	B	
		13.26	-10.62	Medium dense to dense dark grey silty SAND. Sand is fine to medium grained.	13.50 - 13.95	SPT (S)	N=34 (7,8/8,9,9,8)
					13.50 - 13.95	D	
					13.66 - 13.76	D	
		13.96	-11.32	Medium dense to dense greyish brown silty SAND. Sand is fine to medium grained.	14.26 - 14.76	B	
					15.00 - 15.45	SPT (S)	N=5 (0,0/1,1,1,2)
					15.00 - 15.45	D	
					15.66 - 15.76	D	
					15.76 - 16.26	B	
					16.50 - 16.95	SPT (S)	N=33 (6,6/7,8,8,10)
					16.50 - 16.96	D	
					17.26 - 17.66	B	
					17.66 - 17.76	D	
					18.00 - 18.45	SPT (S)	N=36 (6,8/8,9,9,10)
					18.01 - 18.46	D	
					18.66 - 18.76	D	
					18.76 - 19.26	B	
		18.96	-16.32	Medium dense to dense brownish grey silty SAND. Sand is fine to medium grained. Note: silt content within sediment increasing with depth. Note: Occasional shell fragments noted.	19.50 - 19.95	SPT (S)	N=25 (4,6/6,5,6,8)
					19.51 - 19.96	D	
					19.66 - 19.76	D	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
31.95	177	31.50	177	Depths are reported in mbgl.								

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Scale 1:50 Sheet 3 of 4

BH-108

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	26/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	28/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	28/08/2025

GL (AOD):	0.54m	
Easting:	281074	
Northing:	858111	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to dense brownish grey silty SAND. Sand is fine to medium grained. Note: silt content within sediment increasing with depth. Note: Occasional shell fragments noted.	20.26 - 20.76	B	
					20.66 - 20.76	D	
					21.00 - 21.45	SPT (S)	N=50+ (8,9/10,18,13,9)
					21.00 - 21.45	D	
					21.66 - 21.76	D	
					21.76 - 22.26	B	
					22.50 - 22.95	SPT (S)	N=27 (4,5/6,6,7,8)
					22.66 - 22.76	D	
					23.26 - 23.76	B	
					24.66 - 24.76	D	
					24.76 - 25.26	B	
					25.50 - 25.95	SPT (S)	N=35 (6,7/8,8,9,10)
					27.76 - 28.26	D	
					28.50 - 28.95	SPT (S)	N=43
					28.50 - 28.95	D	(10,4/6,11,10,16)

Hole Diameter

Depth Base (m)	Diameter (mm)
31.95	177

Casing Depths

Depth Base (m)	Diameter (mm)
31.50	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 4 of 4

BH-108

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	26/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	28/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	28/08/2025

GL (AOD):	0.54m	
Easting:	281074	
Northing:	858111	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Medium dense to dense brownish grey silty SAND. Sand is fine to medium grained. Note: silt content within sediment increasing with depth. Note: Occasional shell fragments noted.	30.66 - 30.76	D	
					30.76 - 31.26	B	
					31.50 - 31.95	SPT (S)	N=42 (7,9/9,9,10,14)
					31.50 - 31.95	D	
		31.95	-29.31	End of Borehole at 31.950m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
31.95	177	31.50	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 4

BH-109

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	01/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	04/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	04/09/2025

GL (AOD):	1.02m
Easting:	280564
Northing:	858414
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		1.94	1.18	Black, locally dark grey slightly clayey, silty SAND. Sand is fine to medium grained. Occasional shell fragments noted.	1.94 - 2.09	ES	
		2.34	0.78	Medium dense dark grey silty micaceous SAND. Sand is fine to medium grained.	2.44 - 2.59	ES	
					2.94 - 3.09	ES	
					3.04 - 3.49	SPT (S)	N=12 (2,3/2,3,3,4)
					3.44 - 3.59	ES	
					3.94 - 4.09	ES	
		4.22	-1.10	Medium dense to very dense dark grey slightly gravelly silty micaceous SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, granite and quartz. Occasional shell fragments noted. Rare organic lenses noted, slight organic odour on recovery.	4.44 - 4.59	ES	
					4.54 - 4.86	SPT (S)	N=50+ (6,9/21,22,7 for 20mm)
					4.94 - 5.09	ES	
					5.44 - 5.59	ES	
					5.94 - 6.09	ES	
					6.04 - 6.35	SPT (S)	N=50+ (8,9/18,22,10 for 8mm)
					6.44 - 6.59	ES	
					6.94 - 7.09	ES	
					7.32 - 7.82	ES	
					7.82 - 7.97	ES	
					8.32 - 8.47	ES	
					8.82 - 8.97	ES	
		9.49	-6.37	Medium dense to very dense brownish grey slightly gravelly silty micaceous SAND. Sand is fine to medium grained. Gravel is sub-rounded to rounded, fine to medium of siltstone, micro granite and quartz.	9.32 - 9.47	ES	
					9.82 - 9.97	ES	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
34.24	177	33.79	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 2 of 4

BH-109

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	01/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	04/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	04/09/2025

GL (AOD):	1.02m
Easting:	280564
Northing:	858414
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to very dense brownish grey slightly gravelly silty micaceous SAND. Sand is fine to medium grained. Gravel is sub-rounded to rounded, fine to medium of siltstone, micro granite and quartz.	10.32 - 10.47	ES	
					10.82 - 10.97	ES	
					11.29 - 11.60	SPT (S)	N=50+ (7,8/10,25,15 for 10mm)
					11.29 - 11.74	SPTLS	
					11.32 - 11.47	ES	
					11.82 - 11.97	ES	
					12.02 - 12.32	B	
					12.32 - 12.47	ES	
					12.62 - 13.12	ES	
					12.79 - 13.24	SPT (S)	N=22 (4,5/5,6,5,6)
					12.79 - 13.24	SPTLS	
					13.22 - 13.32	D	
					13.32 - 13.82	B	
					14.22 - 14.32	D	N=19 (4,4/5,5,4,5)
					14.29 - 14.74	SPT (S)	
					14.29 - 14.74	SPTLS	
					14.82 - 15.32	B	
					15.22 - 15.32	D	
					15.79 - 15.92	SPT (S)	N=50+ (25 for 40mm/32,18 for 20mm)
					15.79 - 16.24	SPTLS	
					16.22 - 16.32	D	
					16.32 - 16.82	B	
		16.32	-13.20	Dense to very dense grey silty SAND. Sand is fine grained.			
					17.22 - 17.32	D	N=33 (15,8/7,8,9,9)
					17.29 - 17.74	SPT (S)	
					17.29 - 17.74	SPTLS	
					17.82 - 18.32	B	
					18.22 - 18.32	D	
		18.62	-15.50	Very dense brownish grey very silty SAND. Sand is fine to medium grained.			
					18.79 - 19.02	SPT (S)	N=50+ (16,9 for 10mm/48,2)
					18.79 - 19.24	SPTLS	
					19.22 - 19.32	D	
		19.32	-16.20	Dense to very dense grey silty SAND. Sand is fine to medium grained.	19.32 - 19.82	B	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
34.24	177	33.79	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 3 of 4

BH-109

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	01/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	04/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	04/09/2025

GL (AOD):	1.02m
Easting:	280564
Northing:	858414
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Dense to very dense grey silty SAND. Sand is fine to medium grained.	20.22 - 20.32	D	N=42 (5,6/8,8,12,14)
					20.29 - 20.74	SPT (S)	
					20.29 - 20.74	SPTLS	
					20.82 - 21.32	B	
					21.79 - 22.24	SPT (S)	N=50+ (8,10/12,14,22,2)
					21.79 - 22.24	SPTLS	
					22.22 - 22.32	D	
					22.32 - 22.82	B	
					23.29 - 23.74	SPT (S)	N=46 (9,8/9,10,12,15)
					23.29 - 23.74	SPTLS	
					23.82 - 24.22	B	
					24.22 - 24.32	D	
					24.79 - 25.18	SPT (S)	N=50+ (8,9/9,12,22,7 for 20mm)
					24.79 - 25.24	SPTLS	
					25.22 - 25.32	D	
					25.32 - 25.82	B	
					26.22 - 26.32	D	N=50+ (9,11/12,16,22 for 25mm)
					26.29 - 26.62	SPT (S)	
					26.29 - 26.74	SPTLS	
					26.82 - 27.32	B	
		27.32	-24.20				
				Dense to very dense grey silty SAND. Sand is fine to medium grained. Note: increased silt content. Occasional shell fragments and muscovite presence noted from -26.10m CD	27.79 - 28.10	SPT (S)	N=50+ (8,9/12,18,20 for 15mm)
					28.22 - 28.32	D	
					28.32 - 28.82	B	
					29.22 - 29.32	D	N=50+ (8,12/20,24,6 for 25mm)
					29.29 - 29.62	SPT (S)	
					29.82 - 30.22	B	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
34.24	177	33.79	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 4 of 4

BH-109

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	01/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	04/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	04/09/2025

GL (AOD):	1.02m
Easting:	280564
Northing:	858414
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Dense to very dense grey silty SAND. Sand is fine to medium grained. Note: increased silt content. Occasional shell fragments and muscovite presence noted from -26.10m CD	30.22 - 30.32	D	
					31.22 - 31.32	D	
					31.32 - 31.82	B	
					32.22 - 32.32	D	
					32.29 - 32.51	SPT (S)	N=50+ (19,6 for 10mm/25,25 for 60mm)
					32.32 - 32.82	B	
					33.22 - 33.32	D	
					33.79 - 34.24	SPT (S)	N=46 (11,7/10,12,12,12)
		34.24	-31.12	End of Borehole at 34.240m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
34.24	177	33.79	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 3

BH-110

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	22/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	25/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	25/09/2025

GL (AOD):	0.47m	
Easting:	280699	
Northing:	858332	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Void comprising moonpool of drilling platform and depth of water before encountering seabed.			
		1.20	1.37	Dark grey, locally black slightly gravelly, silty organic-rich SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone and quartz.	1.20 - 1.35	ES	
		1.62	0.95	Greenish brown silty SAND. Sand is fine to medium grained.	1.70 - 1.85	ES	
					2.20 - 2.35	ES	
					2.70 - 2.85	ES	
					2.90 - 3.35	SPT (S)	N=1 (1,0/0,0,1,0)
					2.90 - 3.35	SPTLS	
					3.20 - 3.35	ES	
					3.70 - 3.85	ES	
		4.07	-1.50	Loose to medium dense dark grey slightly gravelly silty SAND, with frequent organic lenses. Sand is fine to medium grained. Gravel is sub-rounded to well rounded, fine to medium of siltstone and quartz.	4.20 - 4.35	ES	
					4.40 - 4.85	SPT (S)	N=3 (1,1/2,1,0,0)
					4.40 - 4.85	SPTLS	
					4.70 - 4.85	ES	
					5.20 - 5.35	ES	
		5.57	-3.00	Loose to medium dense dark grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone and quartz.	5.70 - 5.85	ES	
					5.90 - 6.35	SPT (S)	N=4 (1,1/0,1,2,1)
					5.90 - 6.35	SPTLS	
					6.20 - 6.35	ES	
					6.70 - 6.85	ES	
		6.97	-4.00	Loose to medium dense light brownish grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone and quartz.	7.20 - 7.35	ES	
					7.40 - 7.85	SPT (S)	N=4 (1,1/2,1,1,0)
					7.70 - 7.85	ES	
					8.25 - 8.75	ES	
					8.75 - 8.90	ES	
					8.90 - 9.35	SPT (S)	N=0 (0,0/0,0,0,0)
					8.90 - 9.35	SPTLS	
					9.25 - 9.40	ES	
					9.75 - 9.90	ES	
					9.92 - 10.22	B	

Hole Diameter

Depth Base (m)	Diameter (mm)
25.85	177

Casing Depths

Depth Base (m)	Diameter (mm)
25.40	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 2 of 3

BH-110

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	22/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	25/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	25/09/2025

GL (AOD):	0.47m	
Easting:	280699	
Northing:	858332	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Loose to medium dense light brownish grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone and quartz.	10.25 - 10.40	ES	
					10.40 - 10.85	SPT (S)	N=22 (2,4/4,5,6,7)
					10.40 - 10.85	SPTLS	
					10.75 - 10.90	ES	
					11.25 - 11.40	ES	
					11.75 - 11.90	ES	
					11.90 - 12.35	SPT (S)	N=25 (4,4/5,6,6,8)
					12.07 - 12.57	ES	
					13.40 - 13.85	SPT (S)	N=24 (4,5/5,6,6,7)
					13.57 - 14.07	B	
					14.17 - 14.27	D	
		14.57	-12.00	Loose to dense dark grey, gravelly silty SAND with a low cobble content. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to coarse of siltstone and quartz. Cobbles are sub-angular to rounded of gneiss and siltstone.			
		14.87	-12.30	Loose to dense dark grey slightly gravelly silty SAND, with a low cobble content. Sand is fine to medium grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, microgranite and quartz. Cobbles are sub-rounded of granite	15.07 - 15.57	B	
					16.17 - 16.27	D	
					16.40 - 16.85	SPT (S)	N=0 (0,0/0,0,0,0)
					16.57 - 17.07	B	
					17.90 - 18.35	SPT (S)	N=22 (4,5/4,5,6,7)
					17.90 - 18.35	SPTLS	
					18.07 - 18.57	B	
					18.17 - 18.27	D	
		18.97	-16.40	Medium dense to very dense light grey locally grey silty SAND. Sand is fine to medium grained. Occasional shell fragments noted.	19.17 - 19.27	D	
					19.57 - 20.07	B	

Hole Diameter

Depth Base (m)	Diameter (mm)
25.85	177

Casing Depths

Depth Base (m)	Diameter (mm)
25.40	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 3 of 3

BH-110

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	22/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	25/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	25/09/2025

GL (AOD):	0.47m
Easting:	280699
Northing:	858332
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to very dense light grey locally grey silty SAND. Sand is fine to medium grained. Occasional shell fragments noted.	20.17 - 20.27	D	
					20.90 - 21.35	SPT (S)	N=32 (4,5/5,9,7,11)
					21.07 - 21.57	B	
					21.17 - 21.27	D	
					22.17 - 22.27	D	
					22.57 - 23.07	B	
					23.17 - 23.27	D	
					23.90 - 24.35	SPT (S)	N=50+ (20,5/20,30)
					24.07 - 24.57	B	
					24.17 - 24.27	D	
					25.40 - 25.85	SPT (S)	N=50+ (25/30,20)
		25.85	-23.28	End of Borehole at 25.850m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
25.85	177	25.40	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 4

BH-111

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	22/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	25/06/2025
Method:	Sonic overwater drilling			**Backfilled:**	25/09/2025

GL (AOD):	0.74m	
Easting:	280794	
Northing:	858246	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		4.30	-1.46	Organic, black, very silty SAND. Sand is fine to medium grained.	5.30 - 5.45	ES	
					5.80 - 6.25	SPT (S)	N=2 (1,0/0,1,0,1)
					6.80 - 6.95	ES	
		7.24	-4.40	Medium dense Grey to brownish grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, micro granite and quartz.	7.14 - 7.64	ES	
					7.30 - 7.75	SPT (S)	N=4 (1,1/1,1,1,1)
					7.30 - 7.75	D	
					7.80 - 7.95	ES	
					8.30 - 8.45	ES	
					8.80 - 9.25	SPT (S)	N=6 (1,1/1,1,2,2)
					8.80 - 8.95	D	
					8.80 - 9.25	ES	
		9.89	-7.05	Medium dense Light grey silty SAND. Sand is fine to medium grained.	9.80 - 9.95	ES	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
33.25	177	32.80	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 2 of 4

BH-111

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	22/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	25/06/2025
Method:	Sonic overwater drilling			**Backfilled:**	25/09/2025

GL (AOD):	0.74m	
Easting:	280794	
Northing:	858246	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense Light grey silty SAND. Sand is fine to medium grained.	10.30 - 10.75	SPT (S)	N=7 (1,1/1,2,2,2)
					10.30 - 10.45	D	
					10.30 - 10.75	ES	
					11.30 - 11.45	ES	
					11.80 - 12.25	SPT (S)	N=9 (2,2/2,2,2,3)
					11.80 - 12.25	D	
					12.34 - 12.84	ES	
					12.94 - 13.04	D	
					13.04 - 13.54	B	
					13.30 - 13.75	SPT (S)	N=14 (2,3/3,3,4,4)
					13.30 - 13.75	D	
					13.94 - 14.04	D	
					14.54 - 15.04	B	
					14.80 - 15.25	SPT (S)	N=14 (2,3/3,4,3,4)
					14.80 - 15.25	D	
					14.94 - 15.04	D	
					15.94 - 16.04	D	
					16.04 - 16.54	B	
					16.30 - 16.75	SPT (S)	N=16 (3,3/3,4,4,5)
					16.30 - 16.75	D	
					16.94 - 17.04	D	
					17.54 - 18.04	B	
					17.80 - 18.25	SPT (S)	N=20 (3,4/4,4,5,7)
					17.80 - 18.25	D	
					17.94 - 18.04	D	
		18.34	-15.50	Medium dense Grey to brownish grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, microgranite and quartz.	18.94 - 19.04	D	
					18.94 - 19.04	D	
					19.04 - 19.54	B	N=24 (3,4/4,5,7,8)
					19.30 - 19.75	SPT (S)	
					19.30 - 19.75	D	
					19.94 - 20.04	D	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
33.25	177	32.80	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 3 of 4

BH-111

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	22/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	25/06/2025
Method:	Sonic overwater drilling			**Backfilled:**	25/09/2025

GL (AOD):	0.74m	
Easting:	280794	
Northing:	858246	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense Grey to brownish grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, microgranite and quartz.	20.54 - 21.04	B	
					20.80 - 21.25	SPT (S)	N=26 (3,5/5,6,7,8)
					20.94 - 21.04	D	
		21.64	-18.80	Medium dense Dark grey very gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-rounded to rounded, fine to medium of mixed lithologies. Frequent shell fragments noted.	21.94 - 22.04	D	
					22.04 - 22.54	B	
					22.30 - 22.75	SPT (S)	N=27 (4,5/6,7,6,8)
					22.94 - 23.04	D	
		23.34	-20.50	Medium dense grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, microgranite and quartz.	23.54 - 24.04	B	
					23.80 - 24.25	SPT (S)	N=28 (4,5/7,7,7,7)
					23.94 - 24.04	D	
		24.34	-21.50	Loose to medium dense Dark grey slightly clayey silty SAND. Sand is fine to medium grained.	24.94 - 25.04	D	
					25.04 - 25.54	B	
					25.30 - 25.75	SPT (S)	N=13 (2,3/3,3,3,4)
					25.94 - 26.04	D	
					26.54 - 27.04	B	
					26.80 - 27.25	SPT (S)	N=4 (1,0/1,1,1,1)
					26.94 - 27.04	D	
					27.94 - 28.04	D	
					28.04 - 28.54	B	
					28.30 - 28.75	SPT (S)	N=19 (3,4/4,4,5,6)
					28.30 - 28.75	D	
					28.94 - 29.04	D	
					29.54 - 30.04	B	
					29.80 - 30.25	SPT (S)	N=28 (4,5/5,7,8,8)
					29.94 - 30.04	D	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
33.25	177	32.80	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 4 of 4

BH-111

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	22/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	25/06/2025
Method:	Sonic overwater drilling			**Backfilled:**	25/09/2025

GL (AOD):	0.74m	
Easting:	280794	
Northing:	858246	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Loose to medium dense Dark grey slightly clayey silty SAND. Sand is fine to medium grained.			
					30.94 - 31.04	D	
					31.04 - 31.54	B	
					31.30 - 31.75	SPT (S)	N=32 (5,6/7,8,8,9)
					31.94 - 32.04	D	
					32.80 - 33.25	SPT (S)	N=34 (4,6/6,8,10,10)
		33.25	-30.41	End of Borehole at 33.250m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
33.25	177	32.80	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 3

BH-112

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	19/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	20/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	20/08/2025

GL (AOD):	0.54m	
Easting:	280896	
Northing:	858213	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		5.29	-2.65	Loose to medium dense Dark grey sandy SILT. Sand fine to coarse.	5.29 - 5.44	ES	
					6.79 - 7.24	SPT (S)	N=4 (1,1/1,1,1,1)
					6.79 - 7.24	D	
					6.79 - 7.29	ES	
					7.29 - 7.79	ES	
					7.79 - 8.29	ES	
					8.29 - 8.74	SPT (S)	N=17 (2,3/3,4,5,5)
					8.29 - 8.74	D	
					8.29 - 8.79	ES	
					8.79 - 9.29	ES	
					9.29 - 9.79	ES	
					9.79 - 10.24	SPT (S)	N=21 (3,4/4,5,6,6)
					9.79 - 10.24	D	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
27.91	177	27.46	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 2 of 3

BH-112

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	19/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	20/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	20/08/2025

GL (AOD):	0.54m	
Easting:	280896	
Northing:	858213	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Loose to medium dense Dark grey sandy SILT. Sand fine to coarse.	9.79 - 10.29	ES	
					10.29 - 10.79	ES	
					10.79 - 11.29	ES	
					11.29 - 11.74	SPT (S)	N=22 (3,5/5,5,6,6)
					11.29 - 11.74	D	
					11.79 - 12.29	ES	
					12.29 - 12.79	ES	
					12.79 - 13.24	SPT (S)	N=20 (3,4/5,5,5,5)
					12.79 - 13.24	D	
					12.84 - 12.94	D	
					13.14	D	
					13.64 - 14.14	B	
		13.84	-11.20	Medium dense Dark grey clayey slightly sandy SILT. Sand fine to coarse.			
					14.14 - 14.24	D	
					14.29 - 14.74	SPT (S)	N=18 (3,4/4,5,4,5)
					14.29 - 14.74	D	
					15.14 - 15.24	D	
					15.24 - 15.74	B	
					15.79 - 16.24	SPT (S)	N=24 (4,5/5,5,6,8)
					15.79 - 16.24	D	
					16.14 - 16.24	D	
					16.64 - 17.14	B	
					17.29 - 17.74	SPT (S)	N=27 (4,5/6,6,7,8)
					17.29 - 17.74	D	
					18.14 - 18.24	D	
					18.24 - 18.74	B	
					18.79 - 19.24	SPT (S)	N=28 (4,5/6,7,7,8)
					18.79 - 19.24	D	
					19.14 - 19.24	D	
					19.64 - 20.14	B	

Hole Diameter

Depth Base (m)	Diameter (mm)
27.91	177

Casing Depths

Depth Base (m)	Diameter (mm)
27.46	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 3 of 3

BH-112

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	19/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	20/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	20/08/2025

GL (AOD):	0.54m	
Easting:	280896	
Northing:	858213	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense Dark grey clayey slightly sandy SILT. Sand fine to coarse.	20.14 - 20.24	D	
					20.29 - 20.74	SPT (S)	N=29 (5,5/6,7,8,8)
					20.29 - 20.74	D	
					21.14 - 21.24	D	
					21.24 - 21.74	B	
					21.79 - 22.24	SPT (S)	N=29 (5,6/6,7,8,8)
		22.54	-19.90	Medium dense Dark grey clayey silty SAND. Sand fine to coarse.	22.64 - 23.14	B	
					23.14 - 23.24	D	
					23.29 - 23.74	SPT (S)	N=22 (4,4/4,5,6,7)
					23.29 - 23.74	D	
					24.14 - 24.24	D	
					24.24 - 24.74	B	
					24.79 - 25.24	SPT (S)	N=13 (2,3/3,3,3,4)
					24.79 - 25.24	D	
					25.14 - 25.24	D	
					25.64 - 26.14	B	
					26.14 - 26.24	D	
					26.29 - 26.74	SPT (S)	N=27 (3,3/5,6,8,8)
					26.29 - 26.74	D	
		26.74	-24.10	End of Borehole at 26.740m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
27.91	177	27.46	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 4

BH-113

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	20/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	22/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	22/08/2025

GL (AOD):	1.86m	
Easting:	281012	
Northing:	858161	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		8.54	-4.58	Black clayey, slightly sandy organic SILT, with frequent organic and timber insertions. Sand is fine to coarse grained.	8.54 - 8.69	ES	
					8.94 - 9.09	ES	
				Medium dense dark grey, locally black slightly gravelly silty micaceous SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of micro granite, granite, siltstone and quartz.	9.44 - 9.59	ES	
		9.66	-5.70		9.94 - 10.09	ES	

Hole Diameter

Depth Base (m)	Diameter (mm)
34.49	177

Casing Depths

Depth Base (m)	Diameter (mm)
34.04	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 2 of 4

BH-113

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	20/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	22/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	22/08/2025

GL (AOD):	1.86m	
Easting:	281012	
Northing:	858161	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
		10.06	-6.10	Medium dense dark grey, locally black slightly gravelly silty micaceous SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of micro granite, granite, siltstone and quartz.	10.04 - 10.49	SPT (S)	N=1 (0,0/0,0,1,0)
					10.04 - 10.49	D	
					10.56 - 11.06	ES	
				Medium dense dark grey slightly gravelly silty micaceous SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, micro granite and quartz. Occasional shell fragments noted throughout.	10.96 - 11.46	B	
					11.54 - 11.99	SPT (S)	N=23 (4,5/5,5,6,7)
					11.54 - 11.99	D	
					11.56 - 11.70	ES	
					12.06 - 12.21	ES	
					12.26 - 12.46	D	
					12.56 - 13.06	ES	
		12.86	-8.90	Light greyish brown silty micaceous SAND. Sand is fine to coarse grained.	13.04 - 13.49	SPT (S)	N=25 (4,5/5,6,7,7)
					13.04 - 13.49	D	
					13.16 - 13.26	B	
					13.46 - 13.96	B	
					14.16 - 14.26	D	
					14.54 - 14.99	SPT (S)	N=33 (5,7/7,9,8,9)
					14.54 - 14.99	D	
					14.96 - 15.46	B	
					15.66 - 15.76	D	
					16.04 - 16.49	SPT (S)	N=30 (5,6/6,7,8,9)
					16.04 - 16.49	D	
					16.46 - 16.96	B	
					17.54 - 17.99	SPT (S)	N=34 (6,7/7,8,9,10)
					17.54 - 17.99	D	
					17.66 - 17.76	D	
					17.96 - 18.46	B	
					18.66 - 18.76	D	
					19.04 - 19.49	SPT (S)	N=37 (7,6/8,10,9,10)
					19.04 - 19.49	D	
				Dense to very dense dark grey slightly gravelly silty micaceous SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of granite, siltstone and quartz. frequent shell fragments noted from -21.08m CD	19.46 - 19.96	B	
		19.56	-15.60				

Hole Diameter

Depth Base (m)	Diameter (mm)
34.49	177

Casing Depths

Depth Base (m)	Diameter (mm)
34.04	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 3 of 4

BH-113

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	20/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	22/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	22/08/2025

GL (AOD):	1.86m	
Easting:	281012	
Northing:	858161	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Dense to very dense dark grey slightly gravelly silty micaceous SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of granite, siltstone and quartz. frequent shell fragments noted from -21.08m CD	20.54 - 20.99	SPT (S)	N=30 (7,7/7,8,8,7)
					20.54 - 20.99	D	
					20.66 - 20.76	D	
					20.96 - 21.46	B	
					21.66 - 21.76	D	
					22.04 - 22.49	SPT (S)	N=42
					22.04 - 22.49	D	(8,10/8,10,12,12)
					22.46 - 23.76	D	
					23.54 - 23.99	SPT (S)	N=0 (0,0/0,0,0,0)
					23.54 - 23.99	D	
					23.66 - 24.46	B	
					23.96 - 24.76	D	
					24.66 - 25.96	B	
					25.04 - 25.49	SPT (S)	N=50+
					25.04 - 25.49	D	(9,9/10,12,15,13)
					25.46 - 26.76	D	
					26.54 - 26.92	SPT (S)	N=50+ (9,9/11,14,25)
					26.54 - 26.99	D	
					26.66 - 27.46	B	
					26.96 - 27.76	D	
					27.66 - 28.96	B	
					28.00	HV	15kPa
					28.04 - 28.49	SPT (S)	N=49 (8,9/9,10,12,18)
					28.04 - 28.49	D	
					28.46 - 28.96	B	
		29.54	-25.58	NO RECOVERY DUE TO SNAPPED WINCHLINE INSIDE CASING. Hook caught in barrel shoe.	29.54 - 29.99	SPT (S)	N=50+ (7,8/9,12,14,15)
					29.54 - 29.99	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
34.49	177

Casing Depths

Depth Base (m)	Diameter (mm)
34.04	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 4 of 4

BH-113

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	20/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	22/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	22/08/2025

GL (AOD):	1.86m
Easting:	281012
Northing:	858161
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				NO RECOVERY DUE TO SNAPPED WINCHLINE INSIDE CASING. Hook caught in barrel shoe.			
		31.04	-27.08	Firm light greyish brown slightly clayey, sandy low strength SILT. Sand is fine to coarse grained.	31.04 - 31.49	SPT (S)	N=6 (8,9/2,2,1,1)
					31.04 - 31.49	D	
					31.46 - 31.96	B	
					32.54 - 32.99	SPT (S)	N=6 (8,1/2,1,1,2)
					32.54 - 32.99	D	
					32.66 - 32.76	D	
					32.96 - 33.46	B	
					33.66 - 33.76	D	
					34.04 - 34.49	SPT (S)	N=5 (1,1/1,2,1,1)
					34.04 - 34.49	D	
		34.49	-30.53	End of Borehole at 34.490m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
34.49	177	34.04	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 2

BH-114

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	18/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	19/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	19/08/2025

GL (AOD):	0.47m	
Easting:	280526	
Northing:	858366	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		3.94	-1.37	Black sandy SILT. Sand is fine to coarse grained. Organic odour on recovery.	3.94 - 4.09	ES	
					4.17 - 4.27	D	
					4.27 - 4.77	B	
					5.17 - 5.27	D	
					5.44 - 5.89	SPT (S)	N=6 (2,2/1,2,1,2)
					5.44 - 5.89	D	
					5.77 - 6.27	B	
					6.17 - 6.27	D	
					6.94 - 7.39	SPT (S)	N=10 (1,2/2,2,3,3)
		7.04	-4.47	Very soft Black silty slightly sandy CLAY. Sand is fine to coarse grained.	6.94 - 7.39	D	
					7.17 - 7.27	D	
					7.27 - 7.77	B	
		7.61	-5.04	Medium dense Black sandy SILT. Sand is fine to coarse grained.	8.17 - 8.27	D	
					8.44 - 8.89	SPT (S)	N=19 (2,3/4,4,5,6)
					8.44 - 8.89	D	
					8.77 - 9.27	B	
		8.87	-6.30	Medium dense light grey silty SAND. Sand fine to coarse grained.	9.17 - 9.27	D	
					9.17 - 9.67	ES	
					9.94 - 10.39	SPT (S)	N=25 (3,4/5,6,7,7)

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
17.89	177	17.44	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 2 of 2

BH-114

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	18/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	19/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	19/08/2025

GL (AOD):	0.47m
Easting:	280526
Northing:	858366
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense light grey silty SAND. Sand fine to coarse grained.	9.94 - 10.39	D	
					10.17 - 10.27	D	
		10.37	-7.80		10.27 - 10.77	B	
				Medium dense black sandy SILT. Sand is fine to coarse grained.			
					11.17 - 11.27	D	
					11.44 - 11.89	SPT (S)	N=22 (3,5/5,5,6,6)
					11.44 - 11.94	D	
		11.77	-9.20		11.77 - 12.27	B	
				Medium dense light brown slightly gravelly silty SAND. Sand is fine to coarse grained. Gravel is subangular to angular and fine to coarse of shell fragments and igneous material.			
					12.17 - 12.27	D	
		12.37	-9.80		12.27 - 12.77	B	
				Light brown sandy GRAVEL. Sand is fine to coarse grained. Gravel is angular to sub-angular, fine to coarse of siltstone and micro granite.			
		12.67	-10.10				
				Medium dense light brown slightly gravelly silty SAND. Sand is fine to coarse grained. Gravel sub angular to angular and fine to coarse of shell fragments and micro granite.	12.94 - 13.39	SPT (S)	N=24 (4,5/5,6,6,7)
					12.94 - 13.39	D	
					13.17 - 13.27	D	
					13.37 - 13.87	B	
					14.44 - 14.89	SPT (S)	N=25 (4,5/6,6,6,7)
					14.44 - 14.89	D	
					14.47 - 14.97	ES	
					14.77 - 15.27	B	
					15.17 - 15.27	D	
					15.94 - 16.39	SPT (S)	N=26 (4,5/6,6,7,7)
					15.94 - 16.39	D	
					16.17 - 16.27	D	
					16.27 - 17.89	D	
					17.17 - 17.27	D	
					17.44 - 17.89	SPT (S)	N=23 (4,6/5,6,6,6)
					17.44 - 17.89	D	
		17.89	-15.32	End of Borehole at 17.890m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
17.89	177	17.44	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 2

BH-115

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	14/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	14/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	14/08/2025

GL (AOD):	0.14m	
Easting:	280946	
Northing:	858131	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		6.32	-4.08	Black locally dark grey slightly gravelly silty SAND, with frequent organic lenses noted. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone and quartz. Occasional shell fragments noted. Frequent timber and plant matter constituents noted.	6.32 - 6.47 6.49 - 6.59 6.59 - 6.99	ES D B	
		7.13	-4.89	Medium dense dark grey slightly gravelly SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, sandstone, micro granite and quartz. Occasional shell fragments noted.	7.49 - 7.59 7.82 - 8.27 7.82 - 8.27 8.09 - 8.49 8.49 - 8.59 9.32 - 9.77 9.32 - 9.77 9.49 - 9.59 9.59 - 9.99 9.99 - 10.49	D SPT (S) D B D SPT (S) D D B ES	 N=15 (4,4/3,3,4,5) N=20 (4,5/5,5,4,6)

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
17.27	177	16.82	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 2 of 2

BH-115

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	14/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	14/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	14/08/2025

GL (AOD):	0.14m	
Easting:	280946	
Northing:	858131	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense dark grey slightly gravelly SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, sandstone, micro granite and quartz. Occasional shell fragments noted.	10.49 - 10.59	ES	
					10.82 - 11.27	SPT (S)	N=27 (3,4/5,6,8,8)
					10.82 - 11.28	D	
					11.09 - 11.49	D	
		11.59	-9.35		11.49 - 11.59	D	
				Medium dense to dense dark grey slightly gravelly silty SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, sandstone, micro granite and quartz. Occasional organic lenses noted.			
					12.32 - 12.77	SPT (S)	N=32 (4,6/7,8,8,9)
					12.32 - 12.77	D	
					12.49 - 12.59	B	
					12.59 - 12.99	D	
					13.49 - 13.59	D	
					13.82 - 14.27	SPT (S)	N=35 (5,6/7,8,9,11)
					13.82 - 14.22	D	
					13.89 - 14.39	ES	
					14.09 - 14.49	D	
					14.49 - 14.59	B	
					15.32 - 15.77	SPT (S)	N=41 (6,7/7,8,12,14)
					15.32 - 15.77	D	
					15.49 - 15.59	D	
					15.59 - 15.99	D	
					16.49 - 16.59	ES	
					16.82 - 17.27	SPT (S)	N=50+ (6,7/8,12,14,16)
					16.82 - 17.27	D	
		17.27	-15.03	End of Borehole at 17.270m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
17.27	177	16.82	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 2

BH-116

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	15/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	18/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	18/08/2025

GL (AOD):	1.46m	
Easting:	281094	
Northing:	858058	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		7.60	-4.04	Black locally dark grey slightly gravelly silty SAND, with frequent organic lenses noted. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone and quartz. Occasional shell fragments noted. Frequent timber and plant matter constituents noted.	7.60 - 7.75 7.76 - 7.86 8.06 - 8.56 8.76 - 8.86	ES D B D	
		9.21	-5.65	Dense dark grey slightly gravelly SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, sandstone, micro granite and quartz. Occasional shell fragments noted.	9.10 - 9.55 9.10 - 9.55 9.56 - 10.06 9.76 - 9.86	SPT (S) D B D	N=32 (4,5/7,8,8,9)

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
18.55	177	18.10	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 2 of 2

BH-116

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	15/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	18/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	18/08/2025

GL (AOD):	1.46m
Easting:	281094
Northing:	858058
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Dense dark grey slightly gravelly SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, sandstone, micro granite and quartz. Occasional shell fragments noted.			
		10.56	-7.00		10.60 - 11.05	SPT (S)	N=30 (5,6/7,7,8,8)
					10.60 - 11.05	D	
					10.76 - 10.86	D	
				Dense light brown slightly gravelly SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, sandstone, micro granite and quartz.	11.06 - 11.56	B	
					11.66 - 12.16	ES	
					12.10 - 12.55	SPT (S)	N=34 (6,6/7,8,9,10)
					12.10 - 12.55	D	
					12.56 - 13.06	B	
					12.76 - 12.86	D	
					13.60 - 14.05	SPT (S)	N=40 (5,6/6,8,12,14)
					13.60 - 14.05	D	
		13.91	-10.35		13.76 - 13.86	D	
				Dense to very dense dark brownish grey slightly gravelly SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, sandstone, micro granite and quartz.	14.06 - 14.56	B	
					14.76 - 14.86	D	
					15.10 - 15.55	SPT (S)	N=43 (6,8/8,9,11,15)
					15.10 - 15.55	D	
					15.46 - 15.96	ES	
					15.76 - 15.86	D	
					16.60 - 17.05	SPT (S)	N=50+ (7,8/9,11,20,10)
					16.60 - 17.05	D	
					16.76 - 16.86	D	
					17.06 - 17.56	B	
					17.76 - 17.86	D	
					18.10 - 18.55	SPT (S)	N=40 (7,7/8,10,10,12)
					18.10 - 18.55	D	
		18.55	-14.99	End of Borehole at 18.550m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
18.55	177	18.10	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 2

BH-117

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	19/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	19/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	19/08/2025

GL (AOD):	2.16m
Easting:	280658
Northing:	858232
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		7.96	-3.70	Very dark grey, locally black silty micaceous SAND. Sand is fine to medium grained. Organic odour noted on recovery.	7.96 - 8.11	ES	
					8.36 - 8.46	D	
		8.46	-4.20	Medium dense to dense dark grey slightly gravelly, silty micaceous SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, micro granite and quartz.	8.76 - 9.26	B	
					9.36	D	
					9.46 - 9.91	D	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
19.96	177	19.51	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 2 of 2

BH-117

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	19/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	19/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	19/08/2025

GL (AOD):	2.16m	
Easting:	280658	
Northing:	858232	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to dense dark grey slightly gravelly, silty micaceous SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, micro granite and quartz.	10.96 - 11.41	SPT (S)	N=33 (4,8/7,8,9,9)
					10.96 - 11.41	D	
					11.36 - 11.46	D	
		11.46	-7.20	Dense light brown slightly gravelly micaceous SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to coarse of siltstone and quartz.	11.76 - 12.26	B	
					12.36 - 12.86	ES	
					12.46 - 12.91	SPT (S)	N=38 (4,5/5,8,10,15)
					12.46 - 12.91	D	
					13.26 - 13.76	B	
					13.96 - 14.41	SPT (S)	N=25 (4,4/5,5,7,8)
					13.96 - 14.41	D	
		14.36	-10.10	Dense to dense dark grey slightly gravelly silty micaceous SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, micro granite and quartz.	14.36 - 14.46	D	
		14.86	-10.60		14.76 - 15.26	B	
				Dense greyish brown silty micaceous SAND. Sand is fine to medium grained.	15.36 - 15.46	D	
					15.46 - 15.91	SPT (S)	N=33 (6,7/7,8,9,9)
					15.46 - 15.91	D	
					16.16 - 16.66	ES	
					16.96 - 17.41	SPT (S)	N=39 (7,7/8,9,10,12)
					16.96 - 17.41	D	
					17.36 - 17.46	D	
					17.76 - 18.26	B	
					18.36 - 18.46	D	
					18.46 - 18.91	SPT (S)	N=41 (7,8/8,9,10,14)
					18.46 - 18.91	D	
					19.26 - 19.46	D	
		19.96	-15.70	End of Borehole at 19.960m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
19.96	177	19.51	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 2

BH-118

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	13/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	13/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	13/08/2025

GL (AOD):	0.45m
Easting:	280872
Northing:	858116
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		3.96	-1.41	Black locally dark grey slightly gravelly silty SAND, with frequent organic lenses noted. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone and quartz. Occasional shell fragments noted. Frequent timber and plant matter constituents noted.	3.96 - 4.11	ES	
					4.15 - 4.25	D	
					4.25 - 4.65	B	
		4.75	-2.20	Loose to Medium dense dark grey slightly gravelly SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, sandstone, micro granite and quartz. Occasional shell fragments noted.	5.15 - 5.25	D	
					5.75 - 6.15	B	
					5.96 - 6.41	SPT (S)	N=22 (4,4/4,5,6,7)
					5.96 - 6.41	D	
					6.15 - 6.25	D	
					7.15 - 7.25	D	
					7.25 - 7.65	B	
					7.46 - 7.91	SPT (S)	N=0 (3,0/0,0,0,0)
					7.46 - 7.91	ES	
					8.75 - 9.15	B	
					8.95	ES	N=5 (0,0/1,0,2,2)
					8.96 - 9.41	SPT (S)	
					8.96 - 9.41	D	
					9.15 - 9.25	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
16.91	177

Casing Depths

Depth Base (m)	Diameter (mm)
16.46	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 2 of 2

BH-118

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	13/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	13/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	13/08/2025

GL (AOD):	0.45m	
Easting:	280872	
Northing:	858116	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Loose to Medium dense dark grey slightly gravelly SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, sandstone, micro granite and quartz. Occasional shell fragments noted.	10.15 - 10.25	D	
					10.25 - 10.65	B	
					10.46 - 10.91	SPT (S)	N=25 (4,4/5,6,6,8)
					10.46 - 10.91	B	
					11.15 - 11.25	D	
					11.75 - 12.25	B	
					11.96 - 12.41	SPT (S)	N=18 (3,4/4,6,4,4)
					11.96 - 12.41	D	
					12.15 - 12.25	D	
		13.26	-10.71	Medium dense to dense greyish brown slightly gravelly SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, sandstone, microgranite and quartz.	13.15 - 13.25	D	
					13.25 - 13.65	B	
					13.46 - 13.91	SPT (S)	N=32 (6,6/7,8,8,9)
					13.46 - 13.91	D	
					13.55 - 14.05	ES	
					14.15 - 14.25	D	
					14.75 - 15.15	B	
					14.96 - 15.41	SPT (S)	N=28 (4,5/5,6,8,9)
					14.96 - 15.41	D	
					15.15 - 15.25	D	
					16.15 - 16.25	D	
					16.46 - 16.91	SPT (S)	N=44 (8,9/8,9,12,15)
					16.46 - 16.91	D	
		16.91	-14.36	End of Borehole at 16.910m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
16.91	177	16.46	177	Depths are reported in mbgl.								

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Borehole Log

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BH-119

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste XL 140
				Started:	01/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	04/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	04/09/2025

GL (AOD):	1.69m
Easting:	281106
Northing:	857982
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Void comprising moonpool of drilling platform and depth of water prior to encountering seabed.			
		7.96	-4.17	Black organic rich SILT.			
		9.04	-5.25	Medium dense dark grey organic rich silty SAND. Sand fine to medium.	8.96 - 9.41 8.96 - 9.41 8.96 - 9.46 9.46 - 9.96 9.99 - 10.09	SPT (S) ES SPTLS ES D	N=14 (2,2/2,2,5,5)

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
34.12	177	33.67	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 2 of 4

BH-119

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste XL 140
				Started:	01/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	04/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	04/09/2025

GL (AOD):	1.69m	
Easting:	281106	
Northing:	857982	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Medium dense dark grey organic rich silty SAND. Sand fine to medium.	10.09 - 10.59	B	
					10.46 - 10.91	SPT (S)	N=17 (2,4/4,4,4,5)
					10.46 - 10.91	SPTLS	
					10.99 - 11.09	D	
					11.59 - 12.09	B	
		11.69	-7.90	Medium dense dark grey silty SAND. Sand fine to medium.			
					11.96 - 12.41	SPT (S)	N=19 (2,3/4,5,5,5)
					11.96 - 12.41	SPTLS	
					12.09 - 12.19	D	
					12.99 - 13.09	D	
					13.09 - 13.59	B	
					13.99 - 14.09	D	
					14.17 - 14.62	SPT (S)	N=14 (2,2/3,3,4,4)
					14.17 - 14.62	SPTLS	
					14.59 - 15.09	B	
		15.09	-11.30	Medium dense dark grey silty slightly sandy GRAVEL. Sand fine to coarse. Gravel fine to coarse and rounded of mudstone and quartz. Low cobble content of the same. Some angular shell fragments also present.	15.09 - 15.19	D	
		15.64	-11.85		15.67 - 16.12	SPT (S)	N=15 (2,3/3,4,4,4)
					15.67 - 16.12	SPTLS	
				Medium dense dark grey silty SAND. Sand fine to medium.	15.99 - 16.09	D	
					16.09 - 16.59	B	
					16.99 - 17.09	D	
					17.17 - 17.62	SPT (S)	N=16 (3,3/4,3,4,5)
					17.17 - 17.62	SPTLS	
		17.44	-13.65	Medium dense dark grey silty slightly sandy GRAVEL. Sand fine to coarse. Gravel fine to coarse and rounded of mudstone, quartz and igneous content. Low cobble content of the same. Some angular shell fragments also present.	17.59 - 18.09	B	
		17.59	-13.80		18.09 - 18.19	D	
		18.29	-14.50	Medium dense dark grey silty SAND. Sand fine to coarse.			
				Medium dense dark grey silty slightly gravelly SAND. Sand fine to coarse. Gravel fine to coarse and rounded of mudstone, siltstone, quartzite and igneous content.	18.67 - 19.12	SPT (S)	N=25 (1,2/5,6,7,7)
					18.67 - 19.12	SPTLS	
					19.09 - 19.59	B	

Hole Diameter

Depth Base (m)	Diameter (mm)
34.12	177

Casing Depths

Depth Base (m)	Diameter (mm)
33.67	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

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BH-119

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste XL 140
				Started:	01/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	04/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	04/09/2025

GL (AOD):	1.69m	
Easting:	281106	
Northing:	857982	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense dark grey silty slightly gravelly SAND. Sand fine to coarse. Gravel fine to coarse and rounded of mudstone, siltstone, quartzite and igneous content.	20.09 - 20.19	D	
					20.17 - 20.62	SPT (S)	N=23 (2,3/5,5,6,7)
					20.17 - 20.62	SPTLS	
		20.49	-16.70	Medium dense Dark grey silty SAND. Sand fine to coarse.	20.59 - 21.09	B	
		20.89	-17.10	Medium dense dark grey silty slightly gravelly SAND. Sand fine to coarse. Gravel fine to coarse and rounded of mudstone, siltstone, quartzite and igneous content.	20.99 - 21.09	D	
		21.29	-17.50	Medium dense dark grey silty SAND. Sand fine to coarse.			
					21.67 - 22.12	SPT (S)	N=29 (3,5/6,7,7,9)
					21.67 - 22.12	SPTLS	
		21.99	-18.20	Medium dense dark grey silty slightly clayey SAND. Sand fine to medium.	21.99 - 22.09	D	
					22.09 - 22.59	B	
					22.99 - 23.09	D	
					23.12 - 23.57	SPT (S)	N=13 (3,3/4,3,3,3)
					23.12 - 23.67	SPTLS	
					23.59 - 24.09	B	
					24.09 - 24.19	D	
					24.67 - 25.12	SPT (S)	N=7 (3,2/2,1,2,2)
					24.67 - 25.12	SPTLS	
		24.79	-21.00	Soft grey clayey slightly sandy SILT. Sand fine to coarse.	24.99 - 25.09	D	
					25.09 - 25.59	B	
					25.99 - 26.09	D	
		26.09	-22.30	Medium dense Dark grey silty SAND. Sand fine to coarse.	26.17 - 26.62	SPT (S)	N=6 (1,2/1,2,2,1)
					26.17 - 26.62	SPTLS	
					26.59 - 27.09	B	
					27.09 - 27.19	D	
					27.67 - 28.12	SPT (S)	N=9 (2,1/2,2,2,3)
					27.67 - 28.12	SPTLS	
					27.99 - 28.09	D	
					28.09 - 28.59	B	
					28.99 - 29.09	D	
					29.17 - 29.62	SPT (S)	N=16 (3,3/3,3,4,6)
					29.17 - 29.62	SPTLS	
					29.59 - 30.09	B	

Hole Diameter

Depth Base (m)	Diameter (mm)
34.12	177

Casing Depths

Depth Base (m)	Diameter (mm)
33.67	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

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BH-119

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste XL 140
				Started:	01/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	04/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	04/09/2025

GL (AOD):	1.69m
Easting:	281106
Northing:	857982
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Medium dense Dark grey silty SAND. Sand fine to coarse.	30.09 - 30.19	D	
					30.67 - 31.12	SPT (S)	N=19 (3,4/4,3,6,6)
					30.67 - 31.12	SPTLS	
					30.99	D	
					31.09 - 31.59	B	
					31.99 - 32.09	D	
					32.17 - 32.62	SPT (S)	N=19 (2,4/3,4,5,7)
					32.17 - 32.62	SPTLS	
					32.59 - 33.09	B	
					33.09 - 33.19	D	
					33.67 - 34.12	SPT (S)	N=22 (3,3/5,5,6,6)
					33.67 - 34.12	SPTLS	
		34.12	-30.33	End of Borehole at 34.120m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
34.12	177	33.67	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 2

BH-201

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste XL 140
				Started:	08/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	09/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	09/09/2025

GL (AOD):	1.75m
Easting:	281265
Northing:	858047
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		8.50	-4.65	Loose to medium dense black locally dark grey slightly clayey sandy organic SILT. Sand is fine to medium grained. Frequent organic insertions and timber fragments noted.	8.55 - 8.65	D	
					8.85 - 9.35	B	
		9.55	-5.70	Medium dense dark brownish grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to sub-rounded, fine to medium of sandstone, siltstone, micro granite and quartz. Occasional shell fragments noted	9.55 - 9.65	D	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depths are reported in mbgl.	From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
19.95	177	19.50	177									

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Borehole Log

Scale 1:50 Sheet 2 of 2

BH-201

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste XL 140
				Started:	08/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	09/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	09/09/2025

GL (AOD):	1.75m
Easting:	281265
Northing:	858047
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense dark brownish grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to sub-rounded, fine to medium of sandstone, siltstone, micro granite and quartz. Occasional shell fragments noted	10.35 - 10.85	B	
					10.50 - 10.95	SPT (S)	N=0 (0,0/0,0,0,0)
					10.50 - 10.95	D	
					10.55 - 10.65	D	
					11.85 - 12.35	B	
		12.00	-8.15		12.00 - 12.45	SPT (S)	N=14 (2,2/3,4,3,4)
				Medium dense Dark grey, locally brownish grey gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, micro granite and quartz. Occasional shell fragments noted	12.00 - 12.45	D	
		12.55	-8.70				
				Medium dense Dark grey silty SAND. Sand is fine to medium grained.	13.35 - 13.85	B	
					13.50 - 13.95	SPT (S)	N=15 (4,3/3,3,5,4)
					13.50 - 13.95	D	
					14.85 - 15.35	B	
					14.95 - 15.05	D	N=20 (4,5/5,4,6,5)
					15.00 - 15.45	SPT (S)	
					15.00 - 15.45	D	
		15.90	-12.05				
				Medium dense light greyish brown slightly gravelly silty SAND. Sand is fine to medium grained.	15.95 - 16.05	D	
					16.35 - 16.85	B	
					16.50 - 16.95	SPT (S)	N=23 (4,5/5,5,7,6)
					16.50 - 16.95	D	
					16.95 - 17.05	D	
					17.85 - 18.35	B	
					17.95 - 18.05	D	N=26 (5,6/6,7,6,7)
		18.15	-14.30		18.00 - 18.45	SPT (S)	
				Dense Dark brownish grey, slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-rounded, to rounded, fine to medium of siltstone, sandstone, micro granite and quartz.	18.00 - 18.45	D	
					18.95 - 19.05	D	
					19.05 - 19.45	B	
					19.50 - 19.95	SPT (S)	N=36 (6,8/8,9,9,10)
					19.50 - 19.95	D	
		19.95	-16.10				
				End of Borehole at 19.950m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
19.95	177	19.50	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 2

BH-202

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste XL 140
				Started:	08/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	09/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	09/09/2025

GL (AOD):	0.94m
Easting:	281350
Northing:	857995
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		7.15	-4.11	Loose to medium dense Black, locally dark grey slightly gravelly organic silty SAND. Sand is fine to medium grained. Gravel is sub-rounded, to well rounded, fine to medium of siltstone, sandstone and quartz. Frequent organic insertions noted. Organic odour noted on recovery.	7.14 - 7.24	D	
					7.24 - 7.74	B	
					8.14 - 8.24	D	
					8.65 - 9.10	SPT (S)	N=3 (1,0/1,0,1,1)
					8.65 - 9.10	D	
					8.74 - 9.24	B	

Hole Diameter

Depth Base (m)	Diameter (mm)
19.60	177

Casing Depths

Depth Base (m)	Diameter (mm)
19.15	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Scale 1:50 Sheet 2 of 2

BH-202

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste XL 140
				Started:	08/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	09/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	09/09/2025

GL (AOD):	0.94m
Easting:	281350
Northing:	857995
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Loose to medium dense Black, locally dark grey slightly gravelly organic silty SAND. Sand is fine to medium grained. Gravel is sub-rounded, to well rounded, fine to medium of siltstone, sandstone and quartz. Frequent organic insertions noted. Organic odour noted on recovery.	10.15 - 10.60	SPT (S)	N=9 (1,2/2,2,2,3)
					10.15 - 10.60	D	
					10.24 - 10.74	B	
		10.85	-5.71				
				Medium dense Dark grey, locally black slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-rounded, to well rounded, fine to medium of siltstone, sandstone and quartz.	11.14 - 11.24	D	
		11.44	-8.00				
					11.65 - 12.10	SPT (S)	N=13 (2,2/3,3,3,4)
					11.65 - 12.10	D	
				Medium dense Light greyish brown silty SAND. Sand is fine to medium grained.	11.74 - 12.24	B	
					13.14 - 13.24	D	N=15 (3,4/3,4,4,4)
					13.15 - 13.60	SPT (S)	
					13.15 - 13.60	D	
					13.24 - 13.74	B	
					14.14 - 14.24	D	
		14.64	-11.60				
				Medium dense dark grey, locally black slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-rounded, to well rounded, fine to medium of siltstone, sandstone and quartz.	14.65 - 15.10	SPT (S)	N=17 (3,4/4,4,4,5)
					14.65 - 15.10	D	
					14.74 - 15.24	B	
					15.14 - 15.24	D	
		15.24	-12.20				
				Medium dense Dark grey slightly clayey silty SAND. Sand is fine to medium grained.			
		16.14	-13.10				
				Soft Light greyish brown clayey slightly sandy low strength SILT. Sand is fine to medium grained.	16.14 - 16.24	D	N=13 (2,2/3,3,3,4)
					16.15 - 16.60	SPT (S)	
					16.15 - 16.60	D	
					16.24 - 16.74	B	
					16.74	HV	12kPa
					17.14 - 17.24	D	
					17.65 - 18.10	SPT (S)	N=9 (1,2/2,2,2,3)
					17.65 - 18.10	D	
		17.84	-14.80				
				Medium dense dark grey slightly clayey silty SAND. Sand is fine to medium grained.	17.74 - 18.24	B	
					18.14 - 18.24	D	
					19.15 - 19.60	SPT (S)	N=3 (1,0/1,0,1,1)
					19.15 - 19.60	D	
		19.60	-16.56	End of Borehole at 19.600m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
19.60	177	19.15	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 2

BH-203

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	21/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	21/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	21/08/2025

GL (AOD):	1.26m
Easting:	281392
Northing:	857909
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		7.40	-4.04	Dark grey to black organic-rich slightly sandy SILT. Sand is fine to coarse.	7.40 - 7.55	ES	
					7.90 - 8.40	ES	
					8.40 - 8.90	ES	
					8.64 - 15.86	B	
		8.96	-5.60		8.90 - 9.35	SPT (S)	N=6 (1,0/1,1,2,2)
				Medium dense grey silty SAND. Sand is fine to coarse.	8.90 - 9.35	D	
					8.90 - 9.40	ES	
		9.26	-5.90	Band of organic-rich SILT.	9.36 - 9.86	B	
		9.29	-5.93	Medium dense to dense grey silty SAND. Sand is fine to coarse.			
					9.96 - 10.06	D	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
16.99	177	16.54 19.40	177 177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 2 of 2

BH-203

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	21/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	21/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	21/08/2025

GL (AOD):	1.26m
Easting:	281392
Northing:	857909
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense to dense grey silty SAND. Sand is fine to coarse.			
					10.40 - 10.85	SPT (S)	N=9 (2,2/2,2,2,3)
					10.40 - 10.85	D	
					10.76 - 10.86	D	
					10.86 - 11.36	B	
					11.90 - 12.35	SPT (S)	N=19 (2,3/4,4,5,6)
					11.90 - 12.35	D	
					11.96 - 12.06	D	
					12.36 - 12.86	B	
					12.96 - 13.06	D	
					13.40 - 13.85	SPT (S)	N=22 (3,4/5,5,6,6)
					13.40 - 13.85	D	
					13.76 - 13.86	D	
					13.86 - 14.36	B	
					14.90 - 15.35	SPT (S)	N=24 (4,5/5,6,6,7)
					14.90 - 15.35	D	
					14.96 - 15.06	D	
					15.96 - 16.06	D	
					16.40 - 16.85	SPT (S)	N=29 (4,5/6,7,7,9)
					16.40 - 16.85	D	
					16.76 - 16.86	D	
					16.86 - 17.36	B	
					17.90 - 18.35	SPT (S)	N=30 (5,6/6,7,8,9)
					17.90 - 18.35	D	
					17.96 - 18.06	D	
					18.36 - 18.86	B	
					18.96 - 19.06	D	
					19.40 - 19.85	SPT (S)	N=32 (5,6/7,8,8,9)
					19.40 - 19.85	D	
		19.85	-16.49	End of Borehole at 19.850m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
16.99	177	16.54 19.40	177 177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 3

BH-205

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	10/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	11/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	11/09/2025

GL (AOD):	0.98m	
Easting:	281461	
Northing:	857831	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Void comprising moonpool of drilling platform and dept of water before encountering seabed			
		2.20	0.88	Dark grey locally black slightly clayey, slightly gravelly silty, organic-rich SAND. Sand is fine to coarse grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone and quartz. Occasional timber/plant material noted.	2.20 - 2.30	D	
					2.38 - 2.88	B	
					3.16 - 3.25	D	
		3.70	-0.62		3.70 - 4.15	SPT (S)	N=3 (1,0/1,1,1)
					3.70 - 4.15	SPTLS	
					3.88 - 4.38	B	
					4.16 - 4.26	D	
				Medium dense dark grey, locally brownish grey and very dark grey slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to sub-rounded, fine to medium of siltstone, sandstone, micro granite and quartz.			
					5.16 - 5.26	D	N=8 (6,1/2,2,2,2)
					5.20 - 5.65	SPT (S)	
					5.38 - 5.88	B	
					6.16 - 6.26	D	
					6.70 - 7.15	SPT (S)	N=10 (1,2/2,2,3,3)
					6.70 - 7.15	SPTLS	
					6.88 - 7.38	B	
					7.16 - 7.26	D	
					8.16 - 8.26	D	N=14 (2,3/3,3,4,4)
					8.20 - 8.65	SPT (S)	
					8.20 - 8.65	SPTLS	
					8.38 - 8.88	B	
					9.16 - 9.26	D	
		9.48	-6.40	Medium dense dark grey locally pinkish brown slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, micro granite, sandstone and quartz.	9.70 - 10.15	SPT (S)	N=17 (2,3/4,4,4,5)
					9.70 - 10.15	SPTLS	
					9.88 - 10.38	B	

Hole Diameter

Depth Base (m)	Diameter (mm)
20.65	177

Casing Depths

Depth Base (m)	Diameter (mm)
20.20	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

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Borehole Log

Scale 1:50 Sheet 2 of 3

BH-205

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	10/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	11/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	11/09/2025

GL (AOD):	0.98m	
Easting:	281461	
Northing:	857831	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing: Depth (m)	Type	Results
				Medium dense dark grey locally pinkish brown slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, micro granite, sandstone and quartz.	10.16 - 10.26	D	
					11.16 - 11.26	D	N=19 (3,4/4,4,5,6)
					11.20 - 11.65	SPT (S)	
					11.20 - 11.65	SPTLS	
					11.38 - 11.88	B	
					12.16 - 12.26	D	
		12.48	-9.30	Medium dense grey, slightly clayey, silty SAND. Sand is fine to medium grained.			
					12.70 - 13.15	SPT (S)	N=23 (3,4/5,5,6,7)
					12.70 - 13.15	SPTLS	
		12.98	-9.90	Medium dense dark grey, locally pinkish brown slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, sandstone, micro granite and quartz. Occasional shell fragments noted.	12.88 - 13.38	B	
					13.16 - 13.26	D	
					14.16 - 14.26	D	N=22 (2,4/4,5,6,7)
					14.20 - 14.65	SPT (S)	
					14.38 - 14.88	B	
					15.16 - 15.26	D	
					15.70 - 16.15	SPT (S)	N=25 (3,5/5,6,7,7)
					15.70 - 16.15	SPTLS	
					15.88 - 16.38	B	
					16.16 - 16.26	D	
		16.88	-13.80	Medium dense grey, slightly clayey, silty SAND. Sand is fine to medium grained.			
					17.20 - 17.65	SPT (S)	N=30 (4,5/6,7,8,9)
					17.20 - 17.65	SPTLS	
		17.48	-14.40	Medium dense dark grey, locally pinkish brown slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, sandstone, micro granite and quartz. Occasional shell fragments noted.	17.38 - 17.88	B	
		18.08	-15.00	Medium dense grey, slightly clayey, silty SAND. Sand is fine to medium grained.	18.16 - 18.26	D	
		18.38	-15.30	Medium dense dark grey, locally pinkish brown slightly gravelly silty SAND. Sand is fine to medium grained. Gravel is sub-angular to rounded, fine to medium of siltstone, sandstone, micro granite and quartz. Occasional shell fragments noted.	18.70 - 19.15	SPT (S)	N=31 (4,6/7,7,8,9)
					18.70 - 19.15	SPTLS	
					18.88 - 19.38	B	
					19.16 - 19.26	D	
		19.48	-16.40	Soft grey sandy, silty low strength CLAY. Sand is fine to medium grained.			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
20.65	177	20.20	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 3 of 3

BH-205

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	fraste XL 140
				Started:	10/09/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	11/09/2025
Method:	Sonic overwater drilling			**Backfilled:**	11/09/2025

GL (AOD):	0.98m	
Easting:	281461	
Northing:	857831	
Logged:	SM	
Status:	DRAFT	

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Soft grey sandy, silty low strength CLAY. Sand is fine to medium grained.	20.08 20.20 - 20.65	D UT	35 blows [350mm]
		20.65	-17.57	End of Borehole at 20.650m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
20.65	177	20.20	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 1 of 4

BH-207

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	26/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	28/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	28/08/2025

GL (AOD):	0.58m
Easting:	281163
Northing:	585023
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Void comprising moonpool of drilling pontoon and depth of water prior to encountering sea-bed.			
		5.76	-3.08	Black organic rich SILT.	5.76 - 5.91	ES	
					6.26 - 6.76	ES	
		6.72	-4.04	Medium dense black organic rich silty SAND. Sand is fine to coarse grained.	6.76 - 7.26	ES	
		7.32	-4.64	Medium dense dark grey silty SAND. Sand is fine to coarse grained.	7.26 - 7.71	SPT (S)	N=3 (1,0/1,0,1,1)
					7.26 - 7.76	ES	
					7.26 - 7.76	SPTLS	
					7.82 - 7.92	D	
					8.22 - 8.72	D	
					8.76 - 9.21	SPT (S)	N=8 (1,2/2,2,2,2)
					8.76 - 9.21	SPTLS	
					8.82 - 8.92	D	
					9.62 - 9.72	D	
					9.72 - 10.22	B	

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
31.71	177	31.26	177	Depths are reported in mbgl.								

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Borehole Log

Scale 1:50 Sheet 2 of 4

BH-207

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	26/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	28/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	28/08/2025

GL (AOD):	0.58m
Easting:	281163
Northing:	585023
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense dark grey silty SAND. Sand is fine to coarse grained.	10.26 - 10.71	SPT (S)	N=12 (2,3/3,2,3,4)
					10.26 - 10.71	SPTLS	
					10.82 - 10.92	D	
					11.22 - 11.72	B	
					11.76 - 12.21	SPT (S)	N=14 (2,3/3,3,4,4)
					11.76 - 12.21	SPTLS	
					11.82 - 11.92	D	
					12.62 - 12.72	D	
		13.02	-10.34	Medium dense dark grey slightly clayey silty SAND. Sand is fine to coarse grained.	13.26 - 13.71	SPT (S)	N=19 (3,4/4,4,5,6)
					13.26 - 13.71	SPTLS	
					13.82 - 13.92	D	
					14.22 - 14.72	B	
					14.76 - 15.21	SPT (S)	N=22 (3,4/5,5,6,6)
					14.76 - 15.21	SPTLS	
					14.82 - 14.92	D	
					15.62 - 15.72	D	
					15.72 - 16.22	B	
					16.26 - 16.71	SPT (S)	N=23 (3,4/5,6,6,6)
					16.26 - 16.71	SPTLS	
					16.82 - 16.92	D	
					17.22 - 17.72	B	
					17.76 - 18.21	SPT (S)	N=24 (3,5/5,6,6,7)
					17.76 - 18.21	SPTLS	
					17.82 - 17.92	D	
					18.62 - 18.72	D	
					18.72 - 19.22	B	
					19.26 - 19.71	SPT (S)	N=25 (4,5/5,6,7,7)
					19.26 - 19.71	SPTLS	
					19.82 - 19.92	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
31.71	177

Casing Depths

Depth Base (m)	Diameter (mm)
31.26	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

SOLMEK
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 607083
info@solmek.com

Borehole Log

Scale 1:50 Sheet 3 of 4

BH-207

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	26/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	28/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	28/08/2025

GL (AOD):	0.58m
Easting:	281163
Northing:	585023
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Medium dense dark grey slightly clayey silty SAND. Sand is fine to coarse grained.	20.22 - 20.72	B	
		20.42	-17.74	Medium dense dark brown clayey silty SAND. Sand is fine to coarse grained.			
					20.76 - 21.21	SPT (S)	N=26 (4,5/5,6,7,8)
					20.76 - 21.21	SPTLS	
					20.82 - 20.92	D	
					21.62 - 21.72	D	
					21.72 - 22.22	B	
					22.26 - 22.71	SPT (S)	N=26 (4,5/5,6,7,8)
					22.26 - 22.71	SPTLS	
					22.82 - 22.92	D	
					23.22 - 23.72	B	
					23.76 - 24.21	SPT (S)	N=18 (3,4/4,4,5,5)
					23.76 - 24.21	SPTLS	
					23.82 - 23.92	D	
					24.62 - 24.72	D	
					24.72 - 25.22	B	
					25.26 - 25.71	SPT (S)	N=19 (3,5/4,5,5,5)
					25.26 - 25.71	SPTLS	
					25.82 - 25.92	D	
					26.22 - 26.72	B	
					26.76 - 27.21	SPT (S)	N=23 (3,4/5,6,6,6)
					26.76 - 27.21	SPTLS	
					26.82 - 26.92	D	
		27.62	-24.94	Firm dark brown slightly sandy silty medium strength CLAY. Sand fine to medium.	27.62 - 27.72	D	
					27.72 - 28.22	B	
					28.26 - 28.71	SPT (S)	N=7 (2,2/1,2,2,2)
					28.26 - 28.71	SPTLS	
					28.82 - 28.92	D	
					29.22 - 29.72	B	
					29.82 - 29.92	D	

Hole Diameter

Depth Base (m)	Diameter (mm)
31.71	177

Casing Depths

Depth Base (m)	Diameter (mm)
31.26	177

General Remarks

Depths are reported in mbgl.

Chiselling

From (m)	To (m)	Time (hr)

Ground Water

Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

SOLMEK
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 607083
info@solmek.com

Borehole Log

Scale 1:50 Sheet 4 of 4

BH-207

Contract no:	S250403	**Site:**	MARINE GI - ARDERSIER	**Driller:**	Borehole Solutions Ltd
				Plant used:	Fraste Multidrill ML
				Started:	26/08/2025
Client:	HAVENTUS/ FAIRHURST			**Ended:**	28/08/2025
Method:	Sonic overwater drilling			**Backfilled:**	28/08/2025

GL (AOD):	0.58m
Easting:	281163
Northing:	585023
Logged:	SM
Status:	DRAFT

Backfill / Installation	Legend	Depth (m)	Level (m CD)	Stratum Description	Samples and Insitu Testing		
					Depth (m)	Type	Results
				Firm dark brown slightly sandy silty medium strength CLAY. Sand fine to medium.	30.62 - 30.72	D	
					30.72 - 31.22	B	
		31.02	-28.34	Medium dense dark grey silty slightly clayey SAND. Sand fine to coarse.	31.03 - 31.48	UT	33 blows [450mm]
					31.26 - 31.71	SPT (S)	N=24 (4,5/5,6,6,7)
		31.71	-29.03	End of Borehole at 31.710m			

Hole Diameter		Casing Depths		General Remarks	Chiselling			Ground Water				
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)		From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)
31.71	177	31.26	177	Depths are reported in mbgl.								

APPENDIX C

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

SOCOTEC

Test Report ID MAR02767

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: 162855-1 Ardersier, Inverness - Marine Scotland Analysis

Date Sampled: 18-20-Aug-25

Date Samples Received: 21-Aug-25

Test Report Date: 25-Sep-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02767
Issue Version 1
Customer Reference 162855-1 Ardersier, Inverness - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_02*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH-118 2.31-2.46	MAR02767.001	Sediment	21.1	78.9	0.00	76.07	23.93	2.64
BH-118 6.95-7.45	MAR02767.002	Sediment	20.7	79.3	0.25	87.76	11.98	2.64
BH-118 11.90-12.4	MAR02767.003	Sediment	17.3	82.7	0.00	93.06	6.94	2.65
BH-115 4.33-4.48	MAR02767.004	Sediment	29.1	70.9	1.52	63.55	34.93	2.63
BH-115 7.80-8.30	MAR02767.005	Sediment	19.5	80.5	0.00	68.56	31.44	2.67
BH-115 11.90-12.40	MAR02767.006	Sediment	26.0	74.0	0.00	63.70	36.30	2.65
BH-116 4.04-4.19	MAR02767.007	Sediment	46.1	53.9	0.00	37.68	62.32	2.55
		Reference Material (% Recovery)	N/A	N/A	N/A	N/A	N/A	N/A
		QC Blank	N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes
NAD - No Asbestos Detected

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Test Report ID	MAR02767
Issue Version	1
Customer Reference	162855-1 Ardersier, Inverness - Marine Scotland Analy

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH-118 2.31-2.46	MAR02767.001	Sediment	NAD	0.12
BH-118 6.95-7.45	MAR02767.002	Sediment	NAD	0.05
BH-118 11.90-12.4	MAR02767.003	Sediment	NAD	0.05
BH-115 4.33-4.48	MAR02767.004	Sediment	NAD	0.43
BH-115 7.80-8.30	MAR02767.005	Sediment	NAD	0.23
BH-115 11.90-12.40	MAR02767.006	Sediment	NAD	0.22
BH-116 4.04-4.19	MAR02767.007	Sediment	NAD	1.37
		Reference Material (% Recovery)	N/A	88
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID MAR02767
Issue Version 1
Customer Reference 162855-1 Ardersier, Inverness - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH-118 2.31-2.46	MAR02767.001	Sediment	2.3	<0.04	7.9	10.4	<0.01	4.4	7.7	82.8
BH-118 6.95-7.45	MAR02767.002	Sediment	1.2	<0.04	3.7	2.1	<0.01	2.5	1.4	11.9
BH-118 11.90-12.4	MAR02767.003	Sediment	2.6	<0.04	7.1	2.6	<0.01	4.5	2.1	14.0
BH-115 4.33-4.48	MAR02767.004	Sediment	3.6	0.08	13.7	6.6	0.01	8.2	8.0	38.9
BH-115 7.80-8.30	MAR02767.005	Sediment	2.6	0.14	10.5	4.8	<0.01	7.4	3.6	28.9
BH-115 11.90-12.40	MAR02767.006	Sediment	1.8	0.13	9.3	4.1	<0.01	6.5	3.2	23.2
BH-116 4.04-4.19	MAR02767.007	Sediment	7.6	0.13	21.4	10.4	0.08	12.2	13.9	55.6
Certified Reference Material SETOC 768 (% Recovery)			96	97	95	97	101	89	98	97
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02767
Issue Version	1
Customer Reference	162855-1 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH-118 2.31-2.46	MAR02767.001	Sediment	6.99	<5
BH-118 6.95-7.45	MAR02767.002	Sediment	<1	<1
BH-118 11.90-12.4	MAR02767.003	Sediment	<1	<1
BH-115 4.33-4.48	MAR02767.004	Sediment	<5	<5
BH-115 7.80-8.30	MAR02767.005	Sediment	<1	<1
BH-115 11.90-12.40	MAR02767.006	Sediment	<5	<5
BH-116 4.04-4.19	MAR02767.007	Sediment	11.7	<5
		Certified Reference Material BCR-646 (% Recovery)	84	85
		QC Blank	<1	<1

* See Report Notes

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Test Report ID MAR02767
Issue Version 1
Customer Reference 162855-1 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	N*	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH-118 2.31-2.46	MAR02767.001	Sediment	37.7	2.44	8.00	36.2	58.5	55.8
BH-118 6.95-7.45	MAR02767.002	Sediment	<1	<1	<1	<1	<1	<1
BH-118 11.90-12.4	MAR02767.003	Sediment	<1	<1	<1	<1	<1	<1
BH-115 4.33-4.48	MAR02767.004	Sediment	3.45	4.76	10.3	42.1	58.2	46.7
BH-115 7.80-8.30	MAR02767.005	Sediment	<1	<1	<1	<1	1.56	1.58
BH-115 11.90-12.40	MAR02767.006	Sediment	<1	<1	<1	<1	<1	1.38
BH-116 4.04-4.19	MAR02767.007	Sediment	15.5	<5	11.3	68.8	114	98.2
Certified Reference Material Quasimeme SED42 (% Recovery)			40	112	89	89	101	95
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID MAR02767
Issue Version 1
Customer Reference 162855-1 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH-118 2.31-2.46	MAR02767.001	Sediment	42.3	42.2	49.4	39.3	32.9	18.5
BH-118 6.95-7.45	MAR02767.002	Sediment	<1	<1	<1	<1	1.34	<1
BH-118 11.90-12.4	MAR02767.003	Sediment	<1	<1	<1	<1	1.61	<1
BH-115 4.33-4.48	MAR02767.004	Sediment	39.9	44.0	45.2	8.83	38.7	25.1
BH-115 7.80-8.30	MAR02767.005	Sediment	1.71	4.34	<1	1.44	2.71	2.28
BH-115 11.90-12.40	MAR02767.006	Sediment	1.37	3.18	<1	<1	2.19	2.24
BH-116 4.04-4.19	MAR02767.007	Sediment	89.5	98.3	103	27.6	48.8	46.7
Certified Reference Material Quasimeme SED42 (% Recovery)			111	114	92	94	66	79
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Certificate of Analysis

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Test Report ID MAR02767
Issue Version 1
Customer Reference 162855-1 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH-118 2.31-2.46	MAR02767.001	Sediment	7.78	45.9	9.96	85.1	22.0	48.0
BH-118 6.95-7.45	MAR02767.002	Sediment	2.63	<1	<1	<1	<1	<1
BH-118 11.90-12.4	MAR02767.003	Sediment	2.72	<1	<1	<1	<1	<1
BH-115 4.33-4.48	MAR02767.004	Sediment	11.2	45.2	7.91	79.0	5.39	45.6
BH-115 7.80-8.30	MAR02767.005	Sediment	3.72	1.40	<1	1.29	<1	1.78
BH-115 11.90-12.40	MAR02767.006	Sediment	4.24	<1	<1	<1	<1	<1
BH-116 4.04-4.19	MAR02767.007	Sediment	18.2	80.6	19.8	127	9.91	105
Certified Reference Material Quasimeme SED42 (% Recovery)			41	105	110	94	65	108
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02767
Issue Version	1
Customer Reference	162855-1 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	N*	N*	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH-118 2.31-2.46	MAR02767.001	Sediment	6.68	38.3	52.0	87.3	44500
BH-118 6.95-7.45	MAR02767.002	Sediment	<1	<1	<1	1.48	9530
BH-118 11.90-12.4	MAR02767.003	Sediment	<1	4.59	<1	<1	5290
BH-115 4.33-4.48	MAR02767.004	Sediment	4.40	110	29.4	81.1	52600
BH-115 7.80-8.30	MAR02767.005	Sediment	<1	126	<1	3.41	17900
BH-115 11.90-12.40	MAR02767.006	Sediment	<1	118	<1	2.73	20700
BH-116 4.04-4.19	MAR02767.007	Sediment	9.35	125	47.4	132	204000
Certified Reference Material Quasimeme SED42 (% Recovery)			87	106	81	94	90~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.

*See report notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02767
Issue Version	1
Customer Reference	162855-1 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH-118 2.31-2.46	MAR02767.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-118 6.95-7.45	MAR02767.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-118 11.90-12.4	MAR02767.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-115 4.33-4.48	MAR02767.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-115 7.80-8.30	MAR02767.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-115 11.90-12.40	MAR02767.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-116 4.04-4.19	MAR02767.007	Sediment	<0.08	<0.08	<0.08	<0.08	0.11	0.11	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			66	100	92	88	114	80	62
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02767
Issue Version	1
Customer Reference	162855-1 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH-118 2.31-2.46	MAR02767.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-118 6.95-7.45	MAR02767.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-118 11.90-12.4	MAR02767.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-115 4.33-4.48	MAR02767.004	Sediment	<0.08	<0.08	<0.08	<0.08	0.08	<0.08	<0.08
BH-115 7.80-8.30	MAR02767.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-115 11.90-12.40	MAR02767.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-116 4.04-4.19	MAR02767.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			91	79	89	83	90	77	68
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Test Report ID	MAR02767
Issue Version	1
Customer Reference	162855-1 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH-118 2.31-2.46	MAR02767.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-118 6.95-7.45	MAR02767.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-118 11.90-12.4	MAR02767.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-115 4.33-4.48	MAR02767.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-115 7.80-8.30	MAR02767.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-115 11.90-12.40	MAR02767.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-116 4.04-4.19	MAR02767.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			111	72	73	70	88	54	73
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Test Report ID MAR02767
Issue Version 1
Customer Reference 162855-1 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH-118 2.31-2.46	MAR02767.001	Sediment	<0.08	0.08	<0.08	<0.08	<0.56
BH-118 6.95-7.45	MAR02767.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-118 11.90-12.4	MAR02767.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-115 4.33-4.48	MAR02767.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-115 7.80-8.30	MAR02767.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-115 11.90-12.40	MAR02767.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-116 4.04-4.19	MAR02767.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			97	92	79	78	98~
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02767
Issue Version	1
Customer Reference	162855-1 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH-118 2.31-2.46	MAR02767.001	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-118 6.95-7.45	MAR02767.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-118 11.90-12.4	MAR02767.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-115 4.33-4.48	MAR02767.004	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.14
BH-115 7.80-8.30	MAR02767.005	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-115 11.90-12.40	MAR02767.006	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-116 4.04-4.19	MAR02767.007	Sediment	<0.1	<0.1	<0.1	0.16	<0.1	0.19	<0.1	0.21
Certified Reference Material Quasimeme SED28 (% Recovery)			98~	84~	98~	63	76	82	45	76
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries

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Test Report ID	MAR02767
Issue Version	1
Customer Reference	162855-1 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH-118 2.31-2.46	MAR02767.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-118 6.95-7.45	MAR02767.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-118 11.90-12.4	MAR02767.003	Sediment	<0.05	<0.05	0.05	<0.05	0.07	0.08
BH-115 4.33-4.48	MAR02767.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-115 7.80-8.30	MAR02767.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-115 11.90-12.40	MAR02767.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-116 4.04-4.19	MAR02767.007	Sediment	0.18	0.09	0.34	0.06	0.07	0.23
Certified Reference Material Quasimeme SED56 (% Recovery)			98~	109	111	94~	123	133
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Test Report ID MAR02767
Issue Version 1
Customer Reference 162855-1 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH-118 2.31-2.46	MAR02767.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<2
BH-118 6.95-7.45	MAR02767.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<2
BH-118 11.90-12.4	MAR02767.003	Sediment	0.07	0.09	0.10	0.08	0.09	<2
BH-115 4.33-4.48	MAR02767.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<2
BH-115 7.80-8.30	MAR02767.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<2
BH-115 11.90-12.40	MAR02767.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<2
BH-116 4.04-4.19	MAR02767.007	Sediment	<0.05	<0.05	0.09	<0.05	0.08	22.3
Certified Reference Material Quasimeme SED56 (% Recovery)			98~	111~	295	98~	135	85
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<2*

* See Report Notes

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Test Report ID MAR02767
Issue Version 1
Customer Reference 162855-1 Ardersier, Inverness - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02767.001-007	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02767.001-007	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02767.001-007	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02767.001-007	Analysis was conducted by an approved subcontracted laboratory.
SUB_03*	MAR02767.001-007	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/301	MAR02767.001, .004, .006-007	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/303/304	MAR02767.007	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/303/304	MAR02767.001-007	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (ANTHRACN, PHENANT, PYRENE) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02767.001-007	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02767.001-007	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. Triphenylene may be present in these samples therefore it is suggested that the Chrysene results should be taken as a Chrysene (inc. Triphenylene).This should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02767.001-007	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (PBDE99, PBDE153) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02767.001-007	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Test Report ID	MAR02767
Issue Version	1
Customer Reference	162855-1 Ardersier, Inverness - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

SOCOTEC

Test Report ID MAR02769

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: 162855-2 Ardersier, Inverness - Marine Scotland Analysis

Date Sampled: 18-19/08/2025

Date Samples Received: 27-Aug-25

Test Report Date: 24-Sep-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02769
Issue Version	1
Customer Reference	162855-2 Ardersier, Inverness - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_03*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH-116 8.10-8.60	MAR02769.001	Sediment	19.2	80.8	0.00	95.85	4.15	2.65
BH-116 11.90-12.40	MAR02769.002	Sediment	17.9	82.1	0.00	85.24	14.76	2.65
BH-114 1.37-1.52	MAR02769.003	Sediment	36.0	64.0	0.00	40.34	59.66	2.64
BH-114 6.60-7.10	MAR02769.004	Sediment	14.9	85.1	0.00	90.10	9.90	2.64
BH-114 11.90-12.40	MAR02769.005	Sediment	18.1	81.9	0.00	85.91	14.09	2.67
BH-117 3.70-3.85	MAR02769.006	Sediment	25.5	74.5	0.00	74.79	25.21	2.65
BH-117 8.10-8.60	MAR02769.007	Sediment	17.8	82.2	0.00	89.25	10.75	2.65
BH-117 11.90-12.40	MAR02769.008	Sediment	19.5	80.5	0.00	89.35	10.65	2.65
		Reference Material (% Recovery)	N/A	N/A	N/A	N/A	N/A	N/A
		QC Blank	N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes

NAD - No Asbestos Detected

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02769
Issue Version	1
Customer Reference	162855-2 Ardersier, Inverness - Marine Scotland Analy

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH-116 8.10-8.60	MAR02769.001	Sediment	NAD	0.05
BH-116 11.90-12.40	MAR02769.002	Sediment	NAD	0.06
BH-114 1.37-1.52	MAR02769.003	Sediment	NAD	0.79
BH-114 6.60-7.10	MAR02769.004	Sediment	NAD	0.06
BH-114 11.90-12.40	MAR02769.005	Sediment	NAD	0.06
BH-117 3.70-3.85	MAR02769.006	Sediment	NAD	0.16
BH-117 8.10-8.60	MAR02769.007	Sediment	NAD	0.04
BH-117 11.90-12.40	MAR02769.008	Sediment	NAD	0.09
		Reference Material (% Recovery)	N/A	93
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID MAR02769
Issue Version 1
Customer Reference 162855-2 Ardersier, Inverness - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH-116 8.10-8.60	MAR02769.001	Sediment	1.6	<0.04	6.0	2.2	<0.01	3.8	1.6	13.3
BH-116 11.90-12.40	MAR02769.002	Sediment	0.5	<0.04	6.5	3.0	<0.01	4.4	1.8	12.1
BH-114 1.37-1.52	MAR02769.003	Sediment	10.2	0.21	24.8	17.4	0.03	15.0	19.2	82.8
BH-114 6.60-7.10	MAR02769.004	Sediment	1.7	<0.04	5.8	4.7	<0.01	3.4	3.0	42.2
BH-114 11.90-12.40	MAR02769.005	Sediment	1.7	0.04	6.8	3.4	<0.01	4.5	2.2	16.1
BH-117 3.70-3.85	MAR02769.006	Sediment	2.6	0.05	9.2	8.4	<0.01	5.6	6.7	49.2
BH-117 8.10-8.60	MAR02769.007	Sediment	1.2	<0.04	7.0	3.9	<0.01	4.8	2.5	17.7
BH-117 11.90-12.40	MAR02769.008	Sediment	3.1	0.05	7.8	3.8	<0.01	5.7	2.2	17.4
Certified Reference Material SETOC 768 (% Recovery)			96	97	95	97	101	89	98	97
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02769
Issue Version	1
Customer Reference	162855-2 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH-116 8.10-8.60	MAR02769.001	Sediment	<1	<1
BH-116 11.90-12.40	MAR02769.002	Sediment	<1	<1
BH-114 1.37-1.52	MAR02769.003	Sediment	<5	13.8
BH-114 6.60-7.10	MAR02769.004	Sediment	<1	<1
BH-114 11.90-12.40	MAR02769.005	Sediment	<1	<1
BH-117 3.70-3.85	MAR02769.006	Sediment	<5	9.53
BH-117 8.10-8.60	MAR02769.007	Sediment	<1	<1
BH-117 11.90-12.40	MAR02769.008	Sediment	<1	1.40
		Certified Reference Material BCR-646 (% Recovery)	123	115
		QC Blank	<1	<1

* See Report Notes

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Test Report ID MAR02769
Issue Version 1
Customer Reference 162855-2 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH-116 8.10-8.60	MAR02769.001	Sediment	<1	<1	<1	<1	<1	<1
BH-116 11.90-12.40	MAR02769.002	Sediment	<1	<1	<1	<1	<1	<1
BH-114 1.37-1.52	MAR02769.003	Sediment	7.33	2.70	11.4	38.5	41.0	38.6
BH-114 6.60-7.10	MAR02769.004	Sediment	<1	<1	<1	<1	<1	<1
BH-114 11.90-12.40	MAR02769.005	Sediment	<1	<1	<1	<1	<1	<1
BH-117 3.70-3.85	MAR02769.006	Sediment	5.14	<1	5.83	14.4	16.2	14.5
BH-117 8.10-8.60	MAR02769.007	Sediment	2.51	<1	2.01	2.75	2.76	2.40
BH-117 11.90-12.40	MAR02769.008	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			37	118	103	89	84	83
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID MAR02769
Issue Version 1
Customer Reference 162855-2 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH-116 8.10-8.60	MAR02769.001	Sediment	<1	<1	<1	<1	<1	<1
BH-116 11.90-12.40	MAR02769.002	Sediment	<1	<1	<1	<1	<1	<1
BH-114 1.37-1.52	MAR02769.003	Sediment	31.4	32.2	39.5	9.24	24.7	20.4
BH-114 6.60-7.10	MAR02769.004	Sediment	<1	<1	<1	<1	<1	<1
BH-114 11.90-12.40	MAR02769.005	Sediment	<1	1.60	<1	<1	<1	<1
BH-117 3.70-3.85	MAR02769.006	Sediment	12.1	11.4	14.2	4.23	18.3	6.09
BH-117 8.10-8.60	MAR02769.007	Sediment	1.99	1.72	2.02	2.13	4.41	1.56
BH-117 11.90-12.40	MAR02769.008	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			98	91	89	100	68	82
QC Blank			<1	<1	<1	<1	<1	<1

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Test Report ID MAR02769
Issue Version 1
Customer Reference 162855-2 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH-116 8.10-8.60	MAR02769.001	Sediment	<1	<1	<1	<1	<1	<1
BH-116 11.90-12.40	MAR02769.002	Sediment	<1	<1	<1	<1	<1	<1
BH-114 1.37-1.52	MAR02769.003	Sediment	12.7	44.2	5.23	78.6	6.38	30.9
BH-114 6.60-7.10	MAR02769.004	Sediment	<1	<1	<1	<1	<1	<1
BH-114 11.90-12.40	MAR02769.005	Sediment	1.41	<1	<1	<1	<1	<1
BH-117 3.70-3.85	MAR02769.006	Sediment	4.11	16.2	1.73	28.0	3.91	11.8
BH-117 8.10-8.60	MAR02769.007	Sediment	<1	2.99	<1	6.58	1.82	1.43
BH-117 11.90-12.40	MAR02769.008	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			40	107	82	90	67	88
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02769
Issue Version 1
Customer Reference 162855-2 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH-116 8.10-8.60	MAR02769.001	Sediment	<1	<1	<1	<1	2390
BH-116 11.90-12.40	MAR02769.002	Sediment	<1	5.18	<1	<1	9470
BH-114 1.37-1.52	MAR02769.003	Sediment	4.90	199	40.7	79.1	85200
BH-114 6.60-7.10	MAR02769.004	Sediment	<1	2.56	<1	<1	5650
BH-114 11.90-12.40	MAR02769.005	Sediment	<1	25.8	<1	1.34	5360
BH-117 3.70-3.85	MAR02769.006	Sediment	1.91	28.9	21.9	28.5	20200
BH-117 8.10-8.60	MAR02769.007	Sediment	1.27	5.88	10.5	7.49	4450
BH-117 11.90-12.40	MAR02769.008	Sediment	<1	30.3	<1	<1	6620
Certified Reference Material Quasimeme SED42 (% Recovery)			101	101	83	92	96~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
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Test Report ID	MAR02769
Issue Version	1
Customer Reference	162855-2 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH-116 8.10-8.60	MAR02769.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-116 11.90-12.40	MAR02769.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-114 1.37-1.52	MAR02769.003	Sediment	<0.08	<0.08	<0.08	0.10	0.19	0.16	<0.08
BH-114 6.60-7.10	MAR02769.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-114 11.90-12.40	MAR02769.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-117 3.70-3.85	MAR02769.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			66	100	92	88	114	80	62
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Test Report ID	MAR02769
Issue Version	1
Customer Reference	162855-2 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH-116 8.10-8.60	MAR02769.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-116 11.90-12.40	MAR02769.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-114 1.37-1.52	MAR02769.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-114 6.60-7.10	MAR02769.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-114 11.90-12.40	MAR02769.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-117 3.70-3.85	MAR02769.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			91	79	89	83	90	77	68
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Test Report ID MAR02769
Issue Version 1
Customer Reference 162855-2 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH-116 8.10-8.60	MAR02769.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-116 11.90-12.40	MAR02769.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-114 1.37-1.52	MAR02769.003	Sediment	<0.08	<0.08	0.11	<0.08	0.13	<0.08	<0.08
BH-114 6.60-7.10	MAR02769.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-114 11.90-12.40	MAR02769.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-117 3.70-3.85	MAR02769.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			111	72	73	70	88	54	73
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

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Test Report ID	MAR02769
Issue Version	1
Customer Reference	162855-2 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH-116 8.10-8.60	MAR02769.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-116 11.90-12.40	MAR02769.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-114 1.37-1.52	MAR02769.003	Sediment	<0.08	<0.08	<0.08	<0.08	0.74
BH-114 6.60-7.10	MAR02769.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-114 11.90-12.40	MAR02769.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-117 3.70-3.85	MAR02769.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			97	92	79	78	88
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02769
Issue Version	1
Customer Reference	162855-2 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH-117 8.10-8.60	MAR02769.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-117 11.90-12.40	MAR02769.008	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			64	98	99	122	88	79	72
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02769
Issue Version	1
Customer Reference	162855-2 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH-117 8.10-8.60	MAR02769.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-117 11.90-12.40	MAR02769.008	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			81	86	75	82	92	79	64
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02769
Issue Version	1
Customer Reference	162855-2 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	N*	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH-117 8.10-8.60	MAR02769.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-117 11.90-12.40	MAR02769.008	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			111	70	68	83	72	58	77
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02769
Issue Version 1
Customer Reference 162855-2 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH-117 8.10-8.60	MAR02769.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-117 11.90-12.40	MAR02769.008	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			77	105	73	81	88
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

For full analyte name see method summaries
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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02769
Issue Version 1
Customer Reference 162855-2 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH-116 8.10-8.60	MAR02769.001	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-116 11.90-12.40	MAR02769.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-114 1.37-1.52	MAR02769.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	0.22	<0.1	0.25
BH-114 6.60-7.10	MAR02769.004	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-114 11.90-12.40	MAR02769.005	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-117 3.70-3.85	MAR02769.006	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			98~	84~	98~	63	76	82	45	76
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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Test Report ID MAR02769
Issue Version 1
Customer Reference 162855-2 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH-117 8.10-8.60	MAR02769.007	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-117 11.90-12.40	MAR02769.008	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			97~	88~	98~	63	73	67	89	76
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
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Test Report ID MAR02769
Issue Version 1
Customer Reference 162855-2 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH-116 8.10-8.60	MAR02769.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-116 11.90-12.40	MAR02769.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-114 1.37-1.52	MAR02769.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-114 6.60-7.10	MAR02769.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-114 11.90-12.40	MAR02769.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-117 3.70-3.85	MAR02769.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-117 8.10-8.60	MAR02769.007	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-117 11.90-12.40	MAR02769.008	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			91~	133	134	98~	149	155
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Test Report ID MAR02769
Issue Version 1
Customer Reference 162855-2 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH-116 8.10-8.60	MAR02769.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	2.98
BH-116 11.90-12.40	MAR02769.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH-114 1.37-1.52	MAR02769.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	2.85
BH-114 6.60-7.10	MAR02769.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	3.42
BH-114 11.90-12.40	MAR02769.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	4.29
BH-117 3.70-3.85	MAR02769.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	4.27
BH-117 8.10-8.60	MAR02769.007	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	4.51
BH-117 11.90-12.40	MAR02769.008	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	3.44
Certified Reference Material Quasimeme SED56 (% Recovery)			91~	97~	167	86~	118	93
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<1.0.*

* See Report Notes

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Test Report ID MAR02769
Issue Version 1
Customer Reference 162855-2 Ardersier, Inverness - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR002769.001-008	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR002769.001-008	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR002769.001-008	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR002769.001-008	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/301	MAR002769.003, .006	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/302	MAR002769.007-008	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (PCB180) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR002769.001-008	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR002769.001-008	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. Triphenylene may be present in these samples therefore it is suggested that the Chrysene results should be taken as a Chrysene (inc. Triphenylene).This should be taken into consideration when utilising the data.
ASC/SOP/308	MAR002769.001-008	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Certificate of Analysis

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Test Report ID	MAR02769
Issue Version	1
Customer Reference	162855-2 Ardersier, Inverness - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

SOCOTEC

Test Report ID MAR02787

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: 162855-3 Ardersier, Inverness - Marine Scotland Analysis

Date Sampled: 19-21-Aug-25

Date Samples Received: 02-Sep-25

Test Report Date: 30-Sep-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02787
Issue Version 1
Customer Reference 162855-3 Ardersier, Inverness - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_02*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH-112 2.65-2.80	MAR02787.001	Sediment	17.3	82.7	1.99	66.17	31.84	2.63
BH-112 6.15-6.65	MAR02787.002	Sediment	17.5	82.5	0.00	87.53	12.47	2.64
BH-112 9.15-9.65	MAR02787.003	Sediment	15.1	84.9	0.00	79.58	20.42	2.65
BH-113 4.48-4.73	MAR02787.004	Sediment	53.8	46.2	0.00	43.51	56.49	2.58
BH-113 6.60-7.10	MAR02787.005	Sediment	22.8	77.2	0.00	81.06	18.94	2.63
BH-113 8.60-9.10	MAR02787.006	Sediment	25.6	74.4	0.00	71.67	28.33	2.65
BH-203 4.04-4.19	MAR02787.007	Sediment	15.1	84.9	0.00	84.09	15.91	2.64
BH-203 4.54-5.04	MAR02787.008	Sediment	17.1	82.9	0.00	87.15	12.85	2.65
BH-203 5.54-6.04	MAR02787.009	Sediment	18.5	81.5	0.00	83.17	16.29	2.64
Reference Material (% Recovery)			N/A	N/A	N/A	N/A	N/A	N/A
QC Blank			N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes
NAD - No Asbestos Detected

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02787
Issue Version	1
Customer Reference	162855-3 Ardersier, Inverness - Marine Scotland Analy

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH-112 2.65-2.80	MAR02787.001	Sediment	NAD	0.18
BH-112 6.15-6.65	MAR02787.002	Sediment	NAD	0.04
BH-112 9.15-9.65	MAR02787.003	Sediment	NAD	0.11
BH-113 4.48-4.73	MAR02787.004	Sediment	NAD	0.81
BH-113 6.60-7.10	MAR02787.005	Sediment	NAD	0.13
BH-113 8.60-9.10	MAR02787.006	Sediment	NAD	0.19
BH-203 4.04-4.19	MAR02787.007	Sediment	NAD	0.12
BH-203 4.54-5.04	MAR02787.008	Sediment	NAD	0.05
BH-203 5.54-6.04	MAR02787.009	Sediment	NAD	0.08
		Reference Material (% Recovery)	N/A	106
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID MAR02787
Issue Version 1
Customer Reference 162855-3 Ardersier, Inverness - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH-112 2.65-2.80	MAR02787.001	Sediment	2.4	<0.04	4.7	6.0	<0.01	3.8	4.4	40.4
BH-112 6.15-6.65	MAR02787.002	Sediment	1.2	<0.04	2.4	1.7	<0.01	2.3	1.1	10.9
BH-112 9.15-9.65	MAR02787.003	Sediment	1.3	<0.04	3.0	1.9	<0.01	2.6	1.2	11.4
BH-113 4.48-4.73	MAR02787.004	Sediment	8.0	0.16	18.7	10.0	0.05	11.7	16.3	60.6
BH-113 6.60-7.10	MAR02787.005	Sediment	1.8	<0.04	3.2	1.7	<0.01	3.0	2.4	24.8
BH-113 8.60-9.10	MAR02787.006	Sediment	2.3	0.15	5.8	3.5	<0.01	5.3	2.9	26.4
BH-203 4.04-4.19	MAR02787.007	Sediment	1.4	0.10	4.9	3.1	<0.01	4.2	1.7	22.0
BH-203 4.54-5.04	MAR02787.008	Sediment	1.3	0.07	3.9	2.8	<0.01	3.8	1.4	22.7
BH-203 5.54-6.04	MAR02787.009	Sediment	1.3	0.06	3.9	3.1	<0.01	4.0	1.6	23.0
Certified Reference Material SETOC 768 (% Recovery)			106	101	99	93	101	98	97	106
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02787
Issue Version	1
Customer Reference	162855-3 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH-112 2.65-2.80	MAR02787.001	Sediment	<1	<1
BH-112 6.15-6.65	MAR02787.002	Sediment	<1	<1
BH-112 9.15-9.65	MAR02787.003	Sediment	<1	1.77
BH-113 4.48-4.73	MAR02787.004	Sediment	<5	12.5
BH-113 6.60-7.10	MAR02787.005	Sediment	<1	<1
BH-113 8.60-9.10	MAR02787.006	Sediment	<5	<5
BH-203 4.04-4.19	MAR02787.007	Sediment	<1	<1
BH-203 4.54-5.04	MAR02787.008	Sediment	<1	<1
BH-203 5.54-6.04	MAR02787.009	Sediment	<5	<5
Certified Reference Material BCR-646 (% Recovery)			123	115
QC Blank			<1	<1

* See Report Notes

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Test Report ID MAR02787
Issue Version 1
Customer Reference 162855-3 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH-112 2.65-2.80	MAR02787.001	Sediment	<1	<1	<1	4.26	5.56	6.10
BH-112 6.15-6.65	MAR02787.002	Sediment	<1	<1	<1	<1	<1	<1
BH-112 9.15-9.65	MAR02787.003	Sediment	<1	<1	<1	<1	<1	<1
BH-113 4.48-4.73	MAR02787.004	Sediment	<5	<5	10.9	47.7	57.9	67.1
BH-113 6.60-7.10	MAR02787.005	Sediment	<1	<1	<1	<1	<1	<1
BH-113 8.60-9.10	MAR02787.006	Sediment	<1	<1	<1	<1	<1	<1
BH-203 4.04-4.19	MAR02787.007	Sediment	<1	<1	<1	1.29	1.96	2.48
BH-203 4.54-5.04	MAR02787.008	Sediment	<1	<1	<1	<1	<1	<1
BH-203 5.54-6.04	MAR02787.009	Sediment	<1	<1	<1	<1	1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			42	134	96	84	82	91
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID MAR02787
Issue Version 1
Customer Reference 162855-3 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH-112 2.65-2.80	MAR02787.001	Sediment	5.07	4.08	6.25	<1	2.33	2.00
BH-112 6.15-6.65	MAR02787.002	Sediment	<1	<1	<1	<1	<1	<1
BH-112 9.15-9.65	MAR02787.003	Sediment	<1	<1	<1	<1	<1	<1
BH-113 4.48-4.73	MAR02787.004	Sediment	57.9	53.4	66.4	32.2	45.1	48.9
BH-113 6.60-7.10	MAR02787.005	Sediment	<1	<1	<1	<1	<1	<1
BH-113 8.60-9.10	MAR02787.006	Sediment	<1	1	<1	<1	<1	1.82
BH-203 4.04-4.19	MAR02787.007	Sediment	1.77	1.42	1.90	<1	1.53	1.59
BH-203 4.54-5.04	MAR02787.008	Sediment	<1	<1	<1	<1	<1	<1
BH-203 5.54-6.04	MAR02787.009	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			93	87	82	100	64	88
QC Blank			<1	<1	<1	<1	<1	<1

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Issue Version 1
Customer Reference 162855-3 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH-112 2.65-2.80	MAR02787.001	Sediment	<1	5.59	<1	7.79	<1	4.16
BH-112 6.15-6.65	MAR02787.002	Sediment	<1	<1	<1	<1	<1	<1
BH-112 9.15-9.65	MAR02787.003	Sediment	<1	<1	<1	<1	<1	<1
BH-113 4.48-4.73	MAR02787.004	Sediment	19.1	59.6	<5	112	<5	54.2
BH-113 6.60-7.10	MAR02787.005	Sediment	<1	<1	<1	1.5	<1	<1
BH-113 8.60-9.10	MAR02787.006	Sediment	1.97	<1	<1	<1	<1	<1
BH-203 4.04-4.19	MAR02787.007	Sediment	1.39	2.76	<1	3.53	<1	1.40
BH-203 4.54-5.04	MAR02787.008	Sediment	<1	<1	<1	<1	<1	<1
BH-203 5.54-6.04	MAR02787.009	Sediment	<1	1.40	<1	2.41	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			41	96	85	89	72	87
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02787
Issue Version 1
Customer Reference 162855-3 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH-112 2.65-2.80	MAR02787.001	Sediment	<1	8.33	3.28	11.0	33200
BH-112 6.15-6.65	MAR02787.002	Sediment	<1	<1	<1	<1	6090
BH-112 9.15-9.65	MAR02787.003	Sediment	<1	24.8	<1	<1	9460
BH-113 4.48-4.73	MAR02787.004	Sediment	16.8	141	45.7	107	165000
BH-113 6.60-7.10	MAR02787.005	Sediment	<1	2.83	<1	1.85	4210
BH-113 8.60-9.10	MAR02787.006	Sediment	<1	56.1	<1	1.97	9590
BH-203 4.04-4.19	MAR02787.007	Sediment	<1	8.81	2.13	3.52	15800
BH-203 4.54-5.04	MAR02787.008	Sediment	<1	2.91	<1	<1	7660
BH-203 5.54-6.04	MAR02787.009	Sediment	<1	2.32	<1	2.33	7430
Certified Reference Material Quasimeme SED42 (% Recovery)			110	88	79	92	93~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
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Issue Version 1
Customer Reference 162855-3 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH-112 2.65-2.80	MAR02787.001	Sediment	0.12	0.11	0.30	0.51	0.32	0.36	<0.08
BH-112 6.15-6.65	MAR02787.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-112 9.15-9.65	MAR02787.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-113 4.48-4.73	MAR02787.004	Sediment	0.11	0.09	0.10	0.09	0.19	0.24	<0.08
BH-113 6.60-7.10	MAR02787.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-113 8.60-9.10	MAR02787.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-203 4.04-4.19	MAR02787.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-203 4.54-5.04	MAR02787.008	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-203 5.54-6.04	MAR02787.009	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			64	98	99	122	88	79	72
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID MAR02787
Issue Version 1
Customer Reference 162855-3 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH-112 2.65-2.80	MAR02787.001	Sediment	0.33	0.29	0.30	0.41	0.27	0.30	0.34
BH-112 6.15-6.65	MAR02787.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-112 9.15-9.65	MAR02787.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-113 4.48-4.73	MAR02787.004	Sediment	<0.08	0.12	0.09	<0.08	0.13	<0.08	<0.08
BH-113 6.60-7.10	MAR02787.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-113 8.60-9.10	MAR02787.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-203 4.04-4.19	MAR02787.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-203 4.54-5.04	MAR02787.008	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-203 5.54-6.04	MAR02787.009	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			81	86	75	82	92	79	64
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID MAR02787
Issue Version 1
Customer Reference 162855-3 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	N*	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH-112 2.65-2.80	MAR02787.001	Sediment	0.36	0.32	0.36	0.34	0.37	0.28	0.10
BH-112 6.15-6.65	MAR02787.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-112 9.15-9.65	MAR02787.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-113 4.48-4.73	MAR02787.004	Sediment	0.10	<0.08	0.10	<0.08	<0.08	<0.08	0.09
BH-113 6.60-7.10	MAR02787.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-113 8.60-9.10	MAR02787.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-203 4.04-4.19	MAR02787.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-203 4.54-5.04	MAR02787.008	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-203 5.54-6.04	MAR02787.009	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			111	70	68	83	72	58	77
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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*See report notes

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Test Report ID	MAR02787
Issue Version	1
Customer Reference	162855-3 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH-112 2.65-2.80	MAR02787.001	Sediment	0.12	0.15	0.16	0.29	2.08
BH-112 6.15-6.65	MAR02787.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-112 9.15-9.65	MAR02787.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-113 4.48-4.73	MAR02787.004	Sediment	<0.08	<0.08	<0.08	0.11	0.92
BH-113 6.60-7.10	MAR02787.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-113 8.60-9.10	MAR02787.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-203 4.04-4.19	MAR02787.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-203 4.54-5.04	MAR02787.008	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-203 5.54-6.04	MAR02787.009	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			77	105	73	81	88
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

*See report notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02787
Issue Version 1
Customer Reference 162855-3 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH-112 2.65-2.80	MAR02787.001	Sediment	<0.1	0.20	<0.1	0.40	<0.1	0.40	0.36	0.45
BH-112 6.15-6.65	MAR02787.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-112 9.15-9.65	MAR02787.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-113 4.48-4.73	MAR02787.004	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	0.25	<0.1	0.15
BH-113 6.60-7.10	MAR02787.005	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-113 8.60-9.10	MAR02787.006	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-203 4.04-4.19	MAR02787.007	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-203 4.54-5.04	MAR02787.008	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-203 5.54-6.04	MAR02787.009	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			97~	88~	98~	63	73	67	89	76
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
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Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02787
Issue Version	1
Customer Reference	162855-3 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH-112 2.65-2.80	MAR02787.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-112 6.15-6.65	MAR02787.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-112 9.15-9.65	MAR02787.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-113 4.48-4.73	MAR02787.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-113 6.60-7.10	MAR02787.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-113 8.60-9.10	MAR02787.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-203 4.04-4.19	MAR02787.007	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-203 4.54-5.04	MAR02787.008	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-203 5.54-6.04	MAR02787.009	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			98~	134	115	94~	126	128
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

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Test Report ID	MAR02787
Issue Version	1
Customer Reference	162855-3 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH-112 2.65-2.80	MAR02787.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	2.09
BH-112 6.15-6.65	MAR02787.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH-112 9.15-9.65	MAR02787.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH-113 4.48-4.73	MAR02787.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	3.04
BH-113 6.60-7.10	MAR02787.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	1.95
BH-113 8.60-9.10	MAR02787.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH-203 4.04-4.19	MAR02787.007	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH-203 4.54-5.04	MAR02787.008	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH-203 5.54-6.04	MAR02787.009	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
Certified Reference Material Quasimeme SED56 (% Recovery)			98~	111~	114~	98~	107	78
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<1.0*

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*See report notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02787
Issue Version 1
Customer Reference 162855-3 Ardersier, Inverness - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02787.001-009	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02787.001-009	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02787.001-009	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02787.001-009	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/301	MAR02787.004, .006, .009	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/302	MAR02787.001-009	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (PCB180) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02787.004	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/303/304	MAR02787.001-009	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02787.001-009	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. Triphenylene may be present in these samples therefore it is suggested that the Chrysene results should be taken as a Chrysene (inc. Triphenylene).This should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02787.001-009	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02787
Issue Version	1
Customer Reference	162855-3 Ardersier, Inverness - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

SOCOTEC

Test Report ID MAR02798

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: Marine GI Ardersier Port, Inverness

Date Sampled: 26-Aug-25

Date Samples Received: 10-Sep-25

Test Report Date: 01-Oct-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02798
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

			Units	%	%	%	%	%	Mg/m3
			Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_02*
			Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
			Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:		**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH108 ES 4.64-4.79m		MAR02798.001	Sediment	33.1	66.9	0.00	52.84	47.16	2.62
BH108 ES 7.14-7.64m		MAR02798.002	Sediment	27.3	72.7	0.00	85.55	14.45	2.63
BH108 ES 9.50-10.00m		MAR02798.003	Sediment	26.3	73.7	0.00	80.23	19.77	2.64
BH207 ES 4.24-4.39m		MAR02798.004	Sediment	53.1	46.9	0.00	34.50	65.50	2.59
BH207 ES 5.24-5.74m		MAR02798.005	Sediment	26.7	73.3	0.00	83.25	16.75	2.63
BH207 ES 5.74-6.24m		MAR02798.006	Sediment	16.3	83.7	0.00	82.84	17.16	2.64
			Reference Material (% Recovery)	N/A	N/A	N/A	N/A	N/A	N/A
			QC Blank	N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID	MAR02798
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	NAD	0.12
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	NAD	0.03
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	NAD	0.06
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	NAD	2.58
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	NAD	0.07
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	NAD	0.09
		Reference Material (% Recovery)	N/A	96
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID	MAR02798
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	9.2	0.13	28.0	28.5	0.05	17.0	18.7	168
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	3.3	<0.04	14.6	7.0	<0.01	10.1	5.1	30.1
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	4.0	0.04	16.5	5.7	<0.01	11.0	3.3	28.7
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	9.8	0.21	32.4	26.5	0.06	20.0	24.6	155
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	4.2	<0.04	14.4	10.3	0.02	9.6	6.3	49.9
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	3.2	<0.04	15.5	7.4	0.02	10.1	3.9	38.0
Certified Reference Material SETOC 768 (% Recovery)			98	95	95	89	102	96	99	100
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02798
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	33.5	27.1
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	<5	<5
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	<5	<5
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	<5	<5
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	22.8	30.0
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	<1	<1
Certified Reference Material BCR-646 (% Recovery)			60	65
QC Blank			<1	<1

* See Report Notes

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Test Report ID MAR02798
Issue Version 1
Customer Reference Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	10.6	<5	12.6	60.0	92.3	96.3
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	<5	<5	<5	<5	<5	<5
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	<1	<1	<1	<1	<1	<1
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	<5	<5	11.4	43.2	53.9	52.5
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	19.0	<5	13.1	46.3	63.6	64.0
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	<1	<1	<1	1.61	2.05	2.02
Certified Reference Material Quasimeme SED42 (% Recovery)			44	144	84	82	84	88
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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*See report notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02798
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	63.5	74.0	87.8	8.58	22.3	12.6
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	<5	<5	<5	<5	<5	<5
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	<1	<1	<1	<1	<1	1.52
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	53.6	47.8	56.5	23.1	37.3	39.4
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	45.6	49.5	58.5	9.76	18.5	11.9
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	1.23	1.67	1.75	<1	<1	1.46
Certified Reference Material Quasimeme SED42 (% Recovery)			100	95	74	97	69	90
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries

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Test Report ID	MAR02798
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	7.91	79.9	16.1	115	<5	79.1
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	<5	<5	<5	<5	<5	<5
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	1.44	<1	<1	<1	<1	<1
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	15.0	49.8	<5	97.6	<5	50.6
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	<5	55.9	10.7	99.6	7.99	52.5
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	<1	1.99	<1	3.31	<1	1.52
Certified Reference Material Quasimeme SED42 (% Recovery)			50	98	102	89	72	98
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries

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Test Report ID MAR02798
Issue Version 1
Customer Reference Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	<5	44.0	46.2	137	158000
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	<5	10.4	<5	<5	22300
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	<1	8.15	<1	1.86	19300
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	<5	159	37.4	89.8	31900
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	<5	30.9	46.0	105	113000
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	<1	2.80	1.63	3.46	15200
Certified Reference Material Quasimeme SED42 (% Recovery)			94	89	81	92	116~
QC Blank			<1	<1	<1	<1	<100

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Test Report ID	MAR02798
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	N*	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	0.13	0.10	<0.08	0.10	0.12	0.19	<0.08
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			84	107	103	110	80	111	86
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Test Report ID	MAR02798
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	<0.08	0.09	<0.08	<0.08	0.15	<0.08	<0.08
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			102	96	95	96	91	90	80
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

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Test Report ID MAR02798
Issue Version 1
Customer Reference Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	0.10	0.14	0.35	<0.08	0.37	0.73	<0.08
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			106	83	82	86	81	68	87
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID	MAR02798
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	<0.08	<0.08	<0.08	0.10	1.05
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			139	97	85	102	97
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

For full analyte name see method summaries

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Test Report ID MAR02798
Issue Version 1
Customer Reference Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	N*	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	<0.1	<0.1	<0.1	0.10	<0.1	<0.1	<0.1	0.13
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	<0.1	0.11	<0.1	0.21	<0.1	0.12	0.18	0.15
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			89~	80~	93~	29	81	46	61	71
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
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Test Report ID	MAR02798
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			98~	134	115	94~	126	128
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

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Test Report ID	MAR02798
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH108 ES 4.64-4.79m	MAR02798.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH108 ES 7.14-7.64m	MAR02798.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH108 ES 9.50-10.00m	MAR02798.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH207 ES 4.24-4.39m	MAR02798.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	1.88
BH207 ES 5.24-5.74m	MAR02798.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH207 ES 5.74-6.24m	MAR02798.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
Certified Reference Material Quasimeme SED56 (% Recovery)			98~	111~	114~	98~	107	78
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<1.0*

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Test Report ID MAR02798
Issue Version 1
Customer Reference Marine GI Ardersier Port, Inverness

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02798.001-006	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02798.001-006	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02798.001-006	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02798.001-006	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/301	MAR02798.002-004, .006	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/302	MAR02798.001-006	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (PCB52, DIELDRIN) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02798.001-002, .004-005	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/303/304	MAR02798.001-006	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02798.001-006	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. Triphenylene may be present in these samples therefore it is suggested that the Chrysene results should be taken as a Chrysene (inc. Triphenylene).This should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02798.001-006	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02798
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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SOCOTEC

Test Report ID MAR02799

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: Marine GI Ardersier Port, Inverness

Date Sampled: 01-02-Sep-25

Date Samples Received: 12-Sep-25

Test Report Date: 03-Oct-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

MAR02799
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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_02*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	24.3	75.7	0.00	80.43	19.57	2.66
BH109 ES 4.20-4.70	MAR02799.002	Sediment	26.1	73.9	0.00	87.64	12.36	2.64
BH109 ES 9.50-10.00	MAR02799.003	Sediment	18.2	81.8	0.00	86.88	13.12	2.66
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	49.2	50.8	0.00	33.44	66.56	2.63
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	41.9	58.1	0.00	44.07	55.93	2.61
		Reference Material (% Recovery)	N/A	N/A	N/A	N/A	N/A	N/A
		QC Blank	N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	NAD	0.04
BH109 ES 4.20-4.70	MAR02799.002	Sediment	NAD	0.03
BH109 ES 9.50-10.00	MAR02799.003	Sediment	NAD	0.09
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	NAD	1.64
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	NAD	0.23
		Reference Material (% Recovery)	N/A	96
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	5.2	0.08	25.1	9.4	0.03	18.1	7.1	44.6
BH109 ES 4.20-4.70	MAR02799.002	Sediment	2.8	<0.04	16.8	7.6	0.02	10.3	4.4	30.7
BH109 ES 9.50-10.00	MAR02799.003	Sediment	3.4	0.15	16.5	7.9	0.01	12.8	4.3	33.6
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	16.5	0.20	35.0	27.3	0.09	21.5	30.5	166
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	10.7	0.15	29.0	22.3	0.05	17.9	18.9	131
Certified Reference Material SETOC 768 (% Recovery)			98	95	95	87	102	96	99	100
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	<1	<1
BH109 ES 4.20-4.70	MAR02799.002	Sediment	<5	<5
BH109 ES 9.50-10.00	MAR02799.003	Sediment	<1	<1
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	16.4	13.5
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	21.4	31.0
Certified Reference Material BCR-646 (% Recovery)			71	75
QC Blank			<1	<1

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Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	<1	1.57	1.99	3.97	4.01	3.00
BH109 ES 4.20-4.70	MAR02799.002	Sediment	<1	<1	1.66	3.40	3.58	3.66
BH109 ES 9.50-10.00	MAR02799.003	Sediment	<1	<1	<1	<1	<1	<1
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	<5	<5	11.2	39.7	54.8	64.0
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	11.8	<5	9.69	51.4	79.1	84.4
Certified Reference Material Quasimeme SED42 (% Recovery)			44	144	84	82	84	88
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries

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As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.

*See report notes

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Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	2.68	2.72	3.37	1.50	4.26	1.75
BH109 ES 4.20-4.70	MAR02799.002	Sediment	2.89	2.13	3.20	24.7	6.21	13.2
BH109 ES 9.50-10.00	MAR02799.003	Sediment	<1	<1	<1	1.24	<1	<1
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	45.3	49.5	51.5	21.4	28.4	25.2
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	67.6	63.2	80.5	13.9	26.0	14.6
Certified Reference Material Quasimeme SED42 (% Recovery)			95	100	74	97	69	90
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries

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Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	1.48	4.40	<1	11.0	1.66	2.84
BH109 ES 4.20-4.70	MAR02799.002	Sediment	9.06	4.12	<1	8.70	<1	2.46
BH109 ES 9.50-10.00	MAR02799.003	Sediment	<1	<1	<1	<1	<1	<1
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	15.0	44.6	<5	85.1	<5	47.4
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	8.83	69.0	13.3	101	<5	64.5
Certified Reference Material Quasimeme SED42 (% Recovery)			50	98	102	89	72	98
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries

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Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	<1	3.76	8.11	10.5	5970
BH109 ES 4.20-4.70	MAR02799.002	Sediment	11.3	11.2	7.62	8.86	9050
BH109 ES 9.50-10.00	MAR02799.003	Sediment	<1	31.3	<1	<1	6640
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	<5	129	34.5	82.9	111000
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	<5	59.4	47.8	124	112000
Certified Reference Material Quasimeme SED42 (% Recovery)			94	89	81	92	116~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries

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Test Report ID MAR02799
Issue Version 1
Customer Reference Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH109 ES 4.20-4.70	MAR02799.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH109 ES 9.50-10.00	MAR02799.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	0.10	<0.08	<0.08	<0.08	0.14	0.18	<0.08
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			84	107	103	107	80	95	86
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID MAR02799
Issue Version 1
Customer Reference Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH109 ES 4.20-4.70	MAR02799.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH109 ES 9.50-10.00	MAR02799.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	<0.08	<0.08	<0.08	<0.08	0.09	<0.08	<0.08
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			102	96	95	96	91	90	80
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH109 ES 4.20-4.70	MAR02799.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH109 ES 9.50-10.00	MAR02799.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	<0.08	<0.08	0.14	<0.08	0.11	<0.08	<0.08
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			87	83	82	86	81	68	87
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH109 ES 4.20-4.70	MAR02799.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH109 ES 9.50-10.00	MAR02799.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	<0.08	<0.08	<0.08	<0.08	0.74
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			139	97	85	102	97
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

For full analyte name see method summaries

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Test Report ID MAR02799
Issue Version 1
Customer Reference Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	N*	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH109 ES 4.20-4.70	MAR02799.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH109 ES 9.50-10.00	MAR02799.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	0.23	<0.1	0.17
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			89~	80~	93~	29	81	46	61	71
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
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*See report notes

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Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH109 ES 4.20-4.70	MAR02799.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH109 ES 9.50-10.00	MAR02799.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	<0.05	<0.05	0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			98~	134	115	94~	126	128
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH109 ES pos 0.68-0.53	MAR02799.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH109 ES 4.20-4.70	MAR02799.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH109 ES 9.50-10.00	MAR02799.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1
BH119 ES neg 5.17-5.67	MAR02799.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	5.71
BH119 ES neg 5.67-6.17	MAR02799.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	3.50
Certified Reference Material Quasimeme SED56 (% Recovery)			98~	111~	114~	98~	107	78
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<1.0*

* See Report Notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02799
Issue Version 1
Customer Reference Marine GI Ardersier Port, Inverness

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR2799.001-005	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR2799.001-005	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR2799.001-005	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR2799.001-005	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/301	MAR2799.002	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/302	MAR2799.001-005	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (DIELDRIN) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR2799.004-005	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/303/304	MAR2799.001-005	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR2799.001-005	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. Triphenylene may be present in these samples therefore it is suggested that the Chrysene results should be taken as a Chrysene (inc. Triphenylene).This should be taken into consideration when utilising the data.
ASC/SOP/308	MAR2799.001-005	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02799
Issue Version	1
Customer Reference	Marine GI Ardersier Port, Inverness

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

SOCOTEC

Test Report ID MAR02813

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: 162855-6a & 6b Ardersier, Inverness - Marine Scotland Analysis

Date Sampled: 10-Sep-25

Date Samples Received: 18-Sep-25

Test Report Date: 13-Oct-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02813
Issue Version	1
Customer Reference	162855-6a & 6b Ardersier, Inverness - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_02*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	22.8	77.2	0.00	77.14	22.86	2.63
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	17.5	82.5	1.28	93.24	5.48	2.64
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	13.6	86.4	0.00	92.48	7.52	2.64
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	1.59	98.4	2.99	93.16	3.85	2.65
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	14.2	85.8	0.00	90.51	9.49	2.64
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	12.3	87.7	0.00	82.50	17.50	2.64
		Reference Material (% Recovery)	N/A	N/A	N/A	N/A	N/A	N/A
		QC Blank	N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID	MAR02813
Issue Version	1
Customer Reference	162855-6a & 6b Ardersier, Inverness - Marine Scotlanc

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	NAD	0.11
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	NAD	0.07
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	NAD	0.05
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	NAD	0.06
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	NAD	0.03
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	NAD	0.05
		Reference Material (% Recovery)	N/A	102
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02813
Issue Version 1
Customer Reference 162855-6a & 6b Ardersier, Inverness - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	5.1	0.07	15.4	14.3	0.02	11.0	12.0	66.3
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	2.7	<0.04	12.3	6.6	<0.01	8.1	4.6	18.2
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	2.3	0.05	14.4	5.3	0.05	7.8	4.0	18.8
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	2.1	0.09	12.3	13.4	0.03	9.1	7.2	75.5
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	2.1	0.05	12.5	4.4	0.01	7.7	3.1	43.7
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	1.4	<0.04	14.4	5.0	0.03	6.2	2.6	16.9
Certified Reference Material SETOC 768 (% Recovery)			103	94	93	86	111	91	108	100
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02813
Issue Version	1
Customer Reference	162855-6a & 6b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	2.04	<1
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	<1	<1
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	<1	<1
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	<1	<1
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	<1	<1
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	<1	<1
Certified Reference Material BCR-646 (% Recovery)			101	96
QC Blank			<1	<1

* See Report Notes

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Test Report ID MAR02813
Issue Version 1
Customer Reference 162855-6a & 6b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	<5	<5	<5	9.81	16.1	16.9
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	<1	<1	<1	<1	<1	<1
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	<1	<1	<1	<1	<1	<1
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	<1	<1	<1	3.16	4.50	3.79
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	<1	<1	<1	<1	<1	<1
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			44	119	86	88	89	86
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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*See report notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02813
Issue Version 1
Customer Reference 162855-6a & 6b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	14.3	13.8	17.4	7.49	15.9	10.7
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	<1	<1	<1	<1	<1	<1
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	<1	<1	<1	<1	<1	<1
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	3.65	3.73	3.92	<1	1.25	<1
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	<1	<1	<1	<1	<1	<1
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			99	100	79	103	73	94
QC Blank			<1	<1	<1	<1	<1	<1

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Test Report ID MAR02813
Issue Version 1
Customer Reference 162855-6a & 6b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	<5	24.8	<5	19.9	<5	14.4
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	<1	<1	<1	<1	<1	<1
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	<1	<1	<1	<1	<1	<1
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	<1	3.89	<1	6.58	<1	3.48
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	<1	<1	<1	<1	<1	<1
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			44	104	91	99	74	95
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02813
Issue Version 1
Customer Reference 162855-6a & 6b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	N*	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	<5	12.9	10.5	26.9	59500
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	<1	<1	<1	<1	2970
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	<1	<1	<1	<1	2430
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	<1	2.77	2.56	6.21	7400
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	<1	<1	<1	<1	8530
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	<1	<1	<1	<1	2640
Certified Reference Material Quasimeme SED42 (% Recovery)			101	103	89	97	86~
QC Blank			<1	<1	<1	<1	<100

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Test Report ID MAR02813
Issue Version 1
Customer Reference 162855-6a & 6b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	N*	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	0.13	0.13	0.14	0.18	0.18	0.17	<0.08
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			81	109	99	95	85	83	77
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID MAR02813
Issue Version 1
Customer Reference 162855-6a & 6b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	0.28	0.17	0.21	<0.08	0.21	0.26	0.17
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			82	95	106	80	98	77	65
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

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Test Report ID MAR02813
Issue Version 1
Customer Reference 162855-6a & 6b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	N*	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	0.17	0.21	0.18	0.24	0.18	0.18	0.12
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			98	76	79	79	87	64	83
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID MAR02813
Issue Version 1
Customer Reference 162855-6a & 6b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.7
		Accreditation	UKAS	N*	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	0.12	0.13	0.12	0.19	1.12
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			121	233	85	87	90
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

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Test Report ID MAR02813
Issue Version 1
Customer Reference 162855-6a & 6b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	N*	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	<0.1	0.19	0.11	0.23	<0.1	0.20	0.40	0.20
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			98~	86~	99~	130	85	91	40	59
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
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Test Report ID	MAR02813
Issue Version	1
Customer Reference	162855-6a & 6b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			122~	122	118	106~	158	154
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Test Report ID	MAR02813
Issue Version	1
Customer Reference	162855-6a & 6b Ardersier, Inverness - Marine Scotland Analys

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH-206 neg 1.20-1.35m	MAR02813.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.4
BH-206 neg 3.50-4.00m	MAR02813.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.4
BH-206 neg 5.50-6.00m	MAR02813.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.4
BH-302 pos 3.92-3.42m	MAR02813.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.4
BH-302 neg 4.08m to -4.58m	MAR02813.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.4
BH-302 neg 12.08-12.58m	MAR02813.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.4
Certified Reference Material Quasimeme SED56 (% Recovery)			112~	117~	155	111~	141	78
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.4*

* See Report Notes

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Test Report ID MAR02813
Issue Version 1
Customer Reference 162855-6a & 6b Ardersier, Inverness - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02813.001-006	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02813.001-006	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02813.001-006	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02813.001-006	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/3024	MAR02813.001-006	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (PCB118, PCB158, PCB47, DDT) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02813.001	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/303/304	MAR02813.001-006	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (PHENANT) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02813.001-006	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02813.001-006	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. Triphenylene may be present in these samples therefore it is suggested that the Chrysene results should be taken as a Chrysene (inc. Triphenylene).This should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02813.001-006	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02813
Issue Version	1
Customer Reference	162855-6a & 6b Ardersier, Inverness - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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SOCOTEC

Test Report ID MAR02819

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: 162855-7a & 7b Ardersier, Inverness - Marine Scotland Analysis

Date Sampled: 11-13-Sep-25

Date Samples Received: 23-Sep-25

Test Report Date: 14-Oct-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02819
Issue Version 1
Customer Reference 162855-7a & 7b Ardersier, Inverness - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_03*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	0.80	99.2	1.20	96.36	2.44	2.64
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	16.8	83.2	0.00	95.52	4.48	2.64
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	13.5	86.5	0.00	81.09	18.91	2.66
		Reference Material (% Recovery)	N/A	N/A	N/A	N/A	N/A	N/A
		QC Blank	N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes
NAD - No Asbestos Detected

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Test Report ID	MAR02819
Issue Version	1
Customer Reference	162855-7a & 7b Ardersier, Inverness - Marine Scotlanc

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	NAD	0.05
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	NAD	<0.02
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	NAD	0.09
		Reference Material (% Recovery)	N/A	96
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID MAR02819
Issue Version 1
Customer Reference 162855-7a & 7b Ardersier, Inverness - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	2.1	<0.04	10.7	8.7	0.01	9.0	5.3	48.2
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	0.8	<0.04	3.1	1.8	<0.01	1.8	1.1	9.3
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	1.6	0.09	12	3.9	<0.01	9.4	2.4	17.9
Certified Reference Material SETOC 768 (% Recovery)			102	97	95	87	94	93	99	95
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02819
Issue Version	1
Customer Reference	162855-7a & 7b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	<1	<1
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	<1	<1
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	<1	<1
Certified Reference Material BCR-646 (% Recovery)			91	100
QC Blank			<1	<1

* See Report Notes

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Test Report ID MAR02819
Issue Version 1
Customer Reference 162855-7a & 7b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	<1	<1	<1	<1	1.14	1.39
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	<1	<1	<1	<1	<1	<1
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			40	132	88	87	87	95
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID MAR02819
Issue Version 1
Customer Reference 162855-7a & 7b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	1.11	1.24	1.16	<1	<1	<1
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	<1	<1	<1	<1	<1	<1
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	<1	<1	<1	2.95	<1	2.76
Certified Reference Material Quasimeme SED42 (% Recovery)			94	104	84	104	75	96
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02819
Issue Version 1
Customer Reference 162855-7a & 7b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	<1	1.37	<1	1.91	<1	1.11
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	<1	<1	<1	<1	<1	<1
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	2.27	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			47	104	102	93	72	104
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID MAR02819
Issue Version 1
Customer Reference 162855-7a & 7b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	<1	1.08	<1	1.87	5660
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	<1	<1	<1	<1	5590
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	<1	38.8	<1	1.19	6890
Certified Reference Material Quasimeme SED42 (% Recovery)			105	97	82	96	90~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID MAR02819
Issue Version 1
Customer Reference 162855-7a & 7b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			81	119	94	96	94	92	75
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID MAR02819
Issue Version 1
Customer Reference 162855-7a & 7b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			111	87	90	87	82	90	91
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID MAR02819
Issue Version 1
Customer Reference 162855-7a & 7b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			103	78	84	94	92	63	96
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

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Test Report ID	MAR02819
Issue Version	1
Customer Reference	162855-7a & 7b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			121	116	89	99	95
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02819
Issue Version 1
Customer Reference 162855-7a & 7b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			93~	80~	104~	92	84	86	68	87
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

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Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02819
Issue Version	1
Customer Reference	162855-7a & 7b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	N*	N*
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	<0.05	<0.05	0.05	<0.05	0.05	0.06
Certified Reference Material Quasimeme SED56 (% Recovery)			137~	115	114	115~	151	170
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Test Report ID	MAR02819
Issue Version	1
Customer Reference	162855-7a & 7b Ardersier, Inverness - Marine Scotland Analys

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	N*	UKAS	N*	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH-301 pos 4.42- 3.92m	MAR02819.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<3
BH-301 neg 3.58-4.08m	MAR02819.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<3
BH-301 neg 11.58-12.08m	MAR02819.003	Sediment	<0.05	<0.05	0.06	<0.05	0.06	<3
Certified Reference Material Quasimeme SED56 (% Recovery)			136~	137~	136~	125~	187	79
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<3.0*

* See Report Notes

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Test Report ID MAR02819
Issue Version 1
Customer Reference 162855-7a & 7b Ardersier, Inverness - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02819.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02819.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02819.001-003	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02819.001-003	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/303/304	MAR02819.001	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02819.001	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. Triphenylene may be present in these samples therefore it is suggested that the Chrysene results should be taken as a Chrysene (inc. Triphenylene).This should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02819.001-003	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (BDE99 ,BDE100 ,BDE153, BDE183) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02819.001-003	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02819
Issue Version	1
Customer Reference	162855-7a & 7b Ardersier, Inverness - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

SOCOTEC

Test Report ID MAR02820

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: 162855-8 Ardersier, Inverness - Marine Scotland Analysis

Date Sampled: 15-16-Sep-25

Date Samples Received: 23-Sep-25

Test Report Date: 16-Oct-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02820
Issue Version	1
Customer Reference	162855-8 Ardersier, Inverness - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_02*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	22.3	77.7	0.00	84.82	15.18	2.65
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	18.7	81.3	0.00	88.06	11.94	2.64
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	18.0	82.0	0.00	87.34	12.66	2.65
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	17.7	82.3	0.00	74.01	25.99	2.64
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	19.1	80.9	0.00	88.12	11.88	2.64
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	13.5	86.5	0.00	66.30	33.70	2.64
		Reference Material (% Recovery)	N/A	N/A	N/A	N/A	N/A	N/A
		QC Blank	N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID	MAR02820
Issue Version	1
Customer Reference	162855-8 Ardersier, Inverness - Marine Scotland Analy

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	NAD	0.08
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	NAD	0.03
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	NAD	0.04
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	NAD	0.10
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	NAD	0.04
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	NAD	0.04
		Reference Material (% Recovery)	N/A	96
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID	MAR02820
Issue Version	1
Customer Reference	162855-8 Ardersier, Inverness - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	0.8	<0.04	5.5	2.0	<0.01	2.8	1.7	14.9
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	0.8	<0.04	4.7	2.1	<0.01	2.7	1.3	8.5
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	1.1	<0.04	4.3	1.7	<0.01	3.0	1.0	9.7
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	1.5	<0.04	5.3	4.2	<0.01	3.4	2.6	25.4
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	0.7	<0.04	4.1	2.0	<0.01	2.5	1.2	11.9
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	1.5	<0.04	3.9	1.1	<0.01	2.0	1.0	10.0
Certified Reference Material SETOC 768 (% Recovery)			102	97	95	87	94	93	99	95
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02820
Issue Version	1
Customer Reference	162855-8 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	<1	<1
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	<1	<1
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	<1	<1
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	<1	<1
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	<1	<1
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	<1	<1
Certified Reference Material BCR-646 (% Recovery)			91	91
QC Blank			<1	<1

* See Report Notes

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Test Report ID	MAR02820
Issue Version	1
Customer Reference	162855-8 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	1.29	<1	3.83	4.54	4.19	4.04
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	<1	<1	10.8	7.18	5.86	5.21
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	<1	<1	<1	<1	<1	<1
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	<1	<1	<1	<1	1.23	1.26
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	<1	<1	<1	<1	<1	<1
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			40	132	88	87	87	95
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.

*See report notes

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Test Report ID	MAR02820
Issue Version	1
Customer Reference	162855-8 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	3.26	2.01	3.87	3.34	4.32	2.21
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	4.43	3.04	5.85	1.65	7.20	2.61
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	<1	<1	<1	<1	<1	<1
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	1.34	<1	<1	<1	<1	<1
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	<1	<1	<1	<1	<1	<1
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			104	94	84	104	75	96
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.

*See report notes

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Test Report ID MAR02820
Issue Version 1
Customer Reference 162855-8 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	1.91	5.97	<1	14.3	1.45	2.42
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	4.23	25.8	<1	22.2	2.49	3.55
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	<1	<1	<1	<1	<1	<1
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	<1	1.26	<1	2.30	<1	<1
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	<1	<1	<1	2.07	<1	<1
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			47	104	102	93	72	104
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID MAR02820
Issue Version 1
Customer Reference 162855-8 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	1.59	2.79	7.56	11.8	9990
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	<1	3.15	12.5	16.6	68700
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	<1	<1	<1	<1	17500
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	<1	4.26	1.29	2.57	19300
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	<1	<1	1.28	2.17	12200
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	<1	1.30	<1	<1	3650
Certified Reference Material Quasimeme SED42 (% Recovery)			105	97	82	96	90~
QC Blank			<1	<1	<1	<1	<100

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		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	0.40	0.44	0.48	0.40	0.58	0.48	0.24
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			81	119	94	96	94	92	75
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

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		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	0.50	0.48	0.56	0.53	0.50	0.46	0.47
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			111	87	90	87	82	90	91
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

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Test Report ID	MAR02820
Issue Version	1
Customer Reference	162855-8 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	0.42	0.42	0.47	0.50	0.56	0.41	0.37
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			103	78	84	94	92	63	96
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Test Report ID	MAR02820
Issue Version	1
Customer Reference	162855-8 Ardersier, Inverness - Marine Scotland Analy

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	0.56	0.42	0.45	0.56	3.27
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			121	116	89	99	95~
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

For full analyte name see method summaries

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Test Report ID MAR02820
Issue Version 1
Customer Reference 162855-8 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	0.19	0.54	0.43	0.59	0.29	0.62	0.99	0.61
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			93~	80~	104~	92	84	86	68	87
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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Test Report ID MAR02820
Issue Version 1
Customer Reference 162855-8 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	N*
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	<0.05	<0.05	0.05	<0.05	<0.05	0.05
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			137~	115	114	115~	151	170
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH-107 pos 0.62-0.47m	MAR02820.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<3
BH-107 neg 2.00-2.50m	MAR02820.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<3
BH-107 neg 4.60-5.10m	MAR02820.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<3
BH-106 pos 1.09-0.94m	MAR02820.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<3
BH-106 neg 2.00-2.50m	MAR02820.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<3
BH-106 neg 5.20-5.70m	MAR02820.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<3
Certified Reference Material Quasimeme SED56 (% Recovery)			136~	137~	136~	125~	187	79
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<3.0*

* See Report Notes

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Test Report ID MAR02820
Issue Version 1
Customer Reference 162855-8 Ardersier, Inverness - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02820.001-006	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02820.001-006	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02820.001-006	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02820.001-006	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/301	MAR02820.001-006	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/303/304	MAR02820.001-006	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02820.001-006	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. Triphenylene may be present in these samples therefore it is suggested that the Chrysene results should be taken as a Chrysene (inc. Triphenylene).This should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02820.001-006	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (BDE99) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02820.001-006	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Test Report ID	MAR02820
Issue Version	1
Customer Reference	162855-8 Ardersier, Inverness - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

SOCOTEC

Test Report ID MAR02821

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: 162855-9a & 9b Ardersier, Inverness - Marine Scotland Analysis

Date Sampled: 15-17-Sep-25

Date Samples Received: 23-Sep-25

Test Report Date: 14-Oct-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02821
Issue Version 1
Customer Reference 162855-9a & 9b Ardersier, Inverness - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_03*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH-303 4.20-4.05m	MAR02821.001	Sediment	14.0	86.0	0.00	92.05	7.95	2.63
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	18.3	81.7	2.56	95.24	2.20	2.63
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	19.7	80.3	0.00	85.52	14.48	2.65
Reference Material (% Recovery)			N/A	N/A	N/A	N/A	N/A	N/A
QC Blank			N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes
NAD - No Asbestos Detected

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Certificate of Analysis

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Test Report ID	MAR02821
Issue Version	1
Customer Reference	162855-9a & 9b Ardersier, Inverness - Marine Scotlanc

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH-303 4.20-4.05m	MAR02821.001	Sediment	NAD	<0.02
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	NAD	0.03
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	NAD	0.10
		Reference Material (% Recovery)	N/A	99
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID MAR02821
Issue Version 1
Customer Reference 162855-9a & 9b Ardersier, Inverness - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH-303 4.20-4.05m	MAR02821.001	Sediment	1.1	<0.04	8.7	1.2	<0.01	1.9	0.9	7.7
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	1.4	0.07	4.6	1.8	<0.01	2.8	1.4	18.1
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	1.3	0.13	12.4	3.5	0.02	5.5	3.3	16.0
Certified Reference Material SETOC 768 (% Recovery)			102	97	95	87	94	93	99	95
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02821
Issue Version	1
Customer Reference	162855-9a & 9b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH-303 4.20-4.05m	MAR02821.001	Sediment	<1	<1
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	<1	<1
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	<1	<1
Certified Reference Material BCR-646 (% Recovery)			91	100
QC Blank			<1	<1

* See Report Notes

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Test Report ID MAR02821
Issue Version 1
Customer Reference 162855-9a & 9b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH-303 4.20-4.05m	MAR02821.001	Sediment	<1	<1	<1	<1	<1	<1
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	<1	<1	<1	<1	<1	<1
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			40	132	88	87	87	95
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID MAR02821
Issue Version 1
Customer Reference 162855-9a & 9b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH-303 4.20-4.05m	MAR02821.001	Sediment	<1	<1	<1	<1	<1	<1
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	<1	<1	<1	<1	<1	<1
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			104	94	84	104	75	96
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02821
Issue Version 1
Customer Reference 162855-9a & 9b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH-303 4.20-4.05m	MAR02821.001	Sediment	<1	<1	<1	<1	<1	<1
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	<1	<1	<1	<1	<1	<1
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			47	104	102	93	72	104
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02821
Issue Version 1
Customer Reference 162855-9a & 9b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH-303 4.20-4.05m	MAR02821.001	Sediment	<1	<1	<1	<1	1790
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	<1	<1	<1	<1	2390
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	<1	8.81	<1	<1	3990
Certified Reference Material Quasimeme SED42 (% Recovery)			105	97	82	96	90~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
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Test Report ID MAR02821
Issue Version 1
Customer Reference 162855-9a & 9b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	N*	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH-303 4.20-4.05m	MAR02821.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			88	115	92	107	89	83	95
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

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Test Report ID MAR02821
Issue Version 1
Customer Reference 162855-9a & 9b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH-303 4.20-4.05m	MAR02821.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			85	94	88	83	83	79	87
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID MAR02821
Issue Version 1
Customer Reference 162855-9a & 9b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH-303 4.20-4.05m	MAR02821.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			137	75	82	88	92	62	96
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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*See report notes

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Test Report ID	MAR02821
Issue Version	1
Customer Reference	162855-9a & 9b Ardersier, Inverness - Marine Scotlanc

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH-303 4.20-4.05m	MAR02821.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			104	123	90	102	94
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

For full analyte name see method summaries

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*See report notes

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Test Report ID MAR02821
Issue Version 1
Customer Reference 162855-9a & 9b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	N*	UKAS	N*
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH-303 4.20-4.05m	MAR02821.001	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			90~	85~	101~	57	83	66	69	70
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
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Test Report ID	MAR02821
Issue Version	1
Customer Reference	162855-9a & 9b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	N*
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH-303 4.20-4.05m	MAR02821.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	<0.05	<0.05	0.05	<0.05	<0.05	0.06
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			137~	115	114	115~	151	170
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Test Report ID	MAR02821
Issue Version	1
Customer Reference	162855-9a & 9b Ardersier, Inverness - Marine Scotland Analys

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH-303 4.20-4.05m	MAR02821.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<3
BH-303 neg 4.00-4.50m	MAR02821.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<3
BH-303 neg 12.00-12.50m	MAR02821.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	3.74
Certified Reference Material Quasimeme SED56 (% Recovery)			136~	137~	136~	125~	187	79
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<3.0*

* See Report Notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02821
Issue Version 1
Customer Reference 162855-9a & 9b Ardersier, Inverness - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02821.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02821.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02821.001-003	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02821.001-003	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/302	MAR02821.001-003	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (PCB118, DDD, DDE) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02821.001-003	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (BDE99) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02821.001-003	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Test Report ID	MAR02821
Issue Version	1
Customer Reference	162855-9a & 9b Ardersier, Inverness - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

SOCOTEC

Test Report ID MAR02838

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: 162855-10a & 10b Ardersier, Inverness - Marine Scotland Analysis

Date Sampled: 19-23-Sep-25

Date Samples Received: 02-Oct-25

Test Report Date: 29-Oct-25

Condition of samples: Ambient Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02838
Issue Version	1
Customer Reference	162855-10a & 10b Ardersier, Inverness - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_02*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	2.99	97.0	0.07	96.60	3.34	2.64
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	20.7	79.3	0.99	96.94	2.08	2.64
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	19.6	80.4	0.56	83.72	15.71	2.65
		Reference Material (% Recovery)	N/A	N/A	N/A	N/A	N/A	N/A
		QC Blank	N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID	MAR02838
Issue Version	1
Customer Reference	162855-10a & 10b Ardersier, Inverness - Marine Scotla

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	NAD	0.03
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	NAD	0.03
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	NAD	0.28
		Reference Material (% Recovery)	N/A	99
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID MAR02838
Issue Version 1
Customer Reference 162855-10a & 10b Ardersier, Inverness - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	0.9	<0.04	3.2	1.4	<0.01	2.0	0.9	4.6
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	1.0	<0.04	3.3	1.5	<0.01	2.1	1.0	4.7
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	3.9	0.10	9.0	4.3	<0.01	6.3	2.8	19.0
Certified Reference Material SETOC 768 (% Recovery)			106	104	113	108	105	104	107	106
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02838
Issue Version	1
Customer Reference	162855-10a & 10b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	<1	<1
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	<1	<1
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	<1	<1
Certified Reference Material BCR-646 (% Recovery)			112	120
QC Blank			<1	<1

* See Report Notes

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Test Report ID MAR02838
Issue Version 1
Customer Reference 162855-10a & 10b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	<1	<1	<1	<1	<1	<1
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	<1	<1	<1	<1	<1	<1
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			41	144	90	76	77	79
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02838
Issue Version	1
Customer Reference	162855-10a & 10b Ardersier, Inverness - Marine Scotla

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	<1	<1	<1	1.32	<1	<1
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	<1	<1	<1	<1	<1	<1
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	<1	1.93	<1	1.90	1.35	2.29
Certified Reference Material Quasimeme SED42 (% Recovery)			89	79	80	104	70	92
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries

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Test Report ID MAR02838
Issue Version 1
Customer Reference 162855-10a & 10b Ardersier, Inverness - Marine Scotla

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	<1	<1	<1	<1	<1	<1
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	<1	<1	<1	<1	<1	<1
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	2.37	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			47	91	73	83	70	78
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID	MAR02838
Issue Version	1
Customer Reference	162855-10a & 10b Ardersier, Inverness - Marine Scotla

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	<1	<1	<1	<1	2980
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	<1	<1	<1	<1	7560
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	2.19	83.3	<1	2.65	12500
Certified Reference Material Quasimeme SED42 (% Recovery)			104	88	78	84	98~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.

*See report notes

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Test Report ID MAR02838
Issue Version 1
Customer Reference 162855-10a & 10b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			80	107	110	95	97	102	84
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
*See report notes

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Test Report ID	MAR02838
Issue Version	1
Customer Reference	162855-10a & 10b Ardersier, Inverness - Marine Scotla

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			95	96	112	123	90	101	103
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

*See report notes

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Test Report ID	MAR02838
Issue Version	1
Customer Reference	162855-10a & 10b Ardersier, Inverness - Marine Scotla

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			76	86	107	114	107	90	83
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

*See report notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02838
Issue Version	1
Customer Reference	162855-10a & 10b Ardersier, Inverness - Marine Scotla

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			93	89	83	95	100
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

For full analyte name see method summaries

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Test Report ID MAR02838
Issue Version 1
Customer Reference 162855-10a & 10b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	<0.1	<0.1	<0.1	0.11	<0.1	<0.1	<0.1	<0.1
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			104~	77~	88~	122	86	86	63	106
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
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Test Report ID	MAR02838
Issue Version	1
Customer Reference	162855-10a & 10b Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			100~	119	143	110~	149	256
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Test Report ID	MAR02838
Issue Version	1
Customer Reference	162855-10a & 10b Ardersier, Inverness - Marine Scotland Ana

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	N*	UKAS	N*	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH-304 pos 4.20-4.05m	MAR02838.001	Sediment	<0.05	<0.05	0.24	<0.05	0.07	21.8
BH-304 neg 3.80-4.30m	MAR02838.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	9.19
BH-304 neg 11.80-12.30m	MAR02838.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	5.14
Certified Reference Material Quasimeme SED56 (% Recovery)			115~	106~	106~	107~	186	105
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.3

* See Report Notes

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Test Report ID MAR02838
Issue Version 1
Customer Reference 162855-10a & 10b Ardersier, Inverness - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02838.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02838.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02838.001-003	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02838.001-003	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/308	MAR02838.001-003	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (PBDE153, PBDE183) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02838.001-003	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02838
Issue Version	1
Customer Reference	162855-10a & 10b Ardersier, Inverness - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

SOCOTEC

Test Report ID MAR02839

Issue Version: 2

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: 162855-11 Ardersier, Inverness - Marine Scotland Analysis

Date Sampled: 23-Sep-25

Date Samples Received: 02-Oct-25

Test Report Date: 24-Oct-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02839
Issue Version	2
Customer Reference	162855-11 Ardersier, Inverness - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_02*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	19.6	80.4	0.00	83.66	16.34	2.65
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	17.7	82.3	0.00	94.10	5.90	2.65
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	19.3	80.7	1.54	86.93	11.54	2.65
		Reference Material (% Recovery)	N/A	N/A	N/A	N/A	N/A	N/A
		QC Blank	N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID	MAR02839
Issue Version	2
Customer Reference	162855-11 Ardersier, Inverness - Marine Scotland Anal

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	NAD	0.03
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	NAD	0.07
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	NAD	0.03
		Reference Material (% Recovery)	N/A	93
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02839
Issue Version	2
Customer Reference	162855-11 Ardersier, Inverness - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	1.9	<0.04	5.6	5.0	0.01	3.4	2.7	16.4
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	1.1	<0.04	4.0	2.1	<0.01	2.5	1.5	8.4
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	3.1	<0.04	5.8	1.8	<0.01	3.5	1.4	10.1
Certified Reference Material SETOC 768 (% Recovery)			106	104	113	108	104	104	107	106
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02839
Issue Version	2
Customer Reference	162855-11 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	<1	<1
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	<1	<1
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	<1	<1
Certified Reference Material BCR-646 (% Recovery)			105	112
QC Blank			<1	<1

* See Report Notes

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Test Report ID MAR02839
Issue Version 2
Customer Reference 162855-11 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	<1	<1	<1	2.34	2.49	2.28
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	<1	2.19	3.97	9.47	9.53	8.81
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			38	137	105	92	87	85
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID MAR02839
Issue Version 2
Customer Reference 162855-11 Ardersier, Inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	1.86	1.37	2.54	1.49	3.14	1.65
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	6.49	3.99	7.88	10.4	9.38	6.50
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			98	79	84	104	72	97
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
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Test Report ID MAR02839
Issue Version 2
Customer Reference 162855-11 Ardersier, Inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	<1	2.69	<1	6.10	<1	1.42
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	5.52	10.1	<1	19.8	1.85	4.49
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			51	105	80	101	77	81
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID MAR02839
Issue Version 2
Customer Reference 162855-11 Ardersier, Inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	<1	4.80	4.17	6.25	7420
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	5.37	12.8	9.44	19.8	6920
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	<1	2.55	<1	<1	2620
Certified Reference Material Quasimeme SED42 (% Recovery)			106	86	88	102	117~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02839
Issue Version 2
Customer Reference 162855-11 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			80	107	110	95	97	102	84
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID MAR02839
Issue Version 2
Customer Reference 162855-11 Ardersier, Inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			95	96	112	123	90	101	103
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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*See report notes

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Test Report ID MAR02839
Issue Version 2
Customer Reference 162855-11 Ardersier, Inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			76	86	107	114	107	90	83
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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*See report notes

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Test Report ID	MAR02839
Issue Version	2
Customer Reference	162855-11 Ardersier, Inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			93	89	83	95	100
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

For full analyte name see method summaries

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Test Report ID MAR02839
Issue Version 2
Customer Reference 162855-11 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.34	<0.1
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			104~	77~	88~	122	86	86	63	106
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
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*See report notes

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Test Report ID	MAR02839
Issue Version	2
Customer Reference	162855-11 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	N*
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	<0.05	<0.05	0.05	<0.05	<0.05	0.08
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			100~	119	143	110~	149	256
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Test Report ID	MAR02839
Issue Version	2
Customer Reference	162855-11 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	N*	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH-110 pos 1.37-1.22m	MAR02839.001	Sediment	<0.05	<0.05	0.05	<0.05	<0.05	8.98
BH-110 neg 4.13-4.28m	MAR02839.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	5.55
BH-110 neg 9.50-10.00m	MAR02839.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	2.50
Certified Reference Material Quasimeme SED56 (% Recovery)			115~	106~	106~	107~	186	105
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.3*

* See Report Notes

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Test Report ID MAR02839
Issue Version 2
Customer Reference 162855-11 Ardersier, Inverness - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02839.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02839.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02839.001-003	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02839.001-003	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/303/304	MAR02839.001-003	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02839.001-003	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. Triphenylene may be present in these samples therefore it is suggested that the Chrysene results should be taken as a Chrysene (inc. Triphenylene).This should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02839.001-003	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (PBDE99, PBDE153) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02839.001-003	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Certificate of Analysis

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Test Report ID	MAR02839
Issue Version	2
Customer Reference	162855-11 Ardersier, Inverness - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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SOCOTEC

Test Report ID MAR02840

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: 162855-12 Ardersier, Inverness - Marine Scotland Analysis

Date Sampled: 23-Sep-25

Date Samples Received: 02-Oct-25

Test Report Date: 23-Oct-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Test Report ID MAR02840
Issue Version 1
Customer Reference 162855-12 Ardersier, Inverness - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_02*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	30.3	69.7	0.00	81.68	18.32	2.66
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	22.3	77.7	0.00	94.19	5.81	2.64
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	22.7	77.3	0.00	84.31	15.69	2.64
		Reference Material (% Recovery)	N/A	N/A	N/A	N/A	N/A	N/A
		QC Blank	N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes
NAD - No Asbestos Detected

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Test Report ID	MAR02840
Issue Version	1
Customer Reference	162855-12 Ardersier, Inverness - Marine Scotland Anal

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	NAD	0.35
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	NAD	0.08
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	NAD	0.05
		Reference Material (% Recovery)	N/A	80
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID MAR02840
Issue Version 1
Customer Reference 162855-12 Ardersier, Inverness - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	2.4	0.05	9.5	3.7	<0.01	5.3	4.2	21.7
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	1.0	<0.04	3.7	1.7	0.04	2.4	1.0	5.4
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	1.0	<0.04	4.4	1.5	0.01	3.5	1.0	5.5
Certified Reference Material SETOC 768 (% Recovery)			106	104	113	108	104	104	107	106
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02840
Issue Version	1
Customer Reference	162855-12 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	<5	<5
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	<5	<5
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	<5	<5
Certified Reference Material BCR-646 (% Recovery)			105	112
QC Blank			<1	<1

* See Report Notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02840
Issue Version 1
Customer Reference 162855-12 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	1.58	3.99	3.06	8.70	7.94	8.26
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	<1	<1	<1	1.42	1.41	<1
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			38	137	105	92	87	85
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02840
Issue Version 1
Customer Reference 162855-12 Ardersier, Inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	6.42	4.19	8.12	7.75	9.38	9.10
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	<1	<1	1.35	2.31	1.40	2.10
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	<1	<1	<1	1.43	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			98	79	84	104	72	97
QC Blank			<1	<1	<1	<1	<1	<1

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Test Report ID MAR02840
Issue Version 1
Customer Reference 162855-12 Ardersier, Inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	7.27	9.93	<1	25.6	2.39	4.79
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	<1	1.55	<1	3.77	<1	<1
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			51	105	80	101	77	81
QC Blank			<1	<1	<1	<1	<1	<1

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Test Report ID MAR02840
Issue Version 1
Customer Reference 162855-12 Ardersier, Inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	3.40	13.8	12.6	22.8	11600
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	<1	<1	<1	3.79	2060
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	<1	<1	<1	<1	7190
Certified Reference Material Quasimeme SED42 (% Recovery)			106	86	88	102	117~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
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Test Report ID	MAR02840
Issue Version	1
Customer Reference	162855-12 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			80	107	110	95	97	102	84
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Test Report ID	MAR02840
Issue Version	1
Customer Reference	162855-12 Ardersier, Inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			95	96	112	123	90	101	103
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Test Report ID	MAR02840
Issue Version	1
Customer Reference	162855-12 Ardersier, Inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			76	86	107	114	107	90	83
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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Test Report ID	MAR02840
Issue Version	1
Customer Reference	162855-12 Ardersier, Inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			93	89	83	95	100
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

For full analyte name see method summaries

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Test Report ID MAR02840
Issue Version 1
Customer Reference 162855-12 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			104~	77~	88~	122	86	86	63	106
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
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Test Report ID	MAR02840
Issue Version	1
Customer Reference	162855-12 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			100~	119	143	110~	149	256
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

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Test Report ID	MAR02840
Issue Version	1
Customer Reference	162855-12 Ardersier, Inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH-111 neg 2.46-2.61m	MAR02840.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	2.68
BH-111 neg 5.46-5.61m	MAR02840.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	13.9
BH-111 neg 9.50-10.00m	MAR02840.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	1.42
Certified Reference Material Quasimeme SED56 (% Recovery)			115~	106~	106~	107~	186	105
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.3*

* See Report Notes

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Test Report ID MAR02840
Issue Version 1
Customer Reference 162855-12 Ardersier, Inverness - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02840.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02840.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02840.001-003	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02840.001-003	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/301	MAR02840.001-003	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/303/304	MAR02840.001-003	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02840.001-003	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. Triphenylene may be present in these samples therefore it is suggested that the Chrysene results should be taken as a Chrysene (inc. Triphenylene).This should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02840.001-003	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Test Report ID	MAR02840
Issue Version	1
Customer Reference	162855-12 Ardersier, Inverness - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

SOCOTEC

Test Report ID MAR02841

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: 162855-13 Ardersier, inverness - Marine Scotland Analysis

Date Sampled: 23-24-Sep-25

Date Samples Received: 02-Oct-25

Test Report Date: 29-Oct-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Test Report ID	MAR02841
Issue Version	1
Customer Reference	162855-13 Ardersier, inverness - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_02*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	5.03	95.0	0.15	97.25	2.59	2.66
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	20.8	79.2	0.28	97.02	2.71	2.65
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	19.4	80.6	0.02	97.39	2.59	2.65
		Reference Material (% Recovery)	N/A	N/A	N/A	N/A	N/A	N/A
		QC Blank	N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID	MAR02841
Issue Version	1
Customer Reference	162855-13 Ardersier, inverness - Marine Scotland Anal

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	NAD	<0.02
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	NAD	0.05
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	NAD	0.02
		Reference Material (% Recovery)	N/A	100
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID MAR02841
Issue Version 1
Customer Reference 162855-13 Ardersier, inverness - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	1.0	<0.04	3.4	1.5	<0.01	2.1	0.9	5.0
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	1.3	<0.04	3.7	1.9	<0.01	2.4	1.0	6.5
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	1.5	<0.04	4.3	1.3	<0.01	2.8	1.0	8.7
Certified Reference Material SETOC 768 (% Recovery)			106	104	113	108	104	104	107	106
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02841
Issue Version	1
Customer Reference	162855-13 Ardersier, inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	<1	<1
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	<1	<1
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	<1	<1
Certified Reference Material BCR-646 (% Recovery)			105	112
QC Blank			<1	<1

* See Report Notes

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Test Report ID MAR02841
Issue Version 1
Customer Reference 162855-13 Ardersier, inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	<1	<1	<1	<1	<1	<1
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	<1	<1	<1	<1	<1	<1
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	5.14	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			38	137	105	92	87	85
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID MAR02841
Issue Version 1
Customer Reference 162855-13 Ardersier, inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	<1	<1	<1	1.33	<1	<1
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	<1	<1	<1	<1	<1	<1
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			98	79	84	104	72	97
QC Blank			<1	<1	<1	<1	<1	<1

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Test Report ID MAR02841
Issue Version 1
Customer Reference 162855-13 Ardersier, inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	1.20	<1	<1	<1	<1	<1
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	<1	<1	<1	<1	<1	<1
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			51	105	80	101	77	81
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID	MAR02841
Issue Version	1
Customer Reference	162855-13 Ardersier, inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	<1	1.90	1.71	<1	1680
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	<1	<1	<1	<1	1070
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	<1	<1	<1	<1	1680
Certified Reference Material Quasimeme SED42 (% Recovery)			106	86	88	102	117~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries

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Test Report ID MAR02841
Issue Version 1
Customer Reference 162855-13 Ardersier, inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			80	107	110	95	97	102	84
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID MAR02841
Issue Version 1
Customer Reference 162855-13 Ardersier, inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			95	96	112	123	90	101	103
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID	MAR02841
Issue Version	1
Customer Reference	162855-13 Ardersier, inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			76	86	107	114	107	90	83
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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*See report notes

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Test Report ID MAR02841
Issue Version 1
Customer Reference 162855-13 Ardersier, inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			93	89	83	95	100
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

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Test Report ID MAR02841
Issue Version 1
Customer Reference 162855-13 Ardersier, inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			104~	77~	88~	122	86	86	63	106
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
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Test Report ID	MAR02841
Issue Version	1
Customer Reference	162855-13 Ardersier, inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			100~	119	143	110~	149	256
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02841
Issue Version	1
Customer Reference	162855-13 Ardersier, inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
BH-305 pos 4.20-4.05m	MAR02841.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	4.71
BH-305 neg 0.80-1.30m	MAR02841.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	1.47
BH-305 neg 5.30-5.80m	MAR02841.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	0.83
Certified Reference Material Quasimeme SED56 (% Recovery)			115~	106~	106~	107~	186	105
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.3*

* See Report Notes

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02841
Issue Version 1
Customer Reference 162855-13 Ardersier, inverness - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02841.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02841.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02841.001-003	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02841.001-003	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/308	MAR02841.001-003	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Test Report ID	MAR02841
Issue Version	1
Customer Reference	162855-13 Ardersier, inverness - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

SOCOTEC

Test Report ID MAR02843

Issue Version: 1

Customer: Solmek, 12-16 Yarm Road, Stockton on Tees, TS18 3NA

Customer Reference: 162855-14 Ardersier, inverness - Marine Scotland Analysis

Date Sampled: 23-Sep-25

Date Samples Received: 06-Oct-25

Test Report Date: 29-Oct-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

JMColbourne

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02843
Issue Version	1
Customer Reference	162855-14 Ardersier, inverness - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_02*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	24.8	75.2	2.20	95.88	1.92	2.65
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	20.2	79.8	0.00	94.64	5.36	2.65
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	20.2	79.8	4.43	94.02	1.55	2.65
		Reference Material (% Recovery)	N/A	N/A	N/A	N/A	N/A	N/A
		QC Blank	N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes

NAD - No Asbestos Detected

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Test Report ID	MAR02843
Issue Version	1
Customer Reference	162855-14 Ardersier, inverness - Marine Scotland Anal

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	NAD	<0.02
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	NAD	0.08
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	NAD	<0.02
		Reference Material (% Recovery)	N/A	99
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02843
Issue Version	1
Customer Reference	162855-14 Ardersier, inverness - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	1.1	<0.04	3.5	2.5	<0.01	2.0	1.4	12.1
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	1.8	<0.04	5.5	2.5	<0.01	3.5	2.0	12.4
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	1.1	<0.04	2.8	7.1	<0.01	1.6	1.7	15.2
Certified Reference Material SETOC 768 (% Recovery)			106	104	113	108	105	104	107	106
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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Test Report ID	MAR02843
Issue Version	1
Customer Reference	162855-14 Ardersier, inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	<1	<1
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	<1	<1
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	<1	<1
Certified Reference Material BCR-646 (% Recovery)			105	112
QC Blank			<1	<1

* See Report Notes

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Test Report ID MAR02843
Issue Version 1
Customer Reference 162855-14 Ardersier, inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	<1	<1	<1	<1	<1	<1
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	<1	<1	<1	3.00	3.53	3.06
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			38	117	89	83	75	96
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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Test Report ID MAR02843
Issue Version 1
Customer Reference 162855-14 Ardersier, inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BEP**	**BENZGHIP**	**BKF***	**C1N**	**C1PHEN**	**C2N**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	<1	<1	<1	<1	<1	<1
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	2.66	2.39	3.74	<1	8.97	2.16
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			97	90	81	101	94	83
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02843
Issue Version 1
Customer Reference 162855-14 Ardersier, inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	N	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**C3N**	**CHRYSENE***	**DBENZAH**	**FLUORANT**	**FLUORENE**	**INDPYR**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	<1	<1	<1	<1	<1	<1
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	<1	4.03	<1	9.25	<1	2.24
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material Quasimeme SED42 (% Recovery)			40	98	78	95	62	91
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02843
Issue Version 1
Customer Reference 162855-14 Ardersier, inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	N	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**NAPTH**	**PERYLENE**	**PHENANT**	**PYRENE**	**THC**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	<1	<1	<1	<1	1080
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	<1	8.85	5.56	8.46	4560
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	<1	<1	<1	<1	1730
Certified Reference Material Quasimeme SED42 (% Recovery)			101	113	84	95	78~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
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Test Report ID MAR02843
Issue Version 1
Customer Reference 162855-14 Ardersier, inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB18**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			83	115	109	120	85	84	71
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Test Report ID	MAR02843
Issue Version	1
Customer Reference	162855-14 Ardersier, inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB105**	**PCB110**	**PCB128**	**PCB141**	**PCB149**	**PCB151**	**PCB156**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			75	111	65	81	96	97	85
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02843
Issue Version	1
Customer Reference	162855-14 Ardersier, inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB158**	**PCB170**	**PCB180**	**PCB183**	**PCB187**	**PCB194**	**PCB31**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material Quasimeme SED28 (% Recovery)			105	84	89	62	74	83	85
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

*See report notes

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Test Report ID	MAR02843
Issue Version	1
Customer Reference	162855-14 Ardersier, inverness - Marine Scotland Anal

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.56
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB44**	**PCB47**	**PCB49**	**PCB66**	**ICES7**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.56
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	<0.08	0.19	0.21	<0.08	<0.56
Certified Reference Material Quasimeme SED28 (% Recovery)			112	137	87	98	98
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.56

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

*See report notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02843
Issue Version 1
Customer Reference 162855-14 Ardersier, inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material Quasimeme SED28 (% Recovery)			104~	99~	117~	85	98	85	69	102
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
*See report notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02843
Issue Version	1
Customer Reference	162855-14 Ardersier, inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	N*
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	0.05
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	0.06
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			93~	112	113	116~	141	135
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02843
Issue Version	1
Customer Reference	162855-14 Ardersier, inverness - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
TI-A pos 1.93- 1.80m	MAR02843.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<2
TI-B pos 2.03-1.90m	MAR02843.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<2
TI-C pos 1.74-1.60m	MAR02843.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<2
Certified Reference Material Quasimeme SED56 (% Recovery)			122~	106~	117~	110~	171	72
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<2*

* See Report Notes

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02843
Issue Version 1
Customer Reference 162855-14 Ardersier, inverness - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02843.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02843.001-003	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02843.001-003	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02843.001-003	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/303/304	MAR02843.001-003	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02843.001-003	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. Triphenylene may be present in these samples therefore it is suggested that the Chrysene results should be taken as a Chrysene (inc. Triphenylene).This should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02843.001-003	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy we have removed accreditation, where applicable, from the affected analytes (PBDE99) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02843.001-003	The Primary process control blank data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with BDE209 falling above acceptable reporting limits. The remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected.However in line with our QMS policy the report limit for this compound has been raised and samples have been blank subtracted.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Sample Contaminated through Damaged Packaging	N/A	N/A
D3	Sample Contaminated through Sampling	N/A	N/A
D4	Inappropriate Container/Packaging	N/A	N/A
D5	Damaged in Transit	N/A	N/A
D6	Insufficient Quantity of Sample	N/A	N/A
D7	Inappropriate Headspace	N/A	N/A
D8	Retained at Incorrect Temperature	N/A	N/A
D9	Lack of Date & Time of Sampling	N/A	N/A
D10	Insufficient Sample Details	N/A	N/A
D11	Sample integrity compromised or not suitable for analysis	N/A	N/A

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Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR02843
Issue Version	1
Customer Reference	162855-14 Ardersier, inverness - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

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APPENDIX D

Laboratory Report Front Sheet

Site name	Job number
Marine GI - Ardersier Port	S250403

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Client details:

Reference:	S250403
Name:	Solmek
Address:	12 Yarm Road, Stockton-on-tees, TS18 3NA
Telephone:	01642 607083
Email:	rwoods@solmek.com
FAO:	Richard Woods

Samples received: 08/09/2025

Date commenced: 15/09/2025

Date reported: 19/02/2026

Observations and interpretations are outside of the UKAS Accreditiation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Samples will be held at the laboratory for a period of 4 weeks after the report date. After the above reporting date the samples will be disposed of. Should further testing be required then the office should be informed before the above date.

Signature:	Approved Signitories:
[Redacted]	☐ D.Anderson (Managing Director) ☑ J. Brischuk (Laboratory Manager) ☐

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BH-101	-0.70		D	28	105									
BH-101	-2.20		D	28	105	28	100	0					NP	Tested in natural condition
BH-101	-2.30		D	24	105									
BH-101	-3.40		D	47	50	47	100	0	57-f	41	16	0.375	MH	Tested in natural condition
BH-102	-1.00		B	23	105									
BH-102	3.50		B	19	105									
BH-102	-4.50		D	19	105									
BH-102	-12.50		D	23	105									
BH-106	-7.91		D	23	105									
BH-106	-12.91		D	15	105									
BH-106	-13.91		D	21	105									
BH-106	-16.91		D	19	105									
BH-107	-0.10		B	23	105									
BH-107	-5.40		D	23	105									
BH-107	-10.40		D	18	105									
BH-107	-17.40		D	24	105									
BH-107	-19.40		D	20	105									
BH-107	-24.40		D	22	105									
BH-108	-4.80		D	23	105								NP	Tested after washing to remove >425µm
BH-108	-11.10		D	22	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicated

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	18/11/2025 15:31
Date report generated	
Report Number	

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BH-108	-14.10		D	25	105									
BH-108	-19.10		D	23	105									
BH-108	-29.10		D	24	105									
BH-109	-10.10		D	20	105									
BH-109	-13.20		B	27	105									
BH-109	-16.20		B	27	105									
BH-109	-25.10		D	27	105									
BH-110	-11.60		D	27	105									
BH-110	-13.60		D	22	105									
BH-110	-18.60		D	17	105									
BH-111	-10.10		D	15	105									
BH-111	-11.70		B	17	105									
BH-111	-16.10		D	22	105									
BH-111	-19.20		B	21	105									
BH-111	-24.10		D	26	105	26	100	0					NP	Tested in natural condition
BH-112	-4.15		D	24	105	24	100	0					NP	Tested in natural condition
BH-112	-10.20		D	17	105	17	100	0					NP	Tested in natural condition
BH-112	-12.50		D	21	105	21	100	0					NP	Tested in natural condition
BH-112	-17.50		D	18	105	18	100	0					NP	Tested in natural condition
BH-113	-7.58		D	32	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicate

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	08/10/2025 14:11
Date report generated	
Report Number	

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BH-113	-16.58		D	24	105									
BH-113	-24.08		D	23	105									
BH-113	-28.70		D	29	105	29	100	0	32-f	19	13	0.769	CL	Tested after >425µm removed by hand
BH-114	-2.60		D	24	105	24	100	0					NP	Tested in natural condition
BH-114	-4.60		D	23	105	23	100	0					NP	Tested in natural condition
BH-114	-4.70		B	28	105									
BH-114	-8.60		D	21	105	21	100	0					NP	Tested in natural condition
BH-114	-12.60		D	21	105									
BH-115	-12.50		D	25	105									
BH-116	-5.20		D	22	105									
BH-116	-6.20		D	23	105									
BH-116	-7.20		D	24	105									
BH-116	-12.20		D	22	105									
BH-117	-13.10		D	25	105									
BH-118	-11.60		B	20	105									
BH-119	-6.20		D	23	105									
BH-119	-9.30		B	25	105									
BH-119	-12.20		D	20	105									
BH-119	-19.20		D	22	105									
BH-119	-21.20		D	27	105	27	99	1	28-f	20	8	0.875	CL	Tested after >425µm removed by hand

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicate

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	03/11/2025 11:03
Date report generated	
Report Number	

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BH-201	-4.70		D	91	105	91	100	0	86-f	42	44	1.114	MV	Tested in natural condition
BH-201	-6.50		B	21	105									
BH-201	-11.00		B	29	105									
BH-201	-12.50		B	21	105									
BH-202	-4.10		D	29	105	29	100	0					NP	Tested in natural condition
BH-202	-10.20		B	21	105									
BH-202	-13.10		D	21	105	21	99	1	28-f	20	8	0.125	CL	Tested after >425µm removed by hand
BH-203	-6.60		D	22	105									
BH-203	-10.40		D	13	105									
BH-203	-15.60		D	17	105									
BH-205	-0.08		D	22	105									
BH-205	-1.08		D	17	105									
BH-205	-6.08		D	21	105									
BH-205	-11.08		D	25	105									
BH-205	-17.00		D	17	105	22	76	24	19-f	12	7	1.429	CL	Tested after >425µm removed by hand
BH-205	-17.12		U	11	105									
BH-206	-6.10		D	19	105									
BH-206	-11.10		D	21	105									
BH-207	-6.30		D	17	105									
BH-207	-12.30		D	23	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicate

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	03/11/2025 10:43
Date report generated	
Report Number	

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	Depth Top m	Depth Base m	Type	*w* %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
BH-207	-20.10		D	23	105									
BH-207	-24.30		D	20	105									
BH-207	-26.10		D	27	105	27	100	0	28-f	22	6	0.833	ML	Tested in natural condition
BH-207	-27.30		D	28	105									
BH-207	-28.24		U	27	105									
BH-207	-28.30		D	16	105									
BH-207	-29.10		D	28	105	28	100	0	31-f	19	12	0.750	CL	Tested in natural condition
CP-101	-0.90		D	24	105									
CP-101	2.10		D	27	105									
CP-101	3.10		D	21	105									
CP-101	-5.90		D	25	105									
CP-101	-9.90		D	29	105									
CP-101	-17.90		D	27	105									
CP-102	1.40		B	23	105									
CP-102	-1.60		B	22	105									
CP-102	2.90		D	25	105									
CP-102	-9.10		D	27	105									
CP-102	-13.60		D	25	105									
CP-103	-0.30		D	22	105									
CP-103	-2.70		D	24	105									

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicate

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	06/10/2025 08:57
Date report generated	
Report Number	

Summary of Classification Tests

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	Depth Top m	Depth Base m	Type	w %	Oven temp. oc	wa %	Pa %	Pr %	wL %	wP %	IP %	IL	Plasticity class	Preparation method
CP-103	-6.30		D	25	105									
CP-103	-9.30		D	27	105									
CP-103	-16.80		D	23	105	23	100	0					NP	Tested in natural condition
CP-103	-18.30		D	27	105	27	100	0					NP	Tested in natural condition
CP-104	-0.50		D	21	105									
CP-104	2.50		D	26	105									
CP-104	-8.00		D	22	105									
CP-104	-15.30		D	24	105									
CP-201	-1.00		D	5.8	105									
CP-201	-2.00		D	23	105									
CP-201	-8.40		D	24	105									
CP-201	-13.00		D	27	105									
CP-202	1.70		D	18	105									
CP-202	-4.30		D	23	105									
CP-202	-7.30		D	27	105									
CP-202	-13.30		D	20	105									
CP-202	-15.75		D	19	105	19	100	0					NP	Tested in natural condition

All tests found in G2M Testing UKAS Schedule of Accreditation are tested to standard unless otherwise indicate

Key	Description		Category	BS Test Code
w	Moisture content			BS 1377:1990 Part 2 Clause 3.2
wa	Equivalent moisture content passing 425µm sieve			BS 1377:1990 Part 2 Clause 3.2
wL	Liquid limit	Single point	-s	BS 1377:1990 Part 2 Clause 4.4
		Four point	-f	BS 1377:1990 Part 2 Clause 4.3
wP	Plastic limit			BS 1377:1990 Part 2 Clause 5.2
Pa	Percentage passing 425um sieve			
Pr	Percentage retained 425um sieve			
IP	Plasticity index			BS 1377:1990 Part 2 Clause 5.4
IL	Liquidity index			BS 1377:1990 Part 2 Clause 5.4
	Suffix indicating test is "Not UKAS Accredited"		*	

Approved by	D Anderson
Approval date	19/11/2025 11:24
Date report generated	
Report Number	

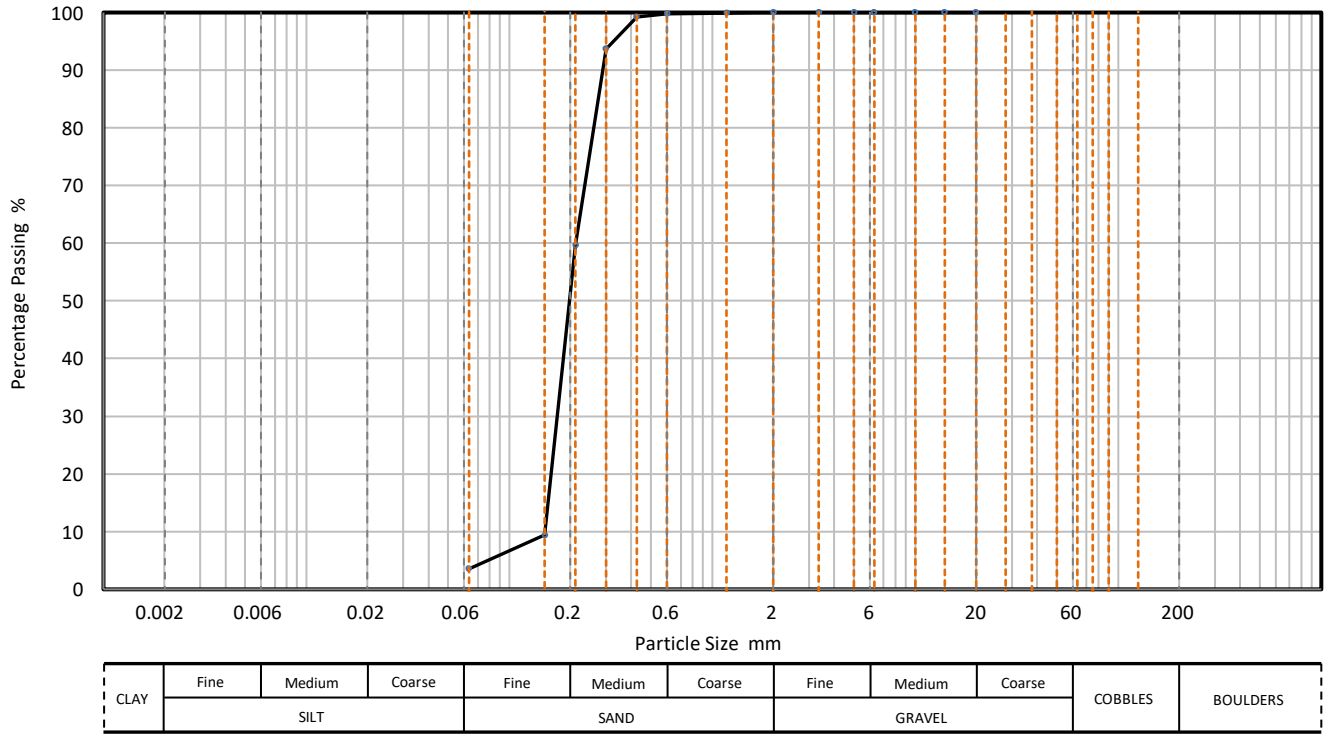
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12-16 Yarm Road
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-101	Lab sample ID	G2MT2025110532
Depth (Top) m	-0.80	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	94		
0.212	60		
0.15	9		
0.063	4		

Dry Mass of sample, g	563

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	96.4
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.213
D30	mm	0.173
D10	mm	0.151
Uniformity Coefficient		1.4
Curvature Coefficient		0.93

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:54

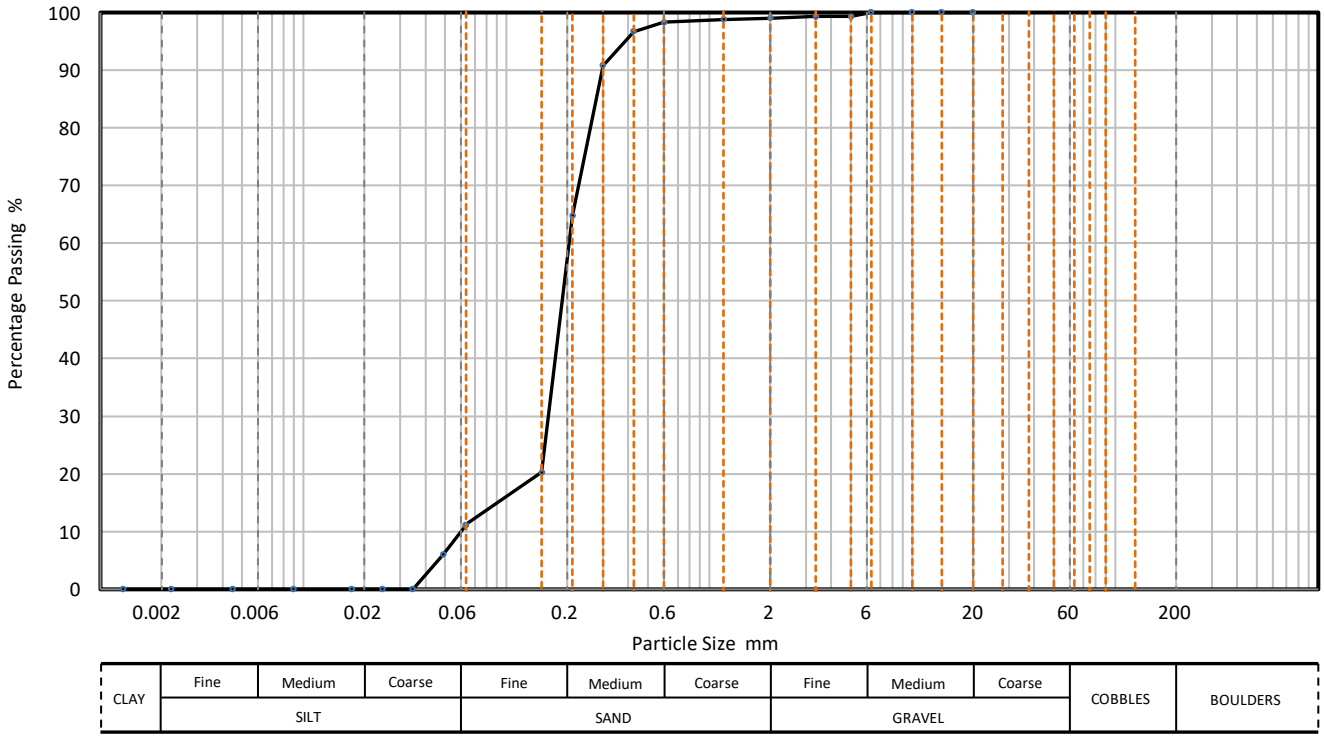
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-101	Lab sample ID	G2MT2025110530
Depth (Top) m	-2.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	11
		0.0489	6
		0.0347	0
		0.0245	0
		0.0173	0
		0.0090	0
		0.0045	0
20	100	0.0022	0
14	100	0.0013	0
10	100		
6.3	100		
5	99		
3.35	99		
2	99		
1.18	99		
0.6	98	Particle density (assumed)	
0.425	97	2.65	Mg/m3
0.3	91		
0.212	65		
0.15	20		
0.063	11		

Dry Mass of sample, g: 708

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.0
Sand	87.8
Silt	11.2
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.204
D30	mm	0.162
D10	mm	0.0597
Uniformity Coefficient		3.4
Curvature Coefficient		2.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/11/2025 08:47

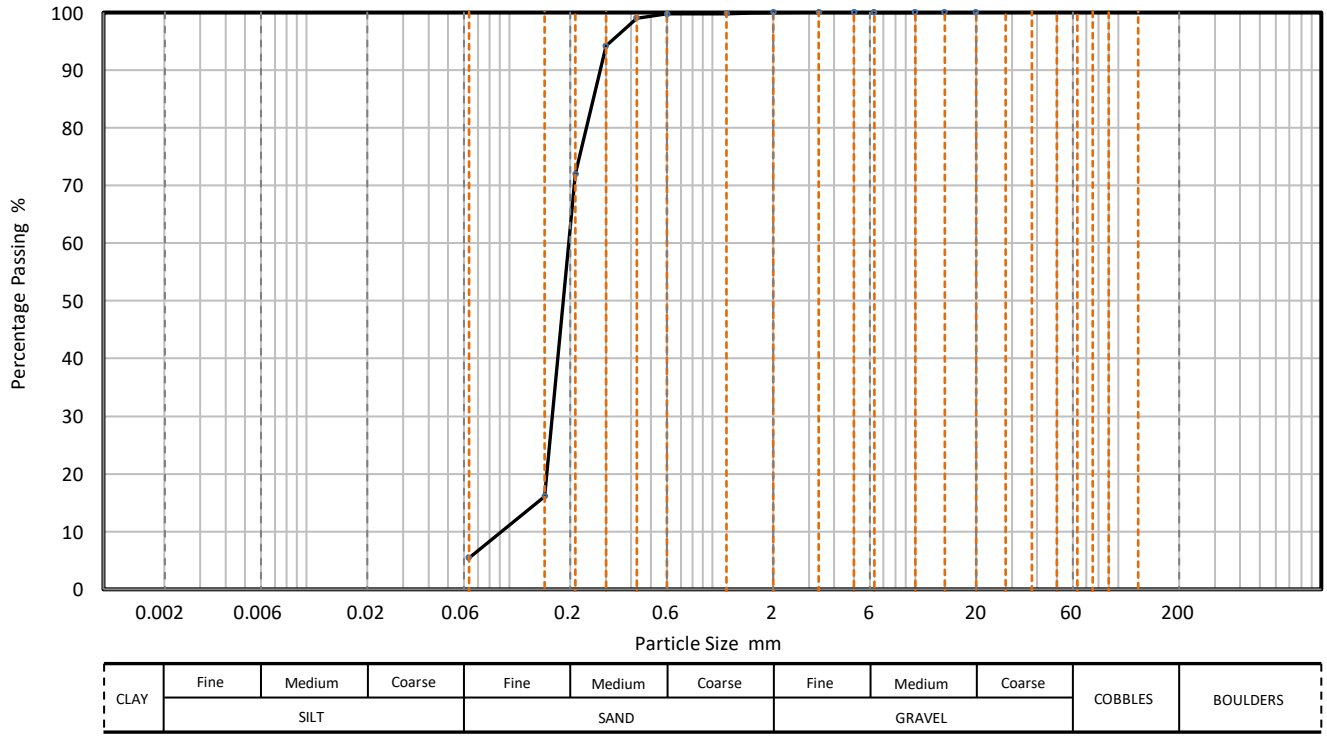
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-101	Lab sample ID	G2MT2025110534
Depth (Top) m	-2.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	94		
0.212	72		
0.15	16		
0.063	6		

Dry Mass of sample, g: 855

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	94.5
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.197
D30	mm	0.163
D10	mm	0.0909
Uniformity Coefficient		2.2
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:47

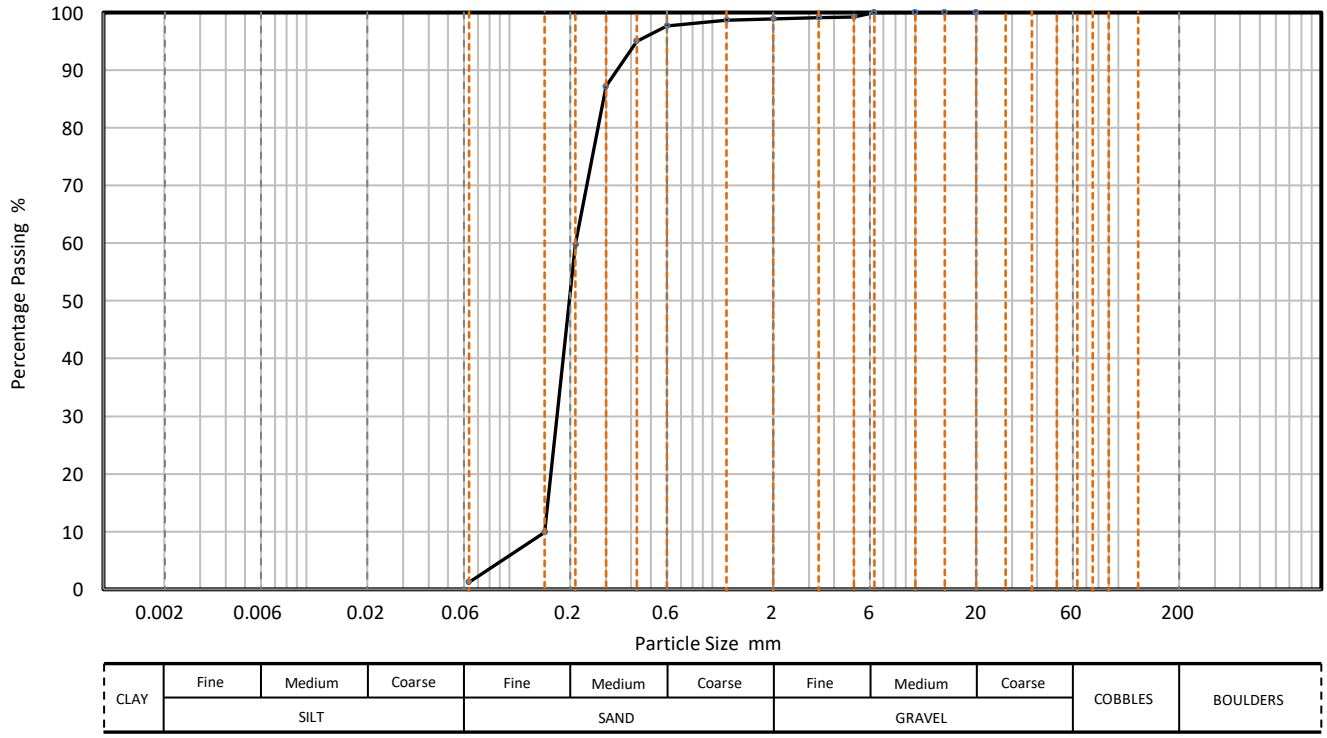
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-101	Lab sample ID	G2MT2025110528
Depth (Top) m	3.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	99		
2	99		
1.18	99		
0.6	98		
0.425	95		
0.3	87		
0.212	60		
0.15	10		
0.063	1		

Dry Mass of sample, g	948

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.1
Sand	97.5
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.213
D30	mm	0.172
D10	mm	0.15
Uniformity Coefficient		1.4
Curvature Coefficient		0.93

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:09

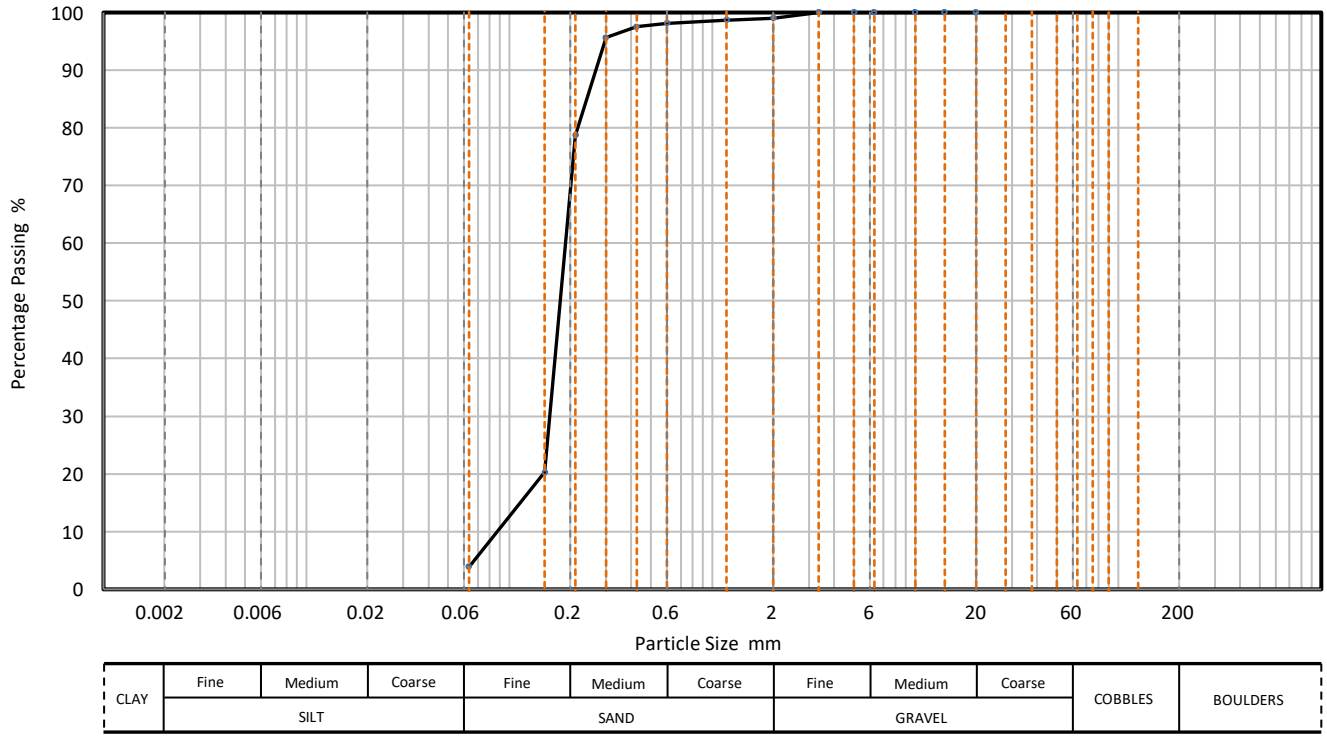
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-101	Lab sample ID	G2MT2025110536
Depth (Top) m	5.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Sligtly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	98		
0.425	98		
0.3	96		
0.212	79		
0.15	20		
0.063	4		

Dry Mass of sample, g	966

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.0
Sand	95.0
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.19
D30	mm	0.159
D10	mm	0.0869
Uniformity Coefficient		2.2
Curvature Coefficient		1.5

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:56

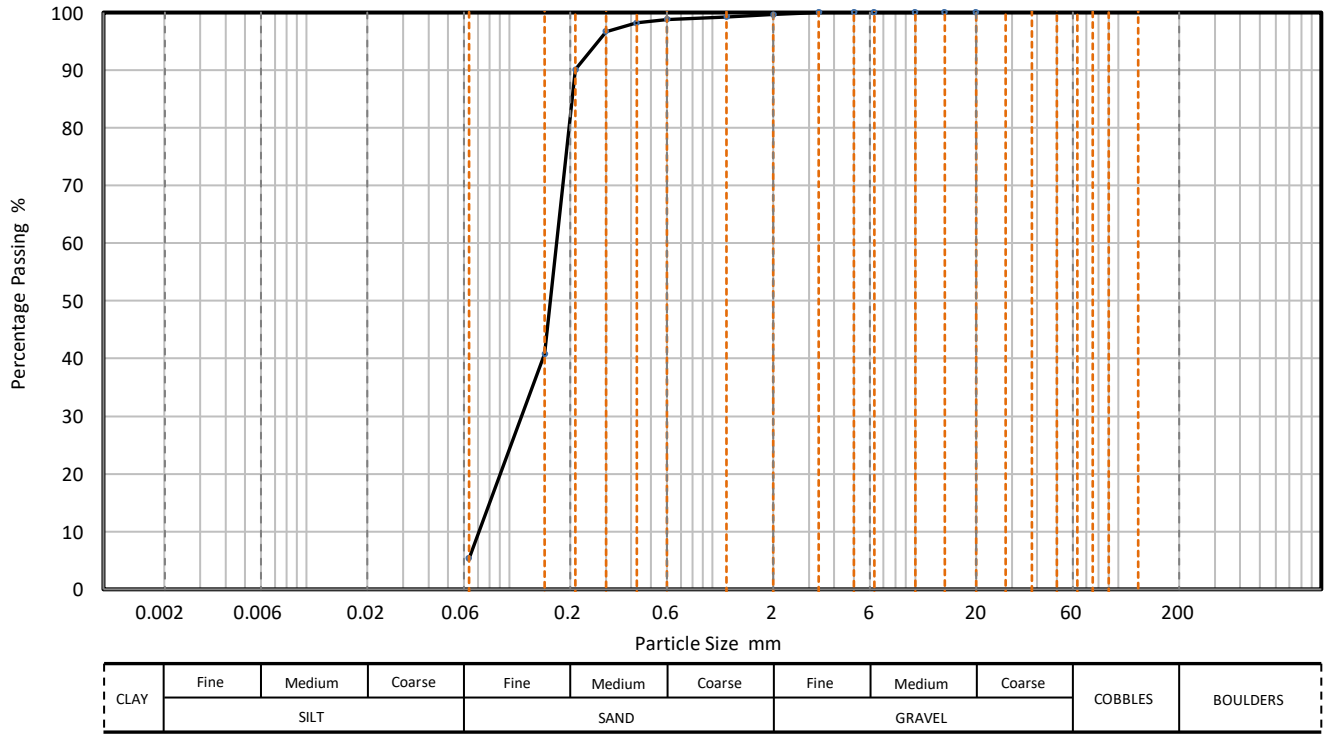
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-101	Lab sample ID	G2MT2025110537
Depth (Top) m	-9.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	99		
0.425	98		
0.3	97		
0.212	90		
0.15	41		
0.063	5		

Dry Mass of sample, g	862

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.4
Sand	94.1
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.172
D30	mm	0.115
D10	mm	0.0705
Uniformity Coefficient		2.4
Curvature Coefficient		1.1

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:25

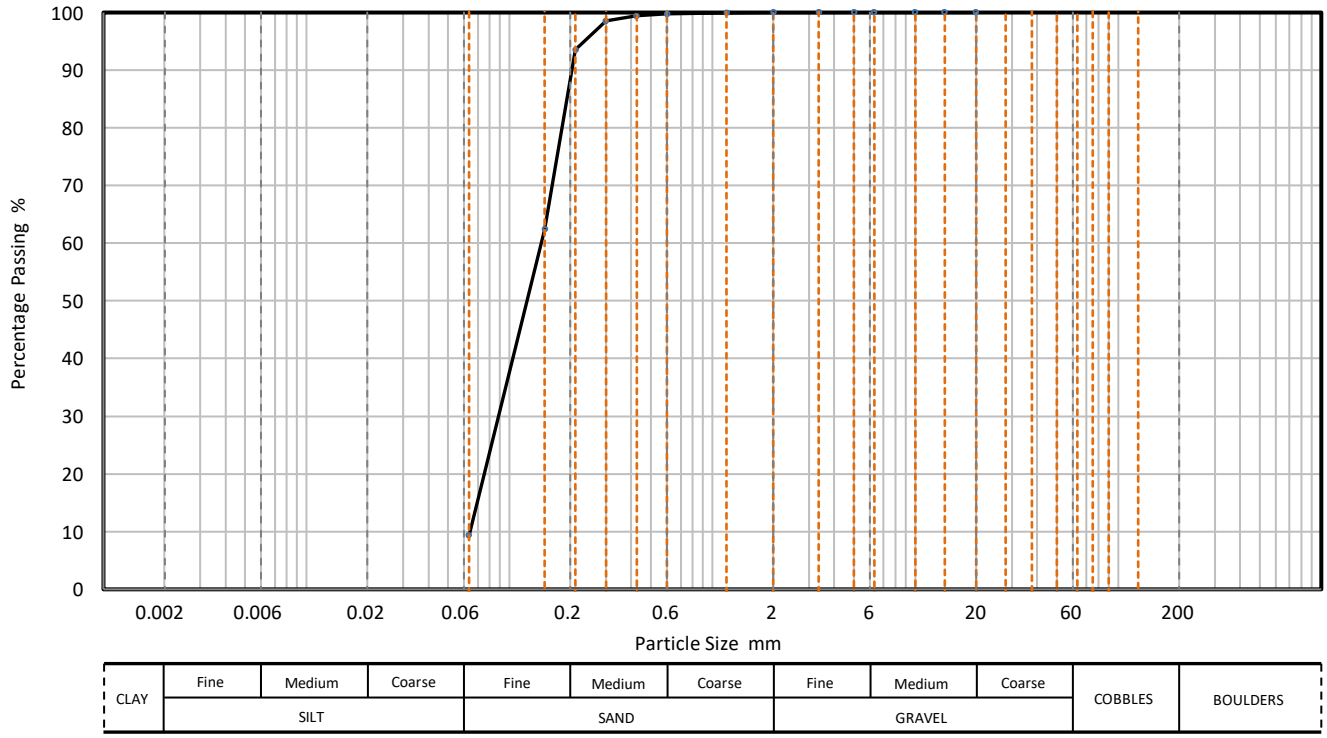
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-101	Lab sample ID	G2MT2025110538
Depth (Top)	m	-17.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	94		
0.15	62		
0.063	9		

Dry Mass of sample, g	809

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	90.5
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.144
D30	mm	0.0882
D10	mm	0.0636
Uniformity Coefficient		2.3
Curvature Coefficient		0.85

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:27

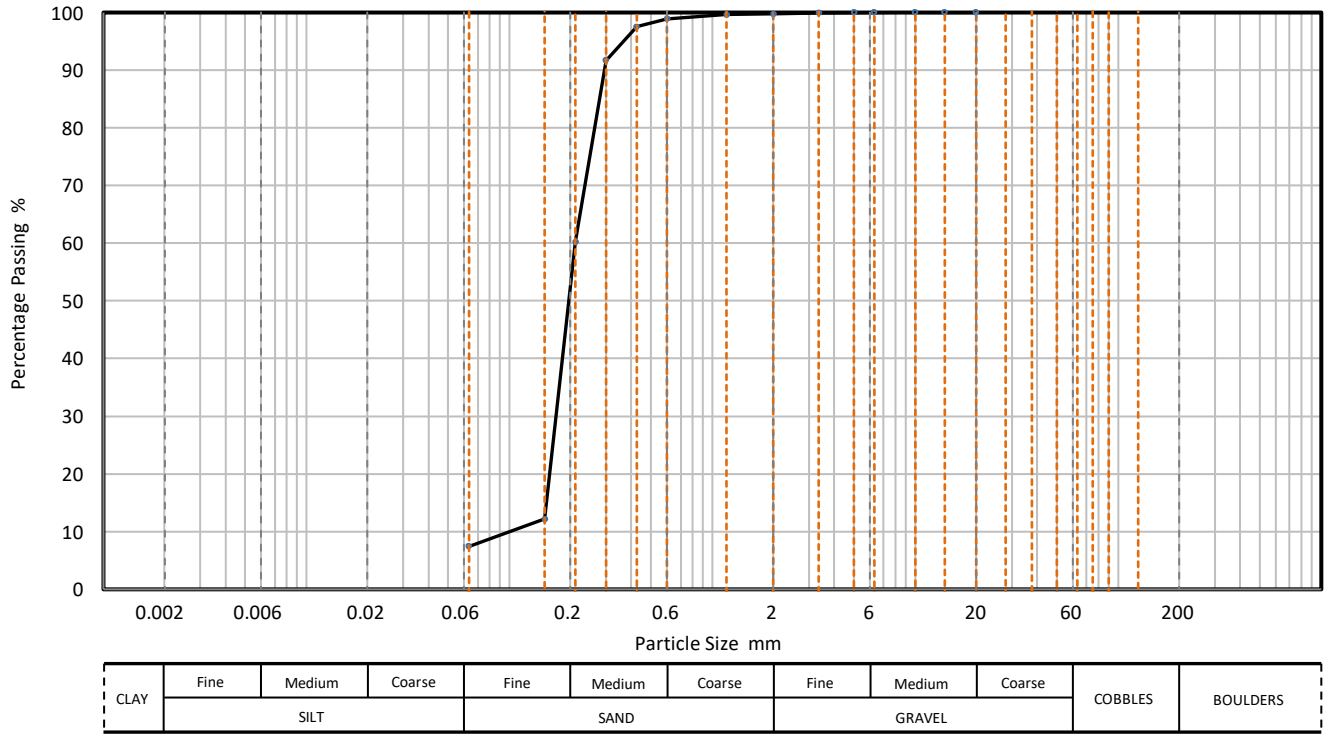
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-102	Lab sample ID	G2MT2025110560
Depth (Top) m	-1.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, Slightly Silty, SAND
Sample type	D		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	92		
0.212	60		
0.15	12		
0.063	8		

Dry Mass of sample, g	322

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	92.3
Fines <0.063mm	7.0

Grading Analysis		
D100	mm	
D60	mm	0.212
D30	mm	0.171
D10	mm	0.1
Uniformity Coefficient		2.1
Curvature Coefficient		1.4

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:29

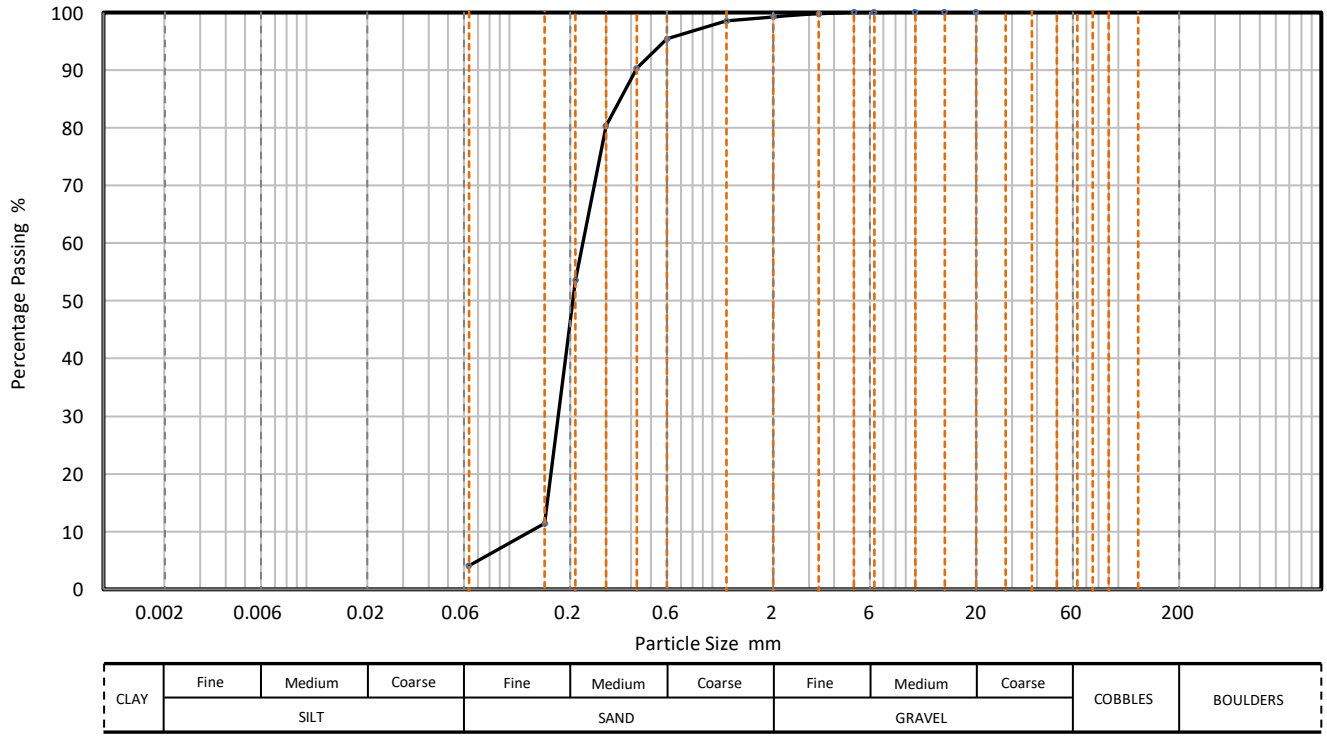
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-102	Lab sample ID	G2MT2025110558
Depth (Top) m	3.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly,slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	95		
0.425	90		
0.3	80		
0.212	54		
0.15	11		
0.063	4		

Dry Mass of sample, g	916

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	95.2
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.231
D30	mm	0.175
D10	mm	0.127
Uniformity Coefficient		1.8
Curvature Coefficient		1

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:59

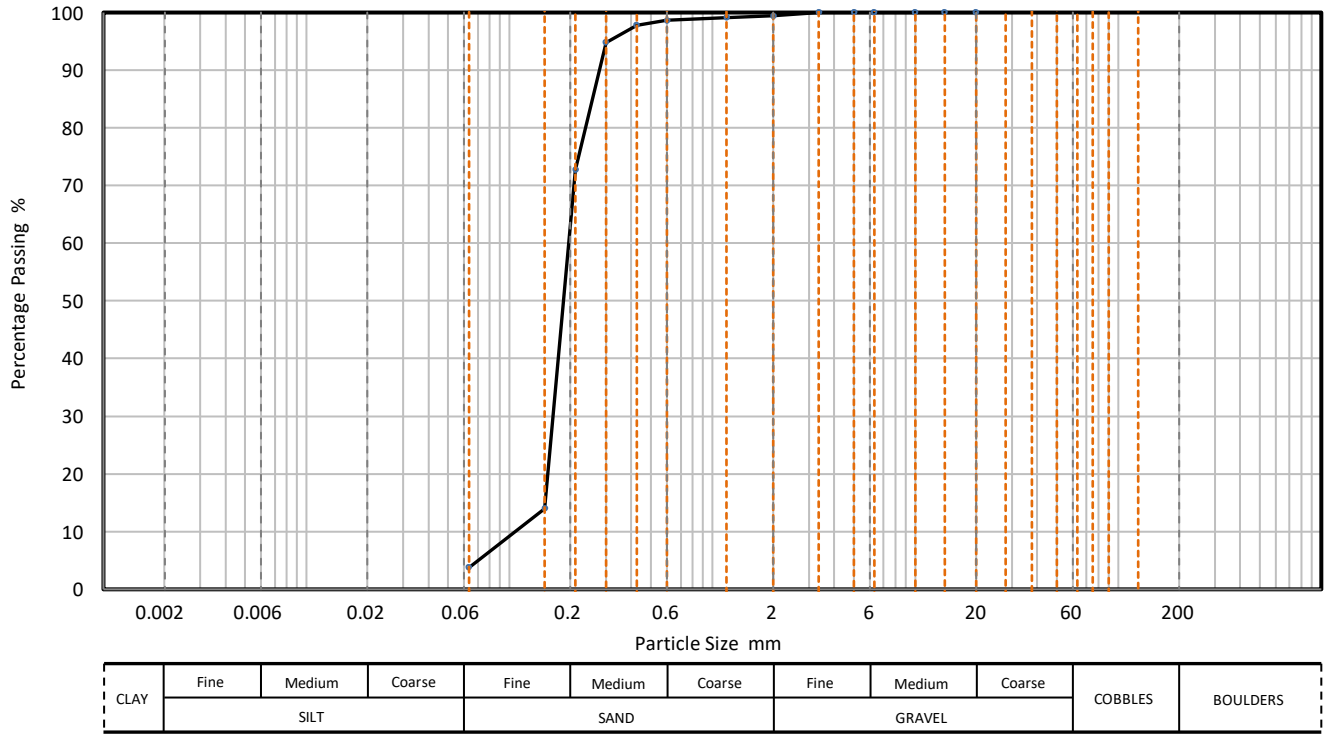
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-102	Lab sample ID	G2MT2025110561
Depth (Top) m	-4.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	99		
0.425	98		
0.3	95		
0.212	73		
0.15	14		
0.063	4		

Dry Mass of sample, g	841

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.6
Sand	95.6
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.197
D30	mm	0.165
D10	mm	0.106
Uniformity Coefficient		1.8
Curvature Coefficient		1.3

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:30

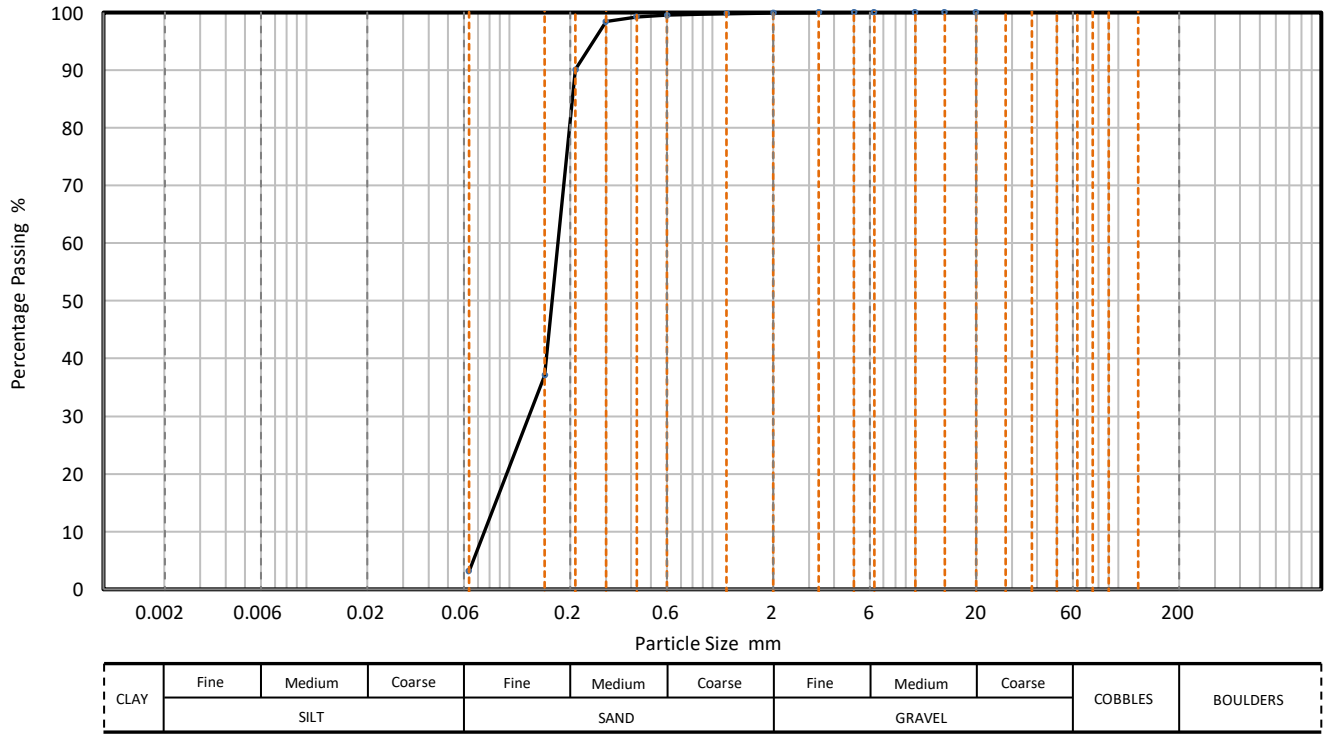
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-102	Lab sample ID	G2MT2025110564
Depth (Top) m	-12.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	90		
0.15	37		
0.063	3		

Dry Mass of sample, g	800

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	96.7
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.174
D30	mm	0.125
D10	mm	0.0749
Uniformity Coefficient		2.3
Curvature Coefficient		1.2

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:00

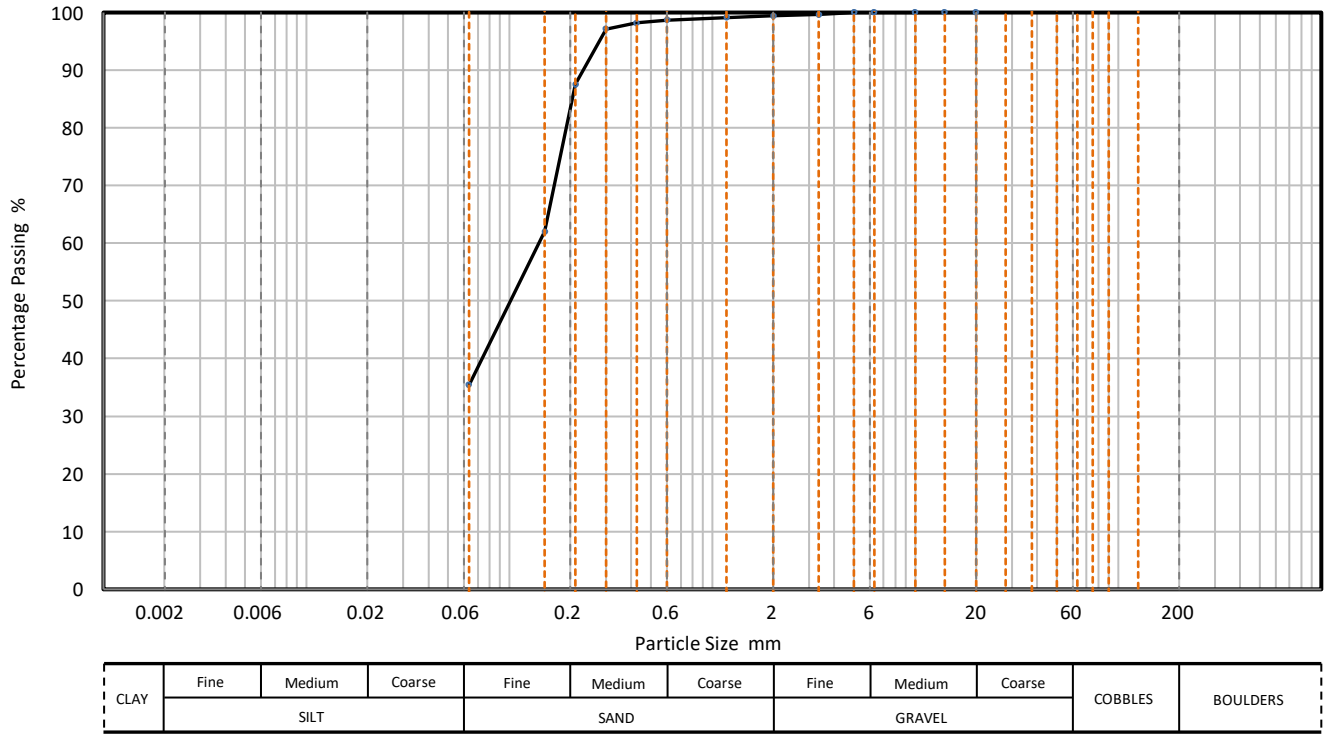
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-106	Lab sample ID	G2MT2025101467
Depth (Top) m	-7.91	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Very Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	99		
0.425	98		
0.3	97		
0.212	88		
0.15	62		
0.063	35		

Dry Mass of sample, g	1194

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.6
Sand	64.0
Fines <0.063mm	35.0

Grading Analysis		
D100	mm	
D60	mm	0.141
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	13/01/2026 12:53

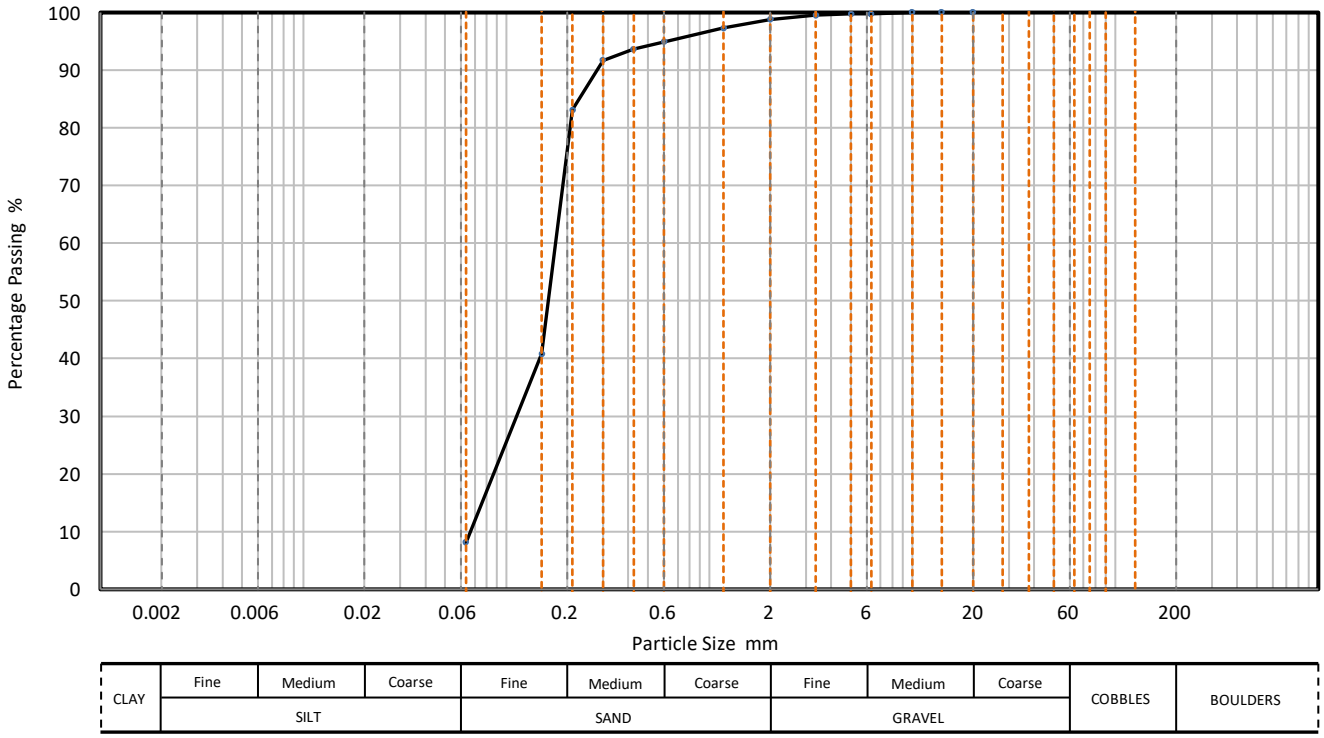
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-106	Lab sample ID	G2MT2025101468
Depth (Top)	m	-12.41	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	97		
0.6	95		
0.425	94		
0.3	92		
0.212	83		
0.15	41		
0.063	8		

Dry Mass of sample, g	756

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.2
Sand	90.6
Fines <0.063mm	8.0

Grading Analysis		
D100	mm	
D60	mm	0.176
D30	mm	0.113
D10	mm	0.0662
Uniformity Coefficient		2.7
Curvature Coefficient		1.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	03/11/2025 11:31

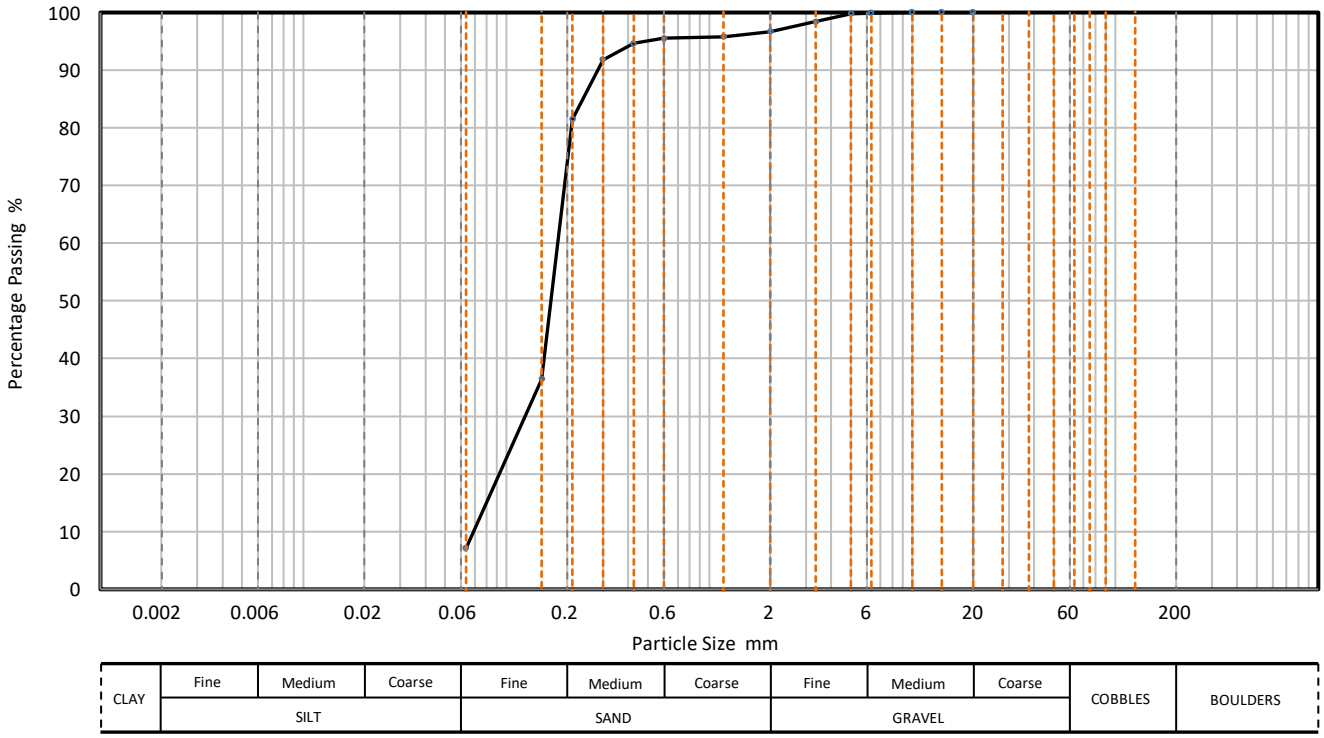
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-106	Lab sample ID	G2MT2025101469
Depth (Top)	m	-13.91	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	98		
2	97		
1.18	96		
0.6	96		
0.425	95		
0.3	92		
0.212	82		
0.15	36		
0.063	7		

Dry Mass of sample, g	931

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	3.3
Sand	89.5
Fines <0.063mm	7.0

Grading Analysis		
D100	mm	
D60	mm	0.18
D30	mm	0.124
D10	mm	0.0685
Uniformity Coefficient		2.6
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 11:39

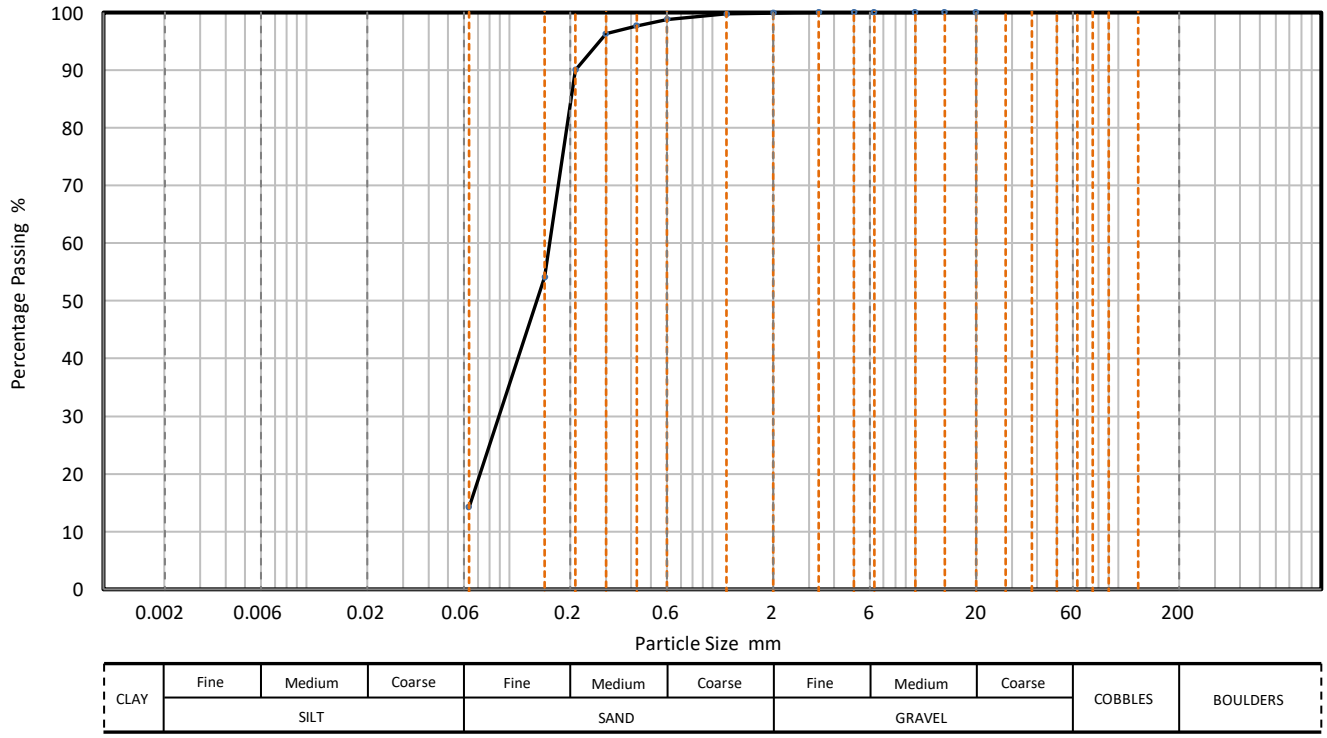
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-106	Lab sample ID	G2MT2025101470
Depth (Top) m	-16.91	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	96		
0.212	90		
0.15	54		
0.063	14		

Dry Mass of sample, g	795

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	85.6
Fines <0.063mm	14.0

Grading Analysis		
D100	mm	
D60	mm	0.159
D30	mm	0.0887
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	13/01/2026 12:53

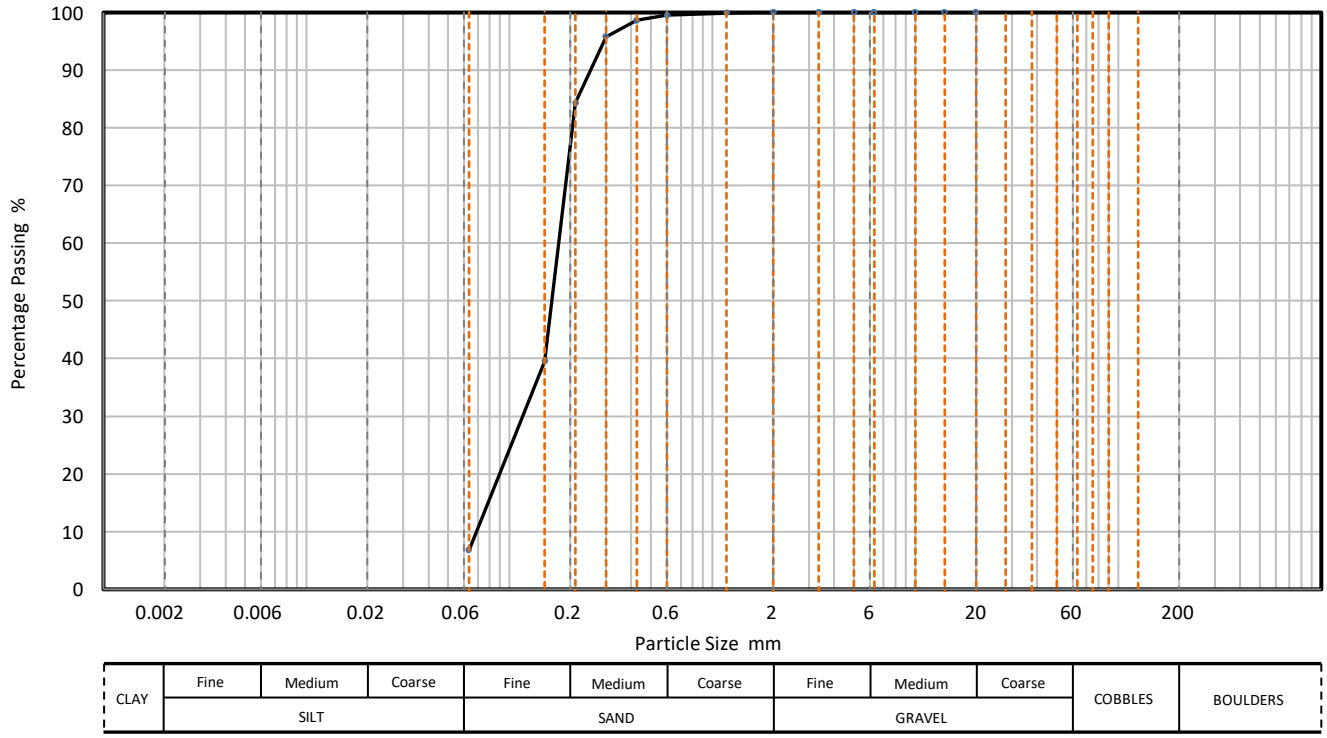
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-106	Lab sample ID	G2MT2025101471
Depth (Top) m	-21.41	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	96		
0.212	84		
0.15	40		
0.063	7		

Dry Mass of sample, g: 872

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	93.2
Fines <0.063mm	7.0

Grading Analysis		
D100	mm	
D60	mm	0.176
D30	mm	0.117
D10	mm	0.0685
Uniformity Coefficient		2.6
Curvature Coefficient		1.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 10:15

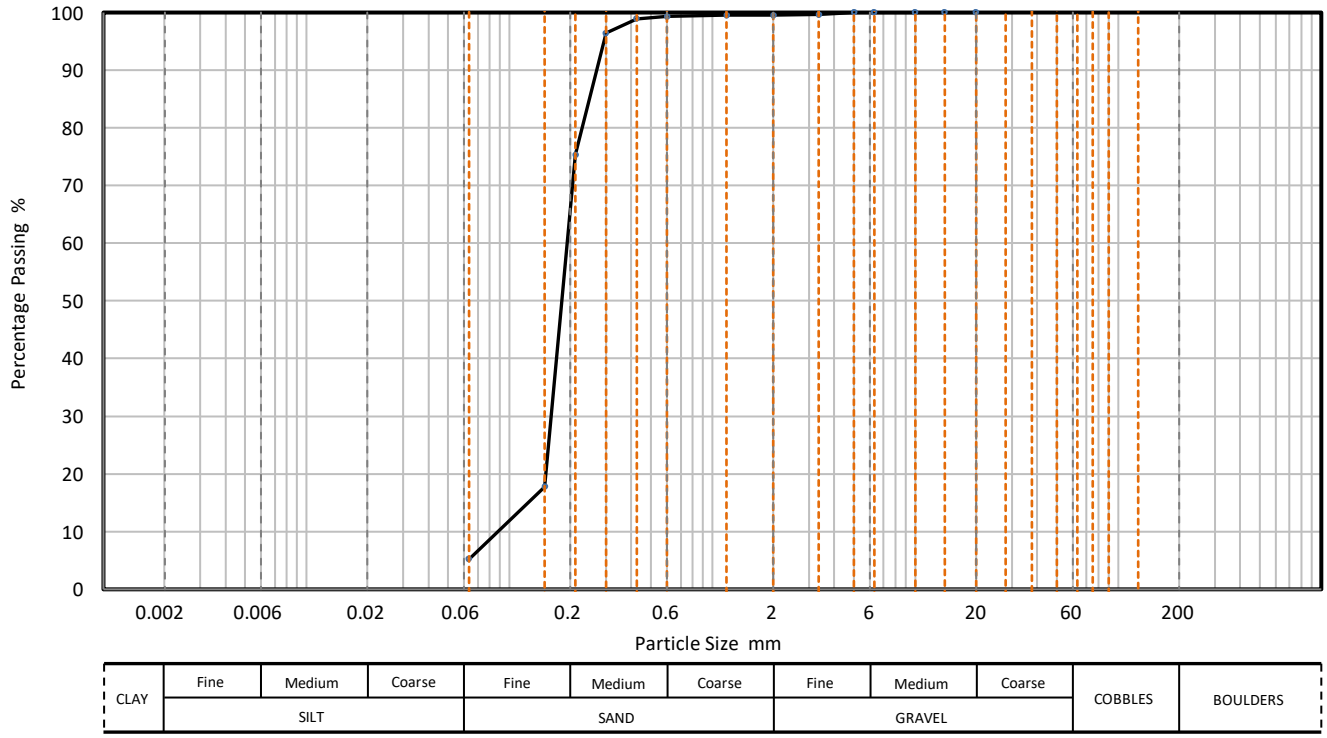
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-107	Lab sample ID	G2MT2025101457
Depth (Top) m	-0.10	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	96		
0.212	75		
0.15	18		
0.063	5		

Dry Mass of sample, g	997

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.5
Sand	94.3
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.193
D30	mm	0.161
D10	mm	0.0875
Uniformity Coefficient		2.2
Curvature Coefficient		1.5

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/10/2025 10:24

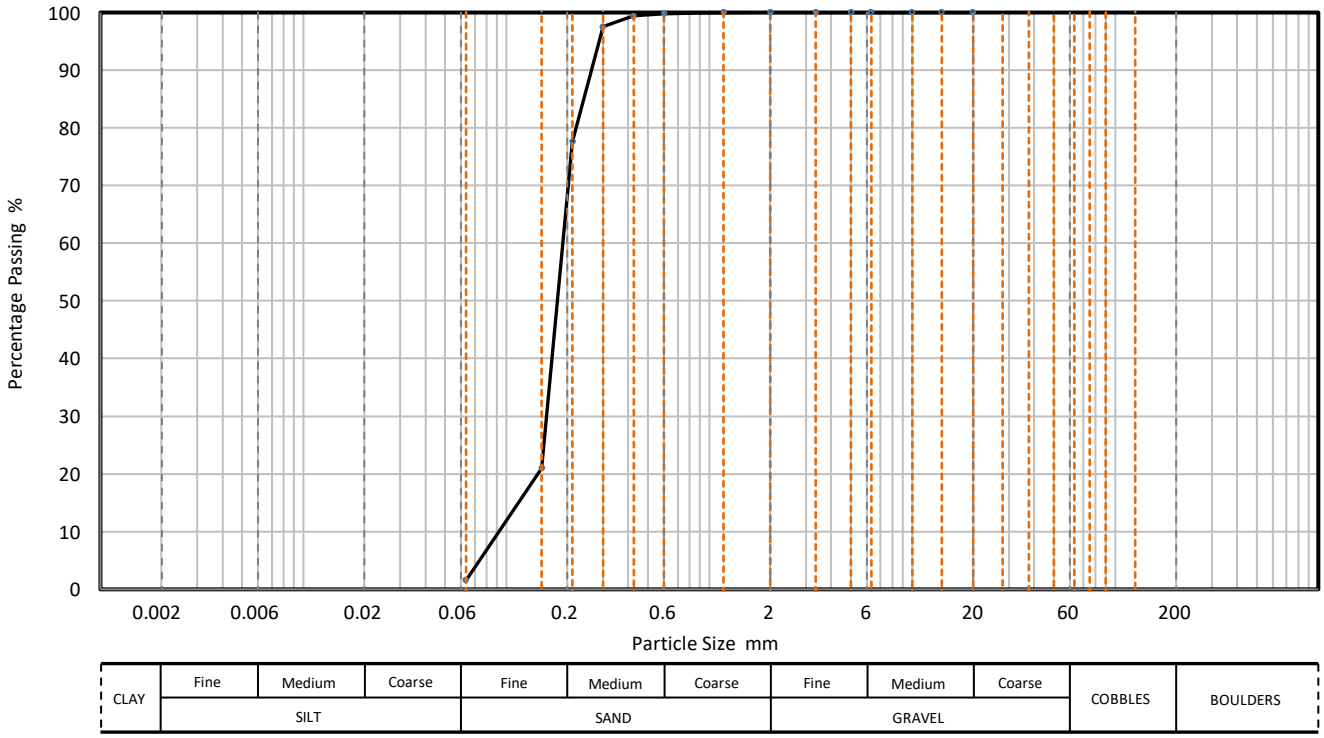
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-107	Lab sample ID	G2MT2025101458
Depth (Top) m	-5.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	78		
0.15	21		
0.063	2		

Dry Mass of sample, g	1152

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	98.4
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.19
D30	mm	0.158
D10	mm	0.0916
Uniformity Coefficient		2.1
Curvature Coefficient		1.4

Remarks
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Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/10/2025 10:26

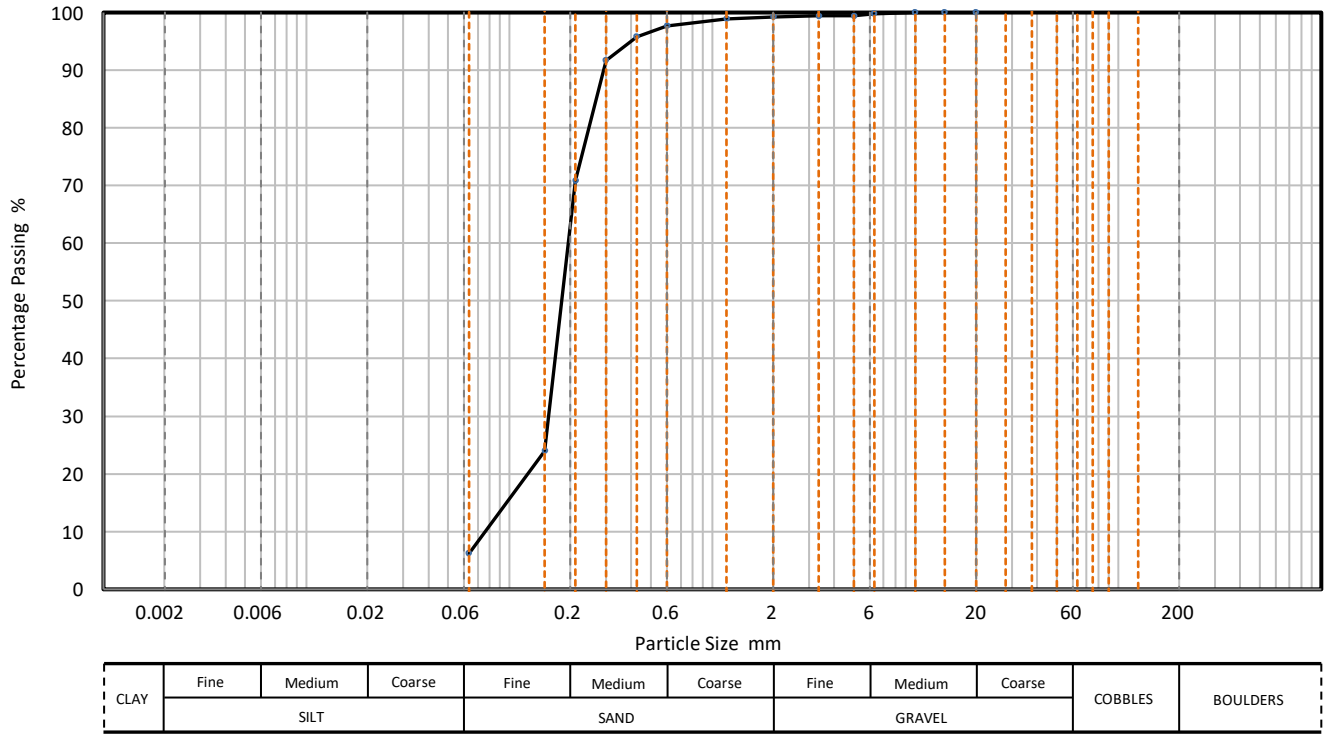
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-107	Lab sample ID	G2MT2025101459
Depth (Top) m	-10.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	99		
2	99		
1.18	99		
0.6	98		
0.425	96		
0.3	92		
0.212	71		
0.15	24		
0.063	6		

Dry Mass of sample, g	811

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	92.9
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.196
D30	mm	0.157
D10	mm	0.0754
Uniformity Coefficient		2.6
Curvature Coefficient		1.7

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

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Approval date	03/11/2025 11:26

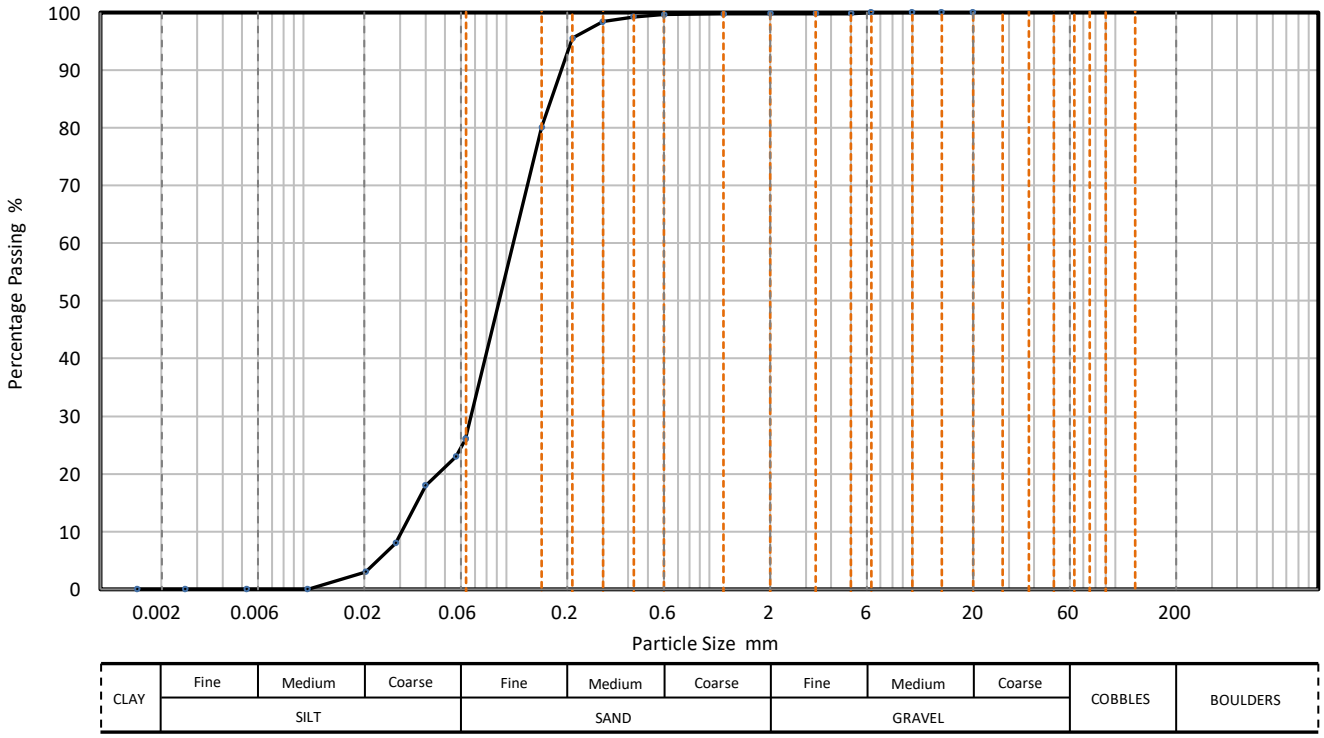
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-107	Lab sample ID	G2MT2025101460
Depth (Top) m	-17.50	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, very Silty,SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	26
		0.0565	23
		0.0401	18
		0.0286	8
		0.0203	3
		0.0105	0
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	98		
0.212	96		
0.15	80		
0.063	26		

Dry Mass of sample, g	661

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	73.7
Silt	26.1
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.109
D30	mm	0.0671
D10	mm	0.0307
Uniformity Coefficient		3.5
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:44

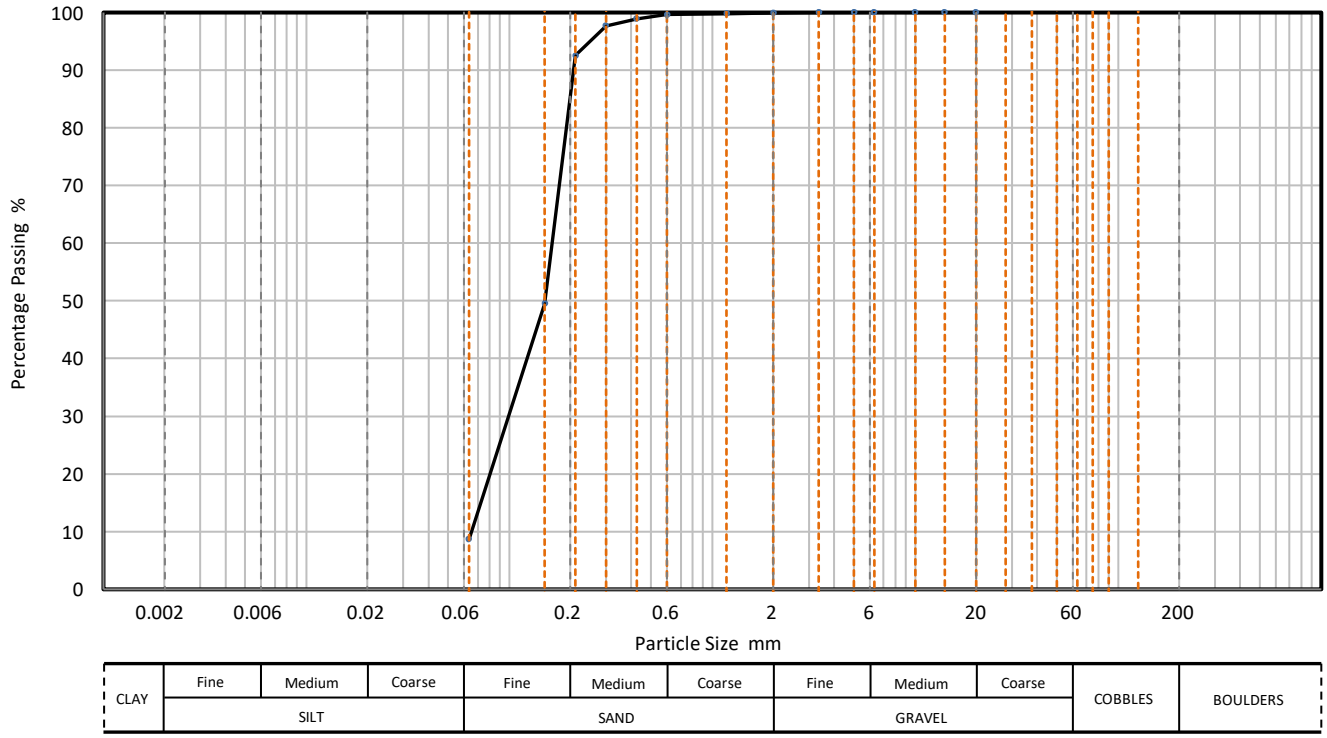
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-107	Lab sample ID	G2MT2025101461
Depth (Top) m	-19.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	93		
0.15	50		
0.063	9		

Dry Mass of sample, g: 816

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	91.1
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.163
D30	mm	0.0991
D10	mm	0.0647
Uniformity Coefficient		2.5
Curvature Coefficient		0.93

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 11:49

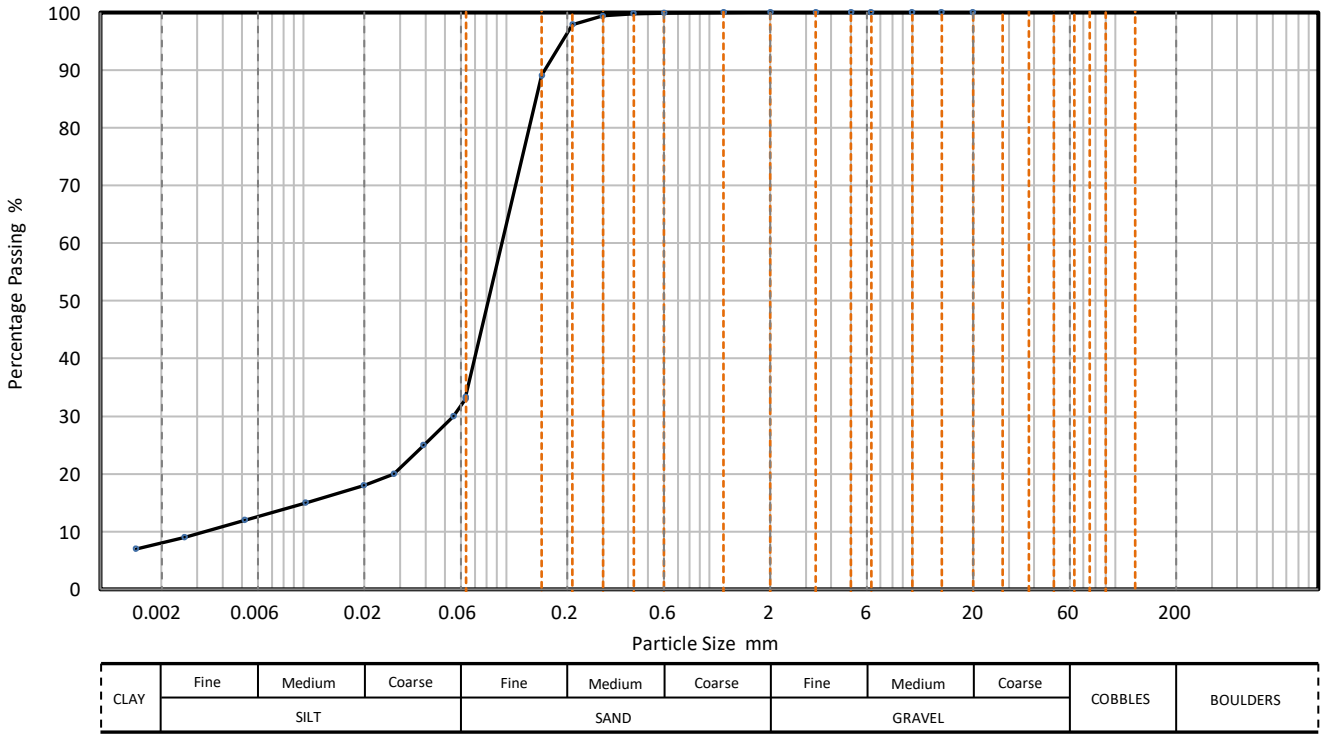
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-107	Lab sample ID	G2MT2025101462
Depth (Top) m	-24.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, very Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	33
		0.0550	30
		0.0392	25
		0.0280	20
		0.0198	18
		0.0103	15
		0.0052	12
20	100	0.0026	9
14	100	0.0015	7
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	98		
0.15	89		
0.063	33		

Dry Mass of sample, g: 772

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	66.7
Silt	25.3
Clay	8.0

Grading Analysis		
D100	mm	
D60	mm	0.0954
D30	mm	0.0536
D10	mm	0.00355
Uniformity Coefficient		27
Curvature Coefficient		8.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:51

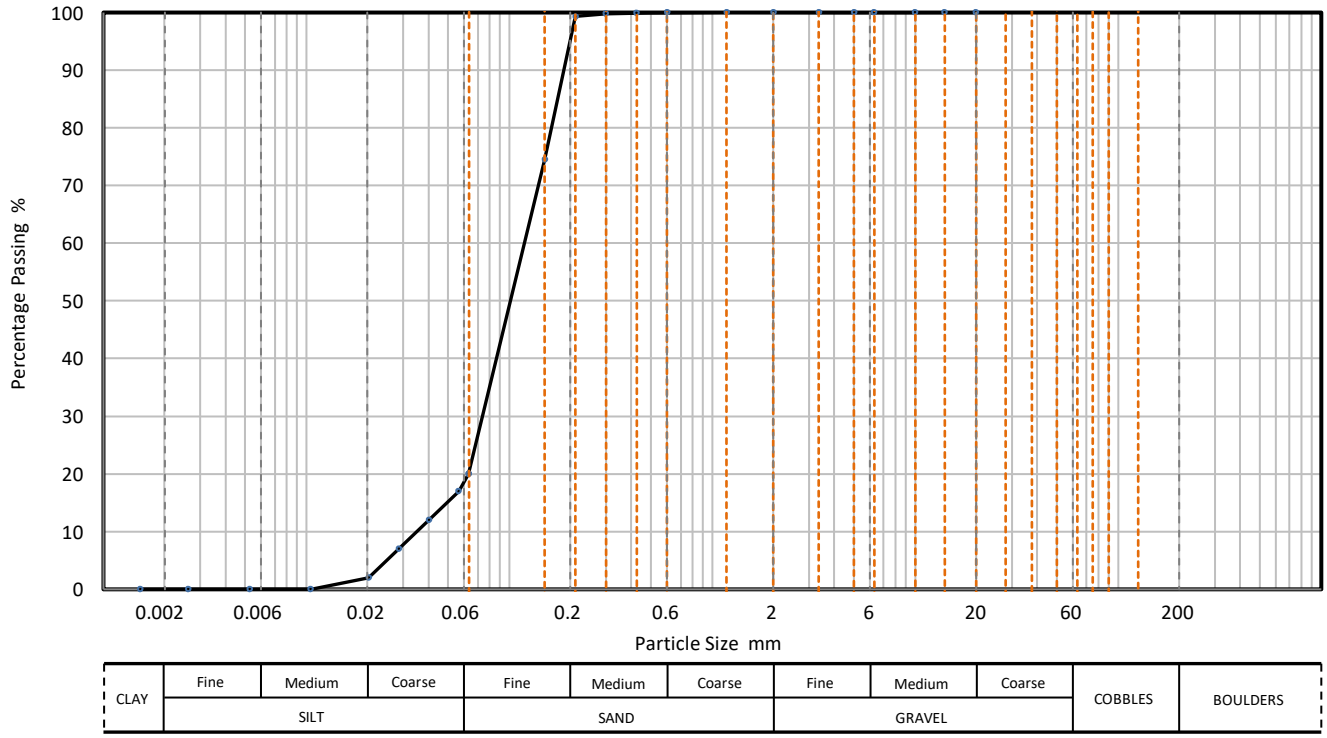
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-108	Lab sample ID	G2MT2025091998
Depth (Top) m	-11.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	20
		0.0565	17
		0.0402	12
		0.0286	7
		0.0203	2
		0.0105	0
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	99		
0.15	75		
0.063	20		

Dry Mass of sample, g	702

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	80.0
Silt	20.0
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.119
D30	mm	0.0739
D10	mm	0.0351
Uniformity Coefficient		3.4
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 13:19

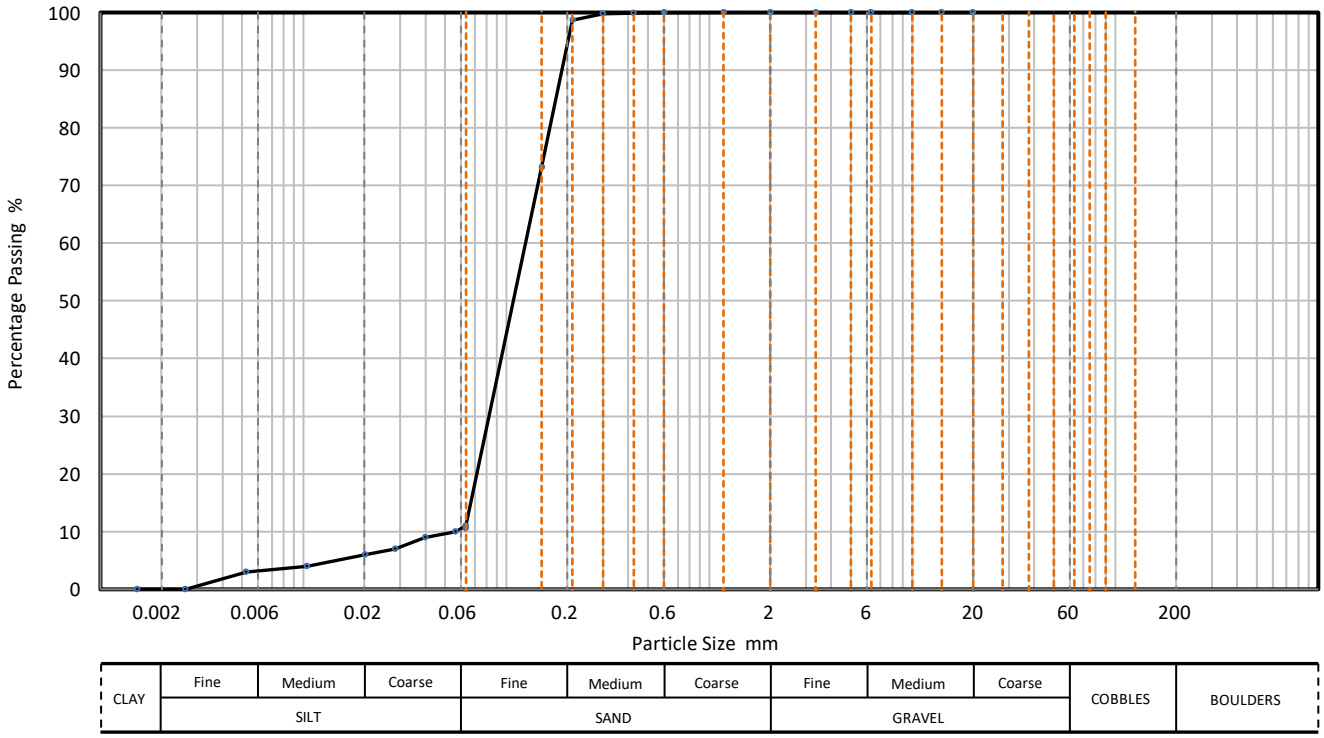
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TS18 3NA
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-108	Lab sample ID	G2MT20250919100
Depth (Top) m	-14.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	11
		0.0564	10
		0.0400	9
		0.0284	7
		0.0201	6
		0.0104	4
		0.0052	3
20	100	0.0026	0
14	100	0.0015	0
10	100		0
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	99		
0.15	73		
0.063	11		

Dry Mass of sample, g	816

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	89.4
Silt	10.6
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 13:05

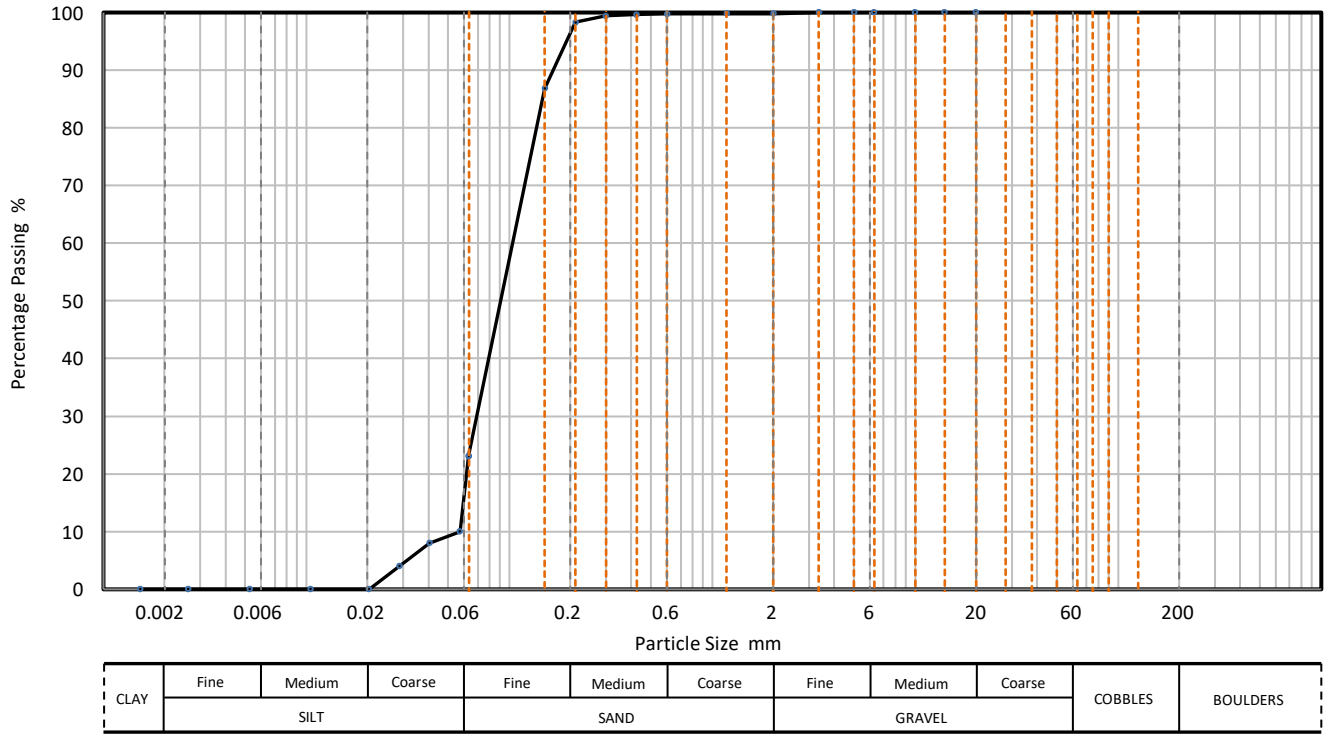
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-108	Lab sample ID	G2MT20250919101
Depth (Top) m	-18.70	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	23
		0.0573	10
		0.0405	8
		0.0287	4
		0.0204	0
		0.0105	0
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	98		
0.15	87		
0.063	23		

Dry Mass of sample, g: 675

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	76.7
Silt	23.1
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.104
D30	mm	0.0692
D10	mm	0.0574
Uniformity Coefficient		1.8
Curvature Coefficient		0.8

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 13:18

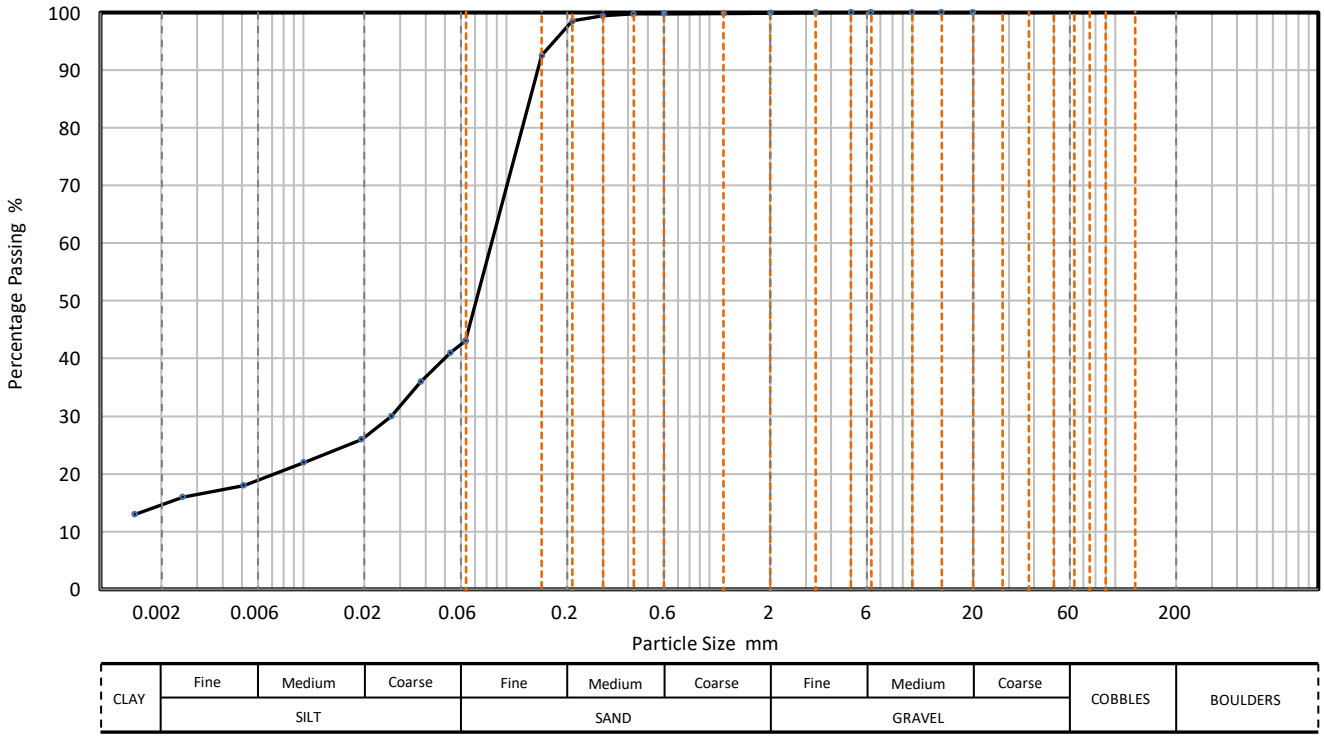
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-108	Lab sample ID	G2MT20250919104
Depth (Top) m	-29.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Clayey, very Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	43
		0.0531	41
		0.0379	36
		0.0272	30
		0.0194	26
		0.0101	22
		0.0051	18
20	100	0.0026	16
14	100	0.0015	13
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	99		
0.15	93		
0.063	43		

Dry Mass of sample, g: 856

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	56.8
Silt	28.6
Clay	14.5

Grading Analysis		
D100	mm	
D60	mm	0.0848
D30	mm	0.0274
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 13:13

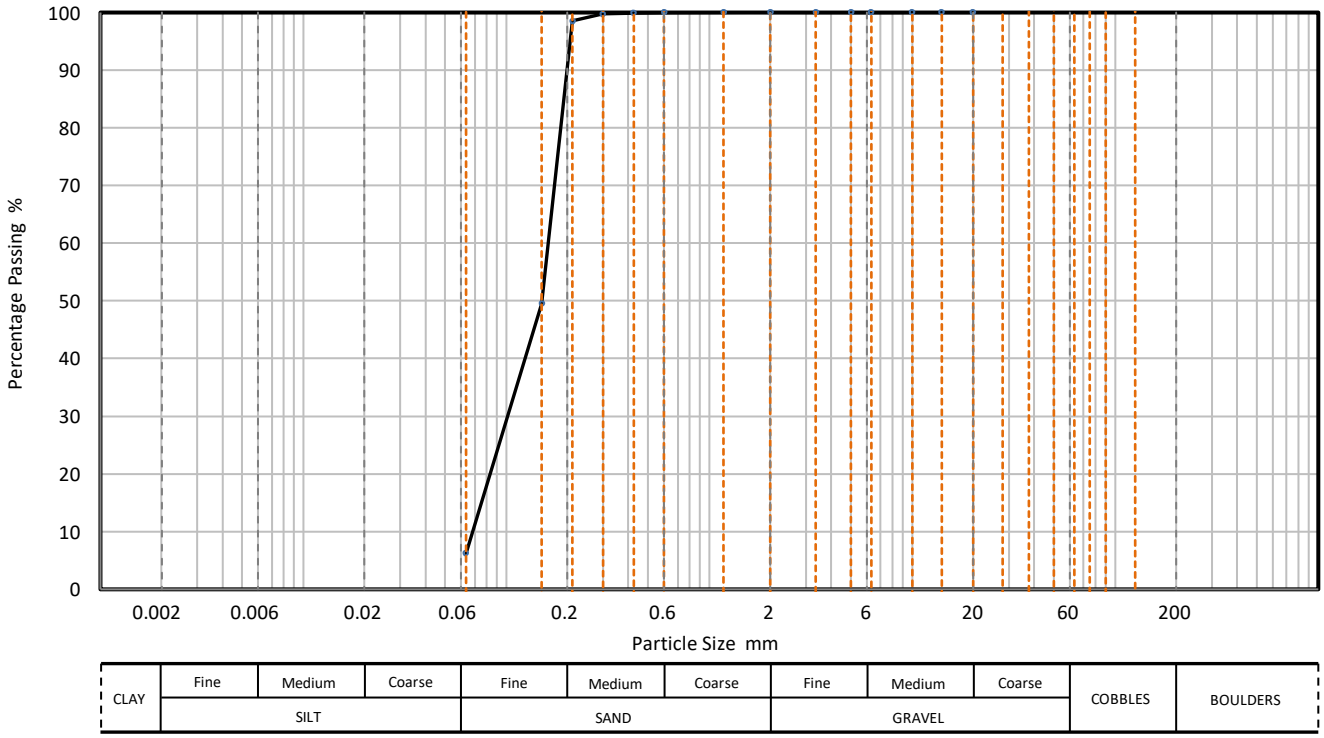
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-109	Lab sample ID	G2MT2025101423
Depth (Top) m	-10.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	99		
0.15	50		
0.063	6		

Dry Mass of sample, g	1050

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	93.7
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.162
D30	mm	0.101
D10	mm	0.0678
Uniformity Coefficient		2.4
Curvature Coefficient		0.94

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 10:06

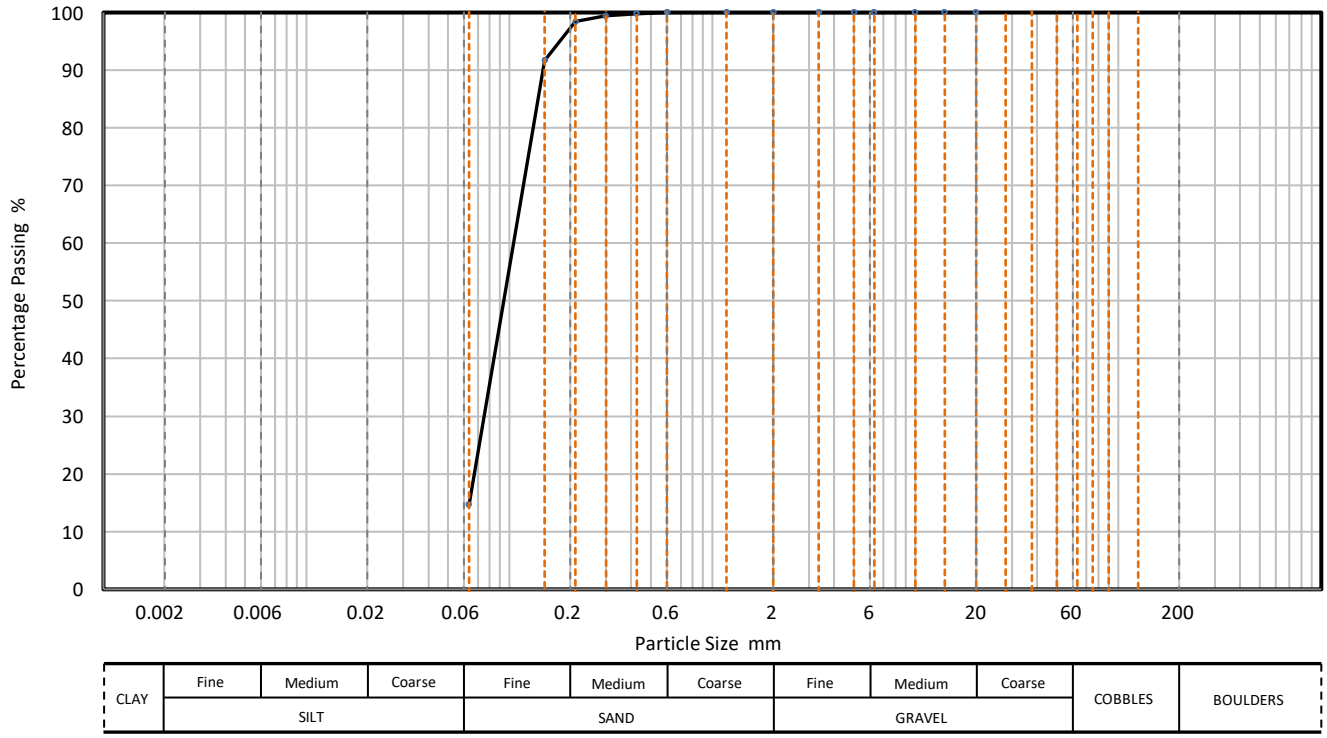
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-109	Lab sample ID	G2MT2025101424
Depth (Top) m	-13.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	98		
0.15	92		
0.063	15		

Dry Mass of sample, g: 1232

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	85.3
Fines <0.063mm	15.0

Grading Analysis		
D100	mm	
D60	mm	0.105
D30	mm	0.0749
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	13/01/2026 12:53

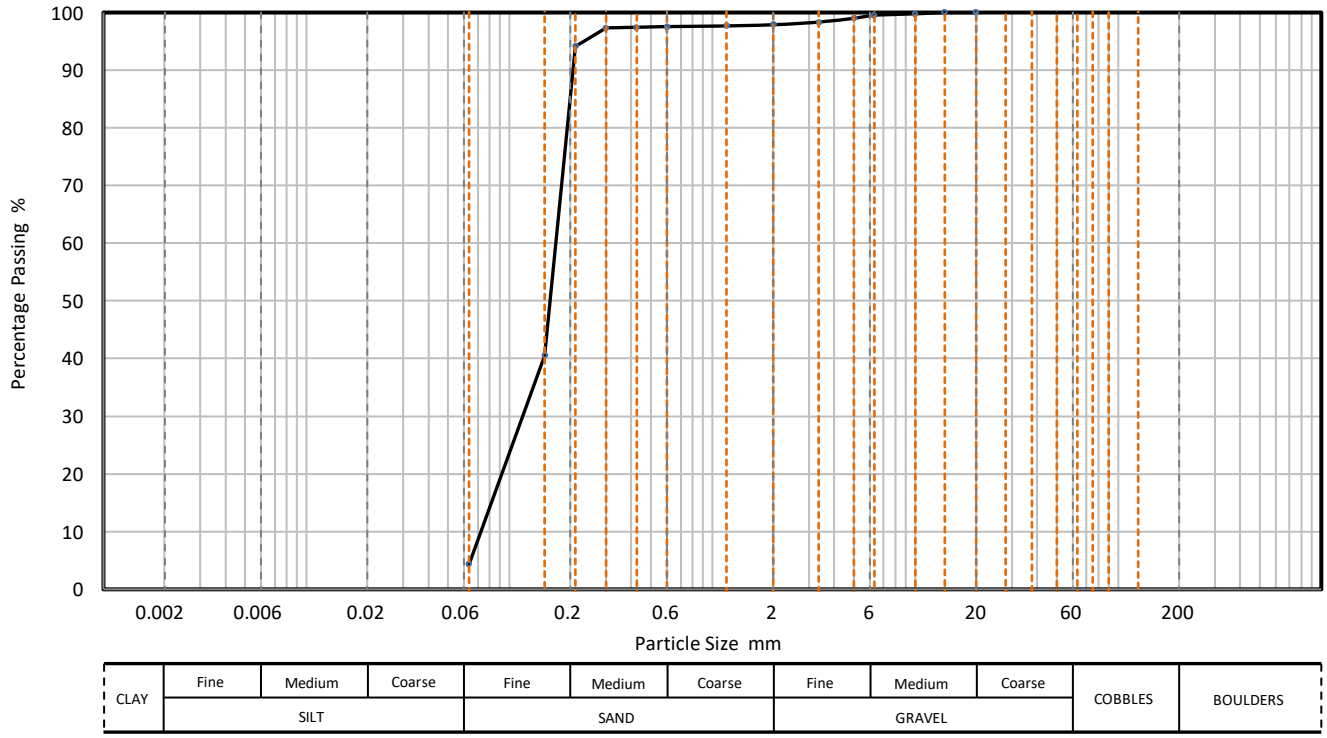
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-109	Lab sample ID	G2MT2025101425
Depth (Top)	m	-16.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	98		
2	98		
1.18	98		
0.6	98		
0.425	97		
0.3	97		
0.212	94		
0.15	41		
0.063	4		

Dry Mass of sample, g	784

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	2.1
Sand	93.5
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.17
D30	mm	0.117
D10	mm	0.0721
Uniformity Coefficient		2.4
Curvature Coefficient		1.1

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 11:42

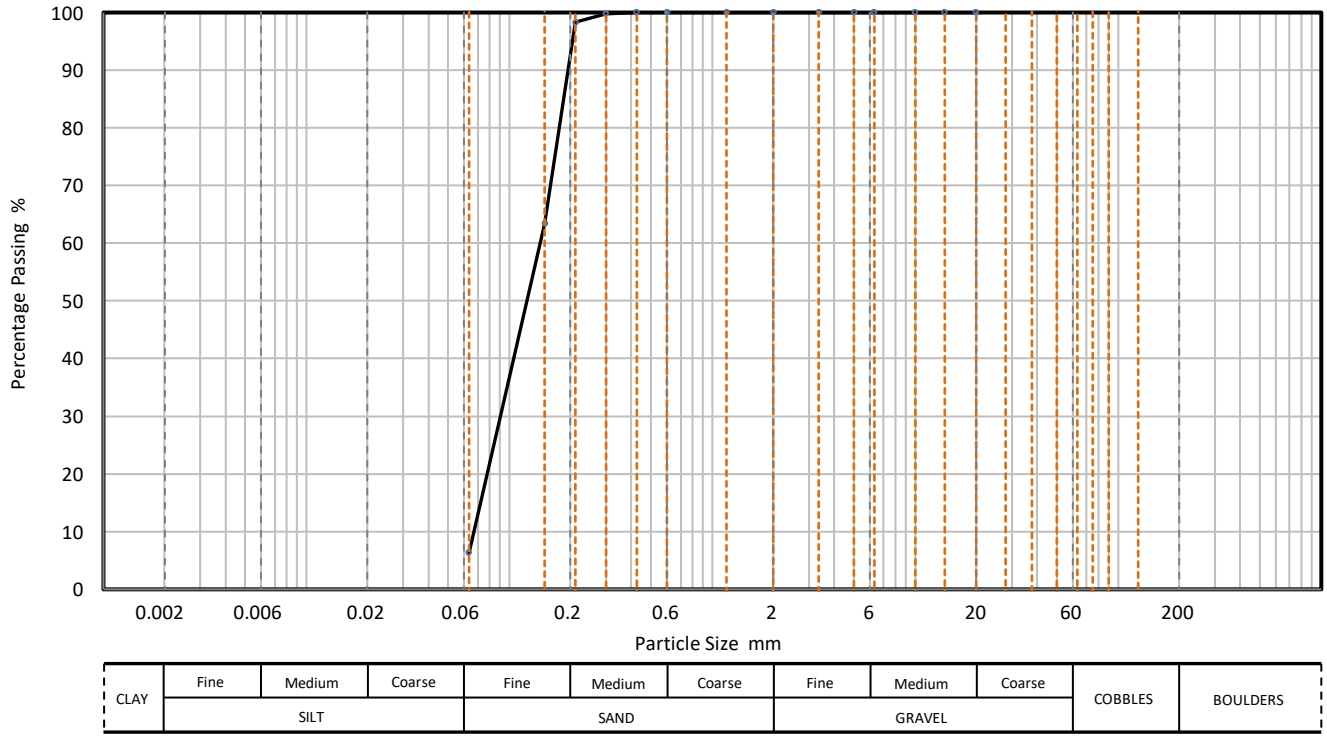
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10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-109	Lab sample ID	G2MT2025101427
Depth (Top) m	-25.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slighttly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	98		
0.15	63		
0.063	6		

Dry Mass of sample, g: 861

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	93.6
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.142
D30	mm	0.0903
D10	mm	0.0666
Uniformity Coefficient		2.1
Curvature Coefficient		0.86

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 09:40

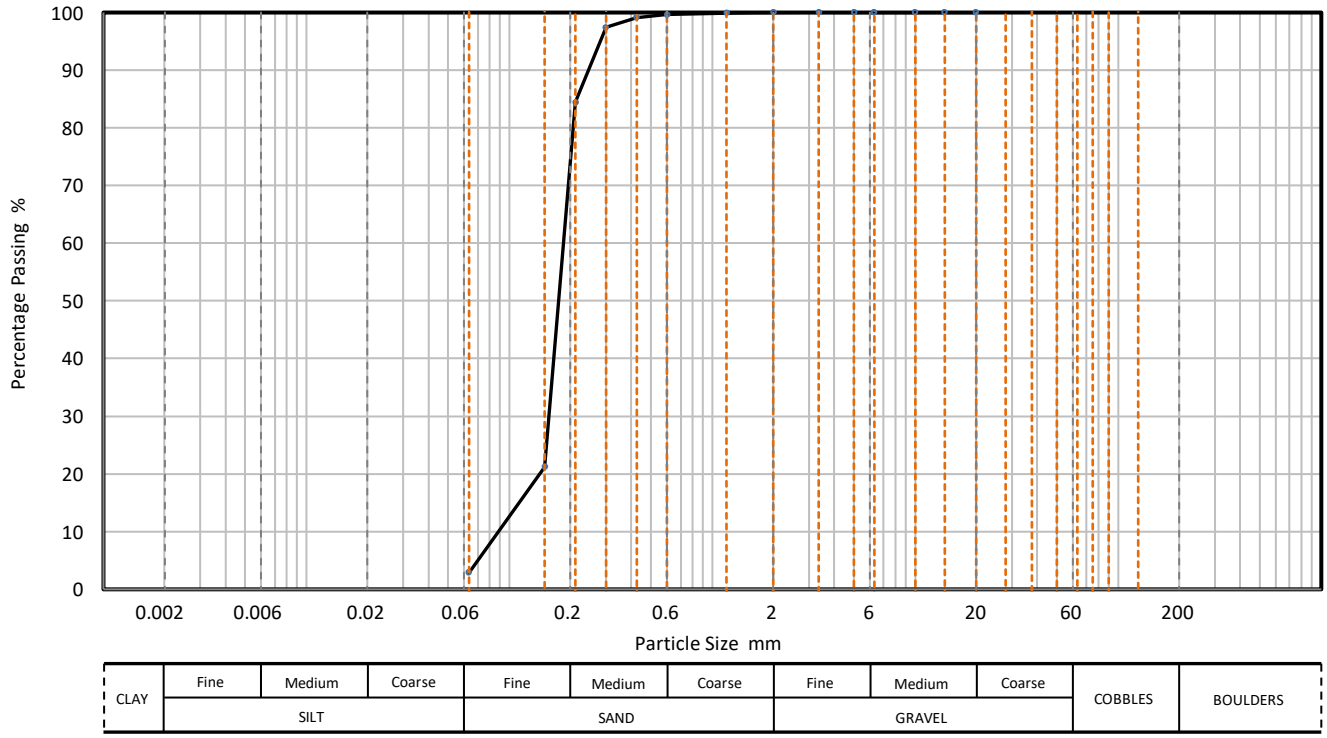
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-110	Lab sample ID	G2MT2025101475
Depth (Top) m	-11.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	97		
0.212	84		
0.15	21		
0.063	3		

Dry Mass of sample, g: 1080

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.1
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.185
D30	mm	0.157
D10	mm	0.0883
Uniformity Coefficient		2.1
Curvature Coefficient		1.5

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 09:49

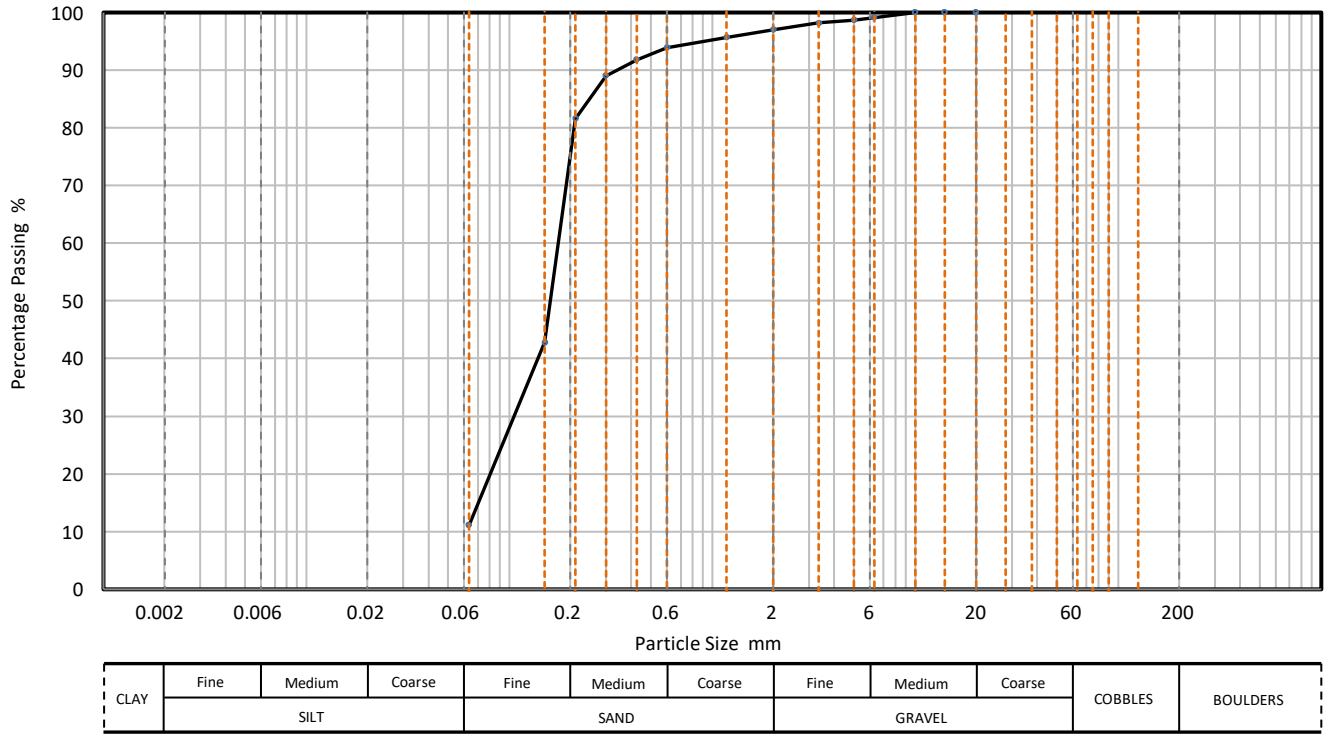
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-110	Lab sample ID	G2MT2025101476
Depth (Top) m	-12.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	98		
2	97		
1.18	96		
0.6	94		
0.425	92		
0.3	89		
0.212	82		
0.15	43		
0.063	11		

Dry Mass of sample, g: 875

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	3.0
Sand	85.9
Fines <0.063mm	11.0

Grading Analysis		
D100	mm	
D60	mm	0.175
D30	mm	0.106
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	13/01/2026 12:53

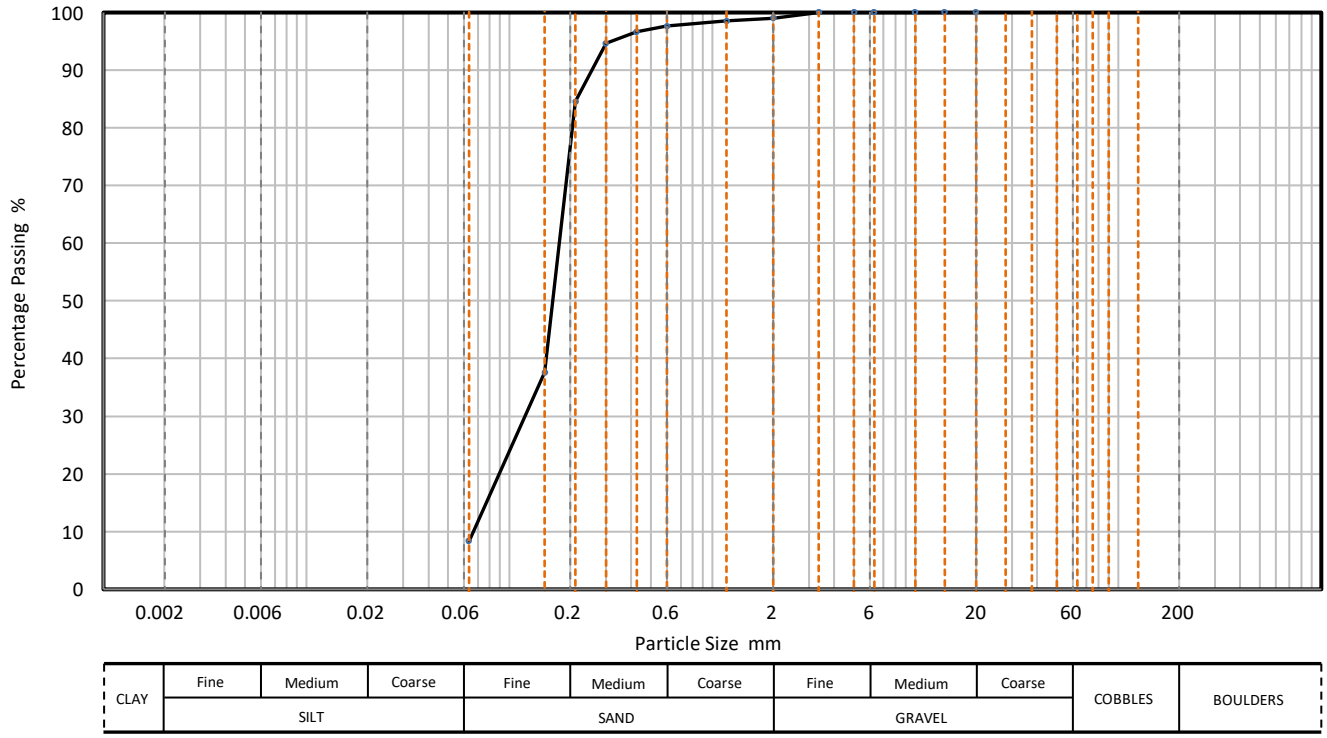
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-110	Lab sample ID	G2MT2025101477
Depth (Top)	m	-14.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	98		
0.425	97		
0.3	95		
0.212	85		
0.15	38		
0.063	8		

Dry Mass of sample, g	1154

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.0
Sand	90.6
Fines <0.063mm	8.0

Grading Analysis		
D100	mm	
D60	mm	0.177
D30	mm	0.12
D10	mm	0.066
Uniformity Coefficient		2.7
Curvature Coefficient		1.2

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 09:57

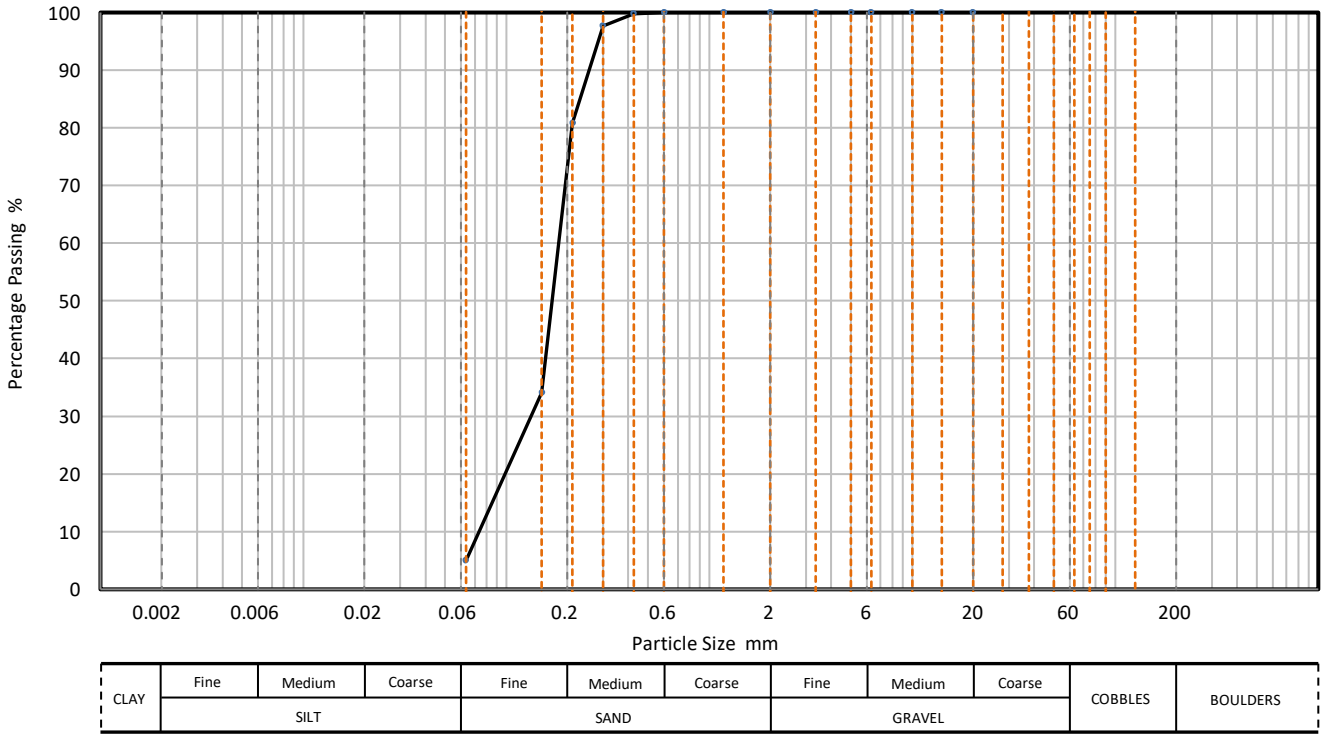
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-110	Lab sample ID	G2MT2025101478
Depth (Top) m	-18.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	98		
0.212	81		
0.15	34		
0.063	5		

Dry Mass of sample, g: 706

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	95.0
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.182
D30	mm	0.133
D10	mm	0.0731
Uniformity Coefficient		2.5
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 10:17

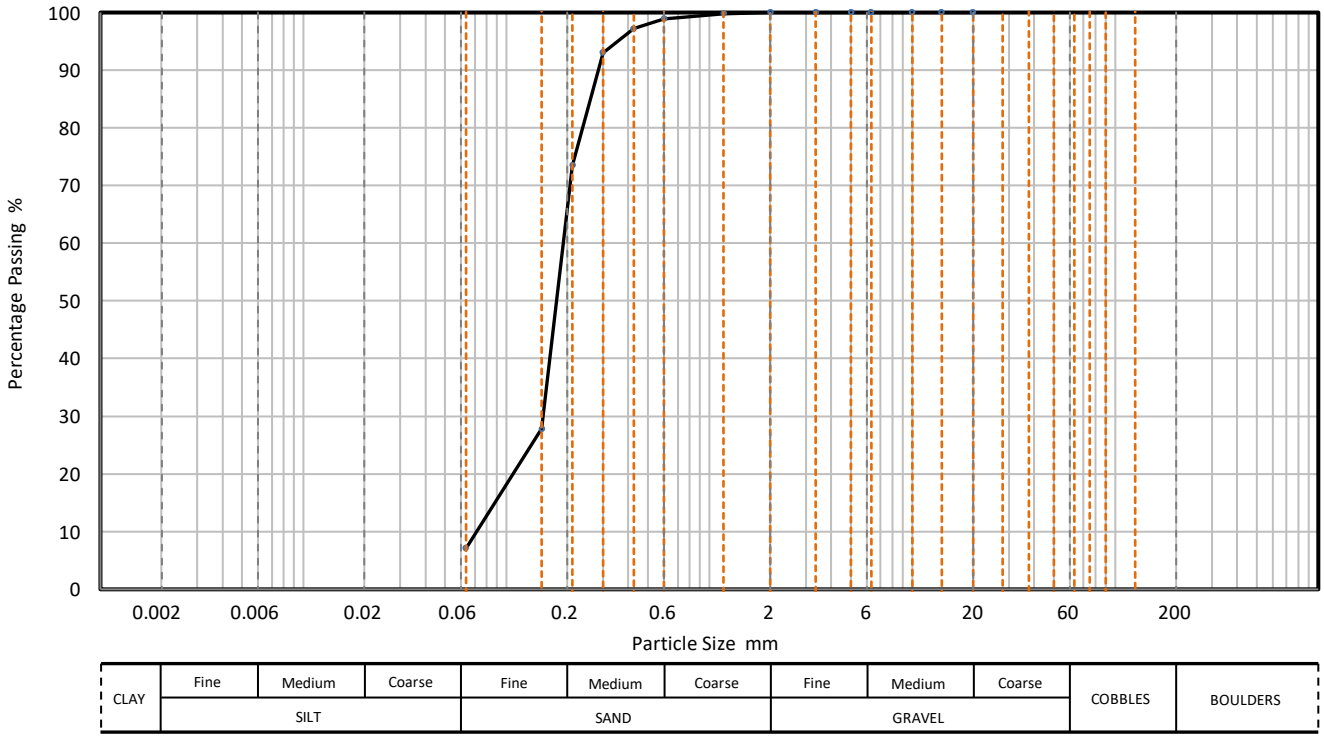
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-111	Lab sample ID	G2MT2025101482
Depth (Top) m	-11.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	97		
0.3	93		
0.212	74		
0.15	28		
0.063	7		

Dry Mass of sample, g: 1264

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	92.8
Fines <0.063mm	7.0

Grading Analysis		
D100	mm	
D60	mm	0.191
D30	mm	0.153
D10	mm	0.0709
Uniformity Coefficient		2.7
Curvature Coefficient		1.7

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/10/2025 10:32

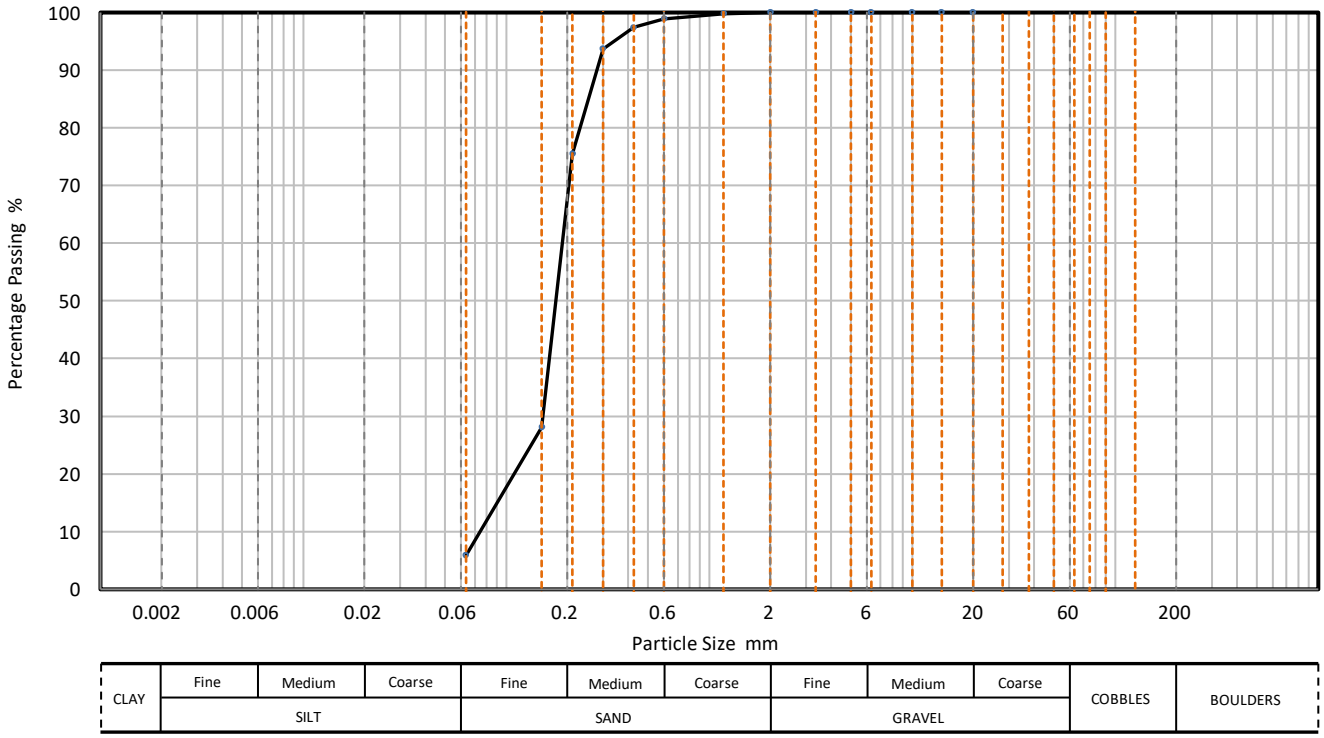
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UKAS TESTING
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-111	Lab sample ID	G2MT2025101483
Depth (Top) m	-16.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	97		
0.3	94		
0.212	76		
0.15	28		
0.063	6		

Dry Mass of sample, g: 752

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	94.0
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.189
D30	mm	0.152
D10	mm	0.0739
Uniformity Coefficient		2.6
Curvature Coefficient		1.7

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 11:43

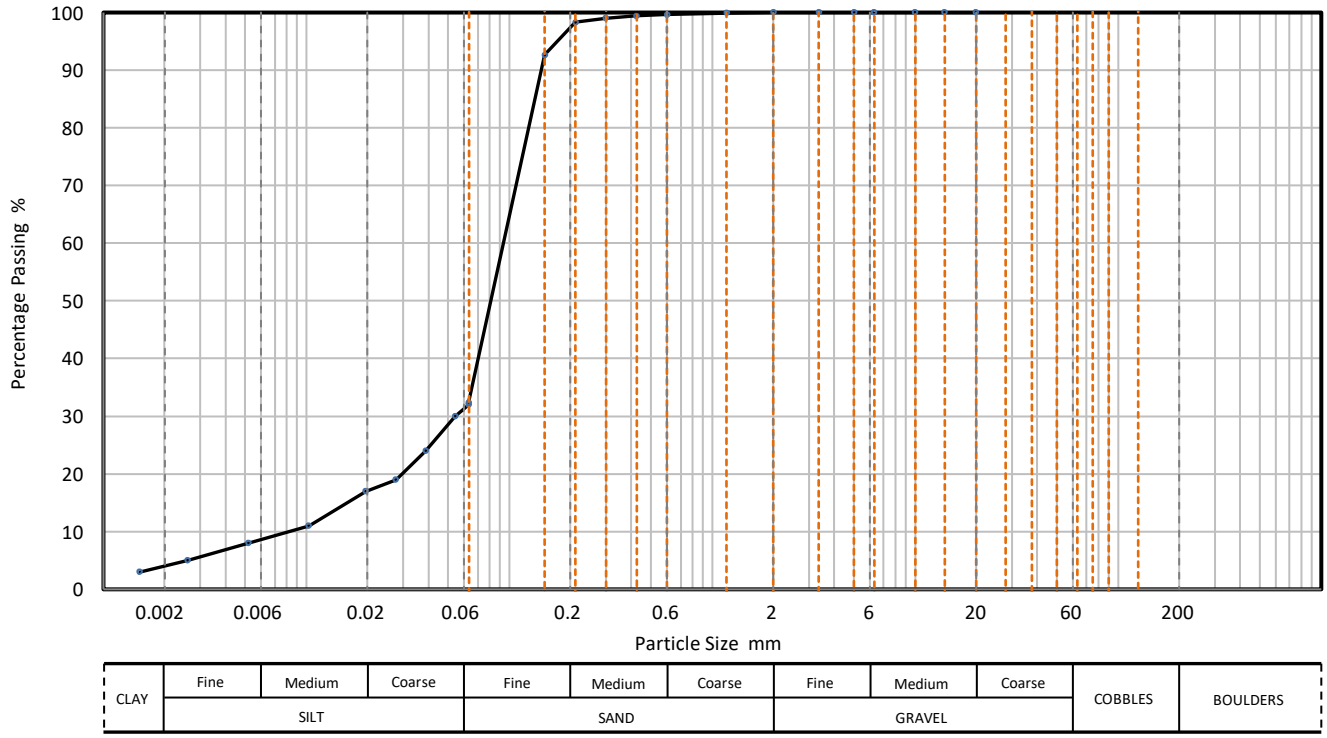
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-111	Lab sample ID	G2MT2025101484
Depth (Top) m	-19.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, very Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	32
		0.0542	30
		0.0388	24
		0.0277	19
		0.0197	17
		0.0103	11
		0.0052	8
20	100	0.0026	5
14	100	0.0015	3
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	99		
0.212	98		
0.15	93		
0.063	32		

Dry Mass of sample, g	859

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	67.7
Silt	28.2
Clay	4.1

Grading Analysis		
D100	mm	
D60	mm	0.0938
D30	mm	0.0554
D10	mm	0.0078
Uniformity Coefficient		12
Curvature Coefficient		4.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:47

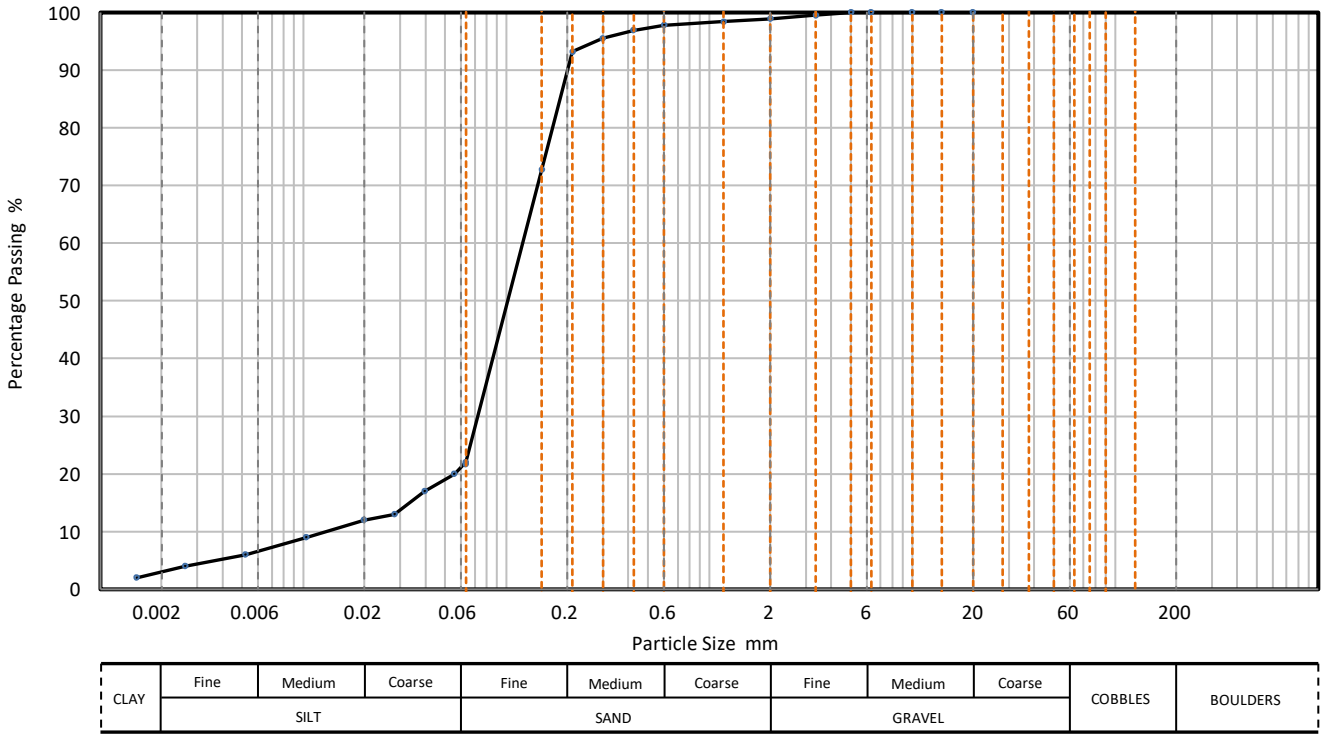
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-111	Lab sample ID	G2MT2025101485
Depth (Top) m	-23.70	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Clayey, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	22
		0.0556	20
		0.0396	17
		0.0282	13
		0.0200	12
		0.0104	9
		0.0052	6
20	100	0.0026	4
14	100	0.0015	2
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	98		
0.6	98	Particle density	(assumed)
0.425	97	2.65	Mg/m3
0.3	96		
0.212	93		
0.15	73		
0.063	22		

Dry Mass of sample, g: 889

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.1
Sand	77.2
Silt	18.9
Clay	2.8

Grading Analysis		
D100	mm	
D60	mm	0.121
D30	mm	0.0725
D10	mm	0.0137
Uniformity Coefficient		8.8
Curvature Coefficient		3.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:49

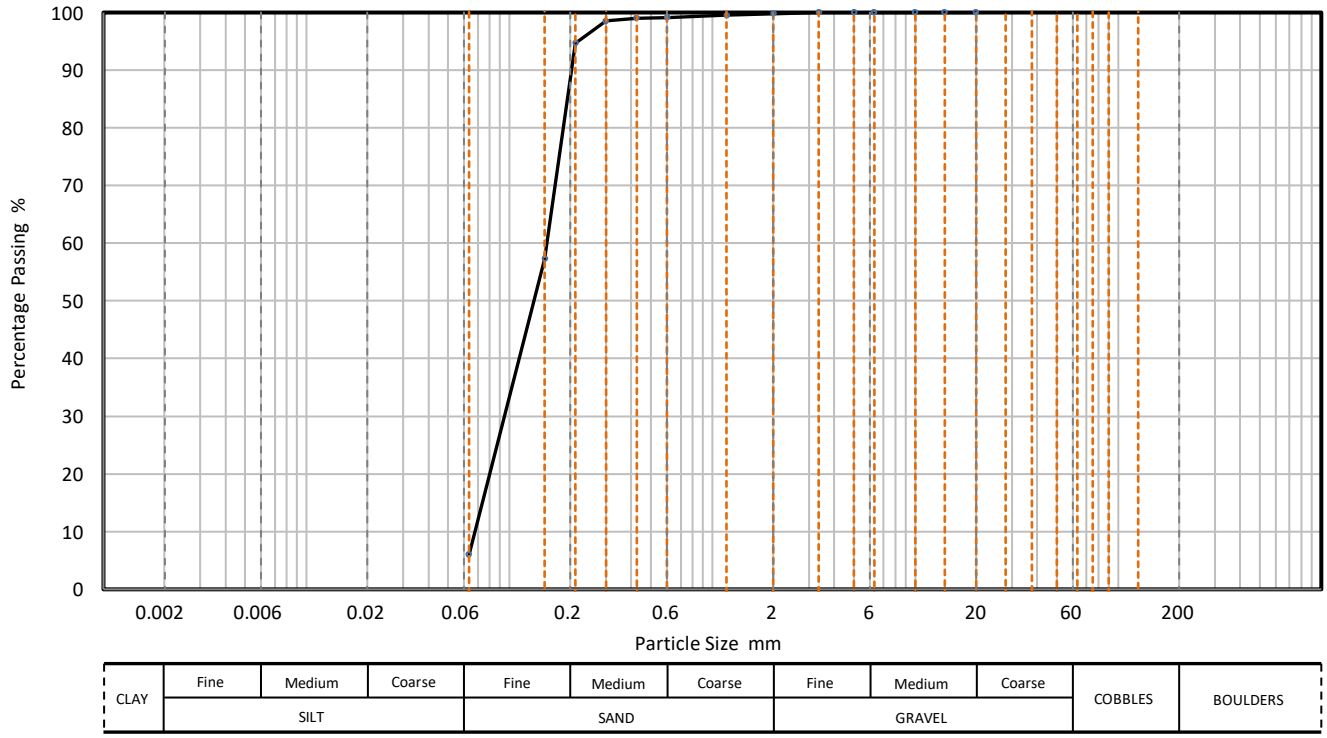
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-112	Lab sample ID	G2MT2025091531
Depth (Top) m	-12.60	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	99		
0.212	95		
0.15	57		
0.063	6		

Dry Mass of sample, g	677

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	93.8
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.154
D30	mm	0.0945
D10	mm	0.0674
Uniformity Coefficient		2.3
Curvature Coefficient		0.86

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:30

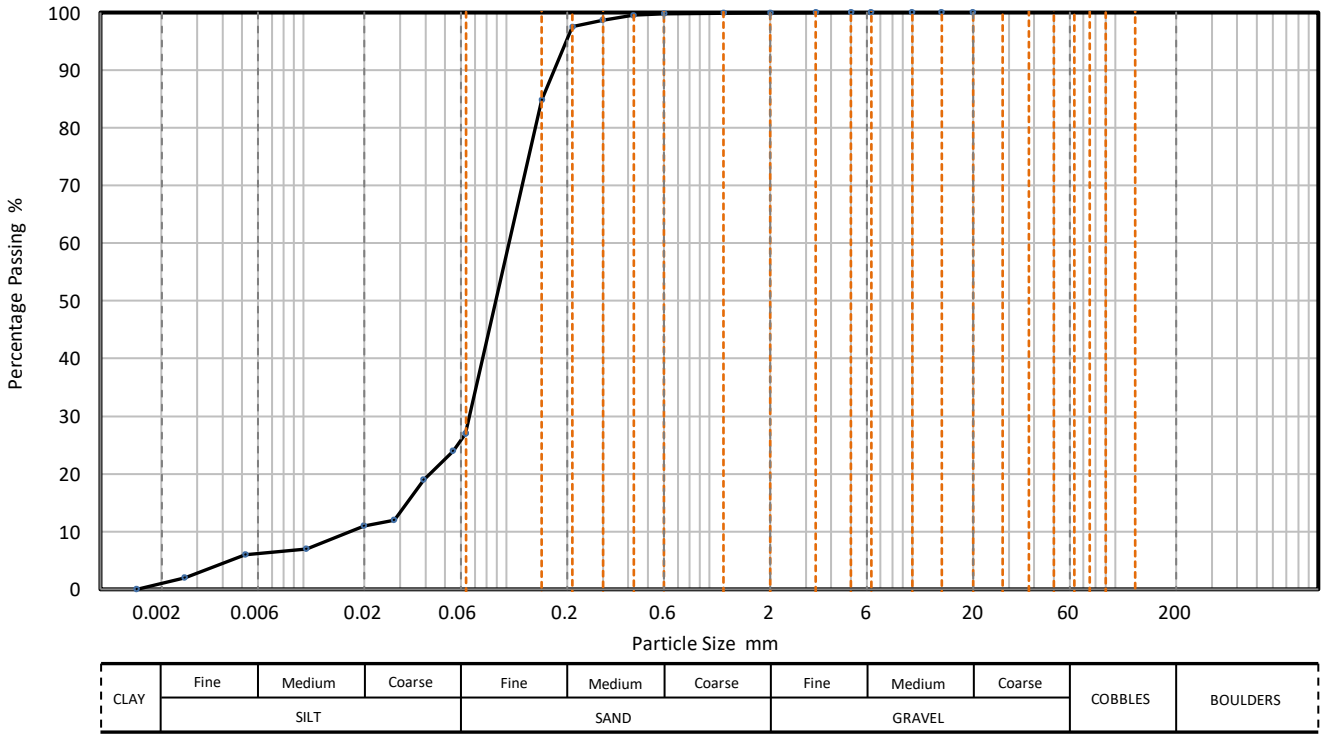
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-112	Lab sample ID	G2MT2025091532
Depth (Top) m	-17.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly,slightly Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	27
		0.0548	24
		0.0391	19
		0.0281	12
		0.0199	11
		0.0104	7
		0.0052	6
20	100	0.0026	2
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	98		
0.15	85		
0.063	27		

Dry Mass of sample, g: 999

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	73.0
Silt	25.7
Clay	1.2

Grading Analysis		
D100	mm	
D60	mm	0.103
D30	mm	0.0659
D10	mm	0.0179
Uniformity Coefficient		5.8
Curvature Coefficient		2.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:22

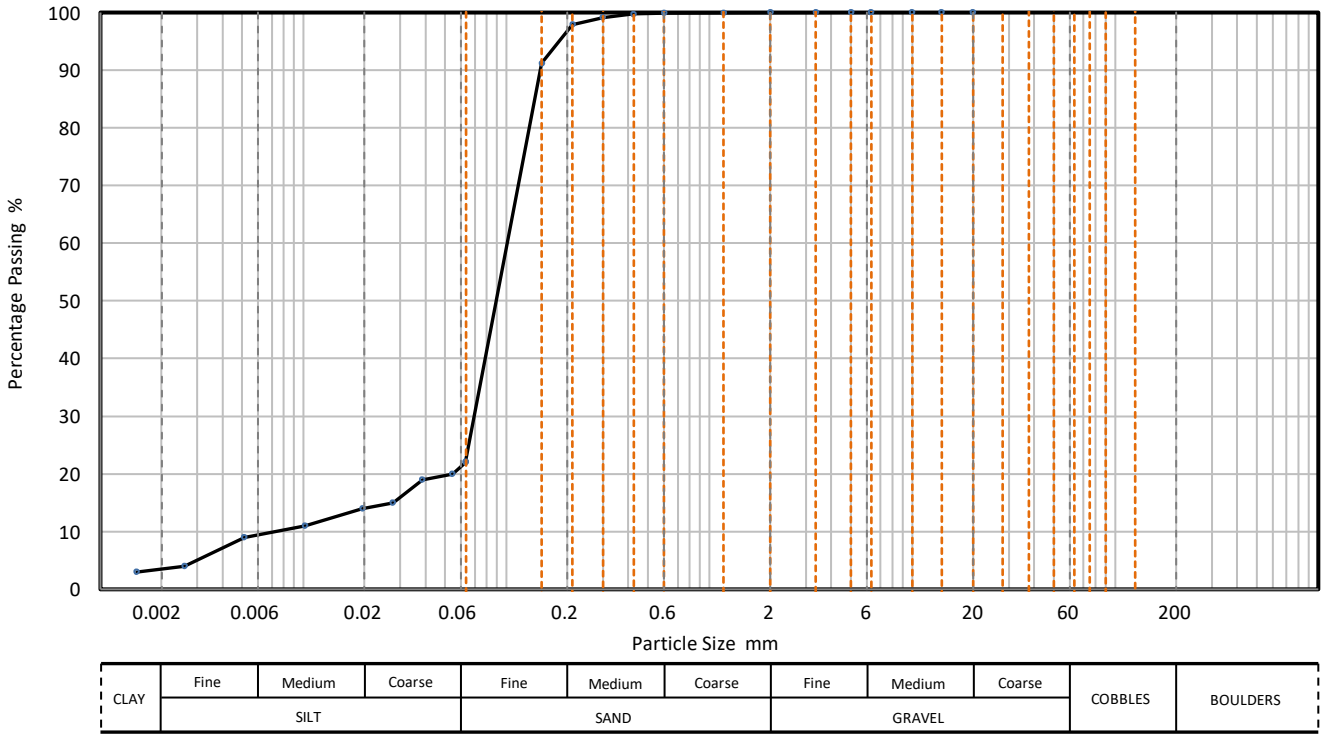
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-112	Lab sample ID	G2MT2025091534
Depth (Top) m	-20.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	22
		0.0544	20
		0.0387	19
		0.0276	15
		0.0196	14
		0.0102	11
		0.0051	9
20	100	0.0026	4
14	100	0.0015	3
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	98		
0.15	91		
0.063	22		

Dry Mass of sample, g: 867

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	77.8
Silt	18.8
Clay	3.4

Grading Analysis		
D100	mm	
D60	mm	0.101
D30	mm	0.0695
D10	mm	0.00768
Uniformity Coefficient		13
Curvature Coefficient		6.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:24

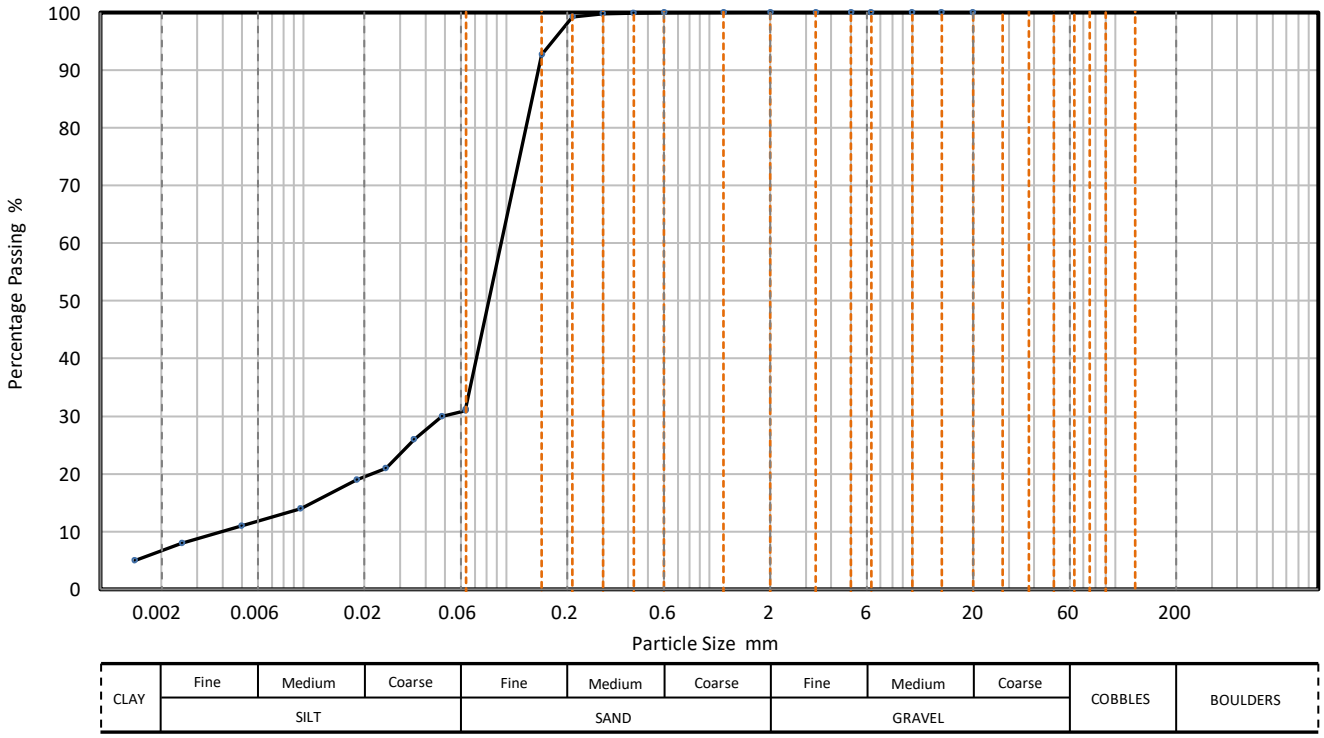
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-112	Lab sample ID	G2MT2025091535
Depth (Top) m	-23.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, very Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	31
		0.0483	30
		0.0351	26
		0.0256	21
		0.0184	19
		0.0097	14
		0.0050	11
20	100	0.0025	8
14	100	0.0015	5
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	99		
0.15	93		
0.063	31		

Dry Mass of sample, g: 843

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	68.8
Silt	24.6
Clay	6.6

Grading Analysis		
D100	mm	
D60	mm	0.0946
D30	mm	0.0495
D10	mm	0.00433
Uniformity Coefficient		22
Curvature Coefficient		6

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:13

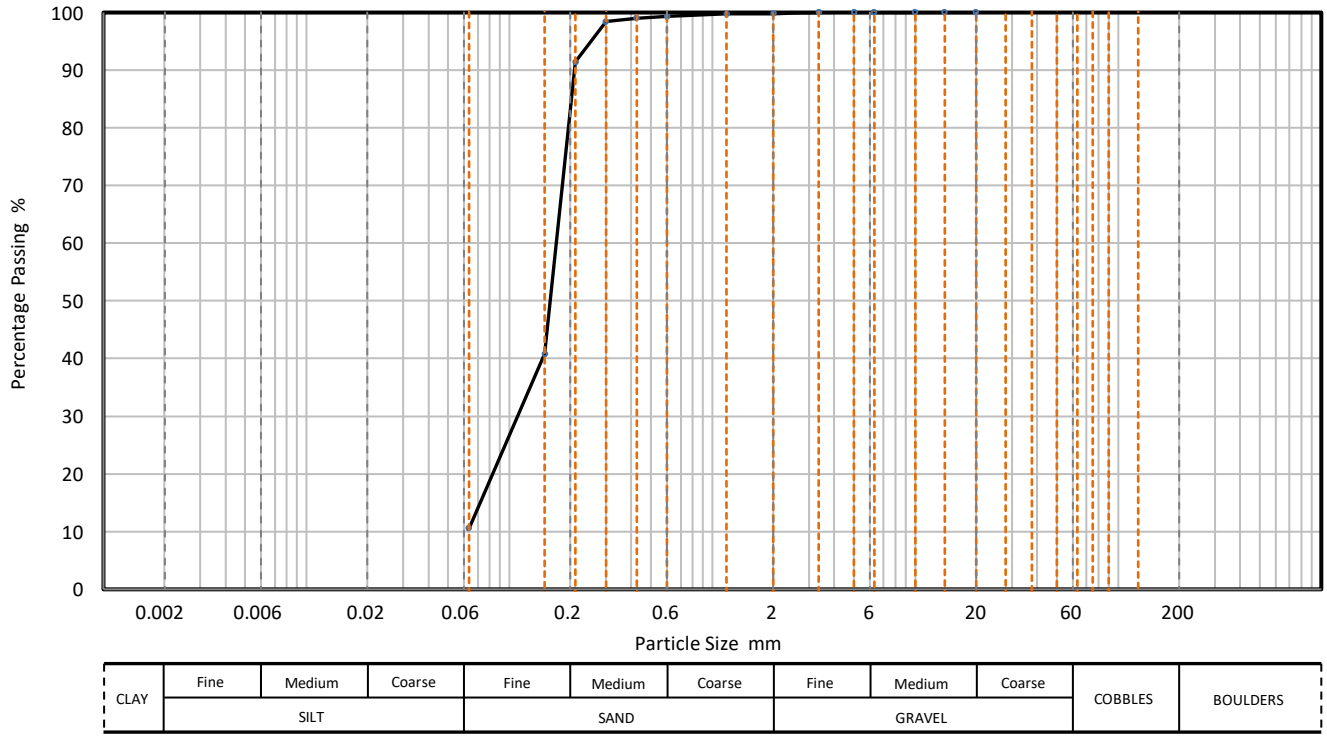
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091536
Depth (Top) m	-7.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	98		
0.212	91		
0.15	41		
0.063	11		

Dry Mass of sample, g	860

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	89.2
Fines <0.063mm	11.0

Grading Analysis		
D100	mm	
D60	mm	0.171
D30	mm	0.11
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 08:18

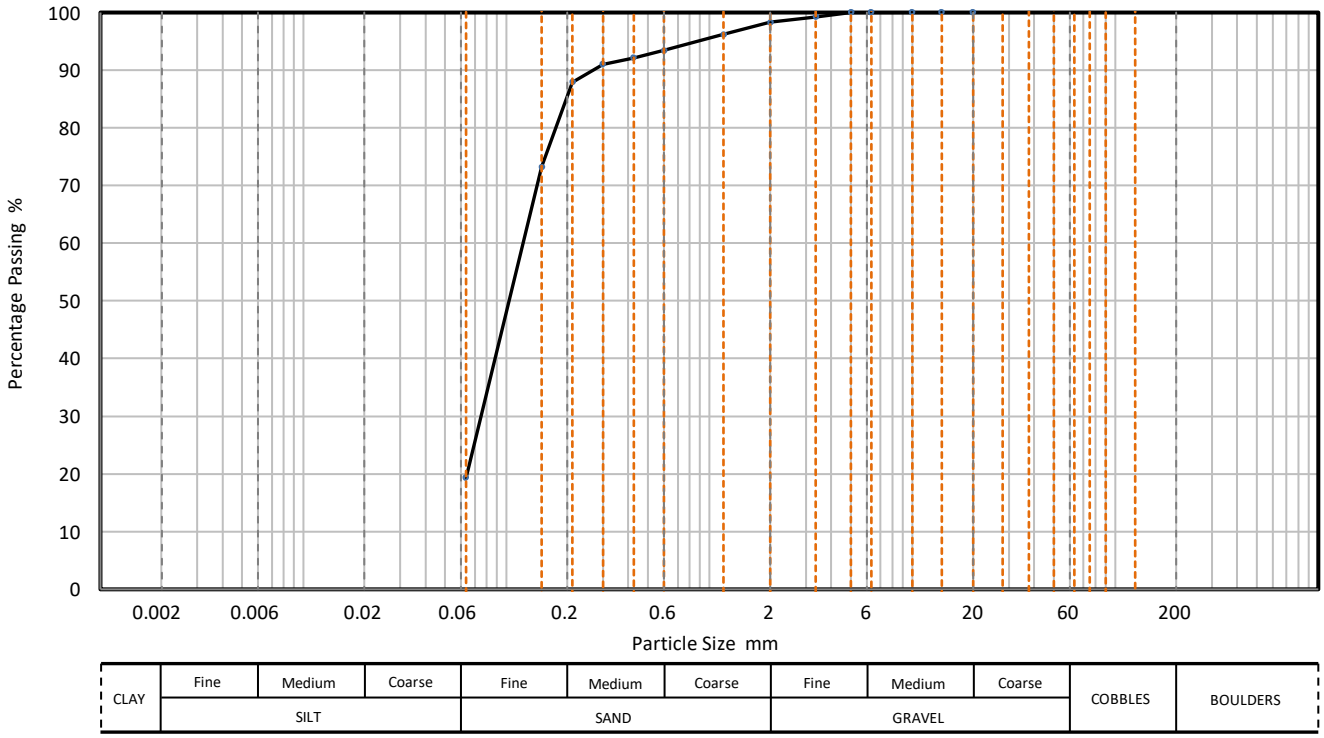
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091538
Depth (Top) m	-9.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	98		
1.18	96		
0.6	93		
0.425	92		
0.3	91		
0.212	88		
0.15	73		
0.063	19		

Dry Mass of sample, g: 1063

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.7
Sand	78.9
Fines <0.063mm	19.0

Grading Analysis		
D100	mm	
D60	mm	0.121
D30	mm	0.0747
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	17/09/2025 14:22

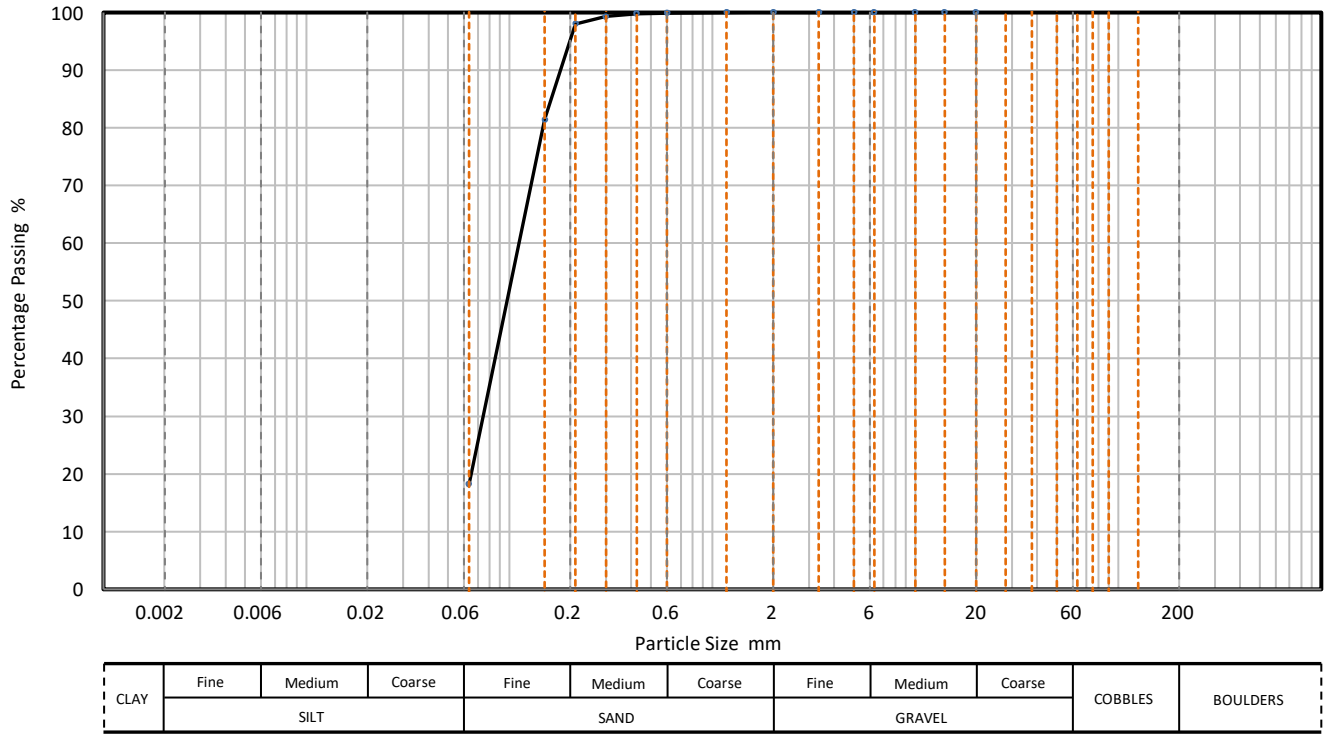
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091539
Depth (Top) m	-15.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	98		
0.15	81		
0.063	18		

Dry Mass of sample, g: 1006

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	81.7
Fines <0.063mm	18.0

Grading Analysis		
D100	mm	
D60	mm	0.112
D30	mm	0.074
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	17/09/2025 14:23

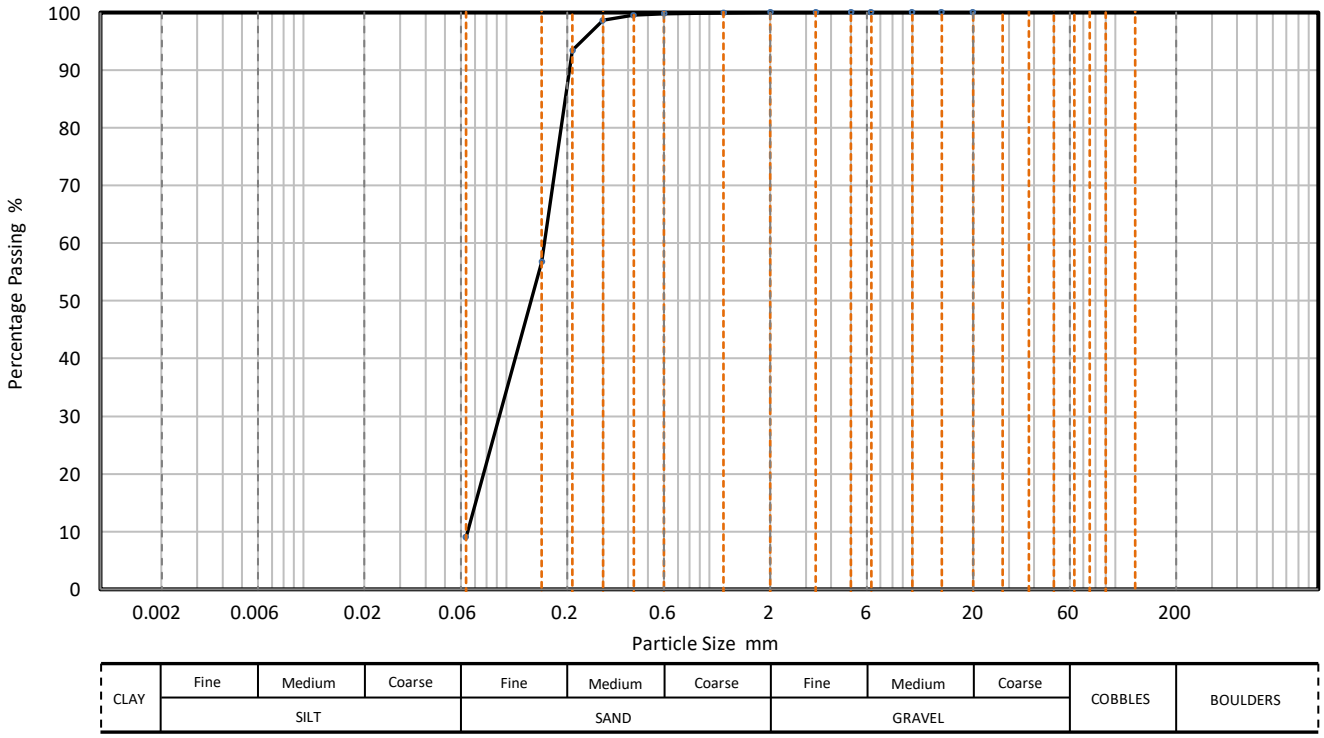
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091541
Depth (Top) m	-20.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	93		
0.15	57		
0.063	9		

Dry Mass of sample, g	966

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	91.0
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.155
D30	mm	0.0924
D10	mm	0.0642
Uniformity Coefficient		2.4
Curvature Coefficient		0.86

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 08:18

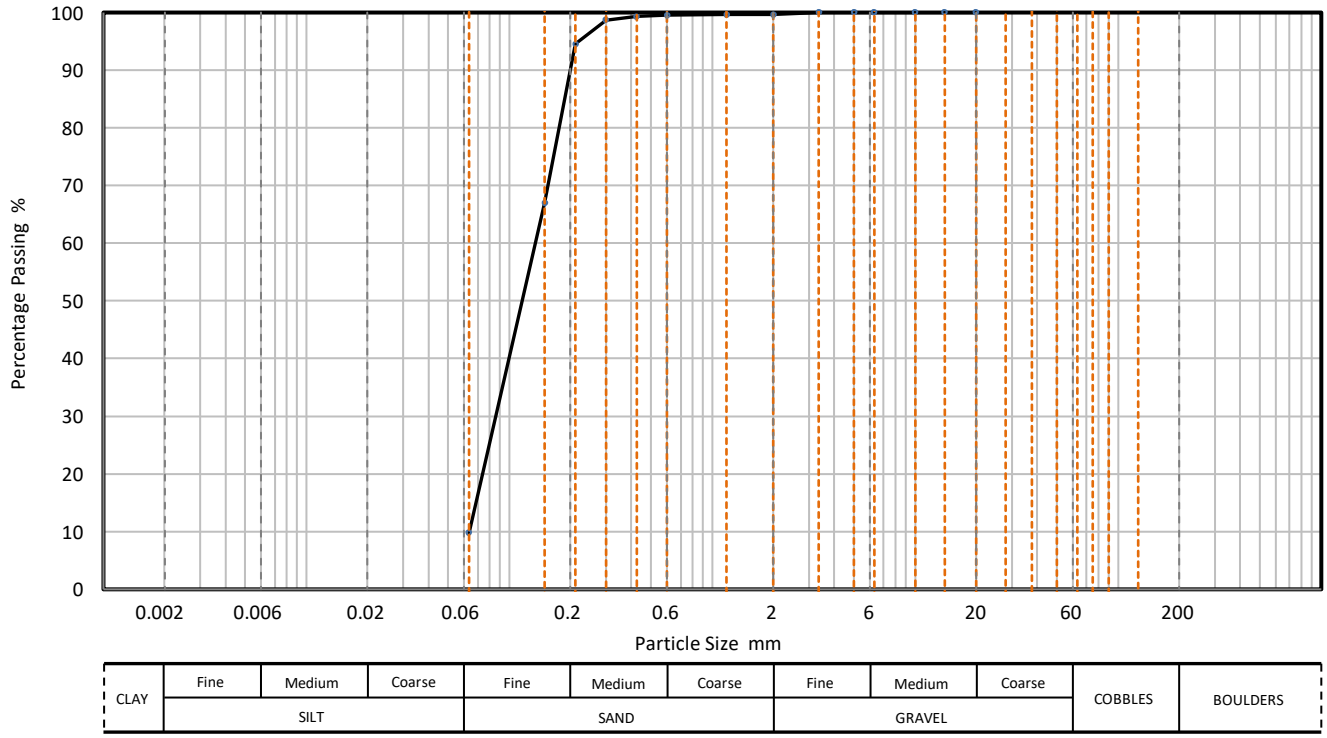
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091544
Depth (Top) m	-24.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	95		
0.15	67		
0.063	10		

Dry Mass of sample, g	827

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.4
Sand	89.8
Fines <0.063mm	10.0

Grading Analysis		
D100	mm	
D60	mm	0.135
D30	mm	0.0856
D10	mm	0.0632
Uniformity Coefficient		2.1
Curvature Coefficient		0.86

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 08:20

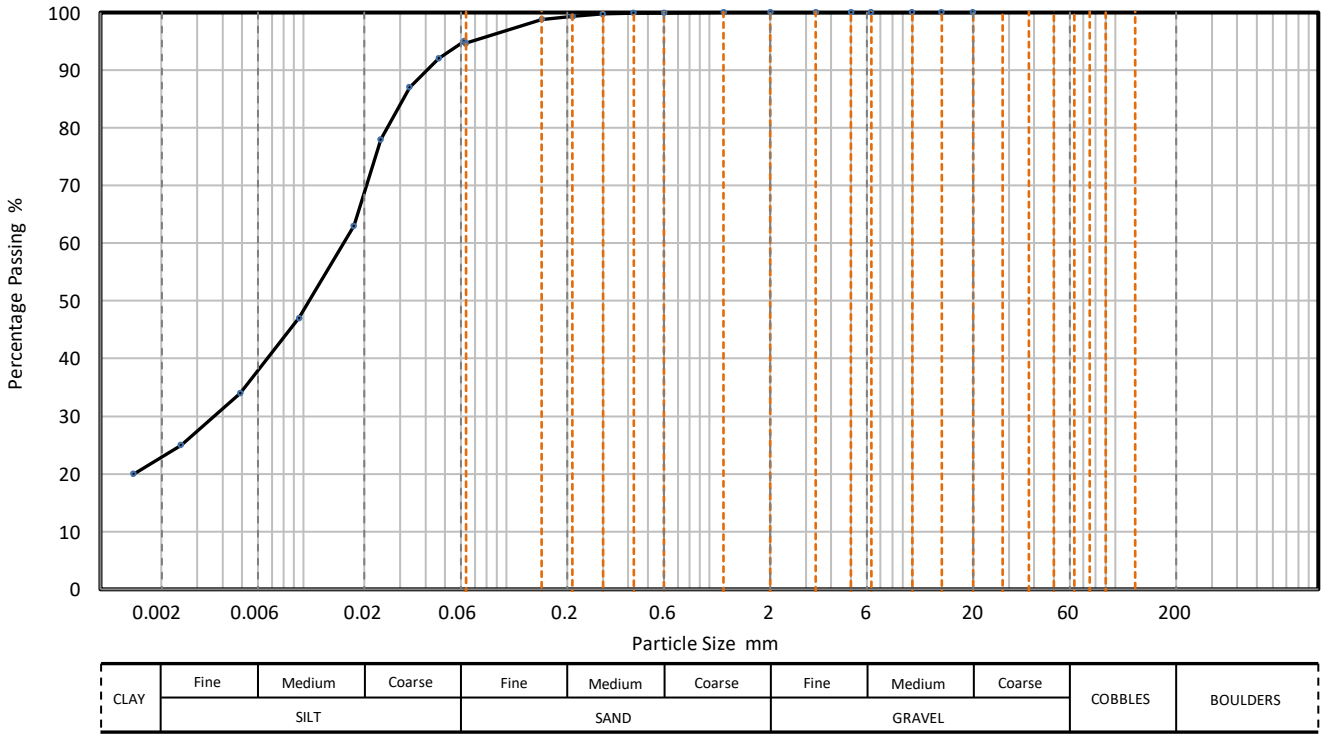
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091545
Depth (Top) m	-27.50	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, very Clayey, SILT
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0621	95
		0.0465	92
		0.0334	87
		0.0241	78
		0.0177	63
		0.0095	47
		0.0049	34
20	100	0.0025	25
14	100	0.0015	20
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	99		
0.15	99		
0.063	95		

Dry Mass of sample, g: 626

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	5.4
Silt	71.3
Clay	23.3

Grading Analysis		
D100	mm	
D60	mm	0.0159
D30	mm	0.00358
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:26

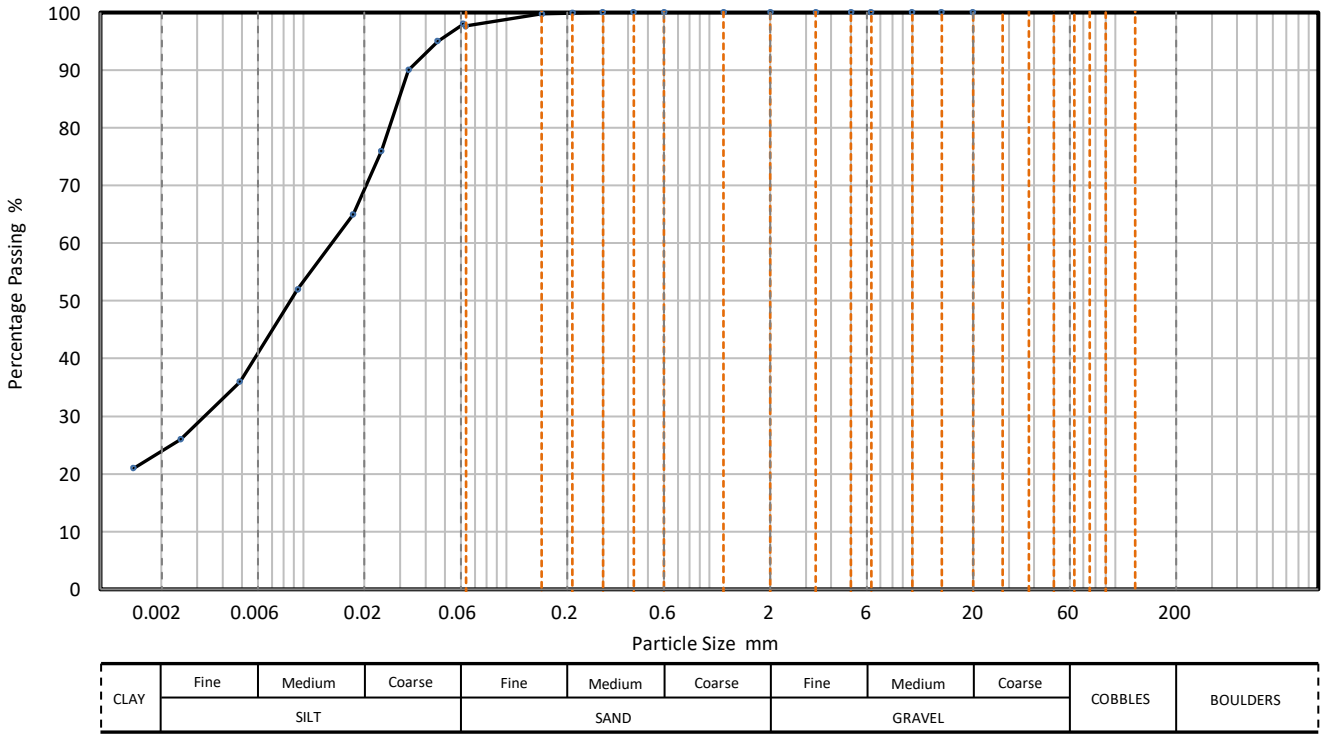
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-113	Lab sample ID	G2MT2025091547
Depth (Top) m	-29.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Sandy, very Clayey, SILT
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0614	98
		0.0459	95
		0.0330	90
		0.0242	76
		0.0176	65
		0.0094	52
		0.0049	36
20	100	0.0025	26
14	100	0.0015	21
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	100		
0.15	100		
0.063	98		

Dry Mass of sample, g	796

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	2.4
Silt	73.9
Clay	23.7

Grading Analysis		
D100	mm	
D60	mm	0.0137
D30	mm	0.00332
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:17

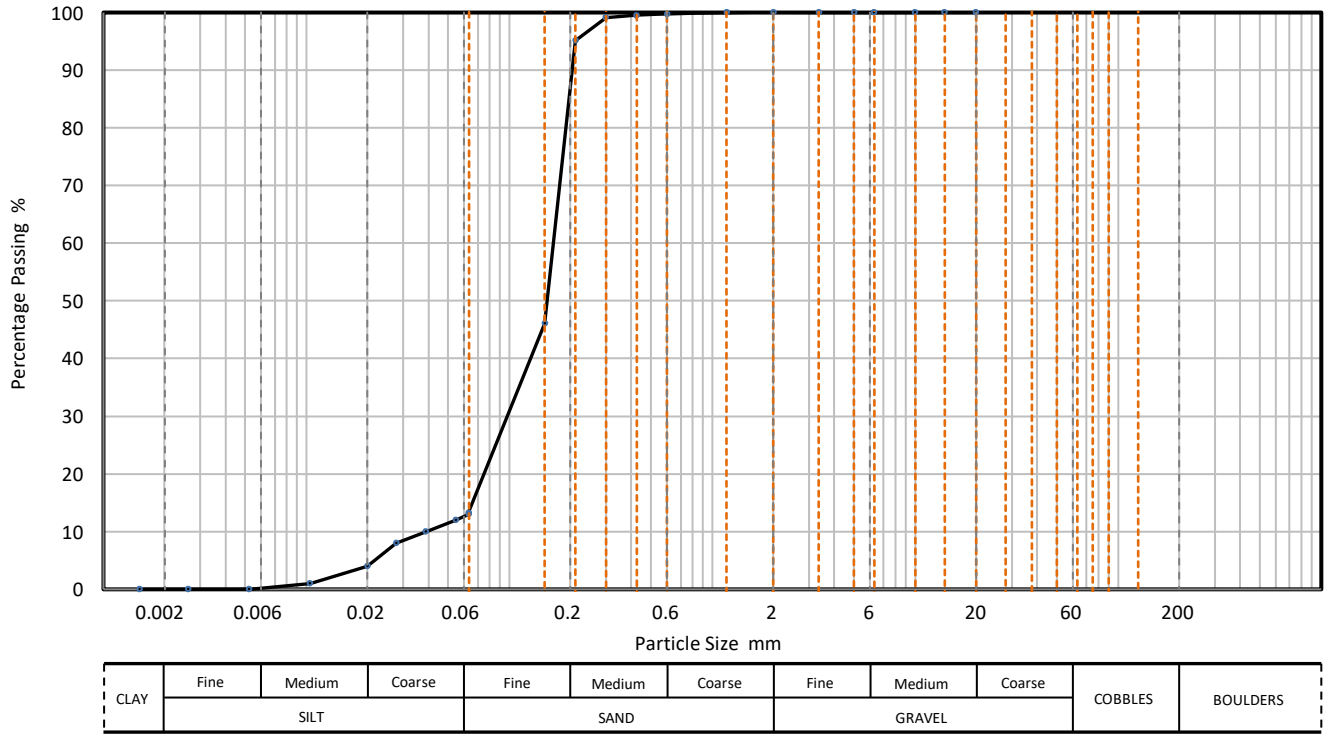
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-114	Lab sample ID	G2MT2025091515
Depth (Top) m	-3.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	13
		0.0545	12
		0.0390	10
		0.0278	8
		0.0200	4
		0.0104	1
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	95		
0.15	46		
0.063	13		

Dry Mass of sample, g	737

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	86.7
Silt	13.3
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.165
D30	mm	0.098
D10	mm	0.0398
Uniformity Coefficient		4.2
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 09:27

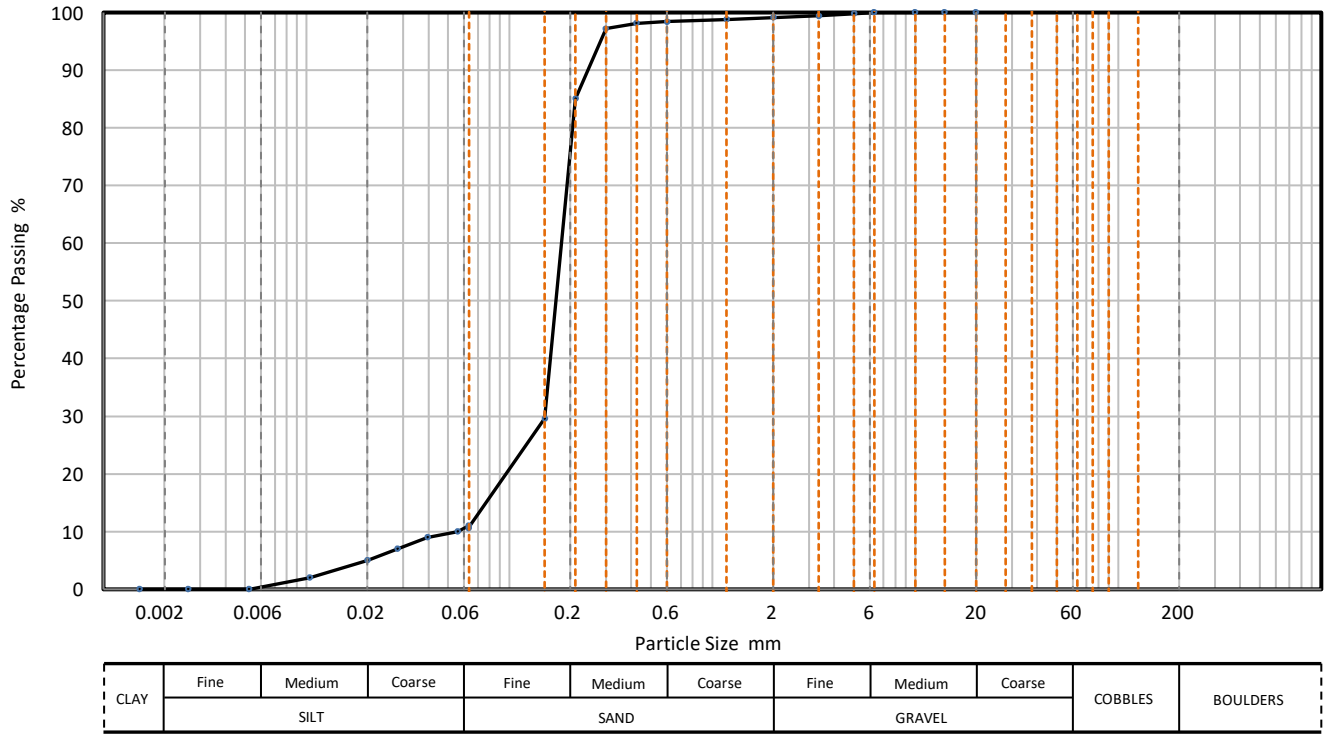
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-114	Lab sample ID	G2MT2025091518
Depth (Top) m	-4.70	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	11
		0.0558	10
		0.0396	9
		0.0281	7
		0.0200	5
		0.0104	2
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	99		
2	99		
1.18	99		
0.6	98	Particle density	(assumed)
0.425	98	2.65	Mg/m3
0.3	97		
0.212	85		
0.15	30		
0.063	11		

Dry Mass of sample, g: 807

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.9
Sand	88.5
Silt	10.6
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.181
D30	mm	0.15
D10	mm	0.059
Uniformity Coefficient		3.1
Curvature Coefficient		2.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 09:43

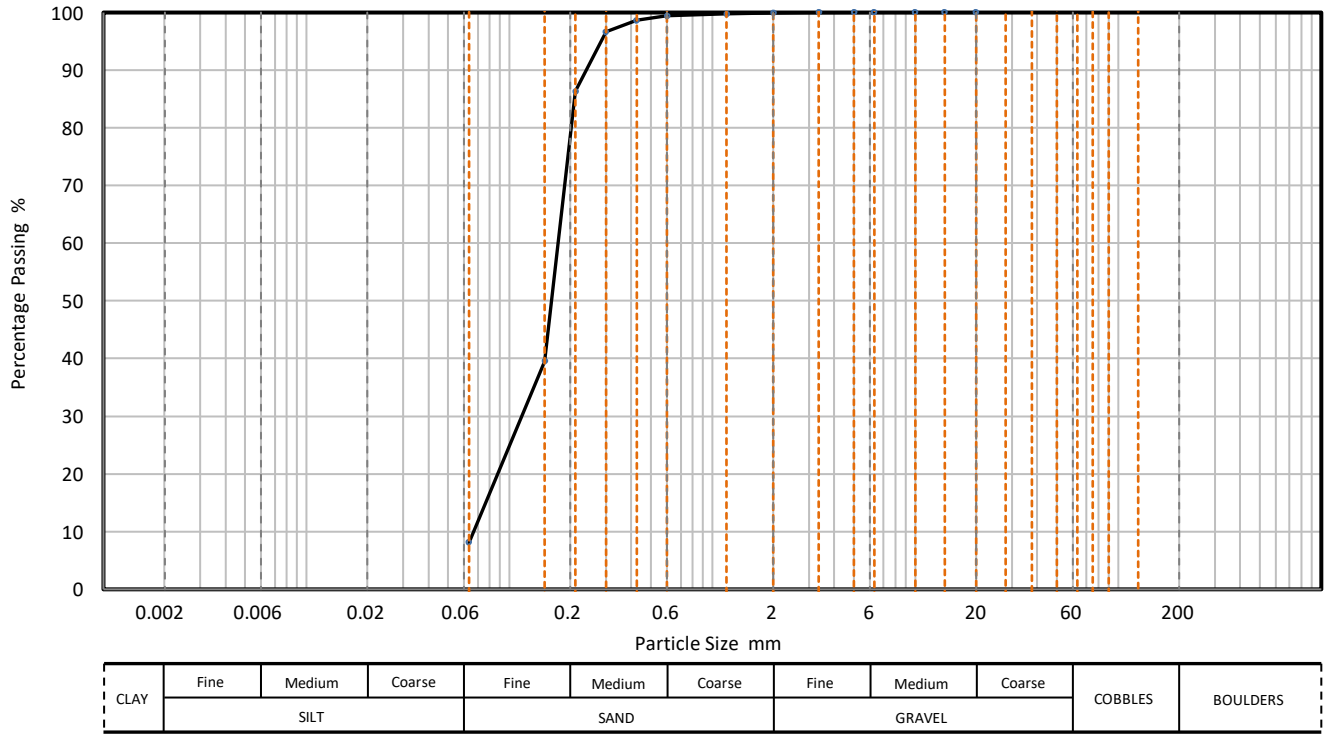
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-114	Lab sample ID	G2MT2025091519
Depth (Top) m	-7.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	97		
0.212	86		
0.15	40		
0.063	8		

Dry Mass of sample, g: 826

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	91.6
Fines <0.063mm	8.0

Grading Analysis		
D100	mm	
D60	mm	0.175
D30	mm	0.115
D10	mm	0.0662
Uniformity Coefficient		2.6
Curvature Coefficient		1.2

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:29

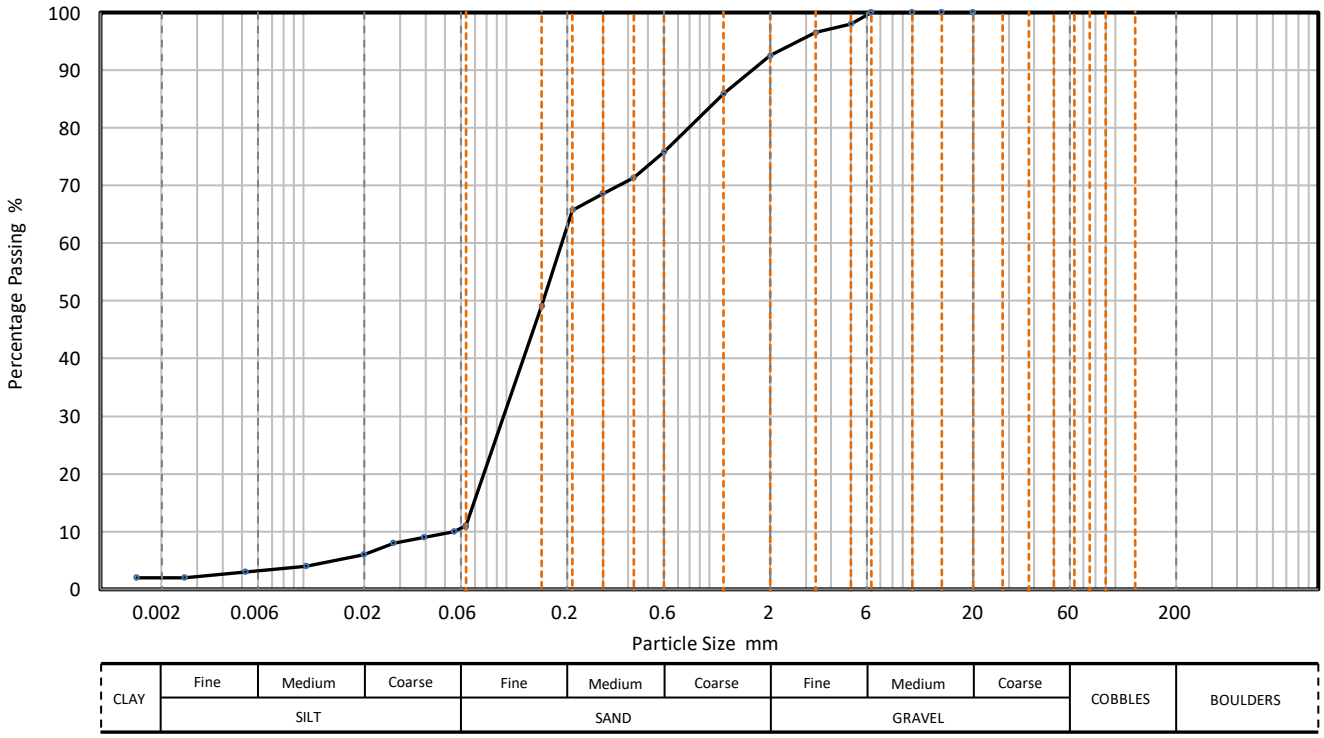
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-114	Lab sample ID	G2MT2025091521
Depth (Top) m	-9.70	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, Gravelly,Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	11
		0.0554	10
		0.0393	9
		0.0278	8
		0.0198	6
		0.0103	4
		0.0052	3
20	100	0.0026	2
14	100	0.0015	2
10	100		
6.3	100		
5	98		
3.35	97		
2	93		
1.18	86		
0.6	76	Particle density	(assumed)
0.425	71	2.65	Mg/m3
0.3	69		
0.212	66		
0.15	49		
0.063	11		

Dry Mass of sample, g: 1168

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	7.5
Sand	81.7
Silt	8.8
Clay	2.0

Grading Analysis		
D100	mm	
D60	mm	0.188
D30	mm	0.0973
D10	mm	0.0578
Uniformity Coefficient		3.3
Curvature Coefficient		0.87

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:05

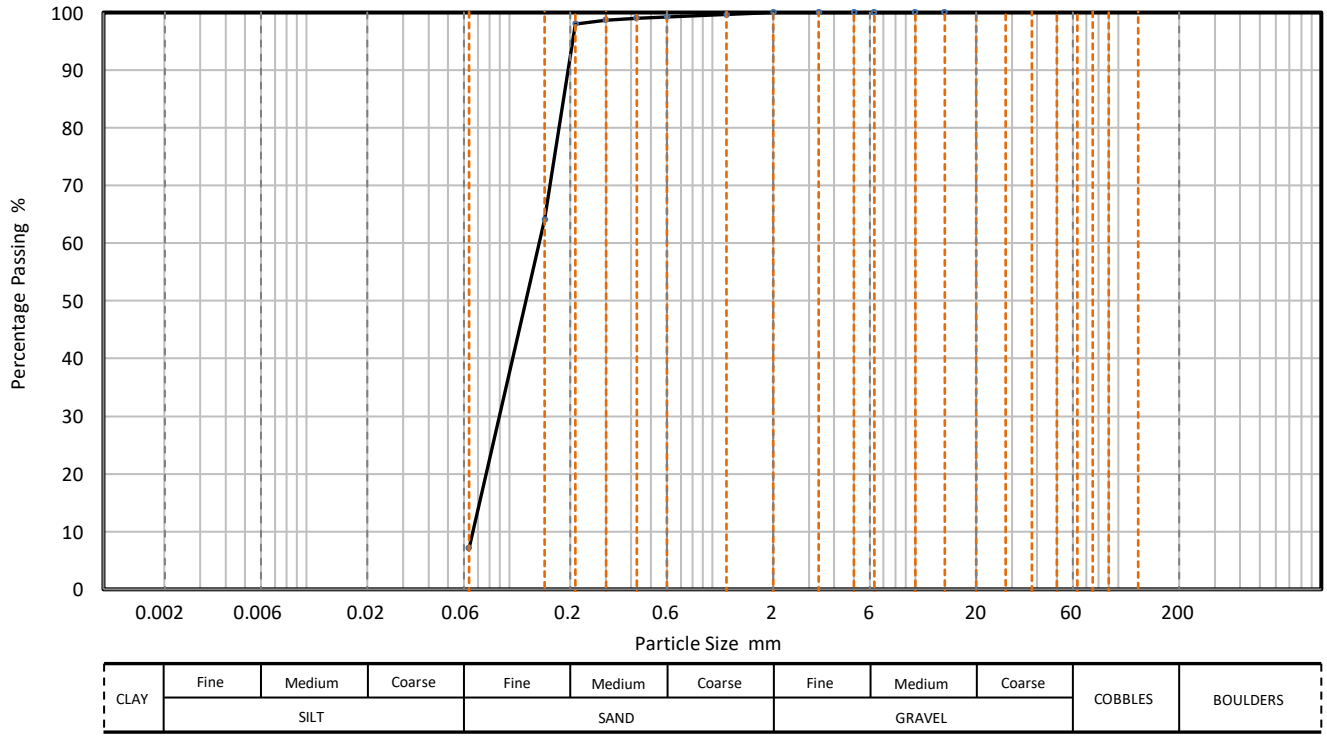
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-114	Lab sample ID	G2MT2025091522
Depth (Top)	m	-12.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Clayey SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	99		
0.212	98		
0.15	64		
0.063	7		

Dry Mass of sample, g	827

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	92.9
Fines <0.063mm	7.0

Grading Analysis		
D100	mm	
D60	mm	0.141
D30	mm	0.0893
D10	mm	0.0659
Uniformity Coefficient		2.1
Curvature Coefficient		0.86

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 08:25

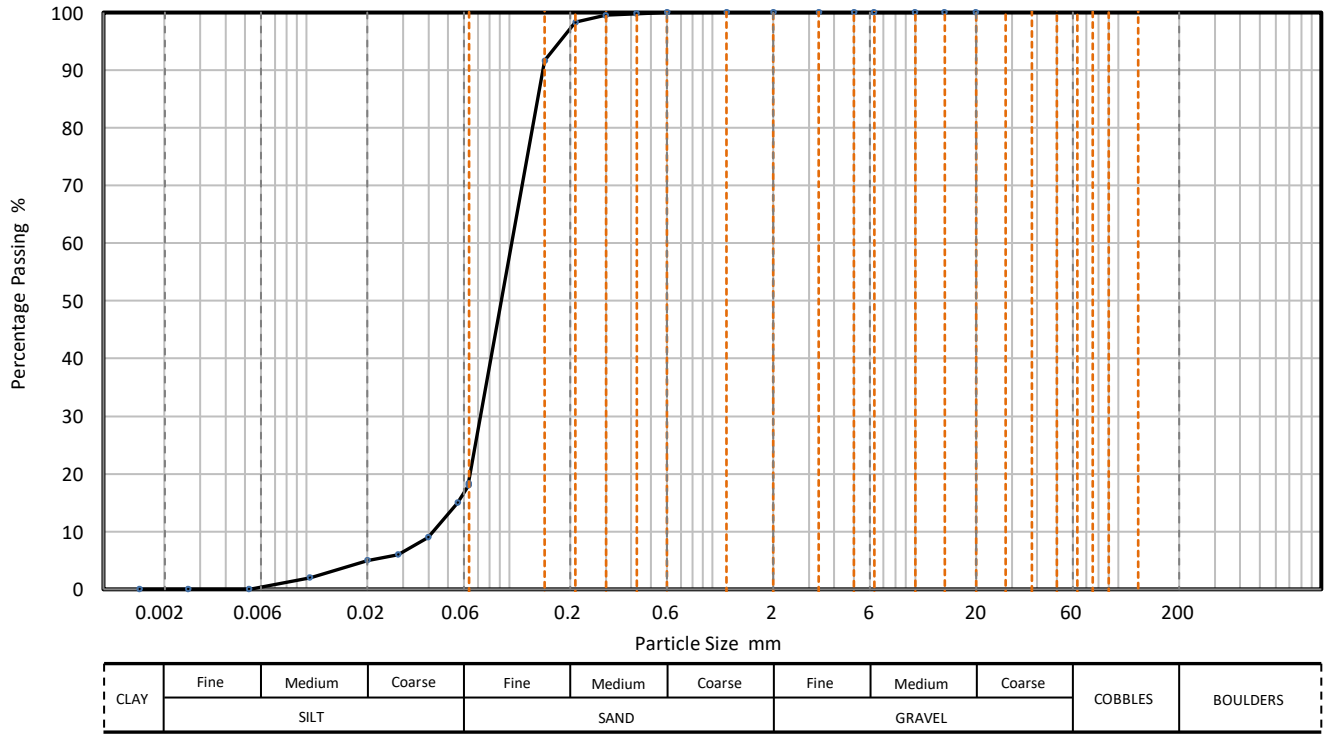
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10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-115	Lab sample ID	G2MT202509151
Depth (Top)	m	-12.10	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base)	m		Soil Description	Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	18
		0.0558	15
		0.0399	9
		0.0284	6
		0.0201	5
		0.0104	2
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	98		
0.15	92		
0.063	18		

Dry Mass of sample, g	921

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	81.6
Silt	18.4
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.103
D30	mm	0.0723
D10	mm	0.0423
Uniformity Coefficient		2.4
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:08

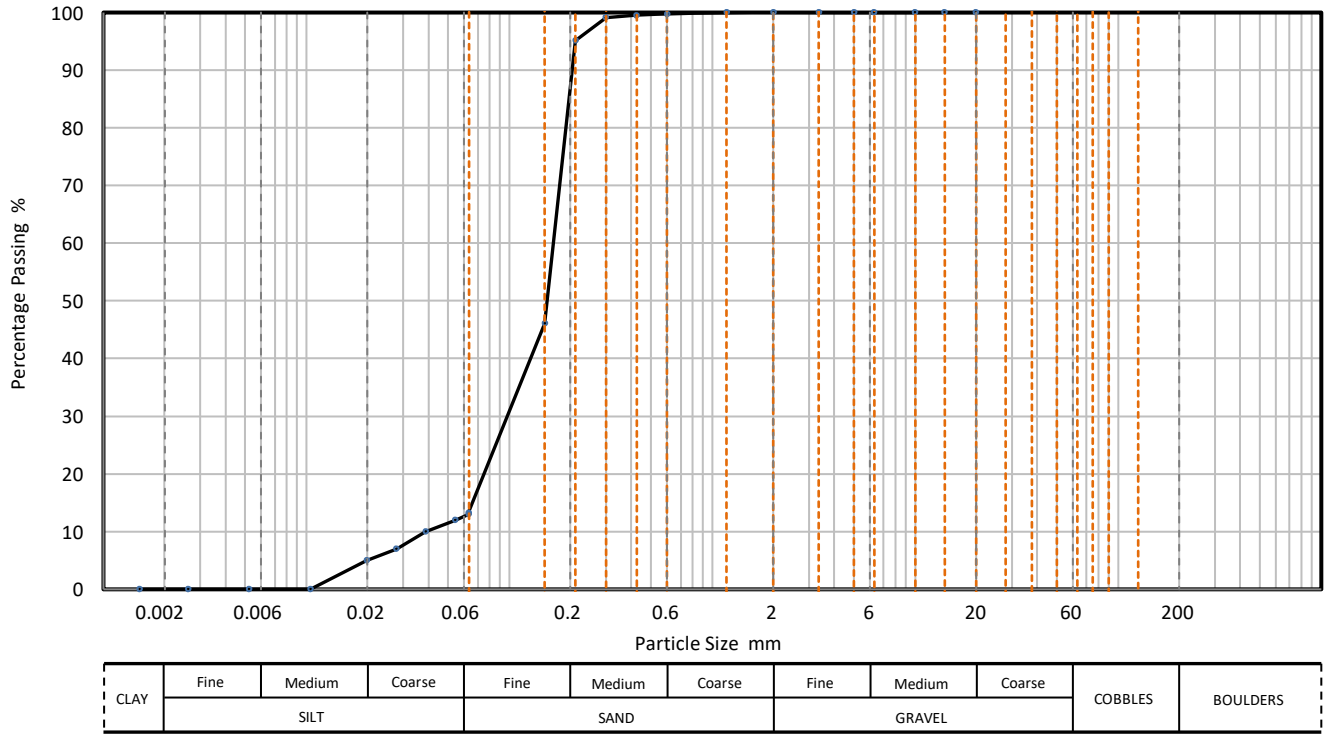
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-116	Lab sample ID	G2MT202509154
Depth (Top) m	-4.50	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	13
		0.0543	12
		0.0388	10
		0.0278	7
		0.0199	5
		0.0105	0
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	95		
0.15	46		
0.063	13		

Dry Mass of sample, g	737

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	86.7
Silt	13.3
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.165
D30	mm	0.098
D10	mm	0.0384
Uniformity Coefficient		4.3
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 09:31

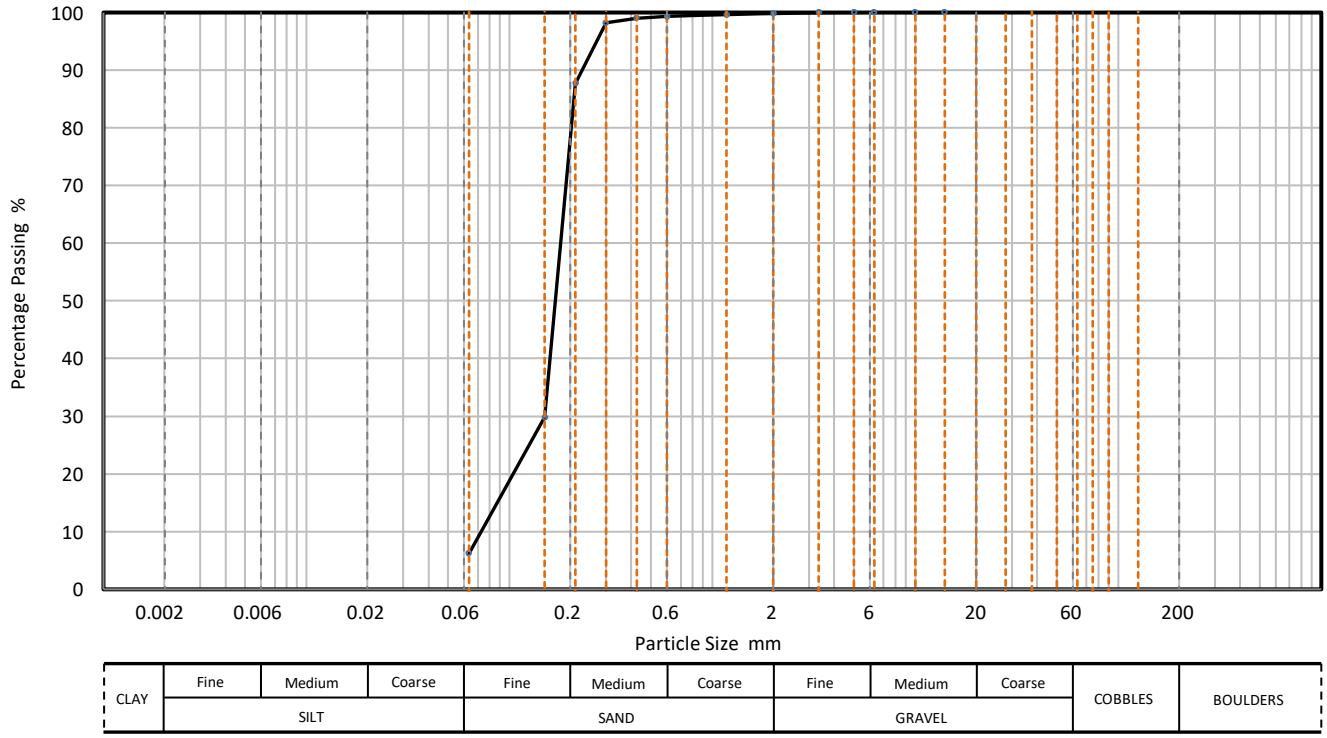
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-116	Lab sample ID	G2MT202509156
Depth (Top) m	-6.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slighlty Gravelly, Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	98		
0.212	88		
0.15	30		
0.063	6		

Dry Mass of sample, g	863

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	93.5
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.18
D30	mm	0.15
D10	mm	0.0722
Uniformity Coefficient		2.5
Curvature Coefficient		1.7

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 08:28

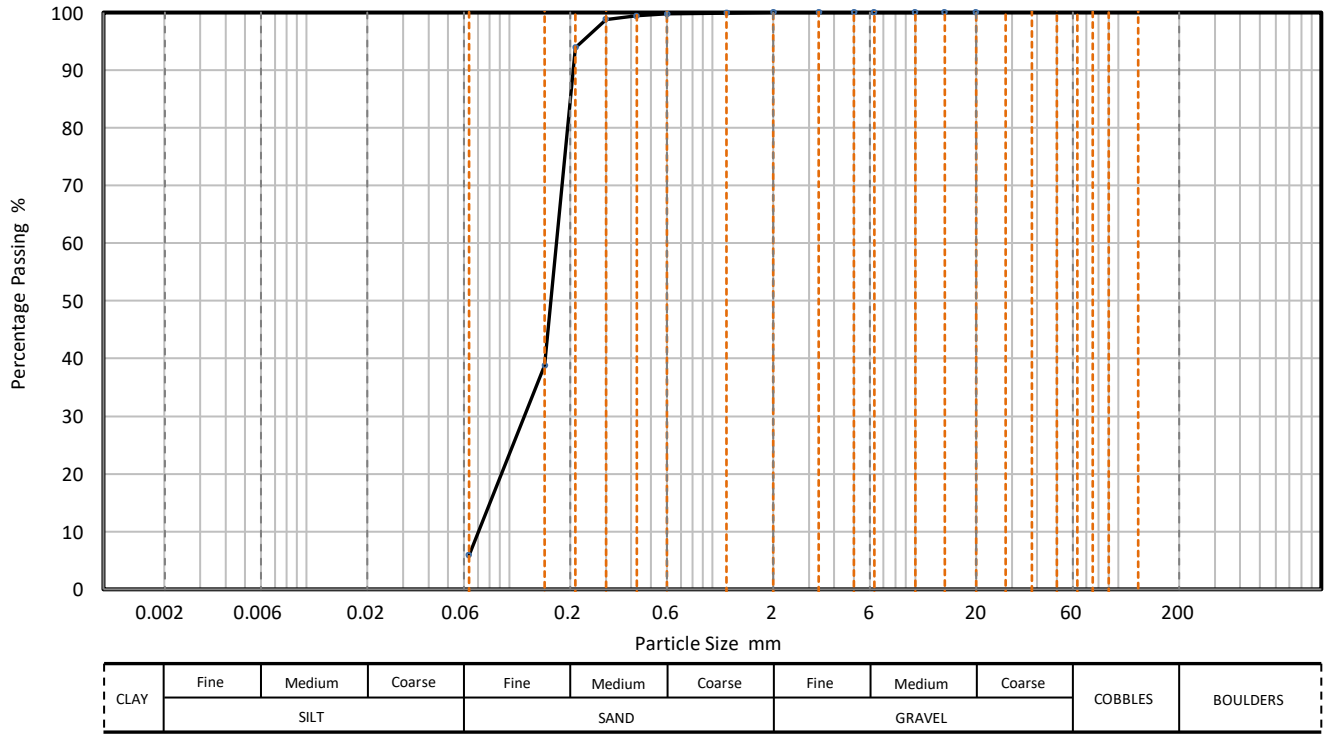
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-116	Lab sample ID	G2MT202509159
Depth (Top) m	-7.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	94		
0.15	39		
0.063	6		

Dry Mass of sample, g	857

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	94.1
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.171
D30	mm	0.119
D10	mm	0.0703
Uniformity Coefficient		2.4
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 08:32

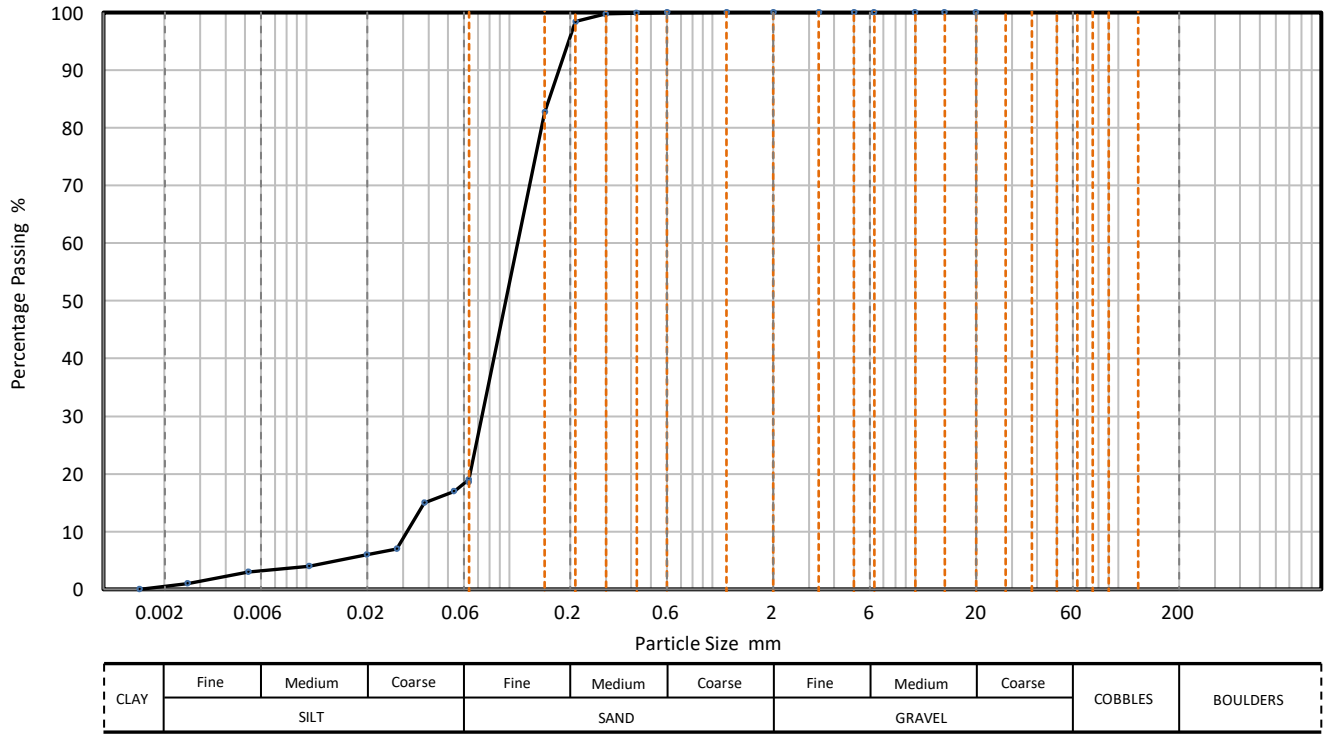
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-116	Lab sample ID	G2MT2025091513
Depth (Top) m	-13.50	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Clayey, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	19
		0.0536	17
		0.0382	15
		0.0279	7
		0.0199	6
		0.0103	4
		0.0052	3
20	100	0.0026	1
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	98		
0.15	83		
0.063	19		

Dry Mass of sample, g: 753

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	81.4
Silt	17.9
Clay	0.7

Grading Analysis		
D100	mm	
D60	mm	0.11
D30	mm	0.0735
D10	mm	0.031
Uniformity Coefficient		3.6
Curvature Coefficient		1.6

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:10

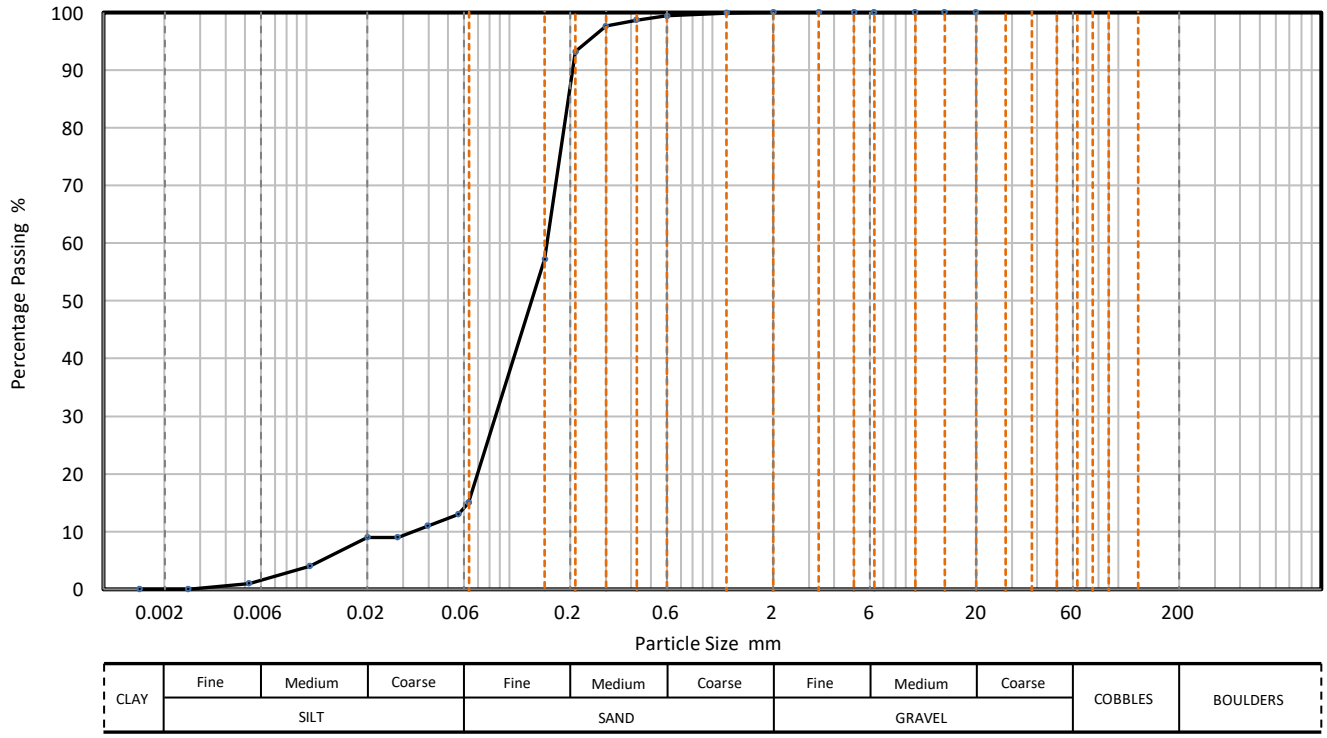
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-117	Lab sample ID	G2MT2025091526
Depth (Top)	m	-13.50	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base)	m		Soil Description	Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	15
		0.0561	13
		0.0398	11
		0.0283	9
		0.0200	9
		0.0104	4
		0.0052	1
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	98		
0.212	93		
0.15	57		
0.063	15		

Dry Mass of sample, g: 825

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	85.0
Silt	15.0
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.154
D30	mm	0.0857
D10	mm	0.0317
Uniformity Coefficient		4.9
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
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Approved by	D Anderson
Approval date	01/10/2025 10:19

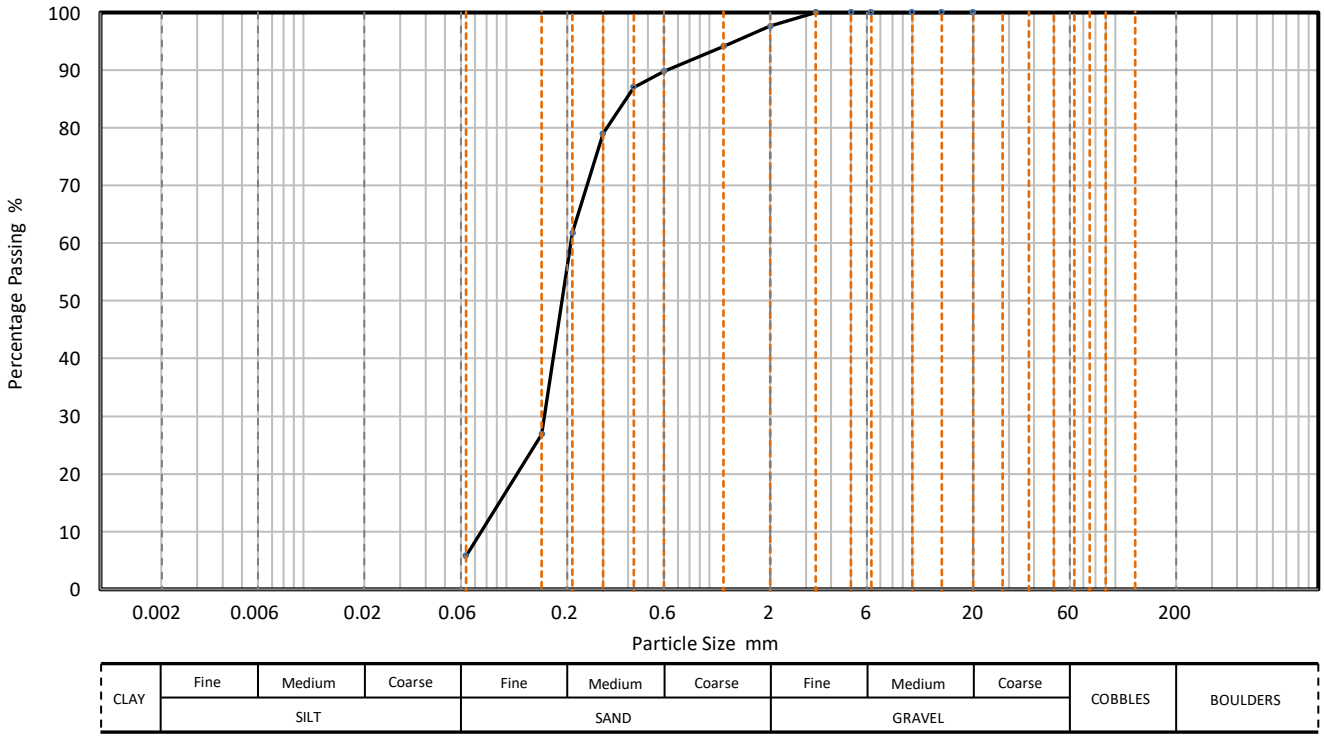
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-118	Lab sample ID	G2MT202509150
Depth (Top) m	-11.60	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	98		
1.18	94		
0.6	90		
0.425	87		
0.3	79		
0.212	62		
0.15	27		
0.063	6		

Dry Mass of sample, g: 896

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	2.4
Sand	91.7
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.208
D30	mm	0.155
D10	mm	0.0748
Uniformity Coefficient		2.8
Curvature Coefficient		1.5

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 09:04

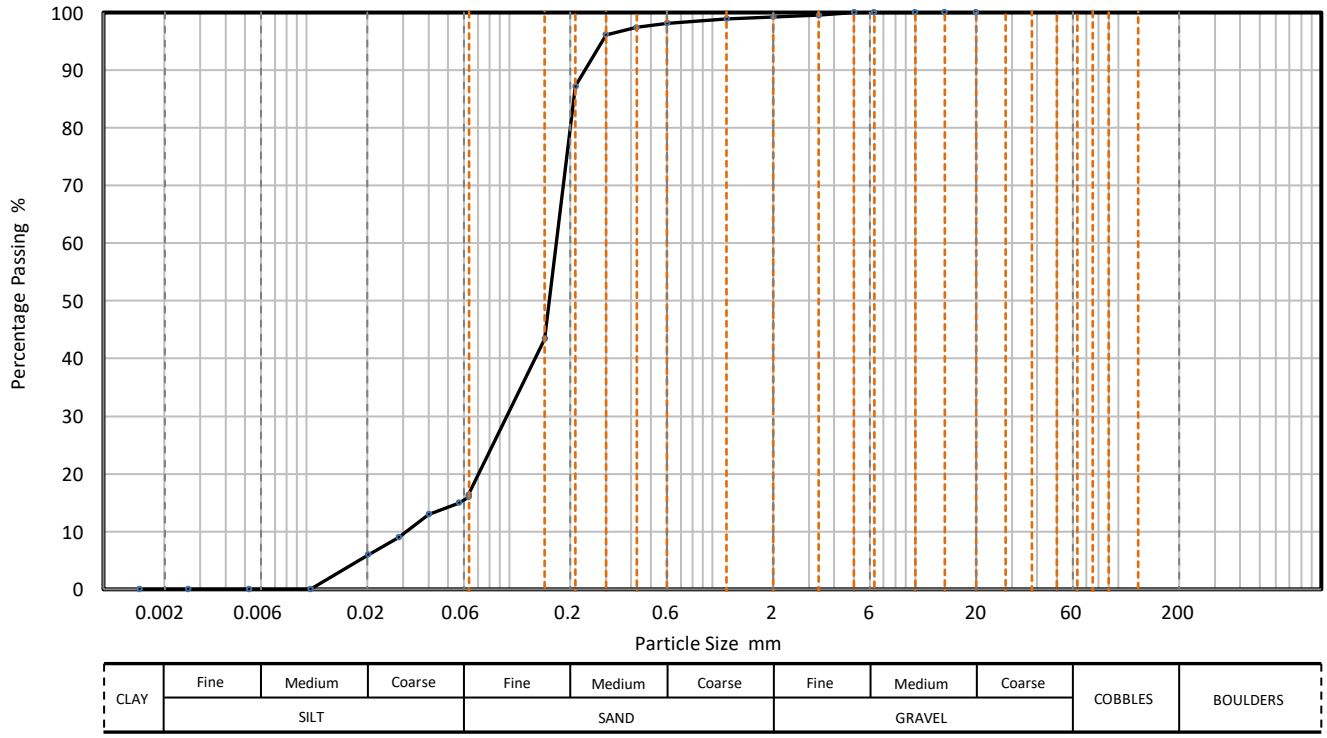
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-119	Lab sample ID	G2MT202510023
Depth (Top) m	-6.30	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	16
		0.0568	15
		0.0402	13
		0.0285	9
		0.0202	6
		0.0105	0
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	98	Particle density	(assumed)
0.425	97	2.65	Mg/m3
0.3	96		
0.212	87		
0.15	43		
0.063	16		

Dry Mass of sample, g	417

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	82.9
Silt	16.3
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.171
D30	mm	0.0976
D10	mm	0.0309
Uniformity Coefficient		5.5
Curvature Coefficient		1.8

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/10/2025 10:02

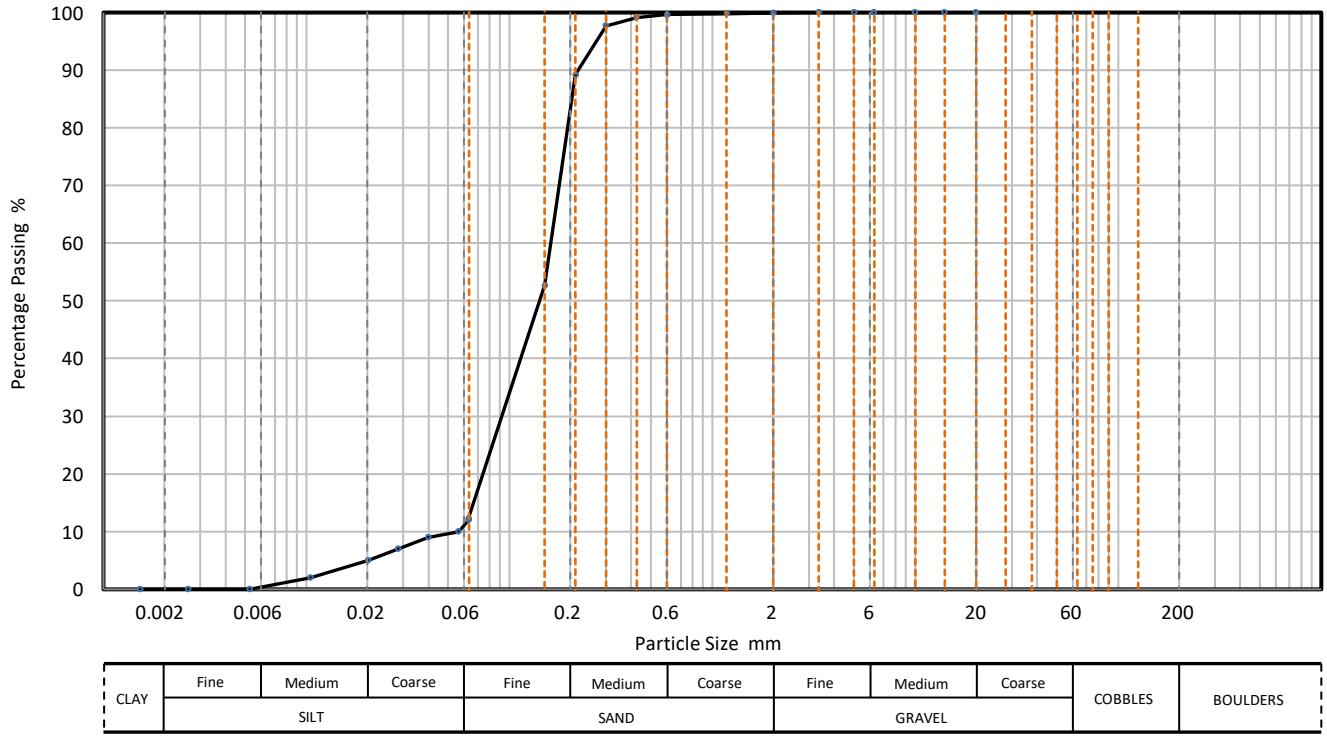
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-119	Lab sample ID	G2MT202510024
Depth (Top) m	-9.30	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	12
		0.0563	10
		0.0399	9
		0.0284	7
		0.0202	5
		0.0105	2
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	98		
0.212	89		
0.15	53		
0.063	12		

Dry Mass of sample, g	887

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	87.6
Silt	12.3
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.161
D30	mm	0.0921
D10	mm	0.0485
Uniformity Coefficient		3.3
Curvature Coefficient		1.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 12:58

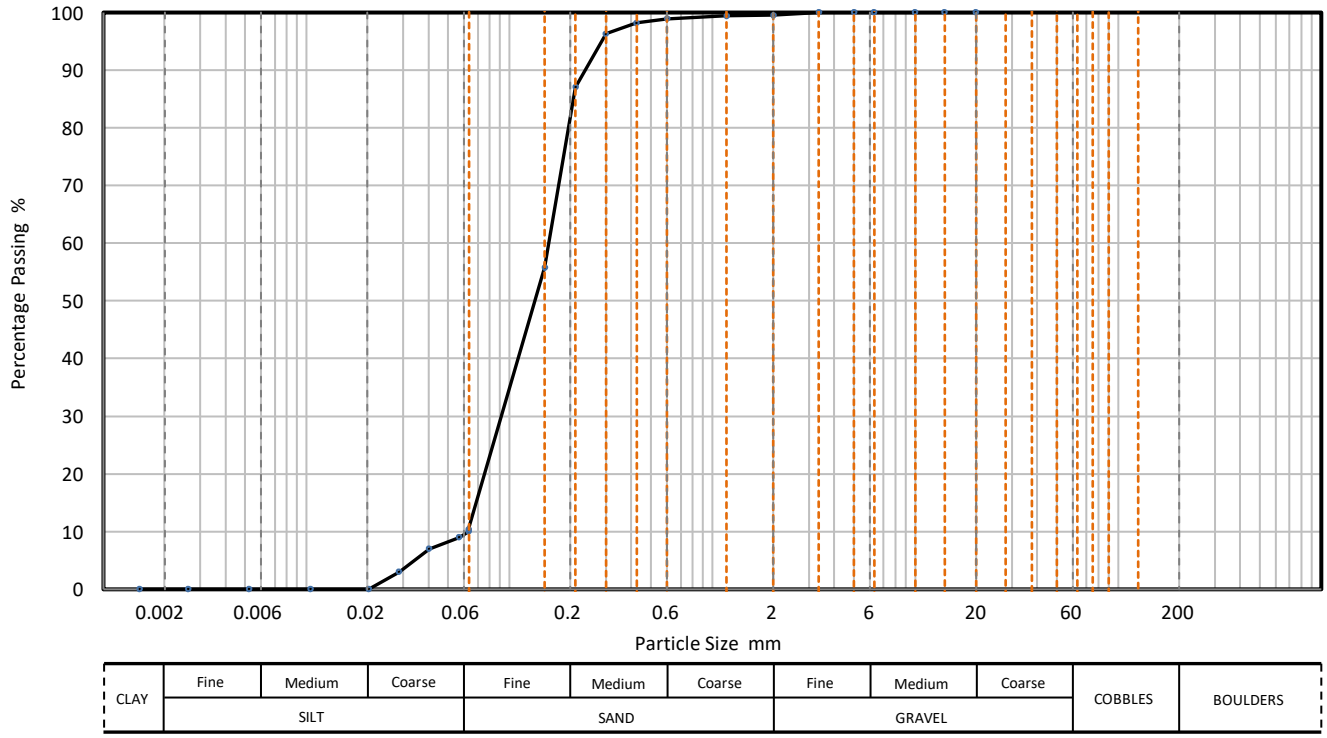
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-119	Lab sample ID	G2MT202510026
Depth (Top) m	-12.30	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	10
		0.0569	9
		0.0403	7
		0.0286	3
		0.0203	0
		0.0105	0
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	99	Particle density	(assumed)
0.425	98	2.65	Mg/m3
0.3	96		
0.212	87		
0.15	56		
0.063	10		

Dry Mass of sample, g: 519

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.5
Sand	89.1
Silt	10.4
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.157
D30	mm	0.0916
D10	mm	0.0614
Uniformity Coefficient		2.6
Curvature Coefficient		0.87

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/10/2025 10:04

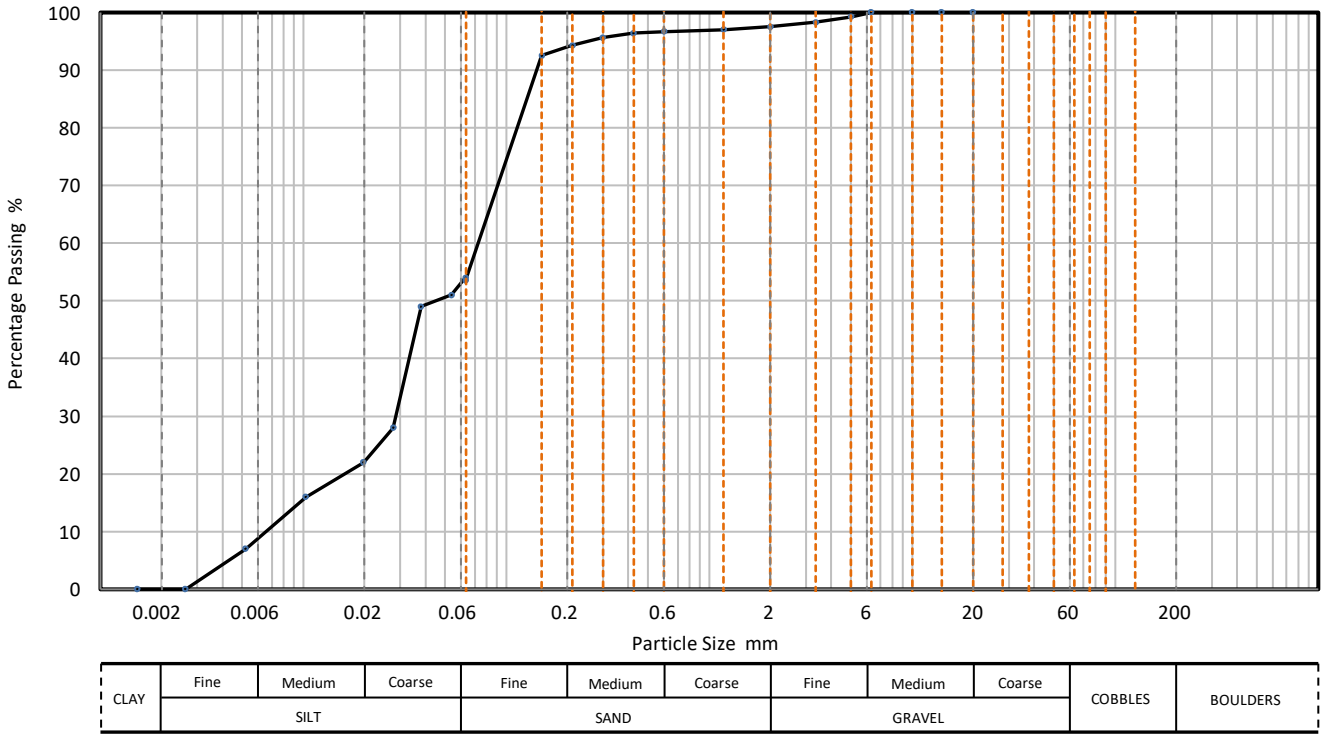
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-119	Lab sample ID	G2MT202510028
Depth (Top) m	-19.80	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, very Sandy, SILT
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	54
		0.0537	51
		0.0381	49
		0.0278	28
		0.0198	22
		0.0103	16
		0.0052	7
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	99		
3.35	98		
2	98		
1.18	97		
0.6	97	Particle density	(assumed)
0.425	96	2.65	Mg/m3
0.3	96		
0.212	94		
0.15	93		
0.063	54		

Dry Mass of sample, g	835

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	2.5
Sand	44.0
Silt	53.5
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.0727
D30	mm	0.0286
D10	mm	0.00646
Uniformity Coefficient		11
Curvature Coefficient		1.7

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 12:54

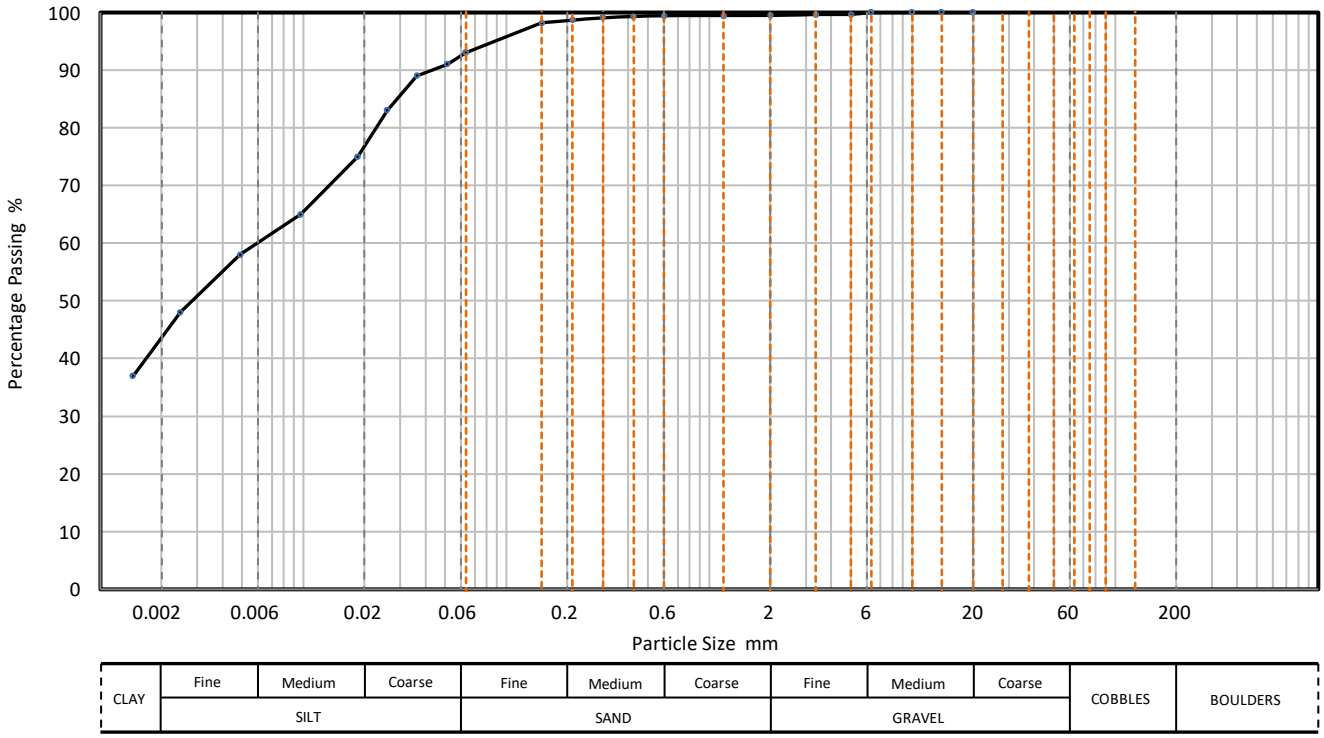
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-119	Lab sample ID	G2MT2025100210
Depth (Top) m	-21.30	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Sandy, very Clayey, SILT
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	93
		0.0513	91
		0.0364	89
		0.0259	83
		0.0185	75
		0.0097	65
		0.0049	58
20	100	0.0025	48
14	100	0.0014	37
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	99	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	99		
0.212	99		
0.15	98		
0.063	93		

Dry Mass of sample, g	679

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.5
Sand	6.5
Silt	49.3
Clay	43.7

Grading Analysis		
D100	mm	
D60	mm	0.00612
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	15/10/2025 09:22

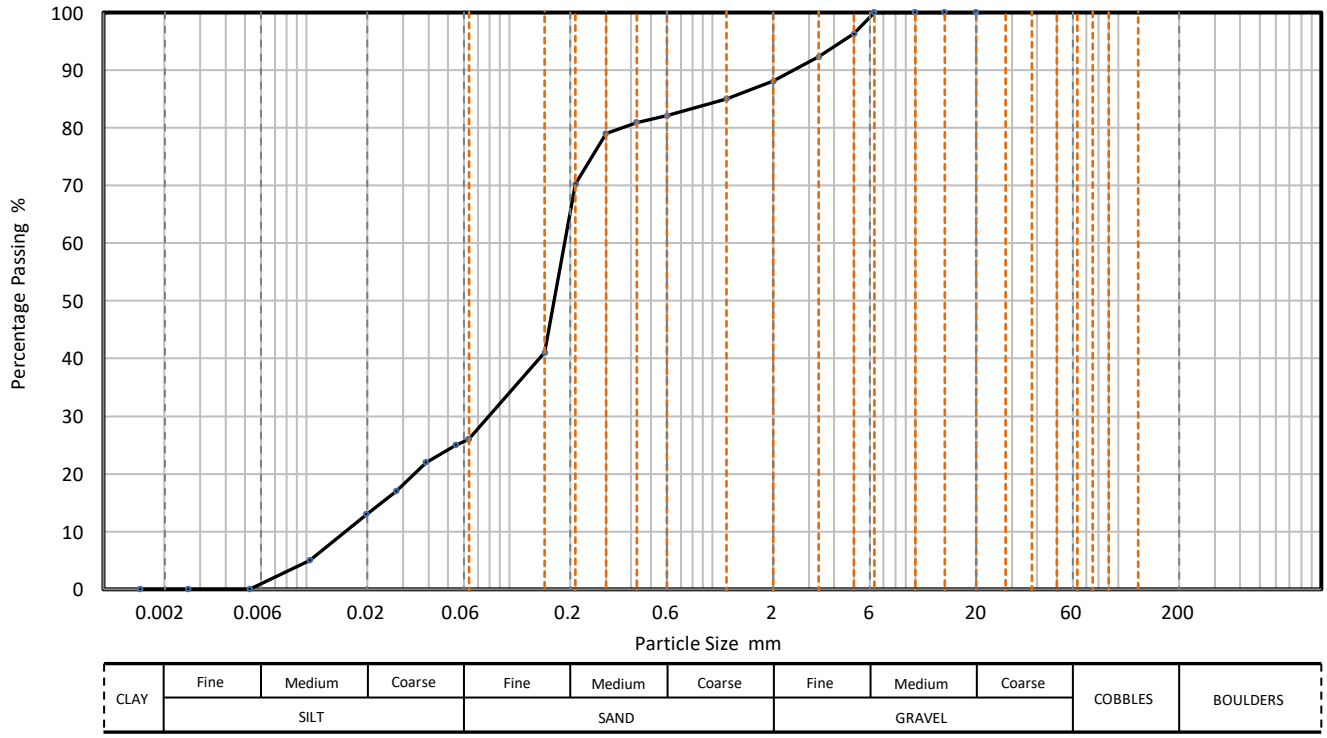
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-201	Lab sample ID	G2MT2025101434
Depth (Top) m	-5.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Gravelly,very Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	26
		0.0545	25
		0.0389	22
		0.0278	17
		0.0198	13
		0.0104	5
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	96		
3.35	92		
2	88		
1.18	85		
0.6	82	Particle density (assumed)	
0.425	81	2.65	Mg/m3
0.3	79		
0.212	70		
0.15	41		
0.063	26		

Dry Mass of sample, g: 328

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	11.9
Sand	62.1
Silt	26.0
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.188
D30	mm	0.0794
D10	mm	0.0156
Uniformity Coefficient		12
Curvature Coefficient		2.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:38

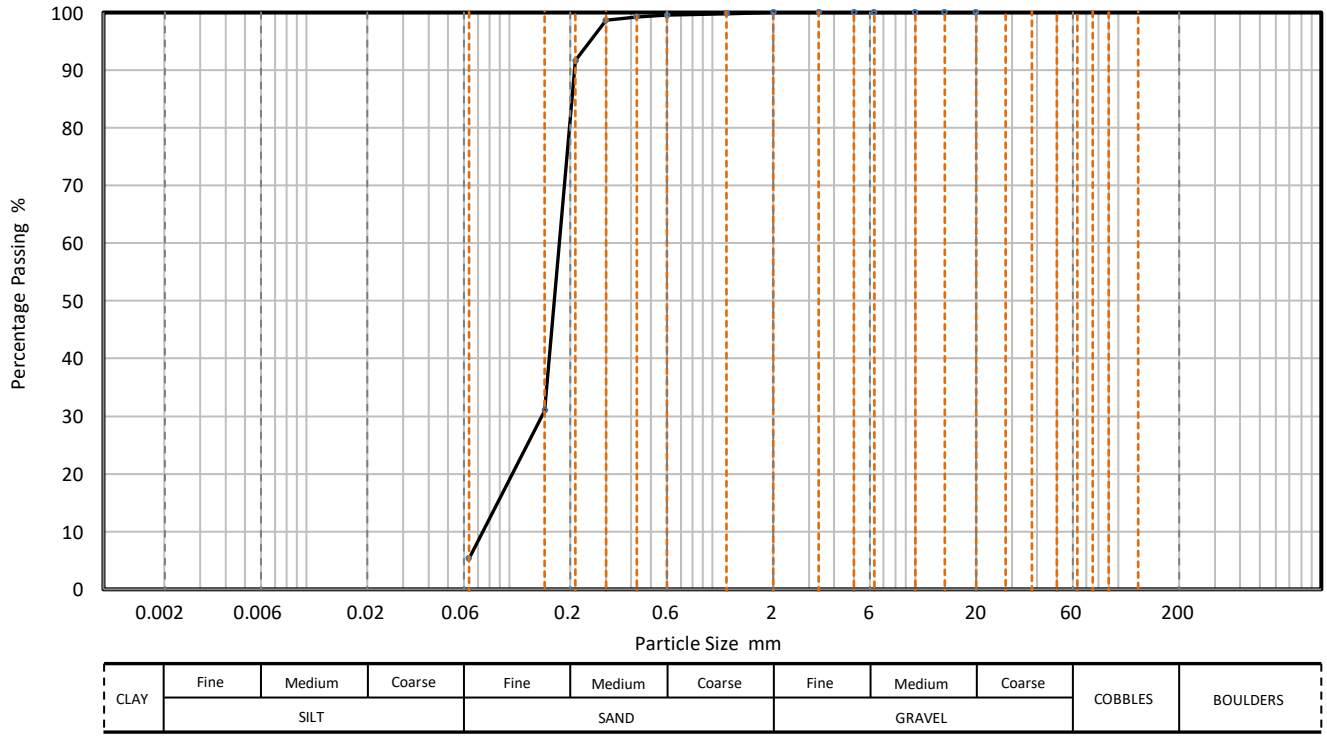
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-201	Lab sample ID	G2MT2025101435
Depth (Top) m	-6.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	92		
0.15	31		
0.063	5		

Dry Mass of sample, g	768

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	94.6
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.177
D30	mm	0.145
D10	mm	0.0737
Uniformity Coefficient		2.4
Curvature Coefficient		1.6

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 10:10

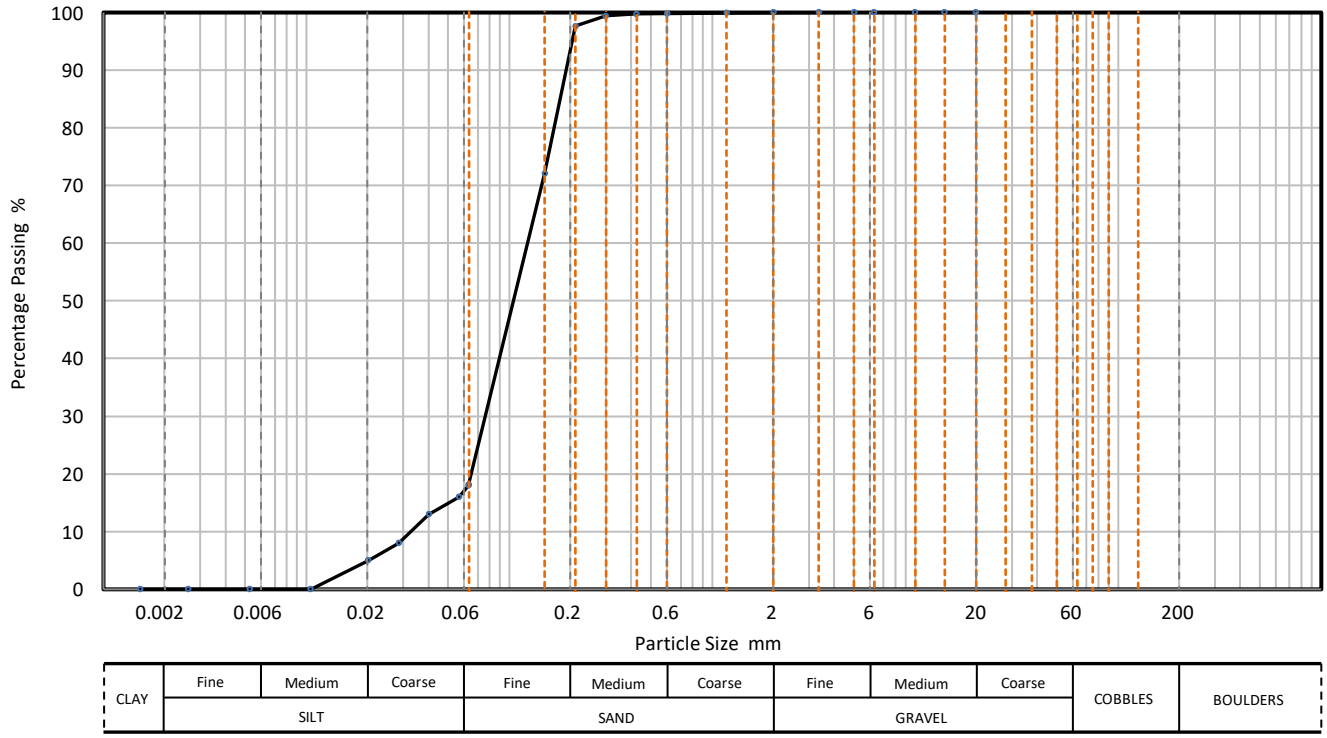
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		BH-201	Lab sample ID	G2MT2025101436
Depth (Top)	m	-11.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base)	m		Soil Description	Silty, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	18
		0.0566	16
		0.0401	13
		0.0286	8
		0.0203	5
		0.0105	0
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	98		
0.15	72		
0.063	18		

Dry Mass of sample, g: 818

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	81.9
Silt	18.1
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.124
D30	mm	0.0763
D10	mm	0.0329
Uniformity Coefficient		3.8
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:40

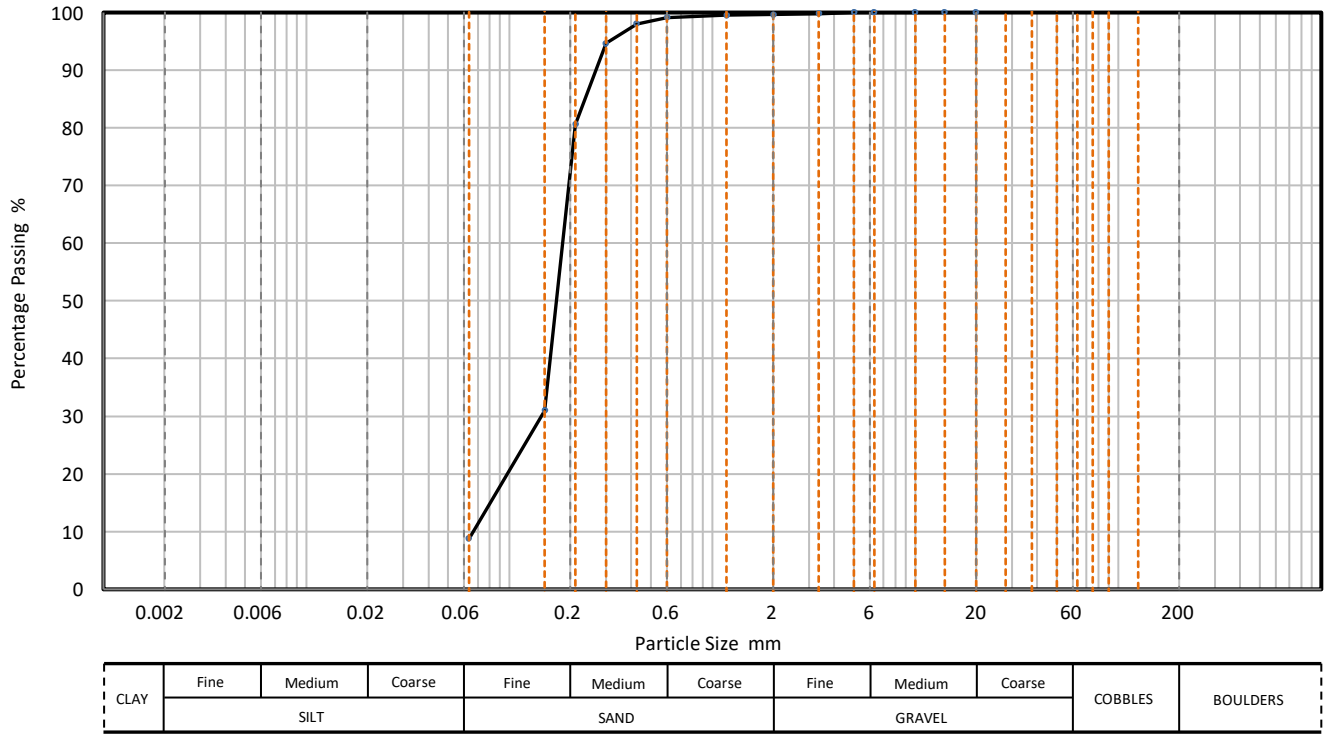
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-201	Lab sample ID	G2MT2025101437
Depth (Top) m	-12.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	95		
0.212	81		
0.15	31		
0.063	9		

Dry Mass of sample, g: 922

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.4
Sand	90.8
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.184
D30	mm	0.144
D10	mm	0.0659
Uniformity Coefficient		2.8
Curvature Coefficient		1.7

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

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Approval date	27/10/2025 09:34

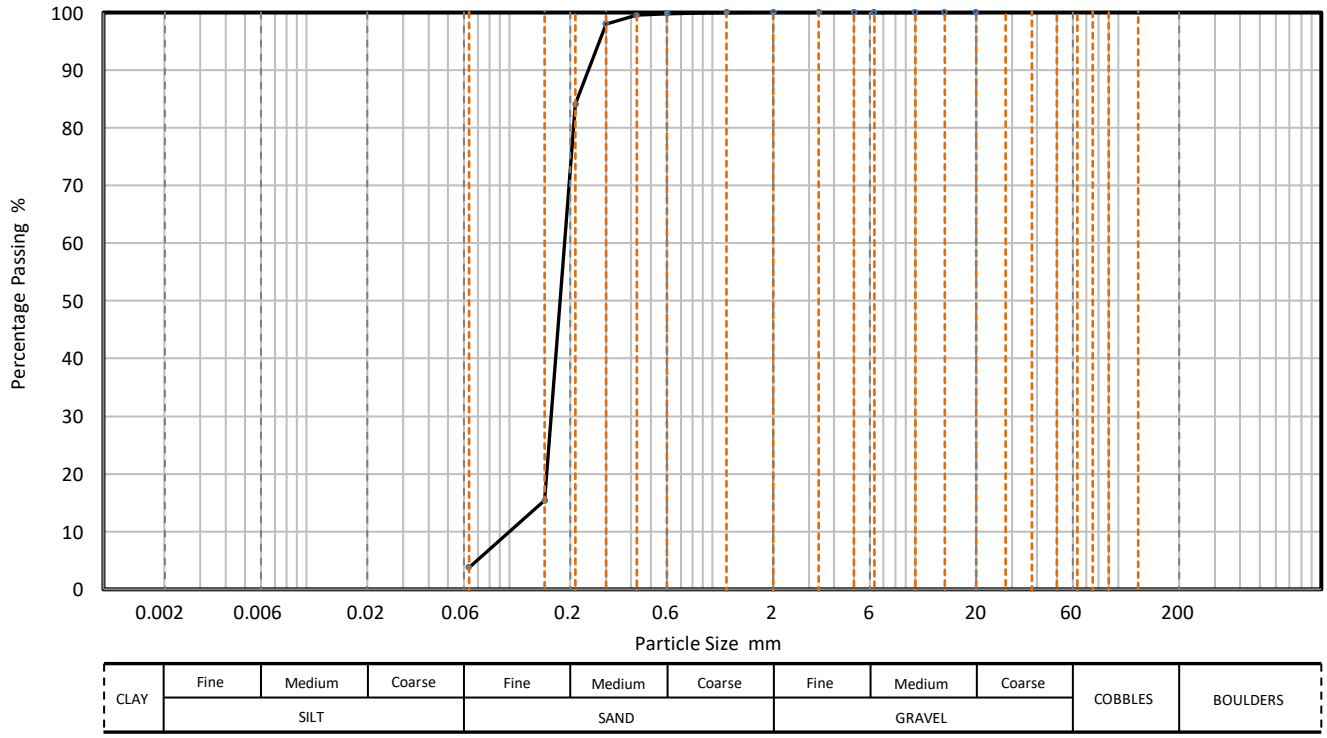
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-202	Lab sample ID	G2MT2025101430
Depth (Top) m	-4.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	98		
0.212	84		
0.15	15		
0.063	4		

Dry Mass of sample, g	1025

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	96.2
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.188
D30	mm	0.161
D10	mm	0.1
Uniformity Coefficient		1.9
Curvature Coefficient		1.4

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	19/01/2026 15:13

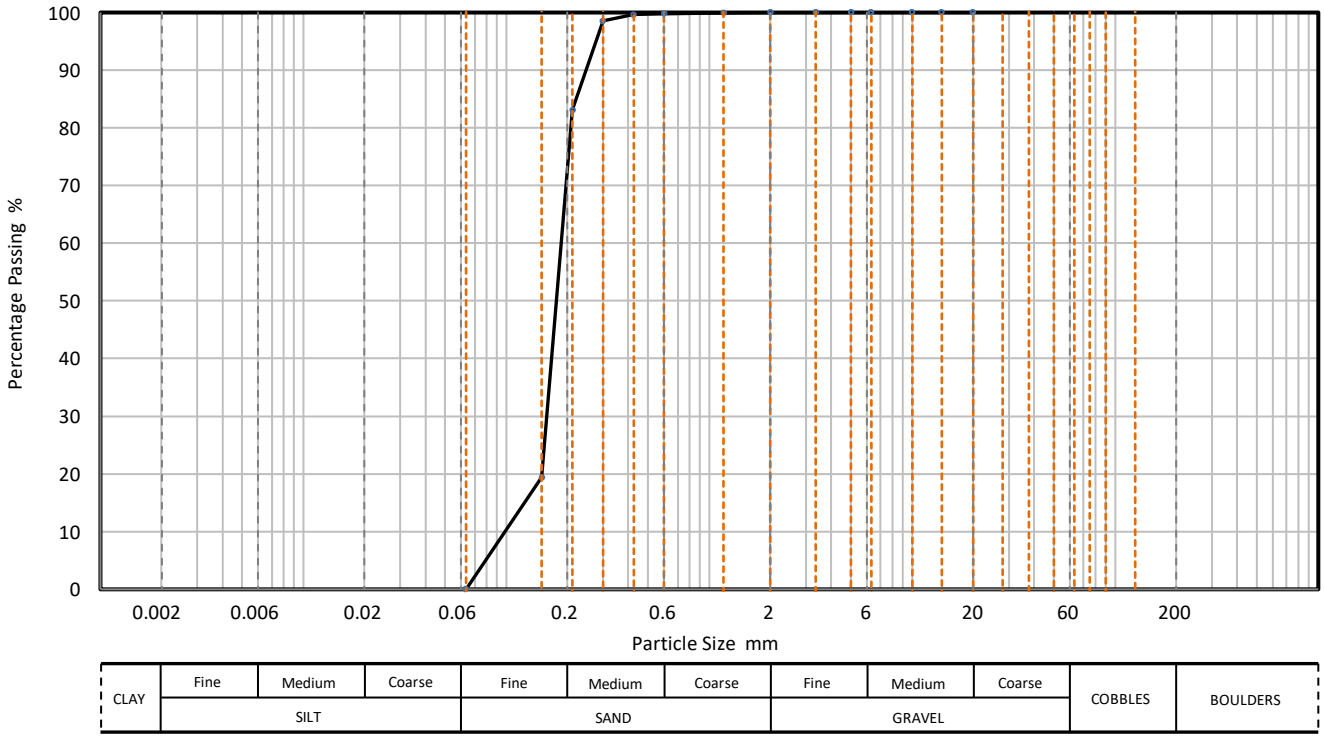
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-202	Lab sample ID	G2MT202510270
Depth (Top) m	5.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m	5.5	Soil Description	SAND
Sample type	D		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	83		
0.15	19		
0.063	0		

Dry Mass of sample, g: 924

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	99.9
Fines <0.063mm	0.0

Grading Analysis		
D100	mm	
D60	mm	0.187
D30	mm	0.159
D10	mm	0.0983
Uniformity Coefficient		1.9
Curvature Coefficient		1.4

Remarks

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Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 10:30

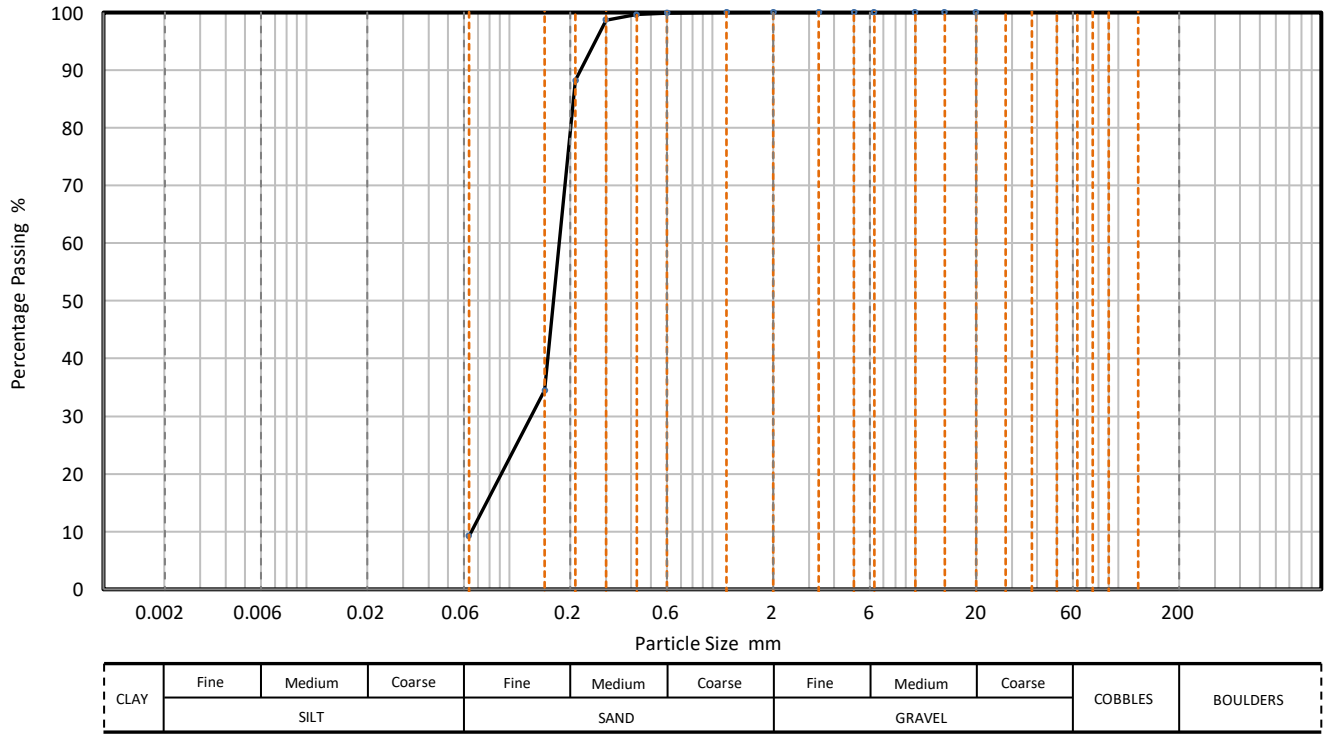
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-202	Lab sample ID	G2MT2025101431
Depth (Top) m	-10.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	88		
0.15	35		
0.063	9		

Dry Mass of sample, g	1031

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	90.7
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.177
D30	mm	0.129
D10	mm	0.0646
Uniformity Coefficient		2.7
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	06/01/2026 11:20

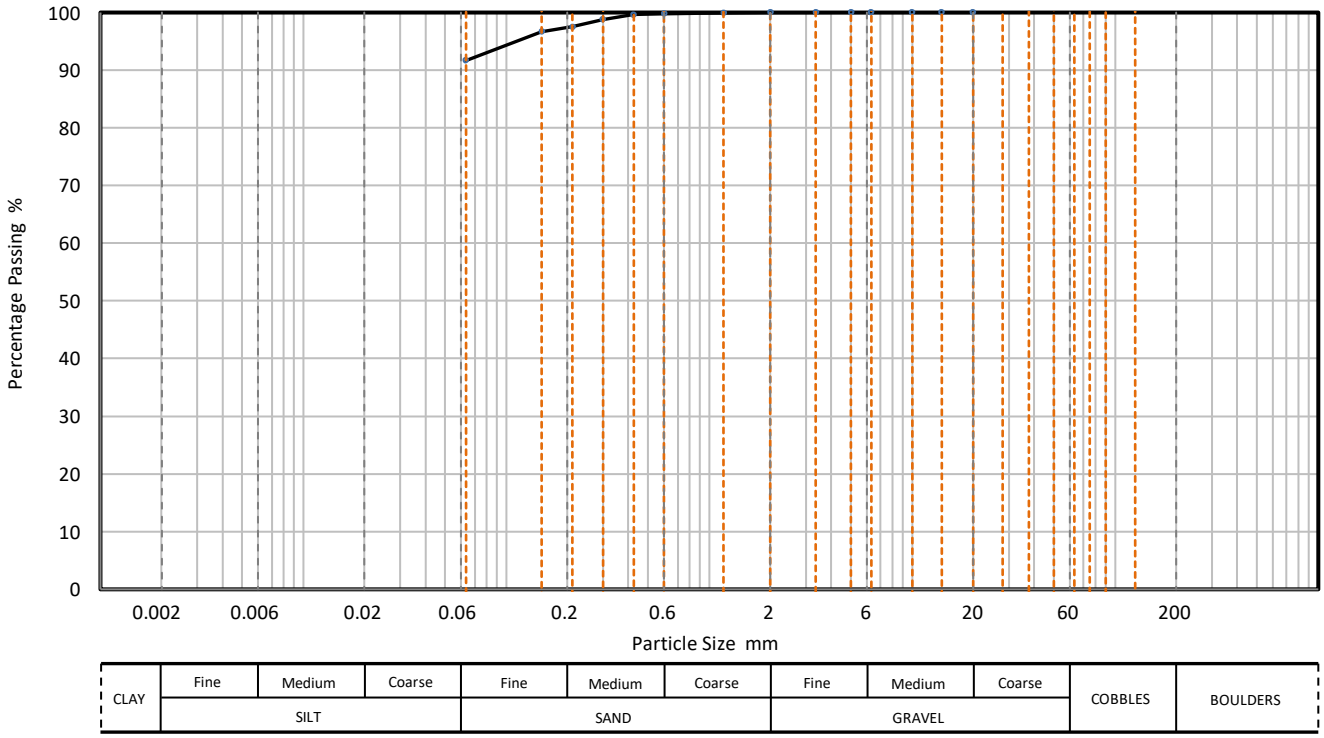
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-202	Lab sample ID	G2MT2025101432
Depth (Top) m	-13.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Sandy CLAY
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	98		
0.15	97		
0.063	92		

Dry Mass of sample, g: 911

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	8.2
Fines <0.063mm	92.0

Grading Analysis		
D100	mm	
D60	mm	
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	13/01/2026 12:53

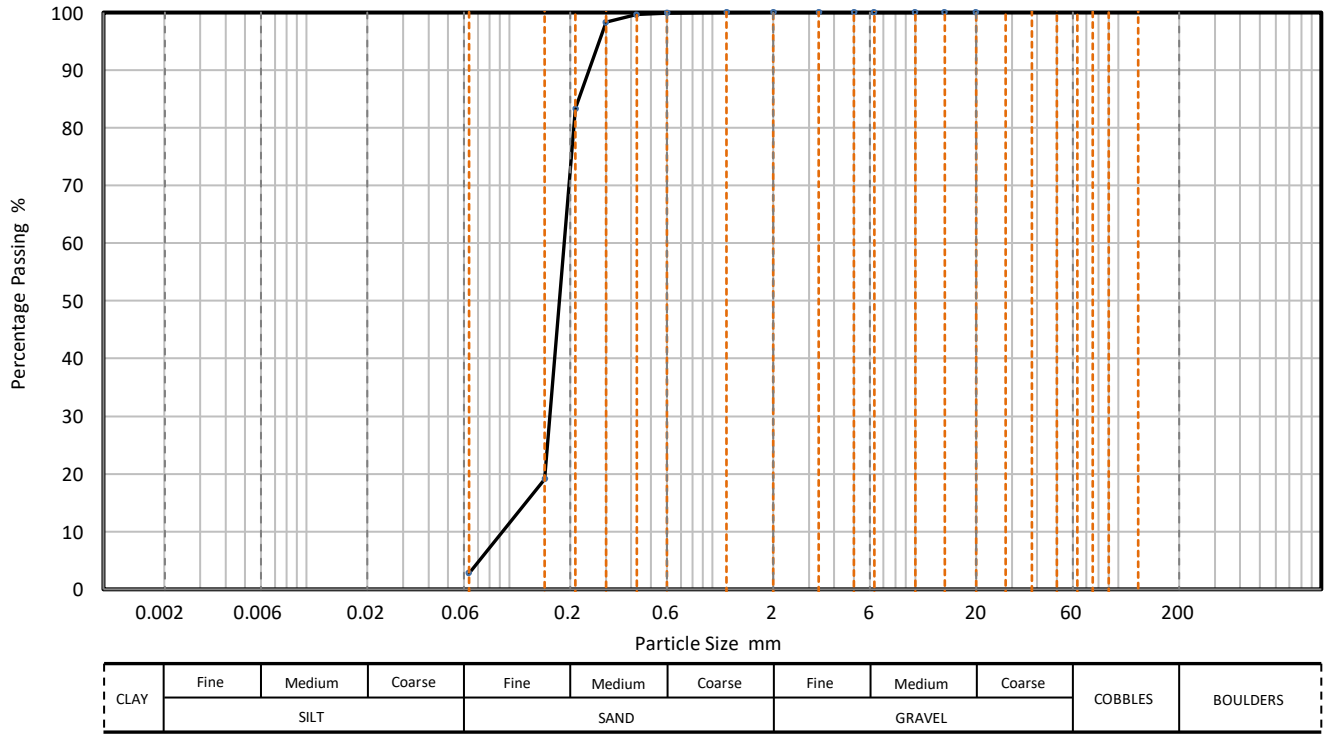
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-203	Lab sample ID	G2MT2025091548
Depth (Top) m	-6.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	98		
0.212	83		
0.15	19		
0.063	3		

Dry Mass of sample, g: 864

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	97.2
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.187
D30	mm	0.159
D10	mm	0.0923
Uniformity Coefficient		2
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 09:20

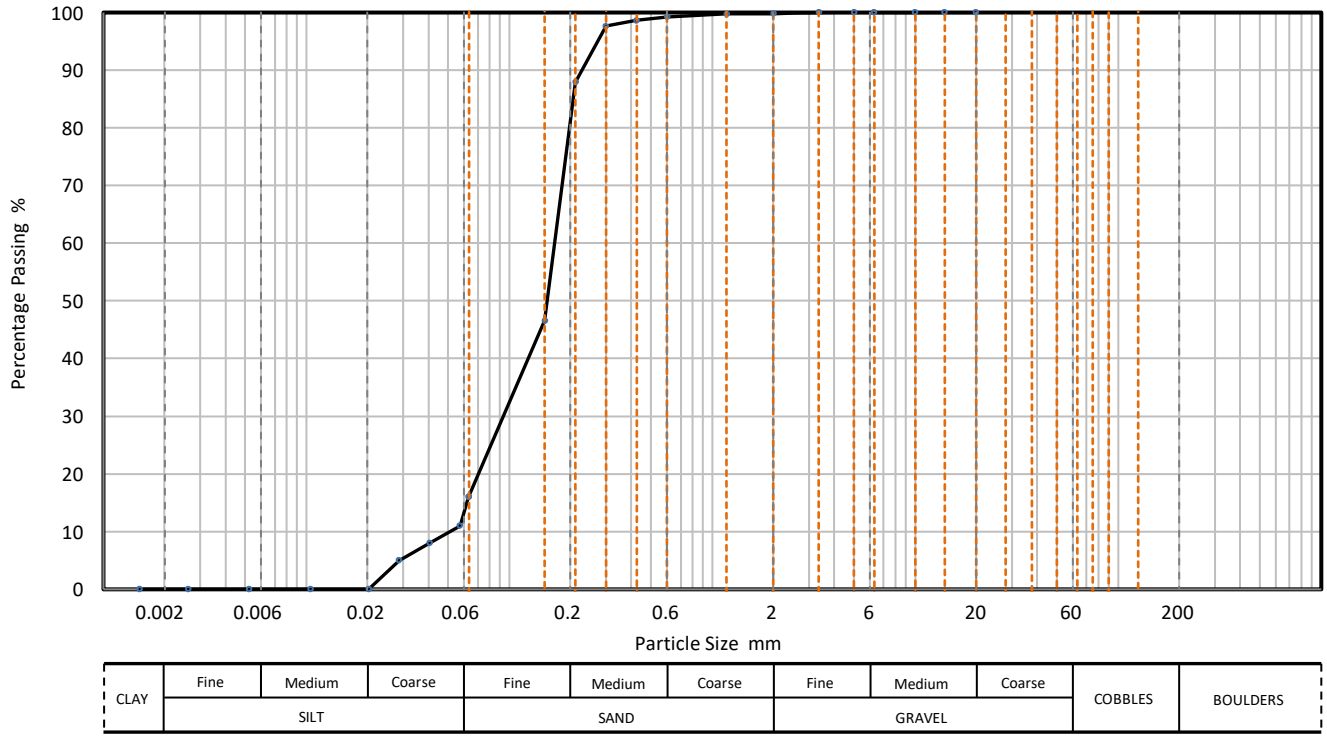
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-203	Lab sample ID	G2MT2025091552
Depth (Top) m	-10.50	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	16
		0.0572	11
		0.0405	8
		0.0287	5
		0.0203	0
		0.0105	0
		0.0052	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	98		
0.212	88		
0.15	47		
0.063	16		

Dry Mass of sample, g: 840

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	83.8
Silt	16.0
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.168
D30	mm	0.0936
D10	mm	0.0525
Uniformity Coefficient		3.2
Curvature Coefficient		1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:06

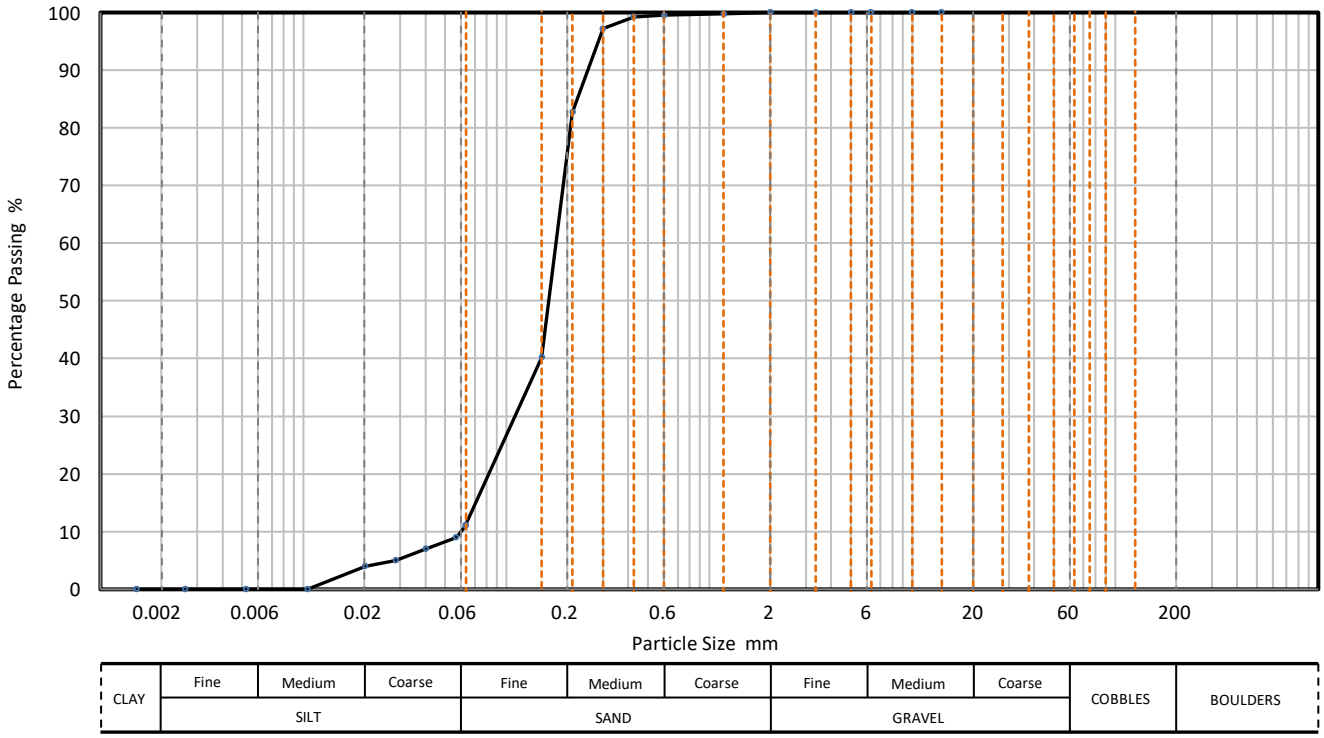
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-203	Lab sample ID	G2MT2025091554
Depth (Top) m	-15.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	11
		0.0568	9
		0.0403	7
		0.0286	5
		0.0202	4
		0.0105	0
		0.0052	0
		0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	97		
0.212	83		
0.15	40		
0.063	11		

Dry Mass of sample, g	914

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	88.9
Silt	11.1
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.176
D30	mm	0.111
D10	mm	0.0593
Uniformity Coefficient		3
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:12

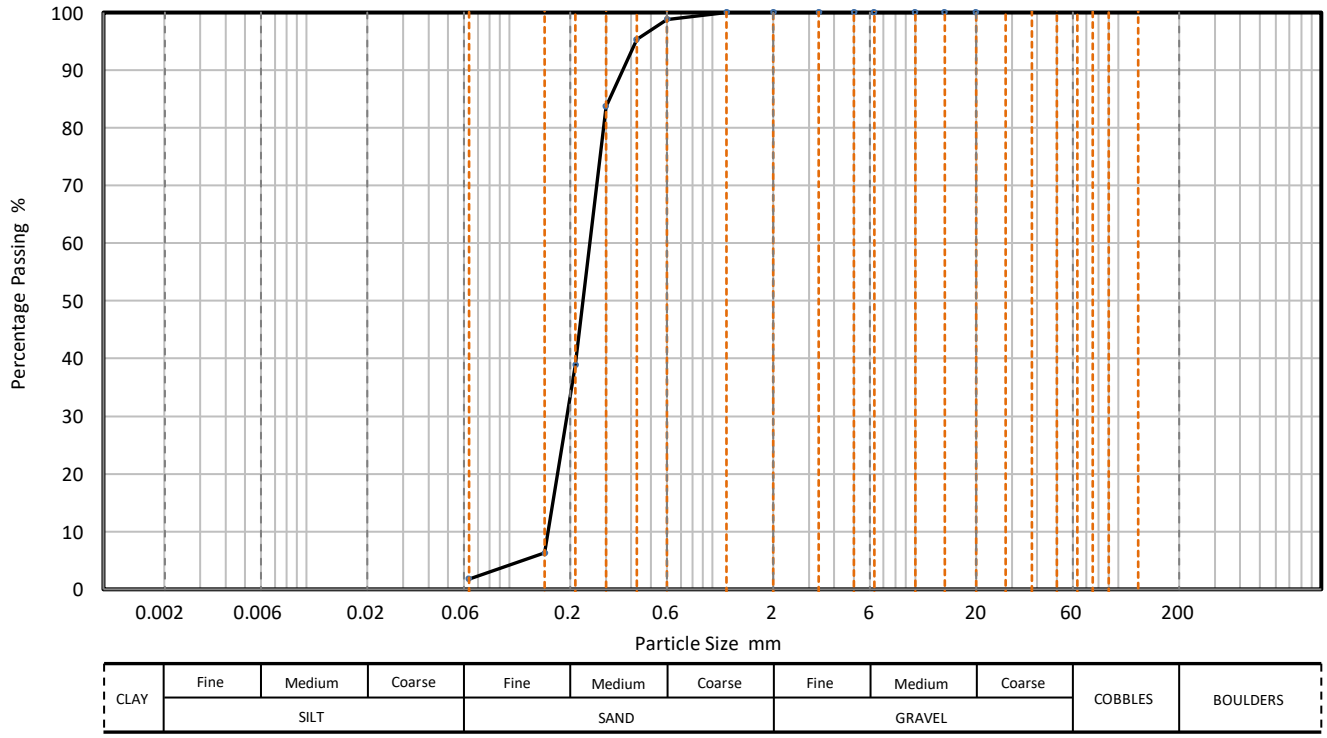
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-205	Lab sample ID	G2MT2025101444
Depth (Top) m	-2.08	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	95		
0.3	84		
0.212	39		
0.15	6		
0.063	2		

Dry Mass of sample, g: 1150

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	98.2
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.25
D30	mm	0.193
D10	mm	0.156
Uniformity Coefficient		1.6
Curvature Coefficient		0.96

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 10:12

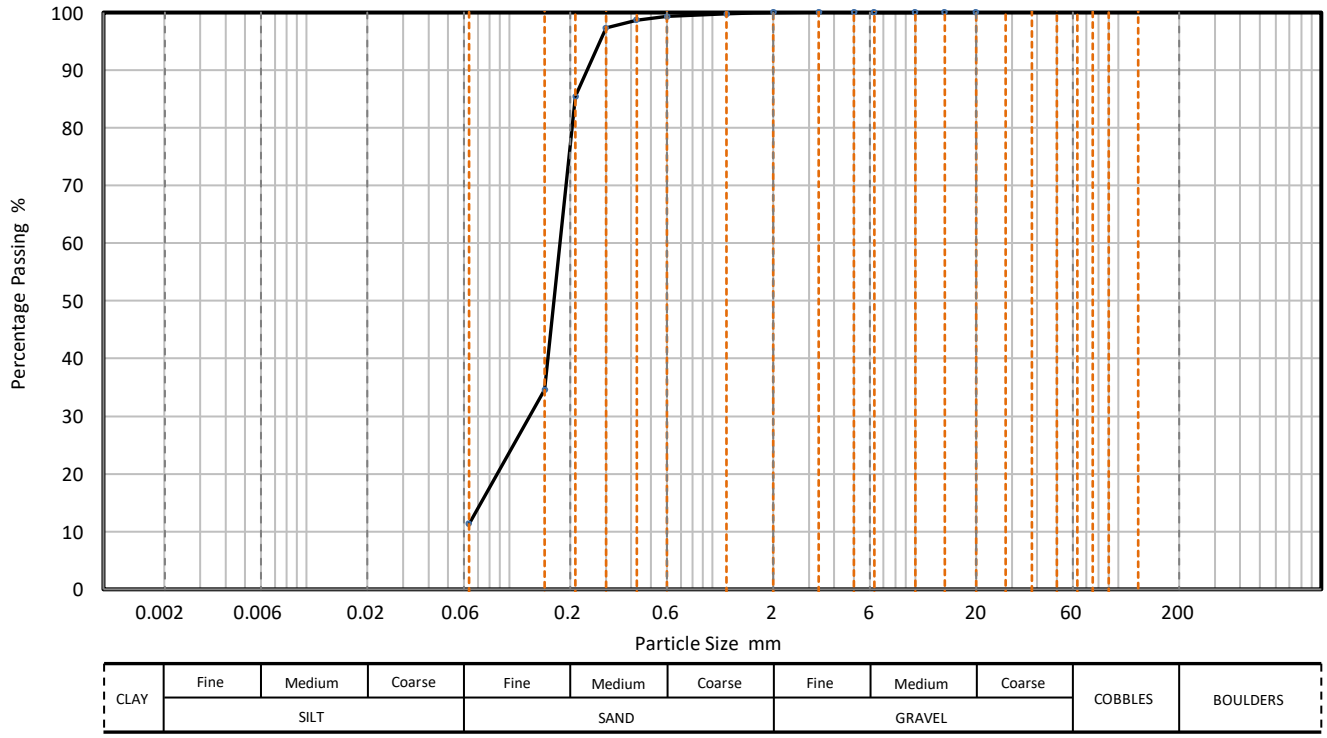
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-205	Lab sample ID	G2MT2025101445
Depth (Top) m	-6.80	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	97		
0.212	85		
0.15	35		
0.063	11		

Dry Mass of sample, g: 1054

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	88.6
Fines <0.063mm	11.0

Grading Analysis		
D100	mm	
D60	mm	0.178
D30	mm	0.126
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	13/01/2026 12:53

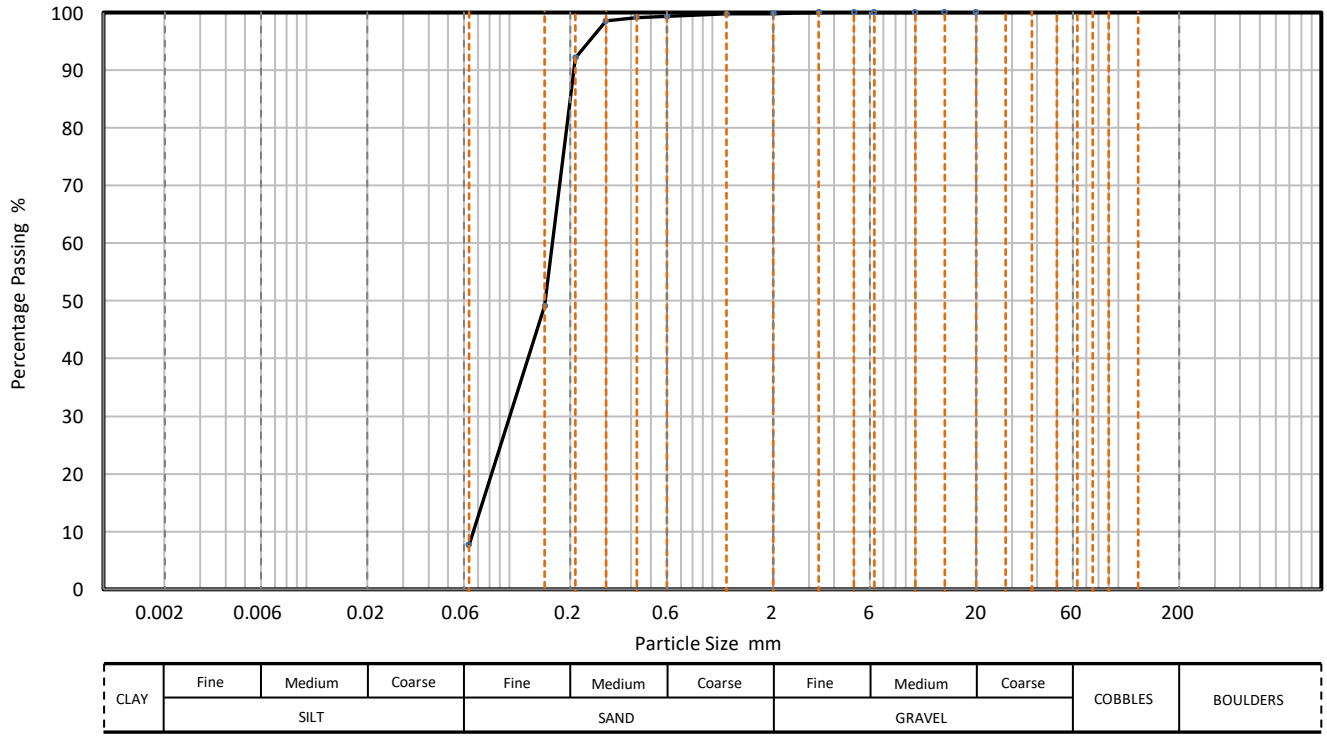
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-205	Lab sample ID	G2MT2025101446
Depth (Top) m	-11.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	99		
0.212	92		
0.15	49		
0.063	8		

Dry Mass of sample, g	1040

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	92.1
Fines <0.063mm	8.0

Grading Analysis		
D100	mm	
D60	mm	0.164
D30	mm	0.101
D10	mm	0.0661
Uniformity Coefficient		2.5
Curvature Coefficient		0.93

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 09:52

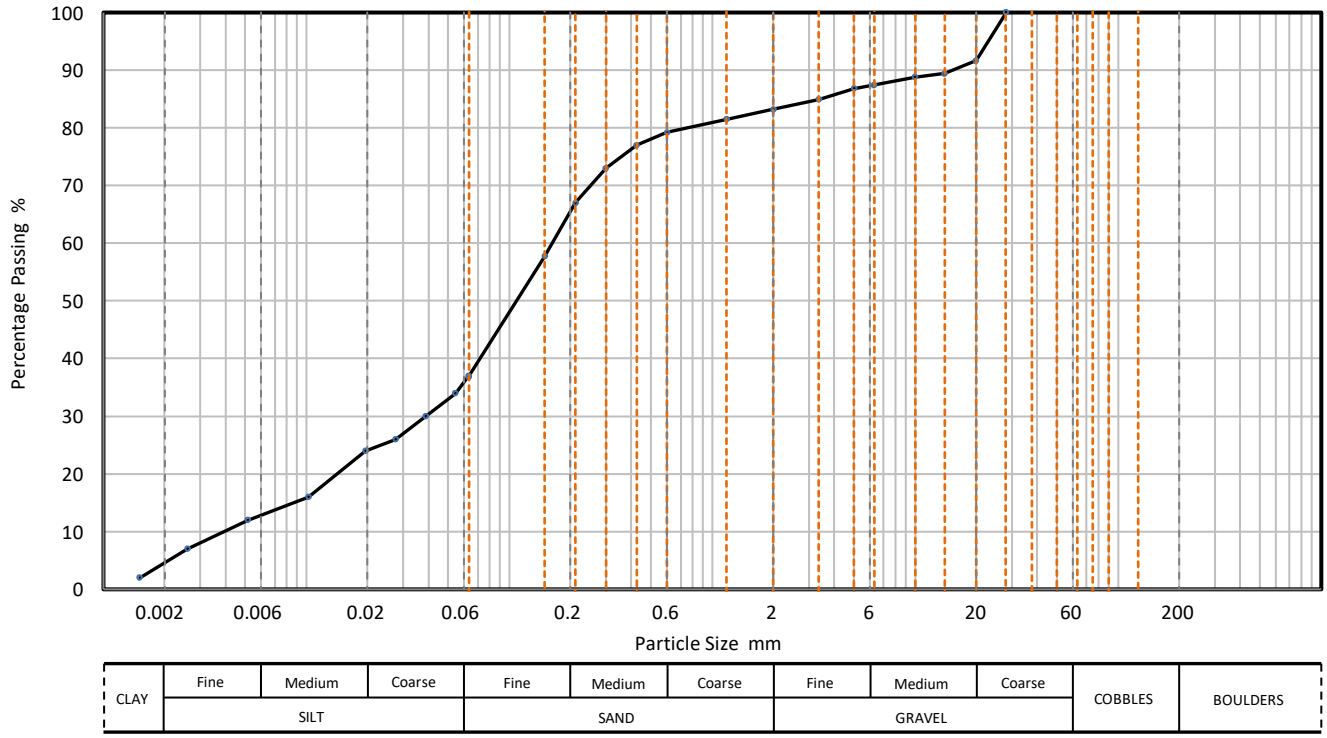
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-205	Lab sample ID	G2MT2025101443
Depth (Top) m	-17.12	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, Gravelly, very Silty,SAND
Sample type	U		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	37
		0.0544	34
		0.0388	30
		0.0276	26
		0.0196	24
		0.0103	16
28	100	0.0052	12
20	92	0.0026	7
14	89	0.0015	2
10	89		
6.3	87		
5	87		
3.35	85		
2	83		
1.18	82		
0.6	79	Particle density	(assumed)
0.425	77	2.65	Mg/m3
0.3	73		
0.212	67		
0.15	58		
0.063	37		

Dry Mass of sample, g	1109

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	16.8
Sand	46.3
Silt	32.6
Clay	4.3

Grading Analysis		
D100	mm	28
D60	mm	0.163
D30	mm	0.04
D10	mm	0.00387
Uniformity Coefficient		42
Curvature Coefficient		2.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:57

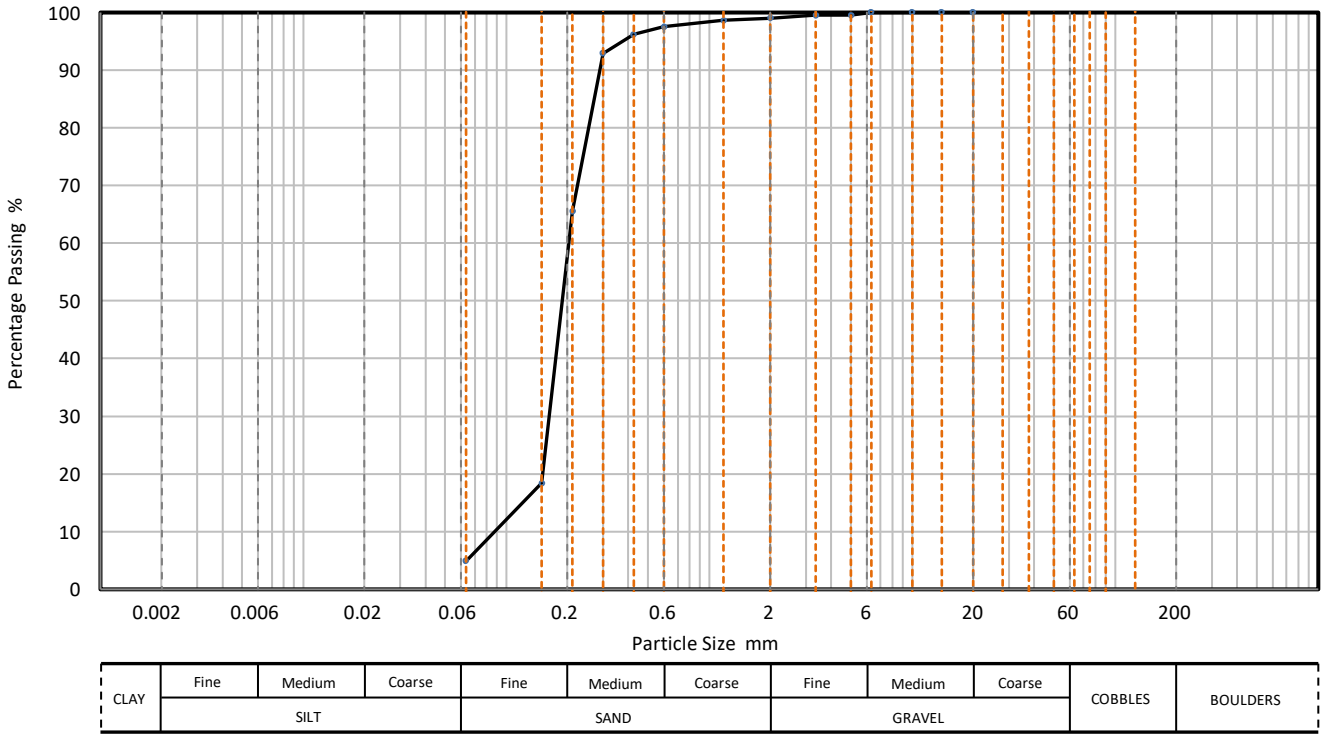
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-206	Lab sample ID	G2MT2025101449
Depth (Top) m	-6.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	98		
0.425	96		
0.3	93		
0.212	66		
0.15	18		
0.063	5		

Dry Mass of sample, g	1453

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.0
Sand	94.1
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.204
D30	mm	0.163
D10	mm	0.0873
Uniformity Coefficient		2.3
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/10/2025 10:28

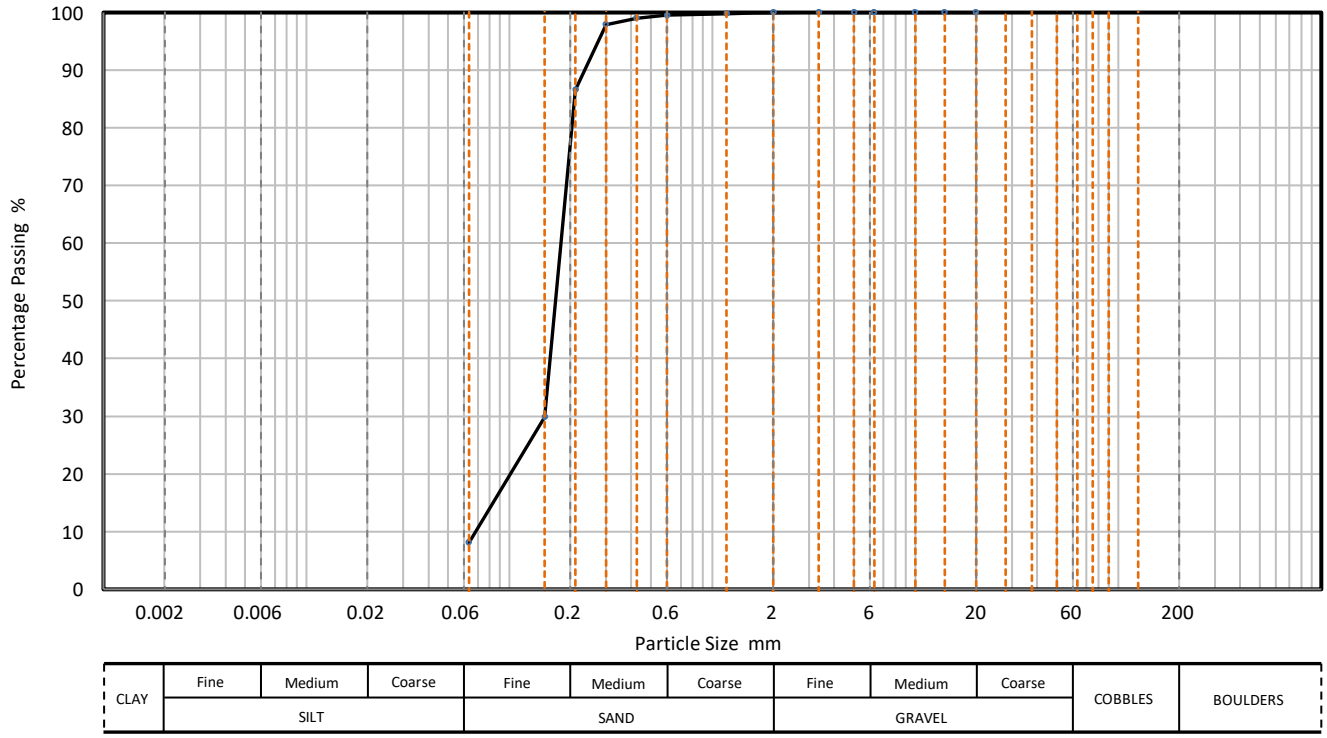
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UKAS TESTING
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-206	Lab sample ID	G2MT2025101450
Depth (Top) m	-10.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	87		
0.15	30		
0.063	8		

Dry Mass of sample, g	879

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	91.9
Fines <0.063mm	8.0

Grading Analysis		
D100	mm	
D60	mm	0.18
D30	mm	0.15
D10	mm	0.0679
Uniformity Coefficient		2.7
Curvature Coefficient		1.8

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	27/10/2025 09:34

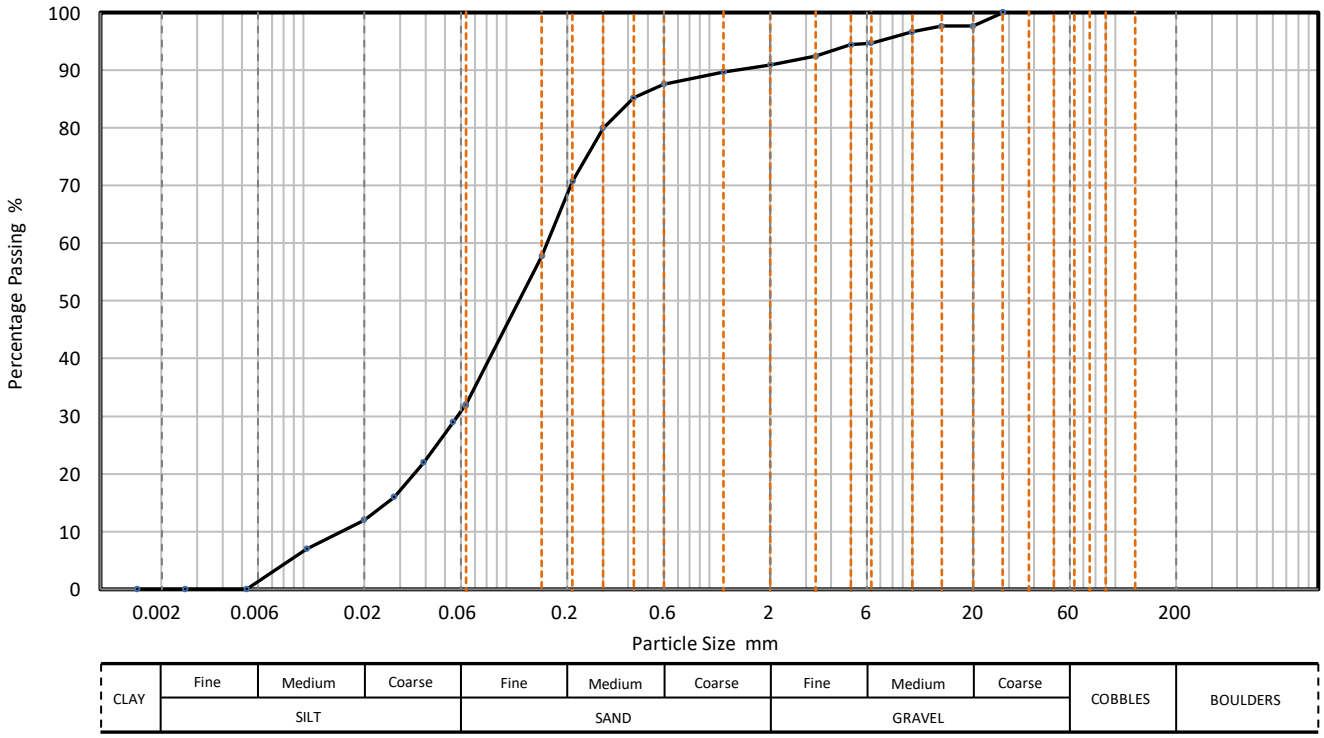
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-206	Lab sample ID	G2MT2025101451
Depth (Top) m	-13.70	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, very Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	32
		0.0547	29
		0.0392	22
		0.0280	16
		0.0199	12
		0.0104	7
28	100	0.0053	0
20	98	0.0026	0
14	98	0.0015	0
10	97		
6.3	95		
5	94		
3.35	92		
2	91		
1.18	90		
0.6	88	Particle density	(assumed)
0.425	85	2.65	Mg/m3
0.3	80		
0.212	71		
0.15	58		
0.063	32		

Dry Mass of sample, g: 1060

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	9.1
Sand	59.1
Silt	31.8
Clay	0.0

Grading Analysis		
D100	mm	28
D60	mm	0.16
D30	mm	0.0569
D10	mm	0.015
Uniformity Coefficient		11
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	25/11/2025 07:42

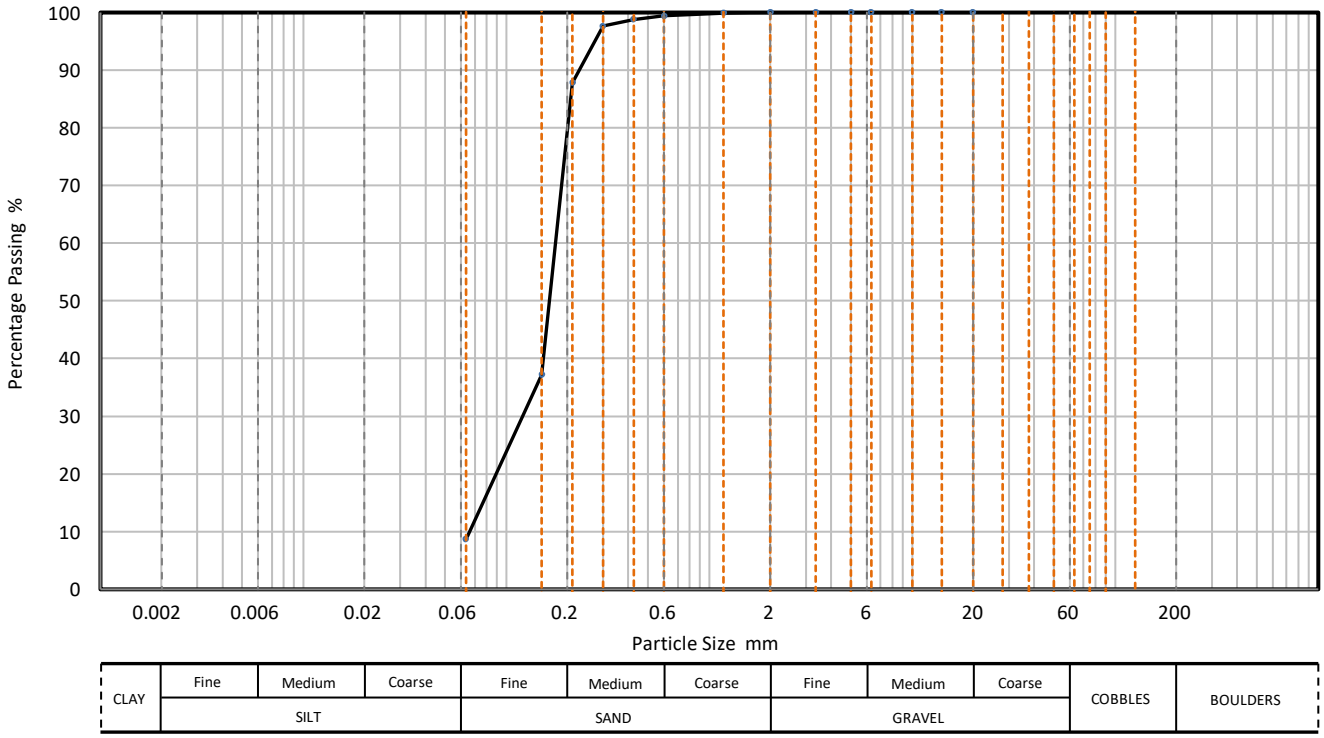
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-207	Lab sample ID	G2MT2025091557
Depth (Top) m	-6.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Clayey, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	98		
0.212	88		
0.15	37		
0.063	9		

Dry Mass of sample, g	915

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	91.3
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.175
D30	mm	0.12
D10	mm	0.0656
Uniformity Coefficient		2.7
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	17/09/2025 14:23

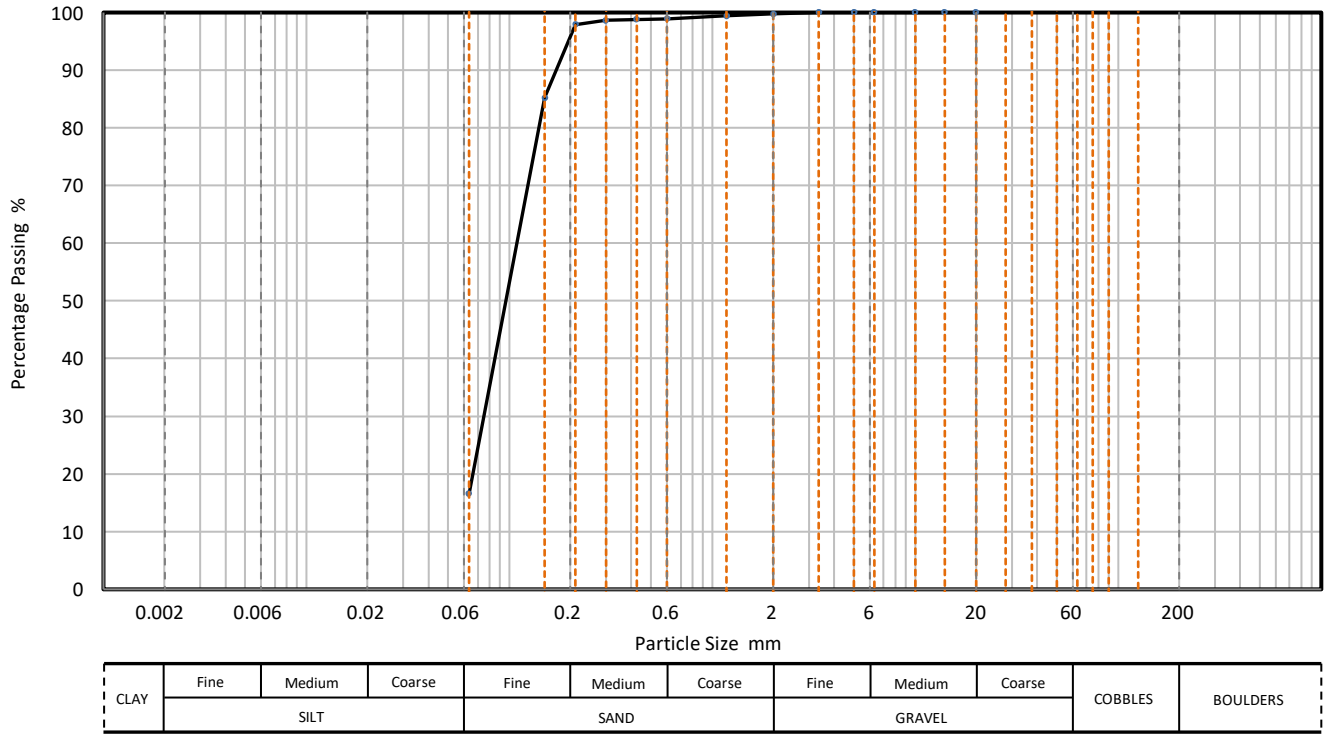
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-207	Lab sample ID	G2MT2025091559
Depth (Top) m	-12.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	99		
0.425	99		
0.3	99		
0.212	98		
0.15	85		
0.063	17		

Dry Mass of sample, g	866

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	83.1
Fines <0.063mm	17.0

Grading Analysis		
D100	mm	
D60	mm	0.109
D30	mm	0.0746
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 09:30

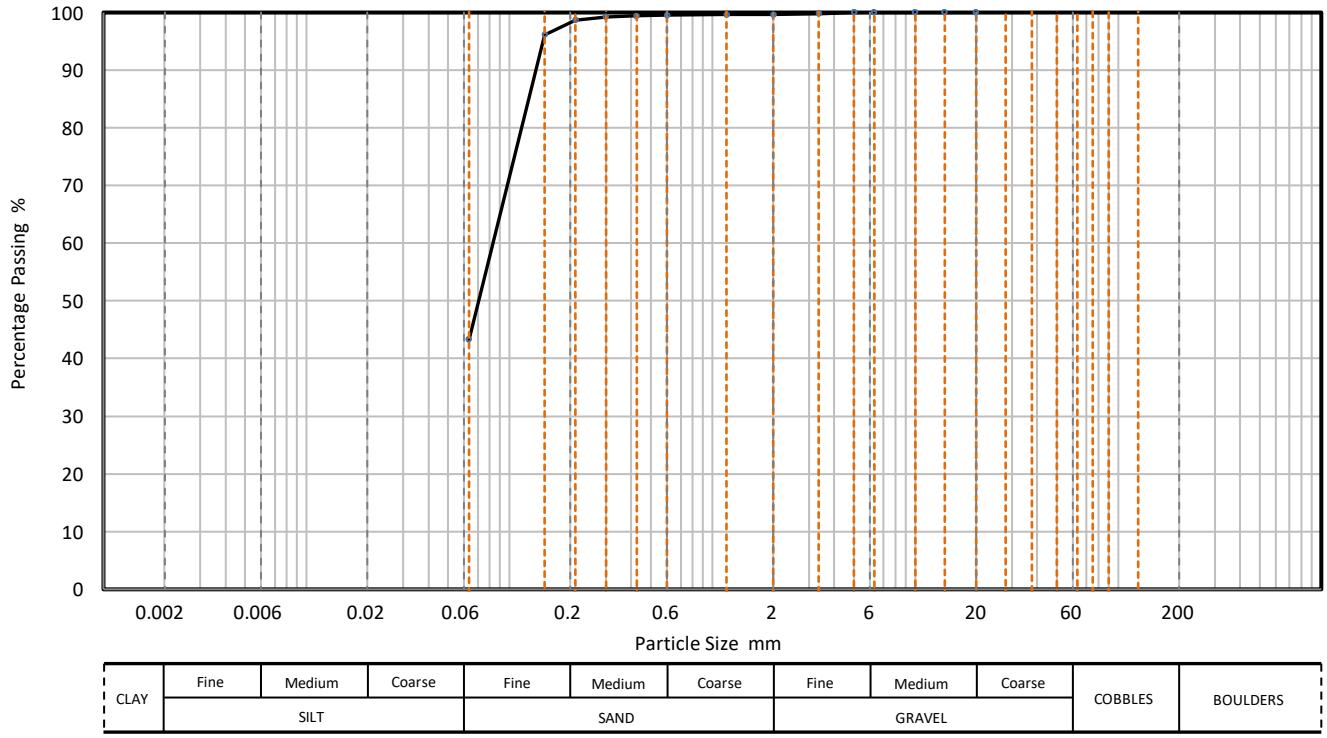
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-207	Lab sample ID	G2MT2025091562
Depth (Top) m	-20.20	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Very Sandy CLAY
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	99		
0.15	96		
0.063	43		

Dry Mass of sample, g	995

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.4
Sand	56.3
Fines <0.063mm	43.0

Grading Analysis		
D100	mm	
D60	mm	0.0829
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 09:26

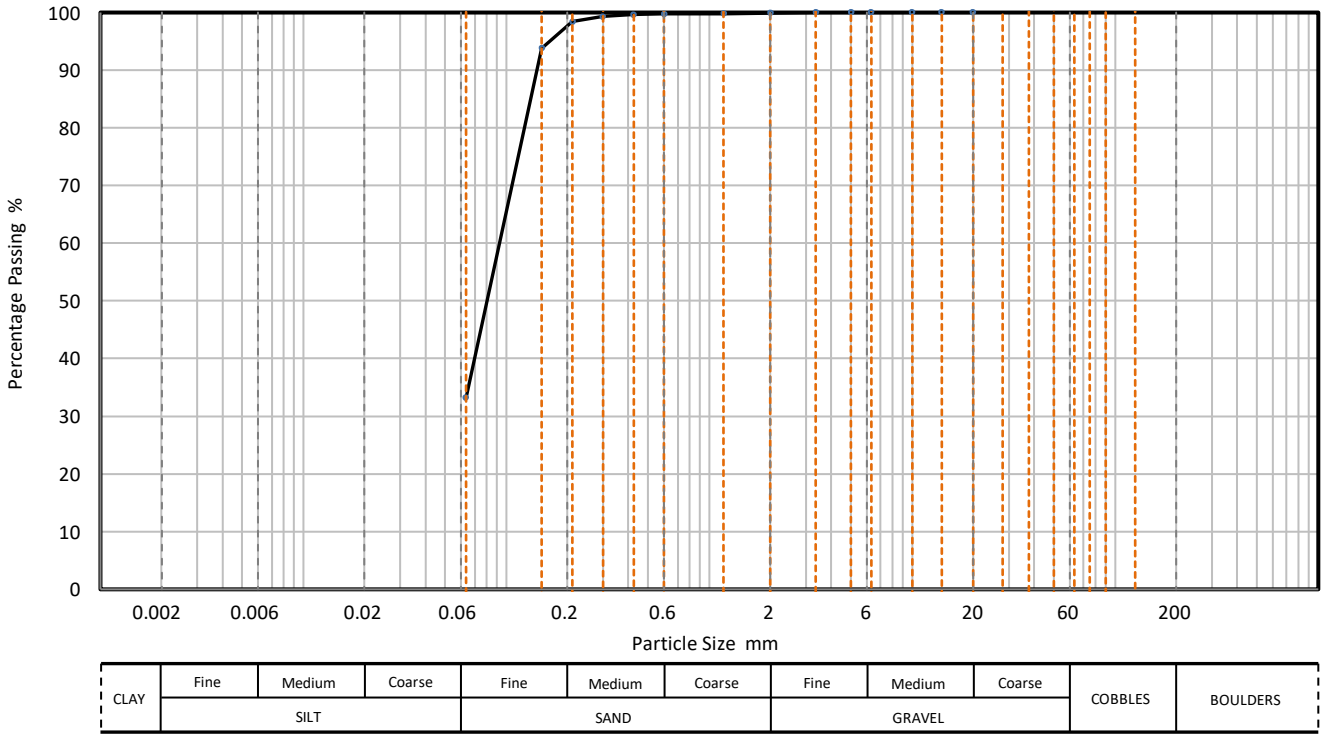
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-207	Lab sample ID	G2MT2025091564
Depth (Top) m	-24.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, Very Clayey SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	98		
0.15	94		
0.063	33		

Dry Mass of sample, g	885

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	66.7
Fines <0.063mm	33.0

Grading Analysis		
D100	mm	
D60	mm	0.0924
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	19/09/2025 09:28

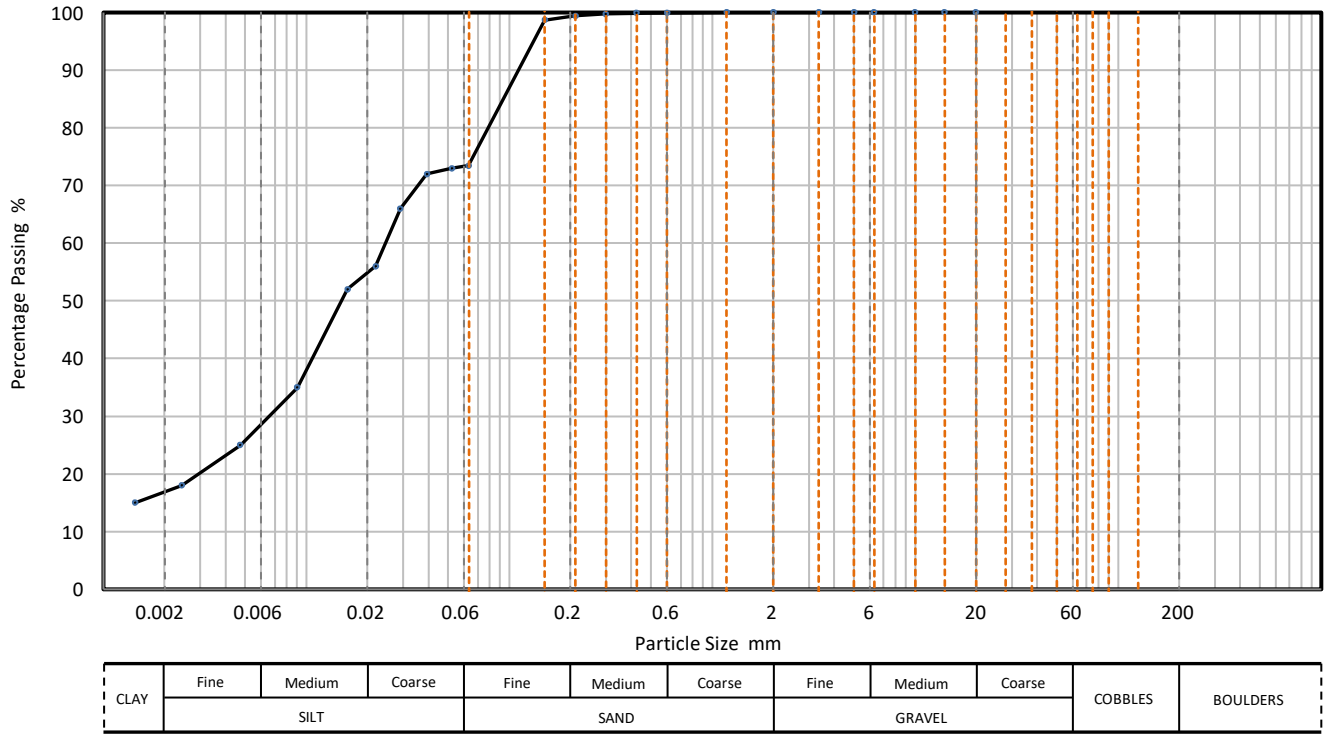
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-207	Lab sample ID	G2MT2025091566
Depth (Top) m	-26.20	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Clayey, very Sandy, SILT
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0523	73
		0.0393	72
		0.0291	66
		0.0220	56
		0.0160	52
		0.0090	35
		0.0047	25
20	100	0.0024	18
14	100	0.0014	15
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	99		
0.15	99		
0.063	73		

Dry Mass of sample, g: 801

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	26.6
Silt	56.3
Clay	17.1

Grading Analysis		
D100	mm	
D60	mm	0.0246
D30	mm	0.00657
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 10:28

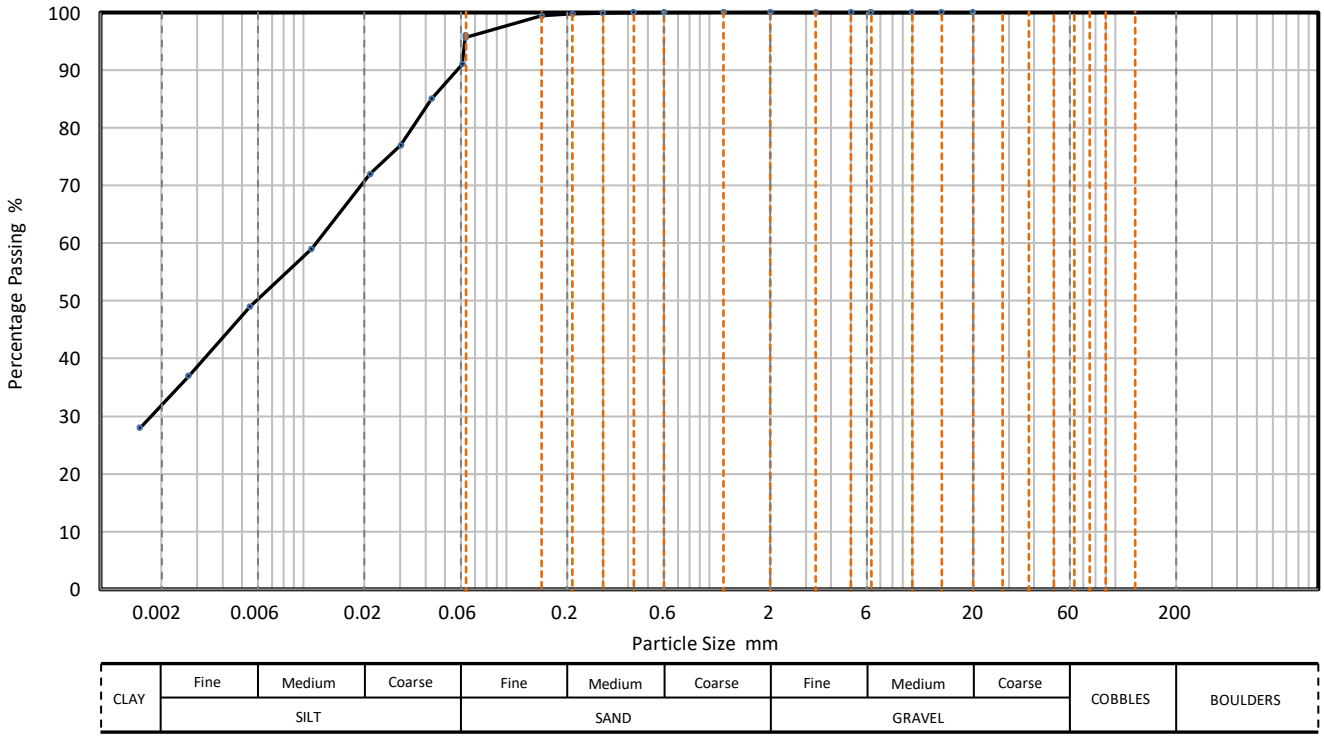
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UKAS TESTING 10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	BH-207	Lab sample ID	G2MT2025091570
Depth (Top) m	-28.24	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, very Clayey, SILT
Sample type	U		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	96
		0.0607	91
		0.0429	85
		0.0302	77
		0.0213	72
		0.0110	59
		0.0055	49
20	100	0.0027	37
14	100	0.0016	28
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	100		
0.212	100		
0.15	99		
0.063	96		

Dry Mass of sample, g: 824

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	4.4
Silt	63.5
Clay	32.1

Grading Analysis		
D100	mm	
D60	mm	0.0113
D30	mm	0.00175
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	01/10/2025 14:43

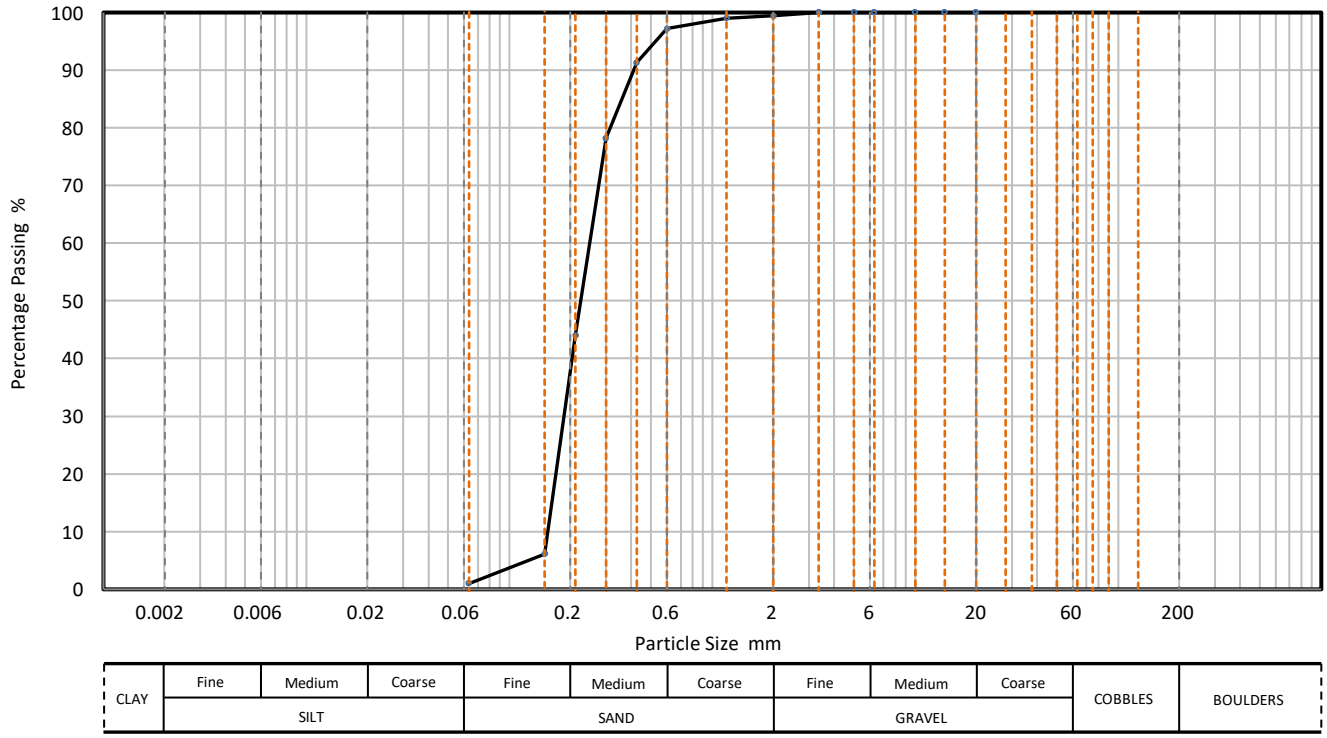
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-101	Lab sample ID	G2MT2025100215
Depth (Top) m	-0.90	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	97		
0.425	91		
0.3	78		
0.212	44		
0.15	6		
0.063	1		

Dry Mass of sample, g: 848

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.6
Sand	98.3
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.249
D30	mm	0.187
D10	mm	0.155
Uniformity Coefficient		1.6
Curvature Coefficient		0.9

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:33

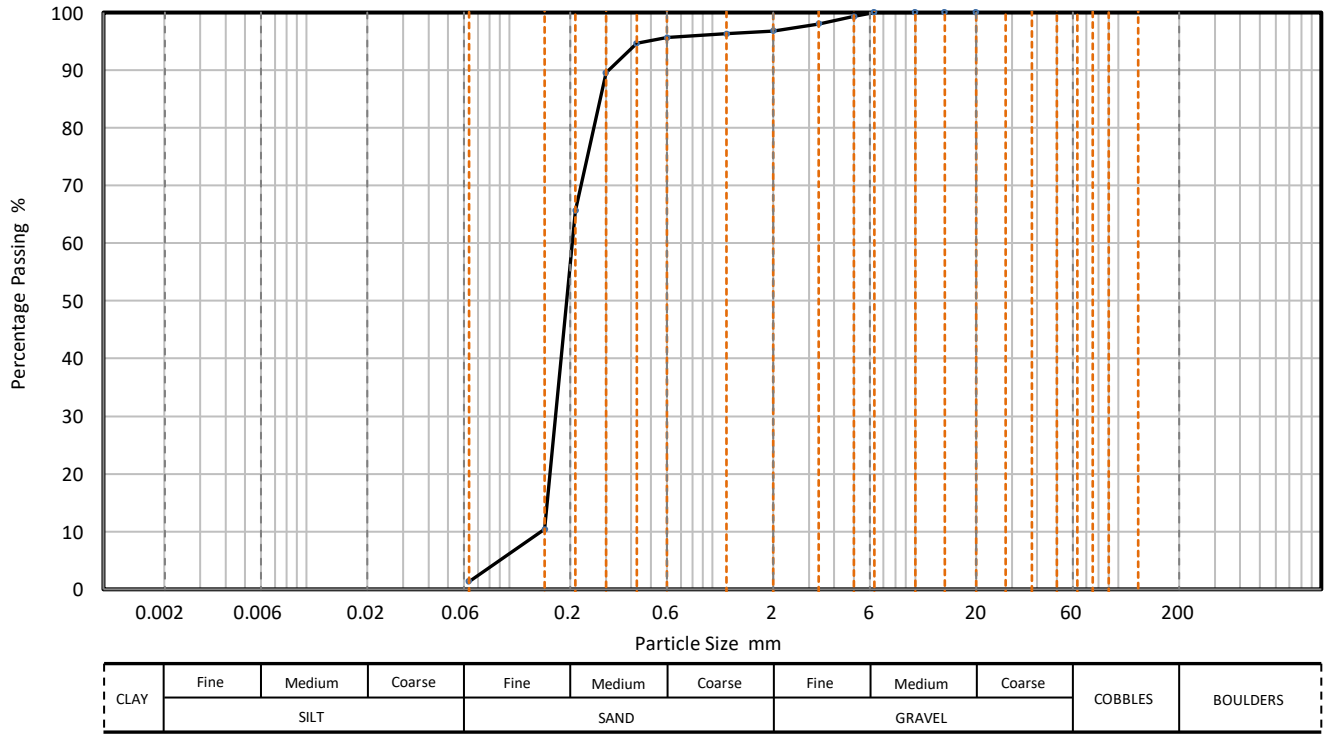
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole		CP-101	Lab sample ID	G2MT2025100213
Depth (Top)	m	2.10	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base)	m		Soil Description	Slightly Silty, slightly Gravelly, SAND
Sample type		B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	98		
2	97		
1.18	96		
0.6	96		
0.425	95		
0.3	90		
0.212	66		
0.15	10		
0.063	1		

Dry Mass of sample, g	879

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	3.2
Sand	95.4
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.205
D30	mm	0.17
D10	mm	0.144
Uniformity Coefficient		1.4
Curvature Coefficient		0.97

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	13/10/2025 10:36

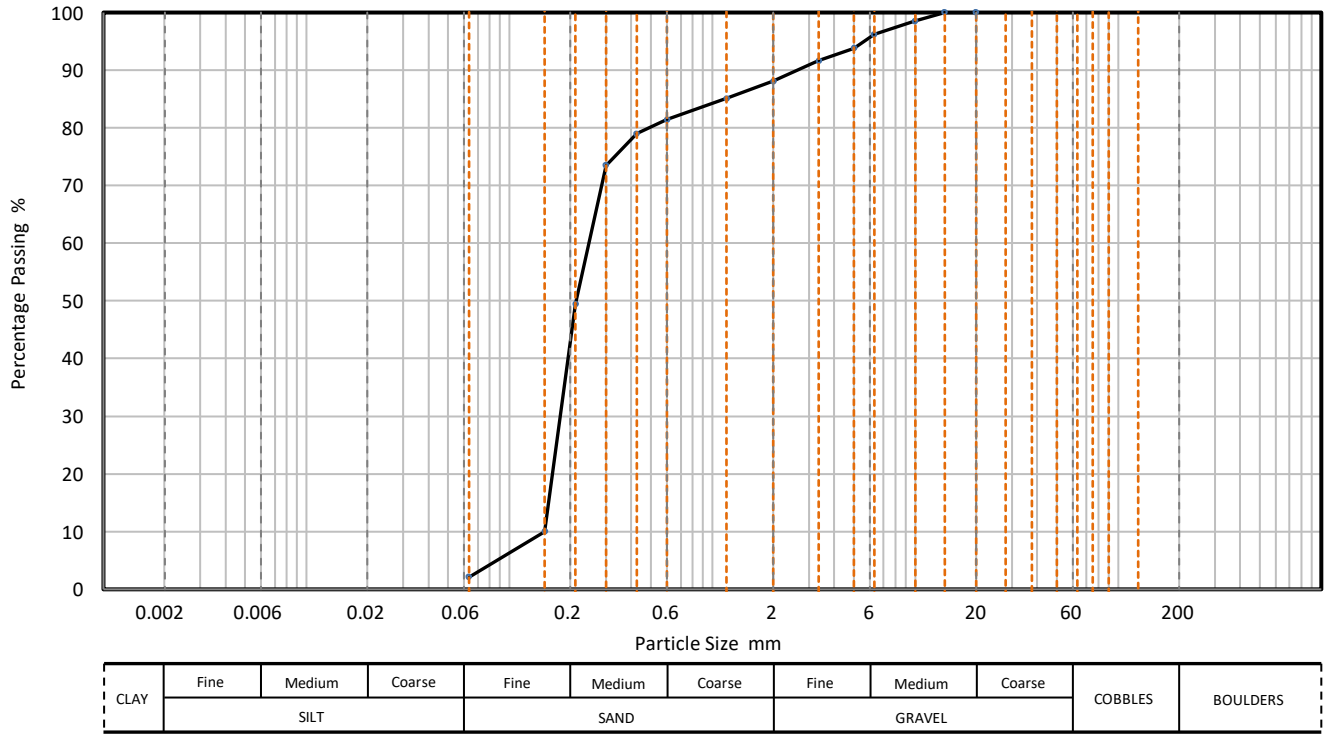
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-101	Lab sample ID	G2MT2025100211
Depth (Top) m	3.60	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, Gravelly,SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	99		
6.3	96		
5	94		
3.35	92		
2	88		
1.18	85		
0.6	81		
0.425	79		
0.3	74		
0.212	49		
0.15	10		
0.063	2		

Dry Mass of sample, g	993

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	11.9
Sand	85.9
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.247
D30	mm	0.179
D10	mm	0.15
Uniformity Coefficient		1.6
Curvature Coefficient		0.86

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:31

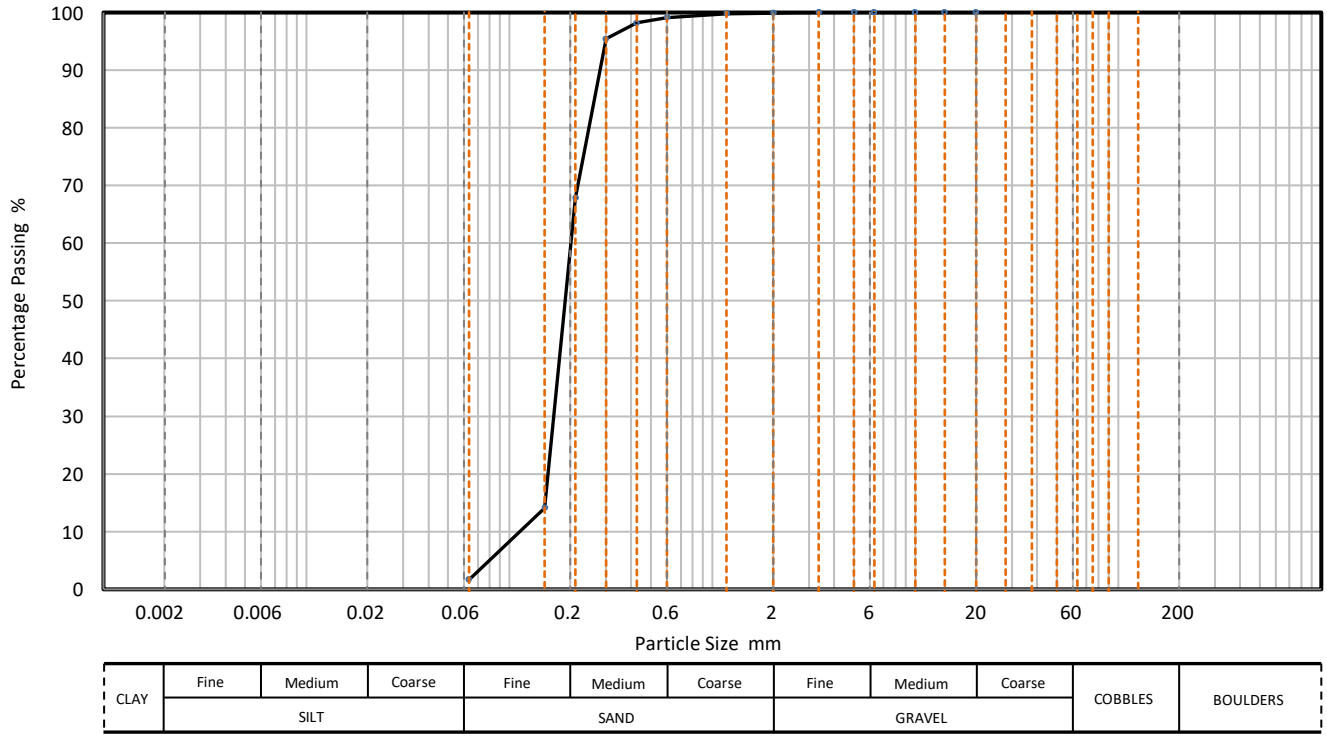
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-101	Lab sample ID	G2MT2025100217
Depth (Top) m	-5.40	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	95		
0.212	68		
0.15	14		
0.063	2		

Dry Mass of sample, g: 1113

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	98.3
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.202
D30	mm	0.166
D10	mm	0.112
Uniformity Coefficient		1.8
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:35

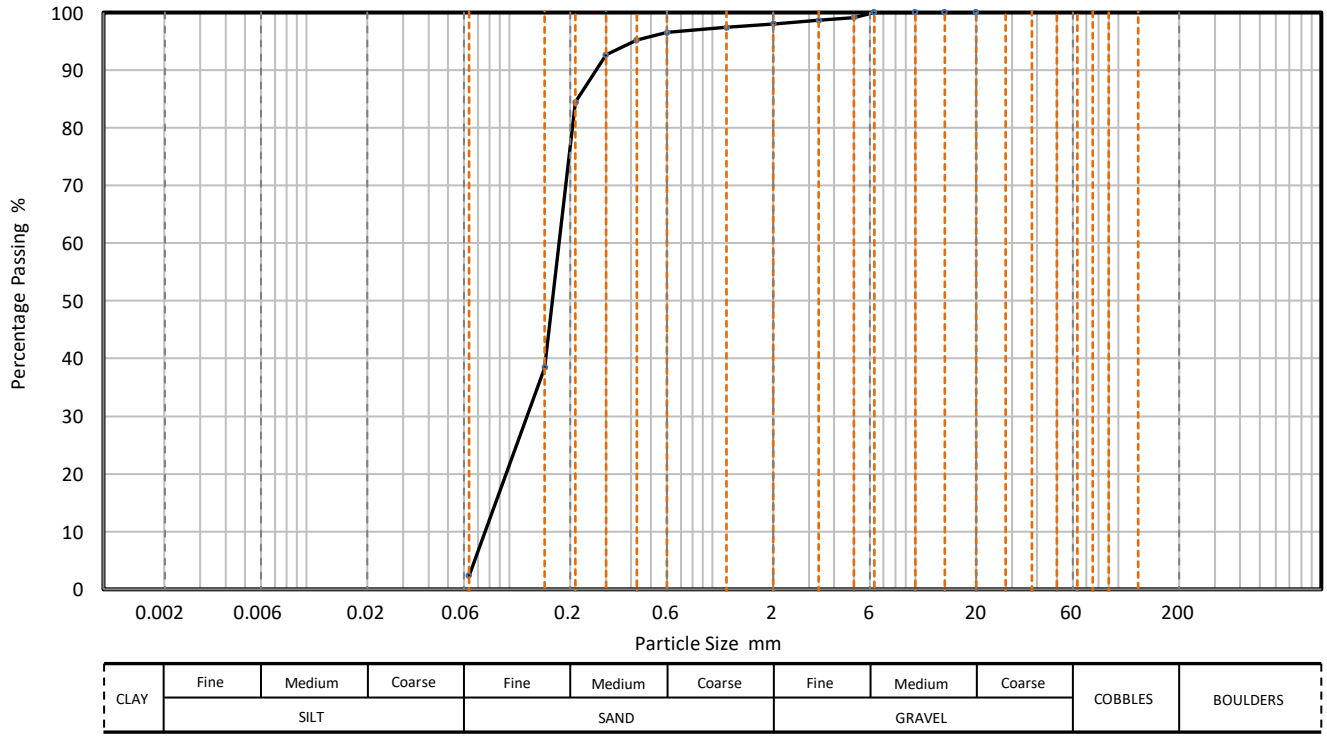
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-101	Lab sample ID	G2MT2025100220
Depth (Top) m	-9.90	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	99		
2	98		
1.18	97		
0.6	97		
0.425	95		
0.3	93		
0.212	84		
0.15	38		
0.063	2		

Dry Mass of sample, g: 836

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	2.0
Sand	95.6
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.176
D30	mm	0.123
D10	mm	0.0757
Uniformity Coefficient		2.3
Curvature Coefficient		1.1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:37

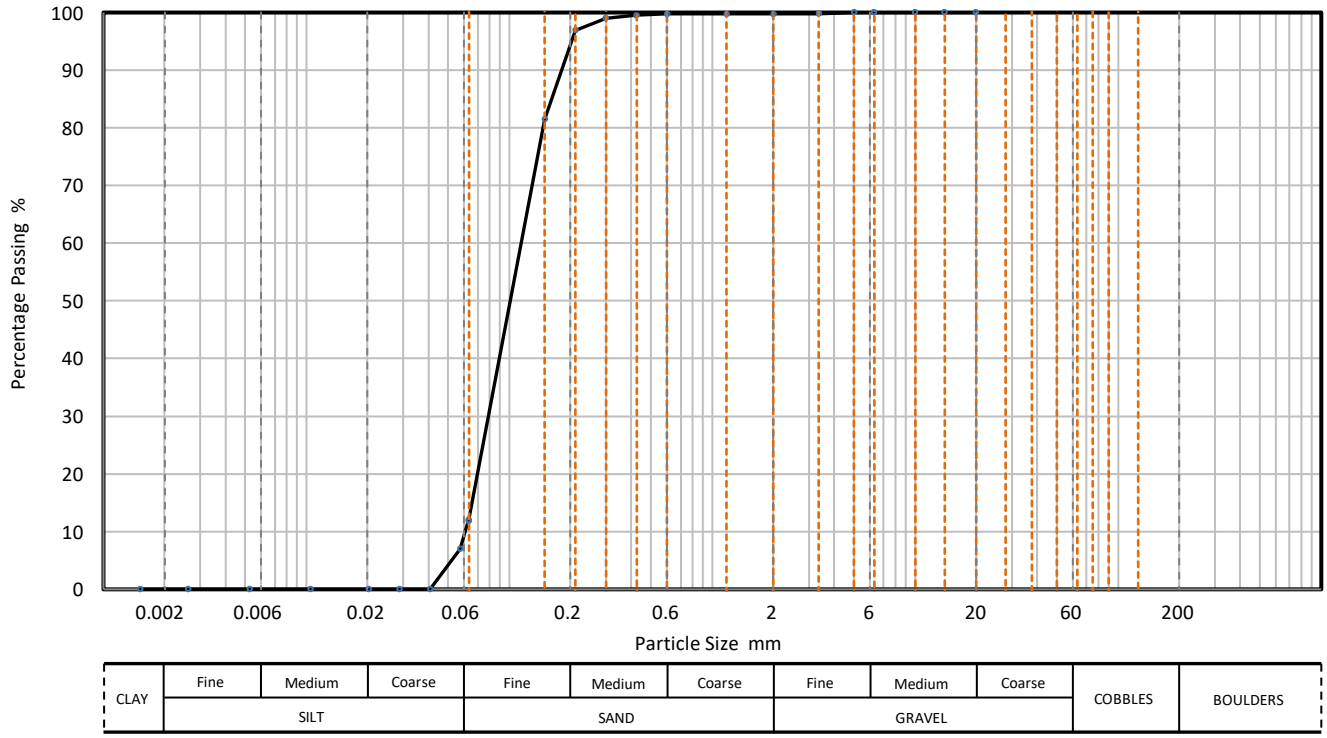
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-101	Lab sample ID	G2MT2025100223
Depth (Top) m	-17.40	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Very slightly Gravelly, Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	12
		0.0573	7
		0.0408	0
		0.0288	0
		0.0204	0
		0.0105	0
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	97		
0.15	82		
0.063	12		

Dry Mass of sample, g: 832

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	88.0
Silt	11.7
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.115
D30	mm	0.079
D10	mm	0.0606
Uniformity Coefficient		1.9
Curvature Coefficient		0.9

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	03/11/2025 13:01

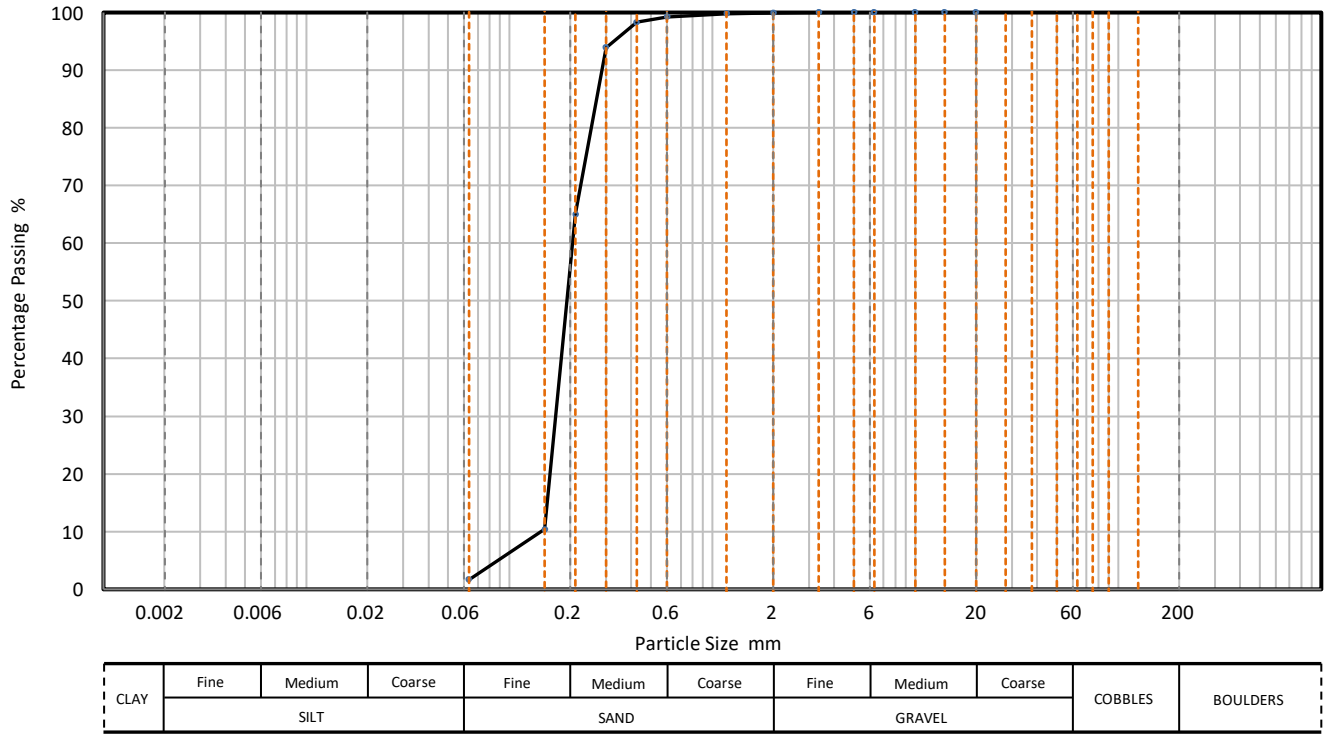
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-102	Lab sample ID	G2MT2025100227
Depth (Top) m	1.40	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	94		
0.212	65		
0.15	10		
0.063	2		

Dry Mass of sample, g: 878

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	98.3
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.205
D30	mm	0.17
D10	mm	0.145
Uniformity Coefficient		1.4
Curvature Coefficient		0.97

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:44

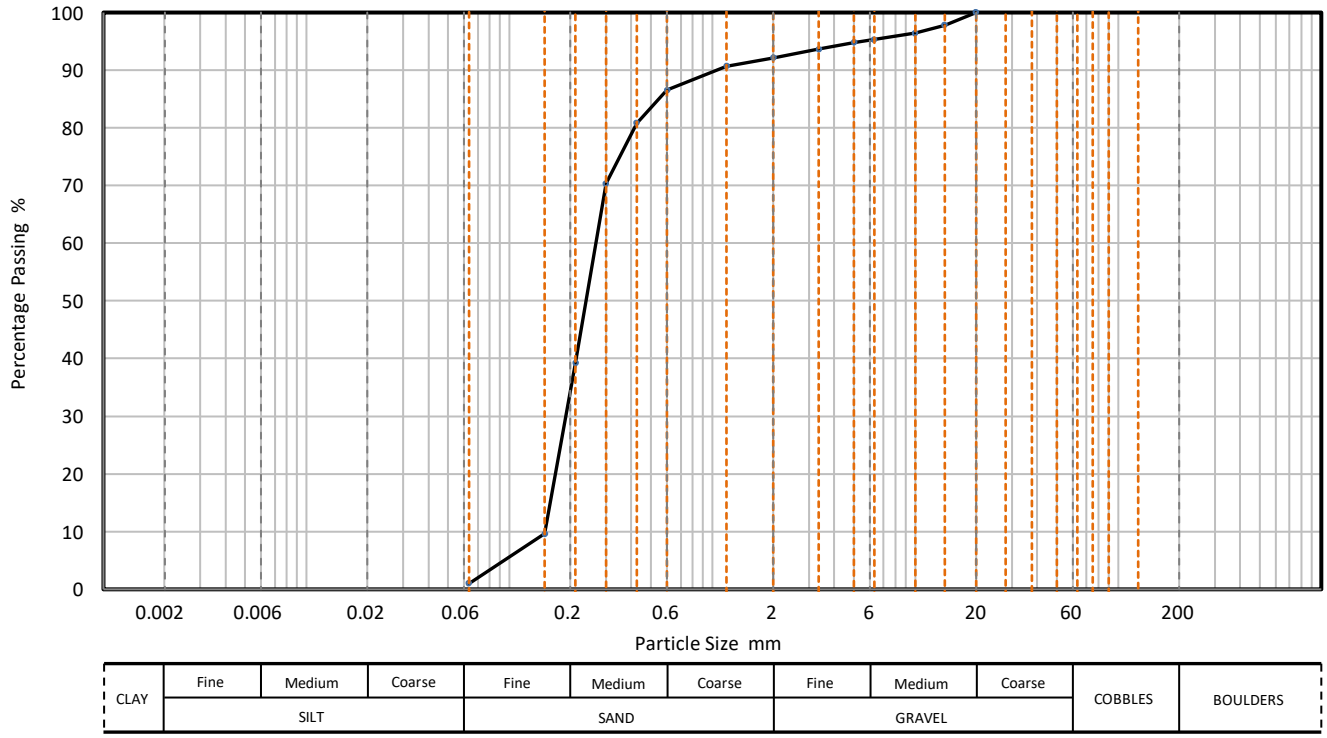
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-102	Lab sample ID	G2MT2025100228
Depth (Top) m	-1.60	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, slightly Gravelly, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	98		
10	96		
6.3	95		
5	95		
3.35	94		
2	92		
1.18	91		
0.6	87		
0.425	81		
0.3	70		
0.212	39		
0.15	10		
0.063	1		

Dry Mass of sample, g	840

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	7.9
Sand	91.0
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	20
D60	mm	0.267
D30	mm	0.19
D10	mm	0.151
Uniformity Coefficient		1.8
Curvature Coefficient		0.9

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:46

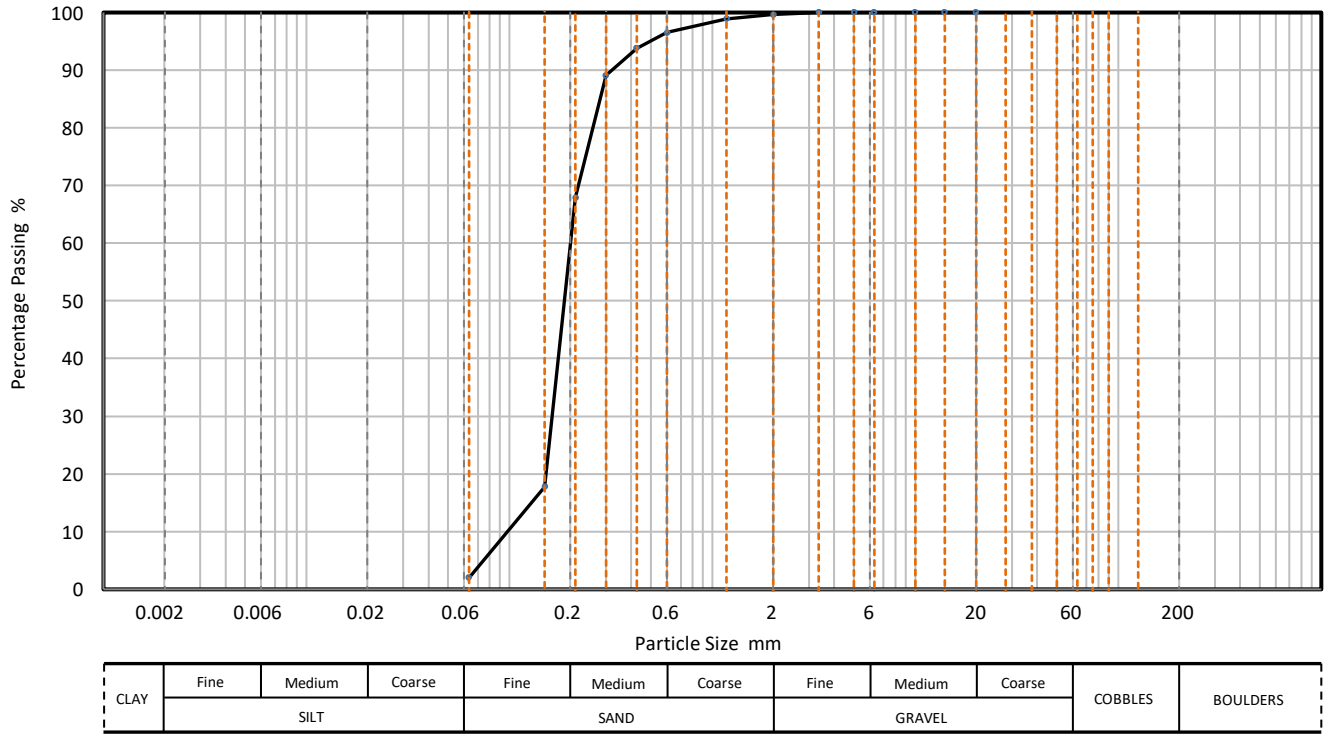
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-102	Lab sample ID	G2MT2025100226
Depth (Top) m	-2.90	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	97		
0.425	94		
0.3	89		
0.212	68		
0.15	18		
0.063	2		

Dry Mass of sample, g	824

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.4
Sand	97.6
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.201
D30	mm	0.163
D10	mm	0.0979
Uniformity Coefficient		2.1
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:42

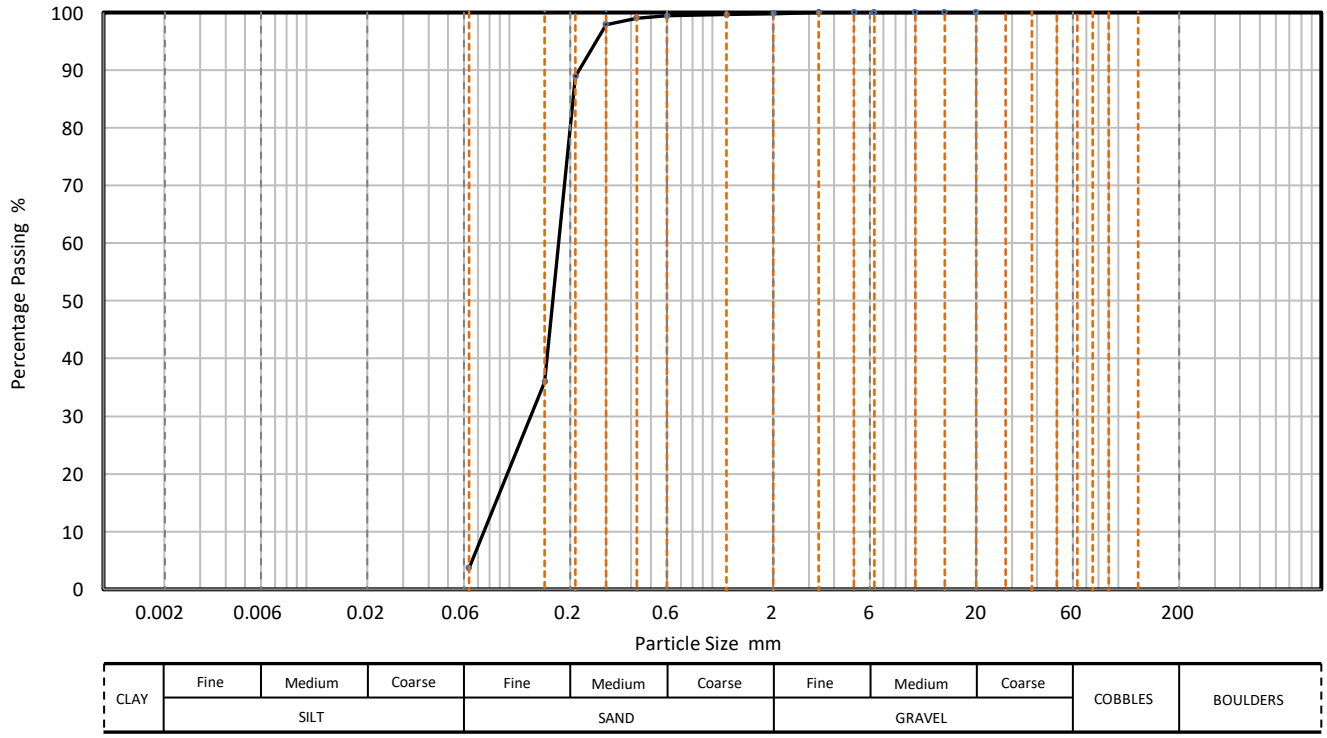
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-102	Lab sample ID	G2MT2025100230
Depth (Top) m	-9.10	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	98		
0.212	89		
0.15	36		
0.063	4		

Dry Mass of sample, g	845

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	96.1
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.176
D30	mm	0.128
D10	mm	0.0747
Uniformity Coefficient		2.4
Curvature Coefficient		1.2

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:48

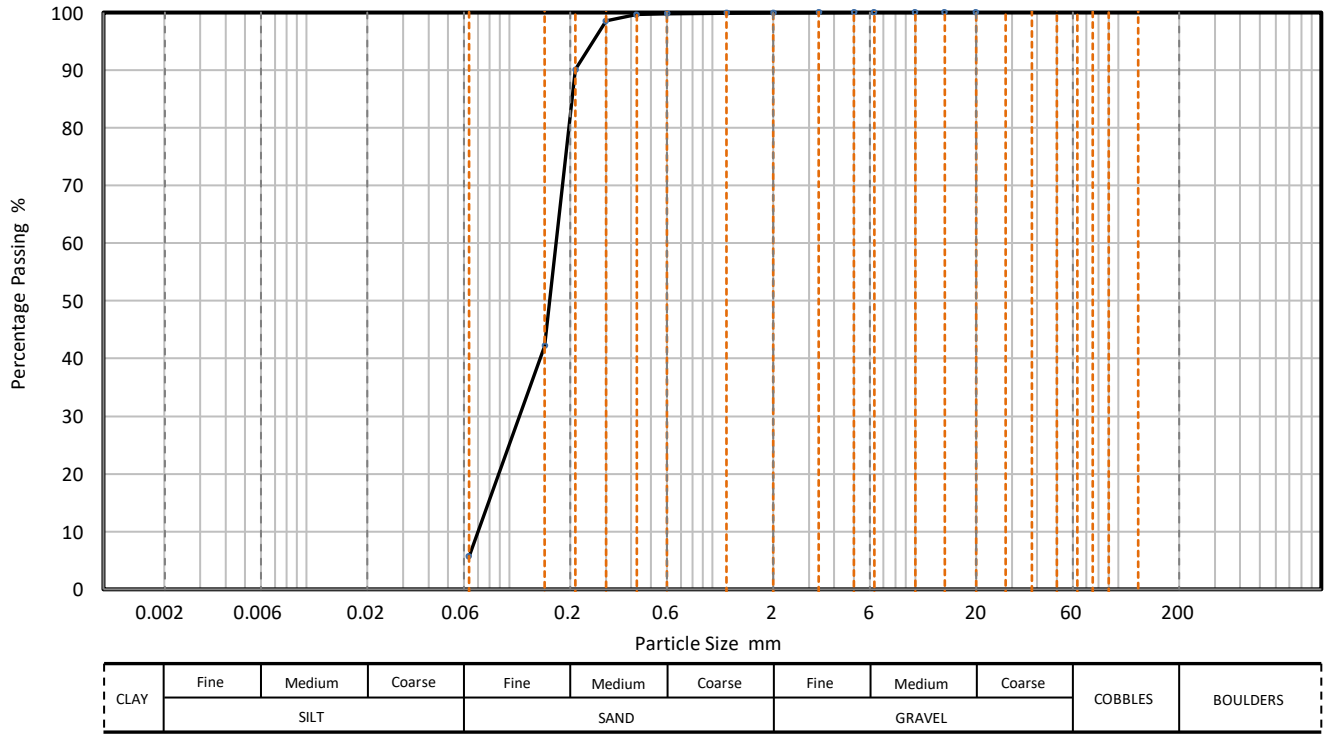
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-102	Lab sample ID	G2MT2025100231
Depth (Top) m	-13.60	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	90		
0.15	42		
0.063	6		

Dry Mass of sample, g	870

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	94.3
Fines <0.063mm	6.0

Grading Analysis		
D100	mm	
D60	mm	0.171
D30	mm	0.112
D10	mm	0.0698
Uniformity Coefficient		2.4
Curvature Coefficient		1.1

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	10/10/2025 07:49

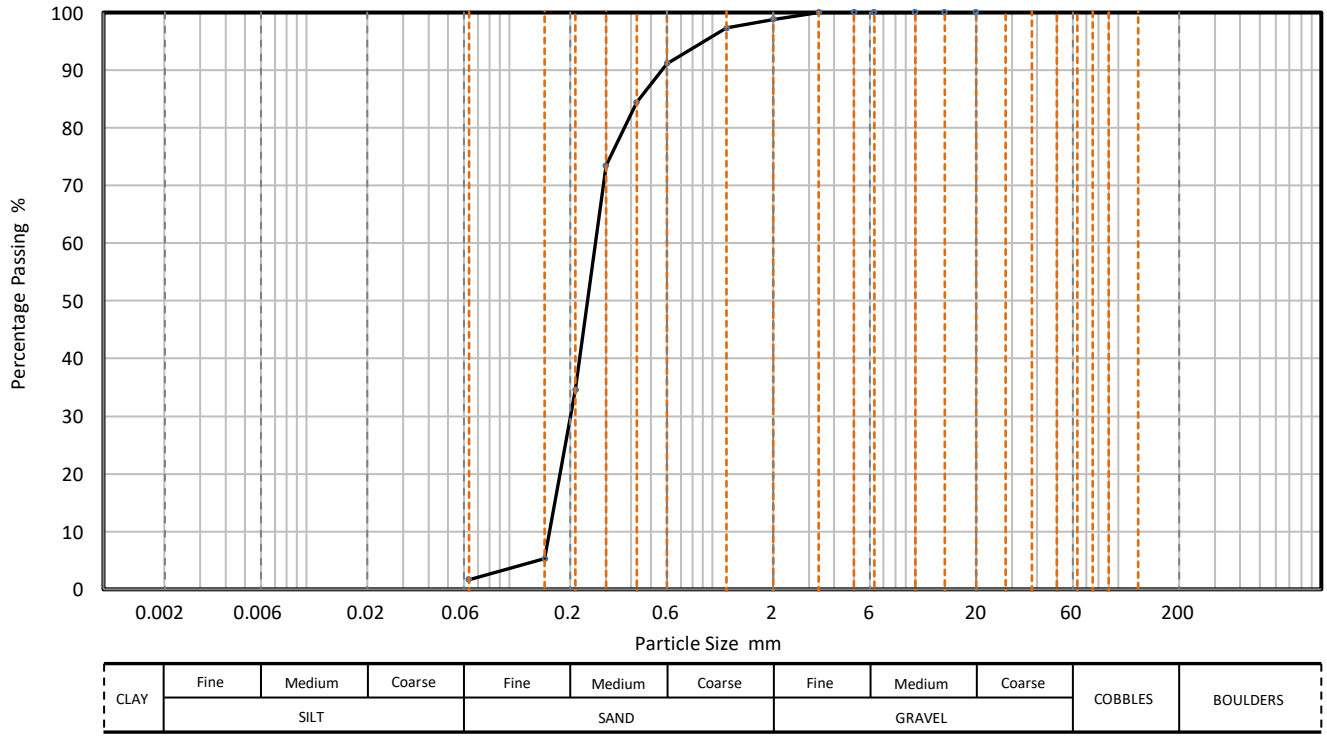
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-103	Lab sample ID	G2MT2025110510
Depth (Top) m	-0.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	97		
0.6	91		
0.425	84		
0.3	73		
0.212	35		
0.15	5		
0.063	2		

Dry Mass of sample, g	911

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	1.2
Sand	97.1
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.266
D30	mm	0.201
D10	mm	0.158
Uniformity Coefficient		1.7
Curvature Coefficient		0.96

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:05

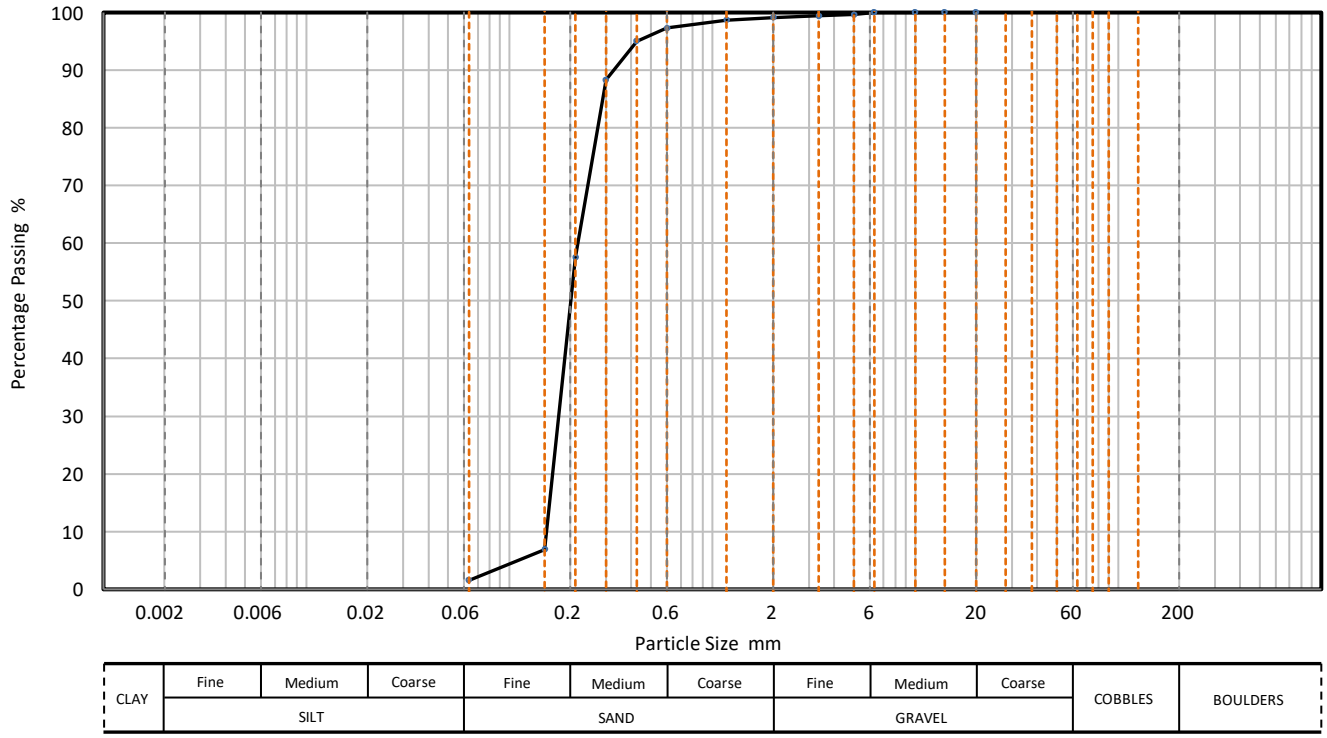
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-103	Lab sample ID	G2MT202511058
Depth (Top) m	2.70	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	99		
1.18	99		
0.6	97		
0.425	95		
0.3	88		
0.212	58		
0.15	7		
0.063	2		

Dry Mass of sample, g: 904

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.9
Sand	97.5
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.218
D30	mm	0.176
D10	mm	0.153
Uniformity Coefficient		1.4
Curvature Coefficient		0.92

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:57

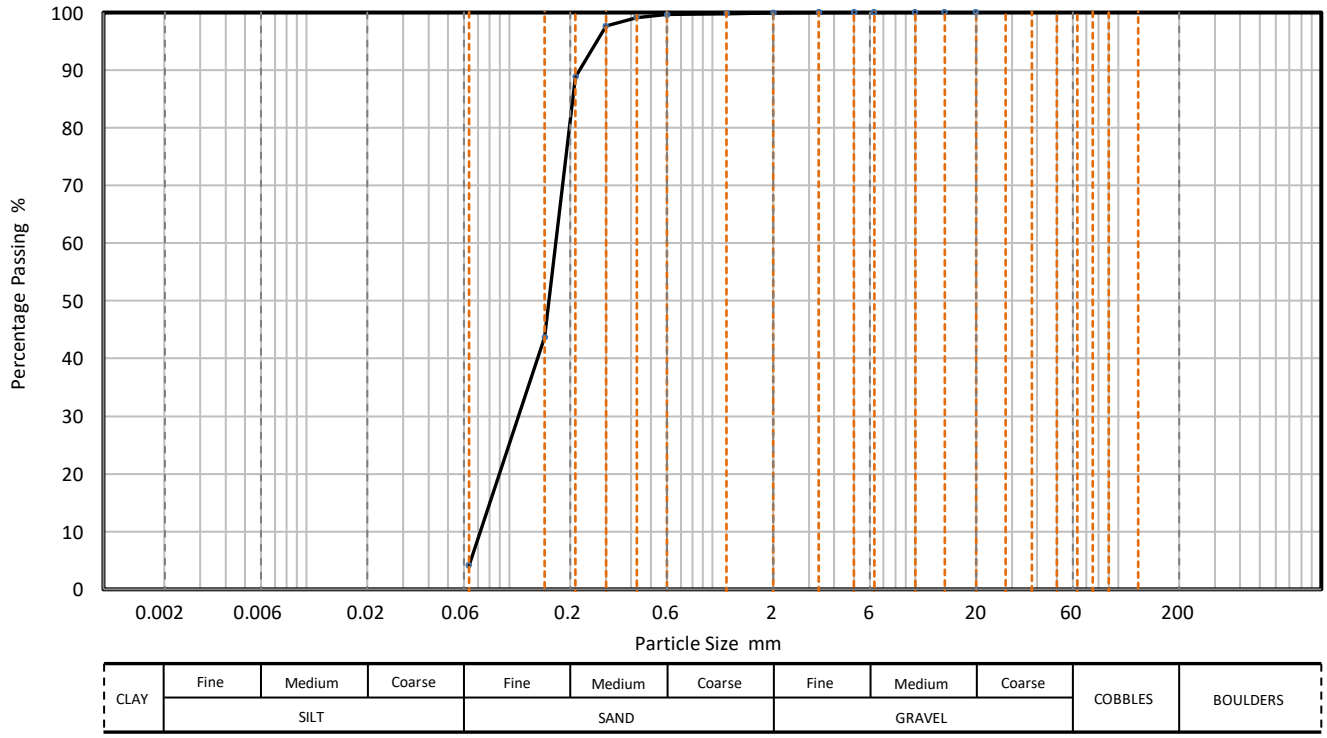
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-103	Lab sample ID	G2MT2025110514
Depth (Top) m	-9.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	98		
0.212	89		
0.15	44		
0.063	4		

Dry Mass of sample, g	807

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.1
Sand	95.7
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.17
D30	mm	0.111
D10	mm	0.0716
Uniformity Coefficient		2.4
Curvature Coefficient		1

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:20

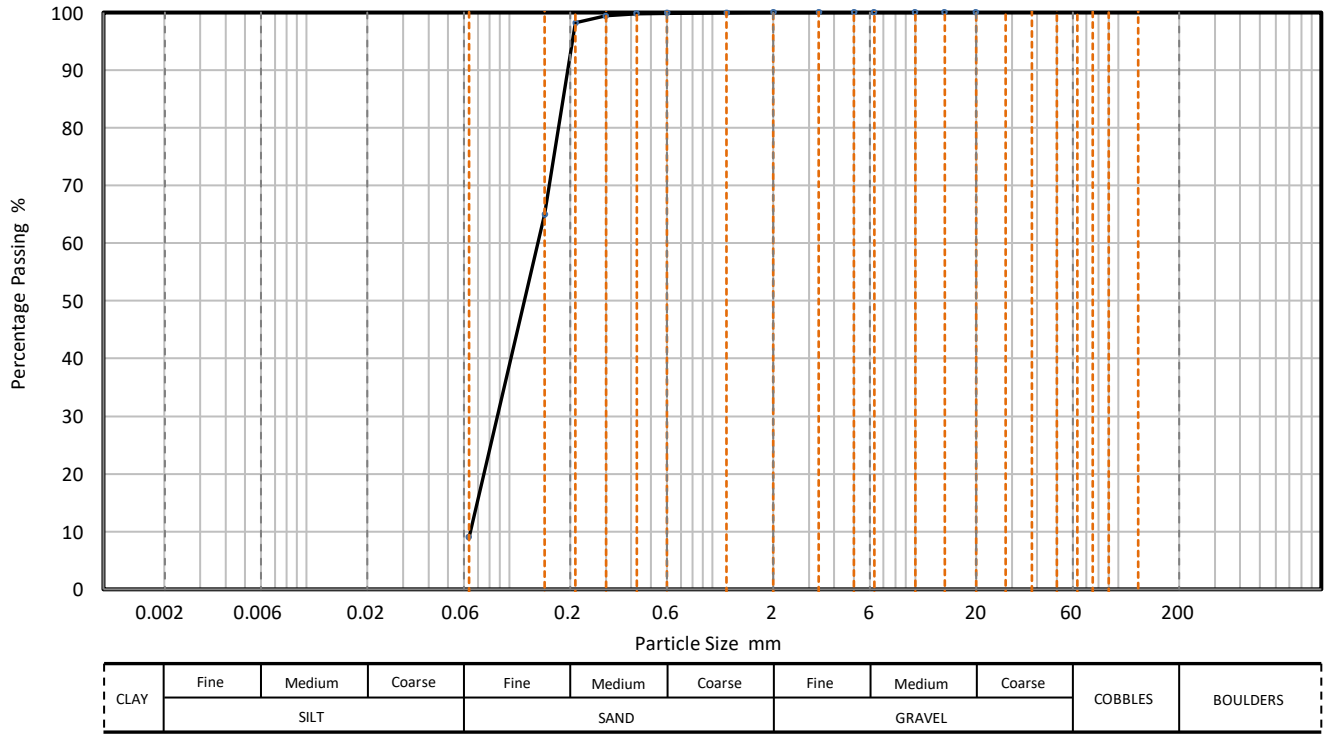
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-103	Lab sample ID	G2MT2025110515
Depth (Top) m	-13.80	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	98		
0.15	65		
0.063	9		

Dry Mass of sample, g: 852

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	91.0
Fines <0.063mm	9.0

Grading Analysis		
D100	mm	
D60	mm	0.139
D30	mm	0.0872
D10	mm	0.064
Uniformity Coefficient		2.2
Curvature Coefficient		0.86

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:07

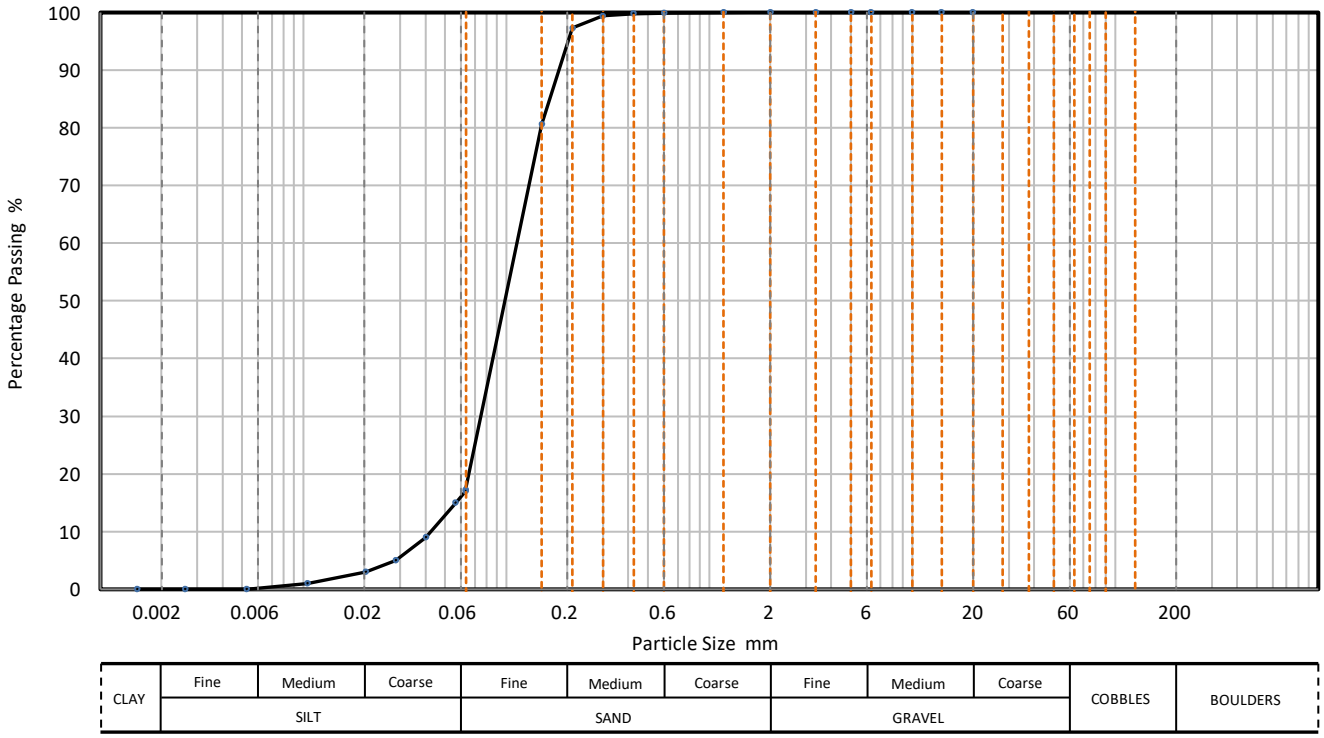
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-103	Lab sample ID	G2MT2025110516
Depth (Top) m	-16.80	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Silty SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	17
		0.0563	15
		0.0402	9
		0.0286	5
		0.0203	3
		0.0105	1
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100	Particle density	(assumed)
0.425	100	2.65	Mg/m3
0.3	99		
0.212	97		
0.15	81		
0.063	17		

Dry Mass of sample, g: 872

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	82.8
Silt	17.2
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.113
D30	mm	0.075
D10	mm	0.0418
Uniformity Coefficient		2.7
Curvature Coefficient		1.2

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	03/12/2025 09:38

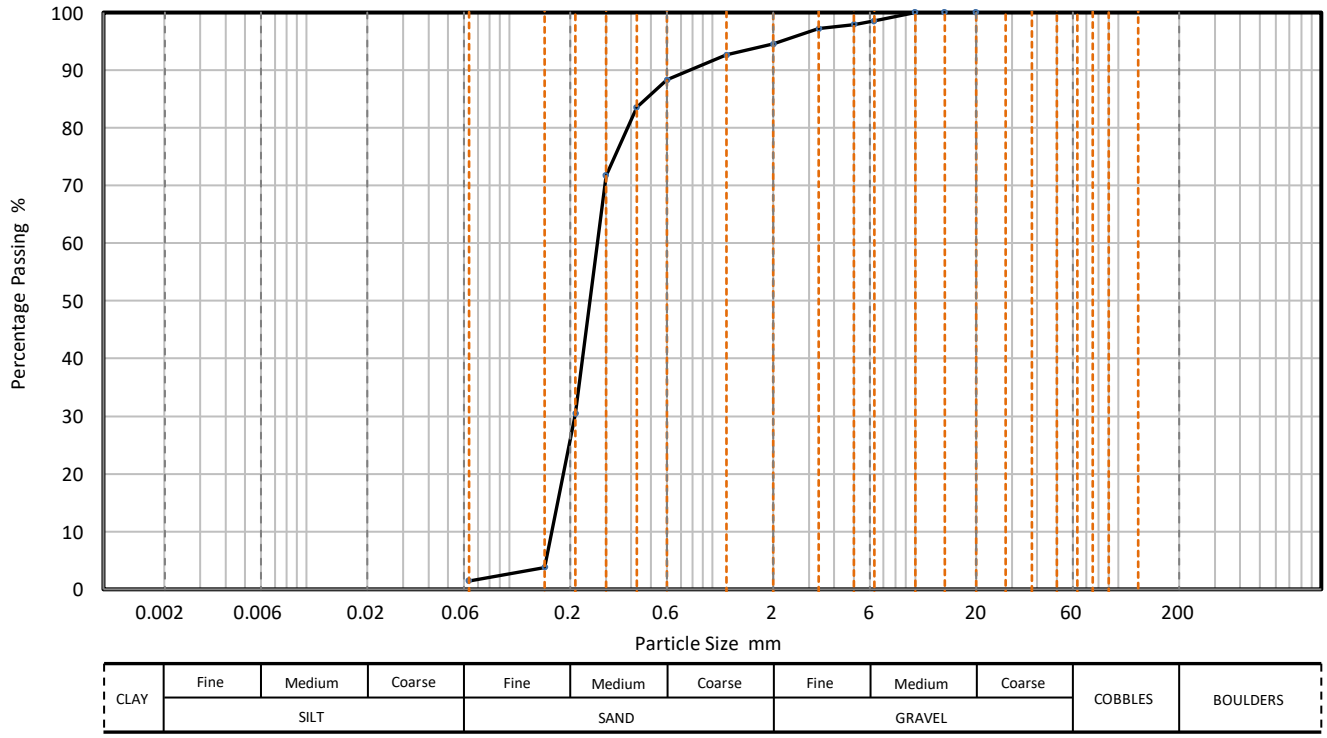
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10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-104	Lab sample ID	G2MT2025110522
Depth (Top) m	-0.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	99		
5	98		
3.35	97		
2	95		
1.18	93		
0.6	88		
0.425	84		
0.3	72		
0.212	30		
0.15	4		
0.063	2		

Dry Mass of sample, g	1153

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	5.5
Sand	93.0
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.272
D30	mm	0.211
D10	mm	0.163
Uniformity Coefficient		1.7
Curvature Coefficient		1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:34

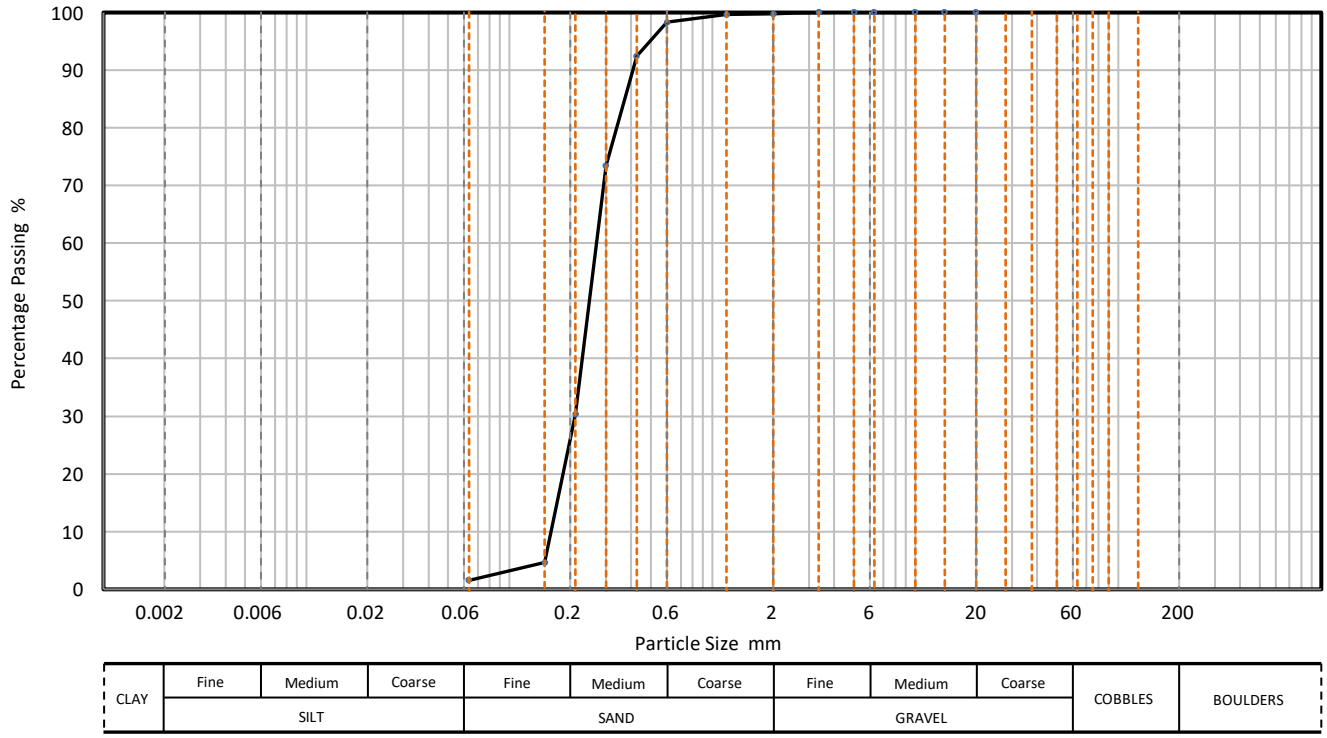
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UKAS TESTING
10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-104	Lab sample ID	G2MT2025110520
Depth (Top) m	2.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	98		
0.425	92		
0.3	73		
0.212	30		
0.15	5		
0.063	2		

Dry Mass of sample, g	517

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	98.1
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.269
D30	mm	0.211
D10	mm	0.161
Uniformity Coefficient		1.7
Curvature Coefficient		1

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:35

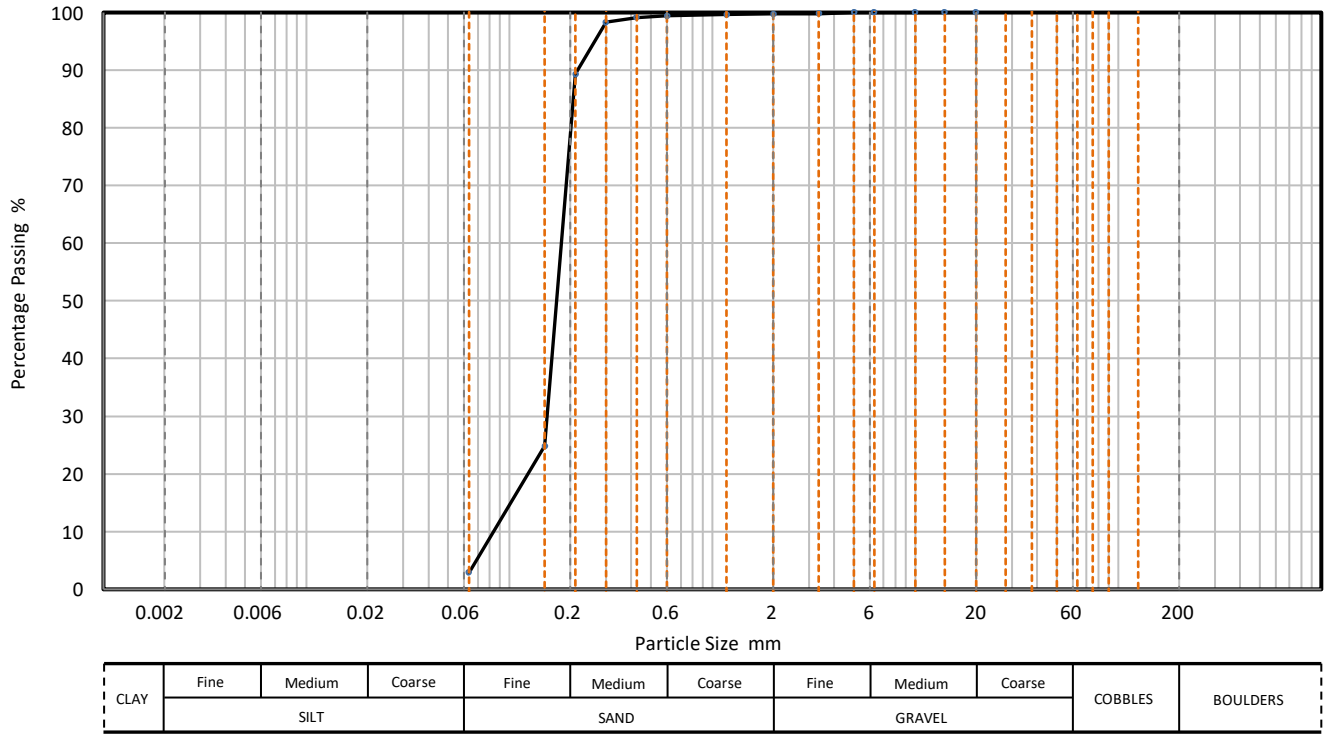
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10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-104	Lab sample ID	G2MT2025110524
Depth (Top) m	-8.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	98		
0.212	89		
0.15	25		
0.063	3		

Dry Mass of sample, g	690

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	96.8
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.181
D30	mm	0.154
D10	mm	0.0835
Uniformity Coefficient		2.2
Curvature Coefficient		1.6

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:38

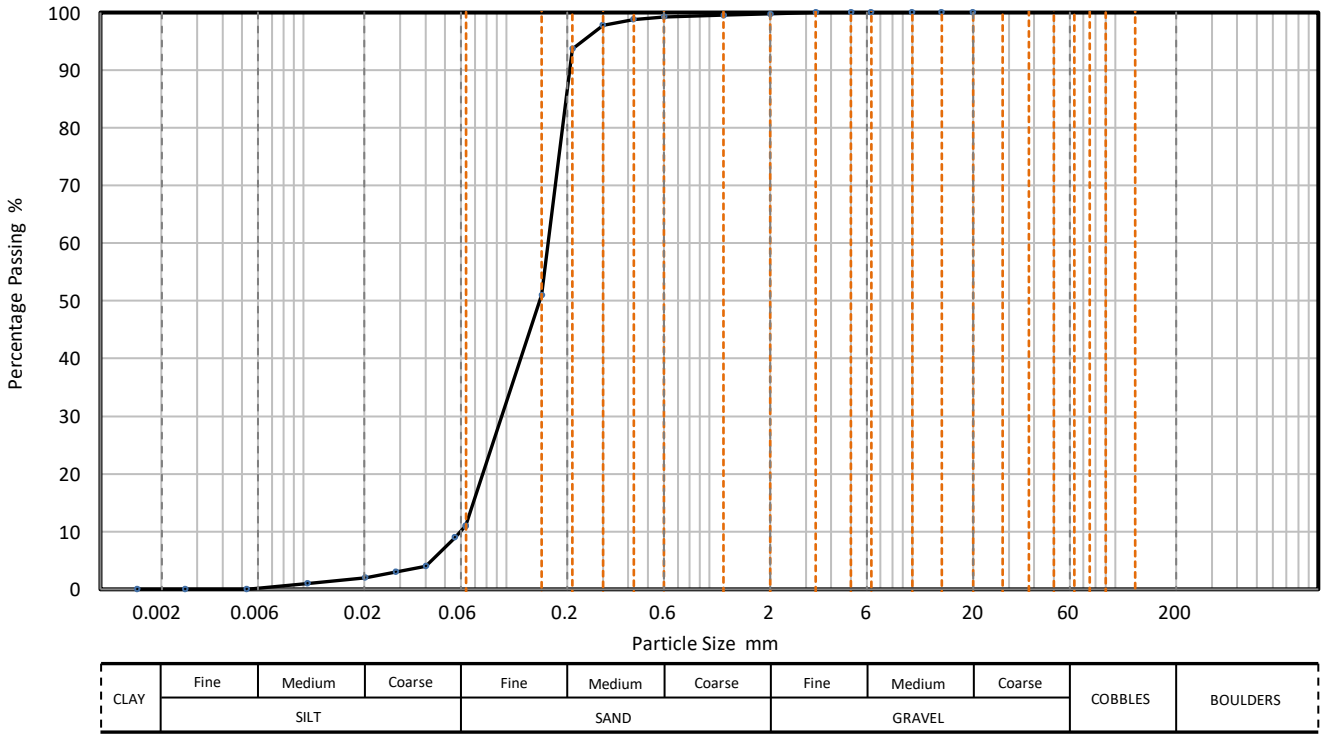
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-104	Lab sample ID	G2MT2025110525
Depth (Top) m	-11.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Gravelly, Silty SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	11
		0.0559	9
		0.0402	4
		0.0286	3
		0.0202	2
		0.0105	1
		0.0053	0
20	100	0.0026	0
14	100	0.0015	0
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	98		
0.212	94		
0.15	51		
0.063	11		

Dry Mass of sample, g: 708

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	88.9
Silt	10.8
Clay	0.0

Grading Analysis		
D100	mm	
D60	mm	0.161
D30	mm	0.0952
D10	mm	0.0593
Uniformity Coefficient		2.7
Curvature Coefficient		0.95

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	03/12/2025 09:52

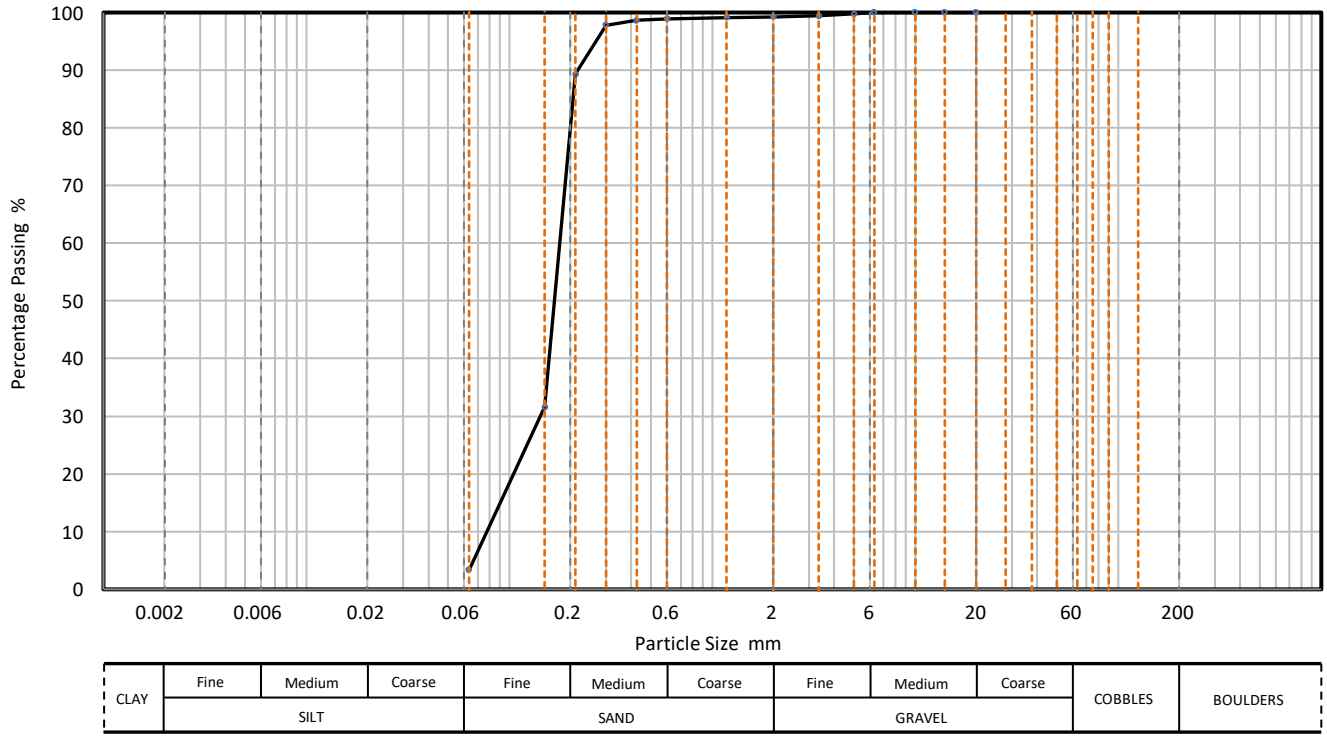
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-104	Lab sample ID	G2MT2025110526
Depth (Top) m	-15.30	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	99		
1.18	99		
0.6	99		
0.425	99		
0.3	98		
0.212	89		
0.15	32		
0.063	3		

Dry Mass of sample, g	852

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	95.8
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.178
D30	mm	0.143
D10	mm	0.0772
Uniformity Coefficient		2.3
Curvature Coefficient		1.5

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:37

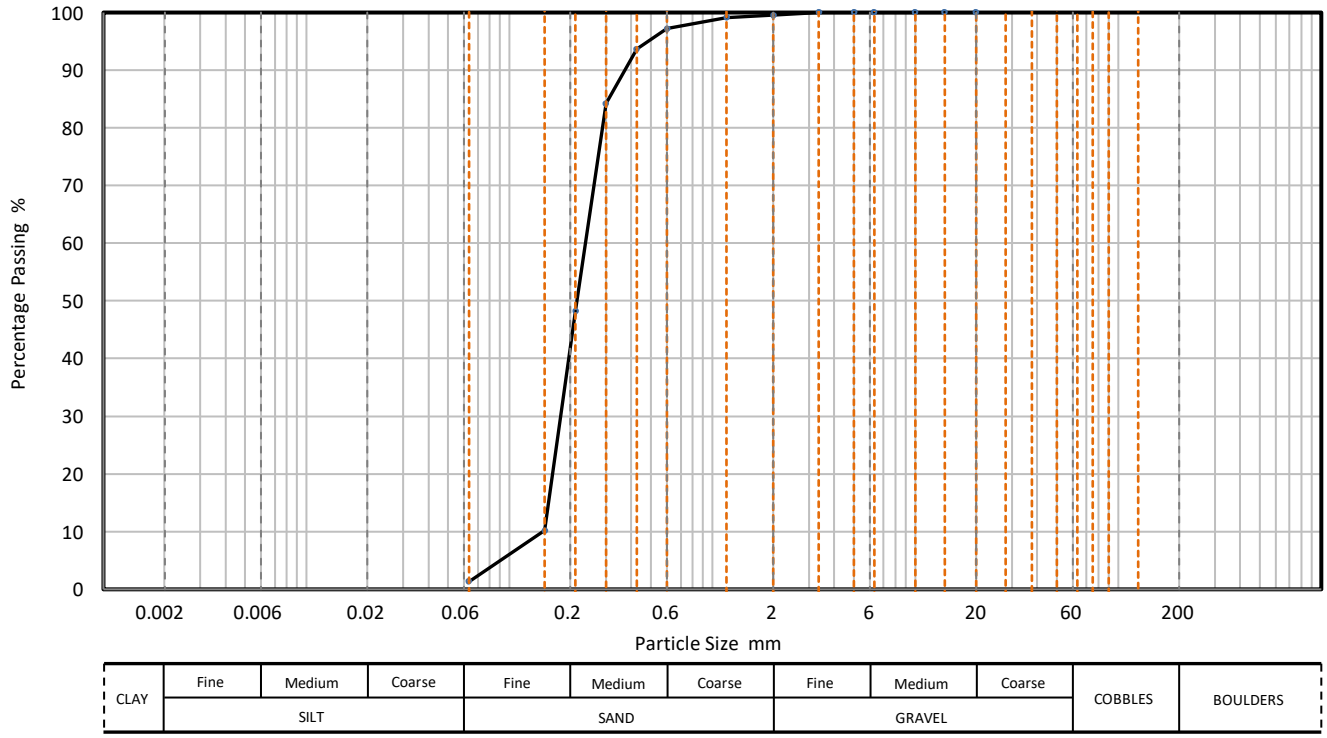
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-201	Lab sample ID	G2MT2025110542
Depth (Top) m	-1.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	97		
0.425	94		
0.3	84		
0.212	48		
0.15	10		
0.063	1		

Dry Mass of sample, g	985

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.5
Sand	98.1
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.238
D30	mm	0.18
D10	mm	0.147
Uniformity Coefficient		1.6
Curvature Coefficient		0.93

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:49

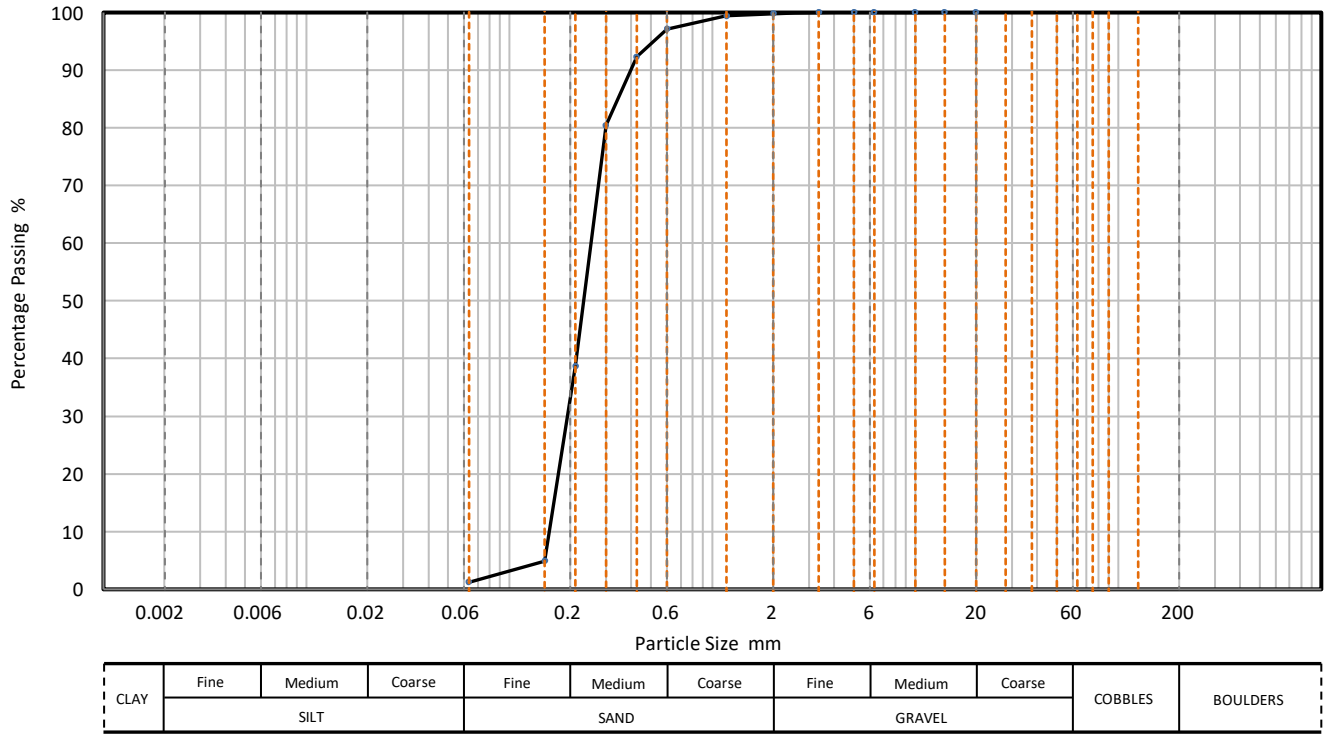
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-201	Lab sample ID	G2MT2025110540
Depth (Top) m	2.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	97		
0.425	92		
0.3	80		
0.212	39		
0.15	5		
0.063	1		

Dry Mass of sample, g: 1215

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	98.5
Fines <0.063mm	1.0

Grading Analysis		
D100	mm	
D60	mm	0.253
D30	mm	0.194
D10	mm	0.158
Uniformity Coefficient		1.6
Curvature Coefficient		0.94

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:31

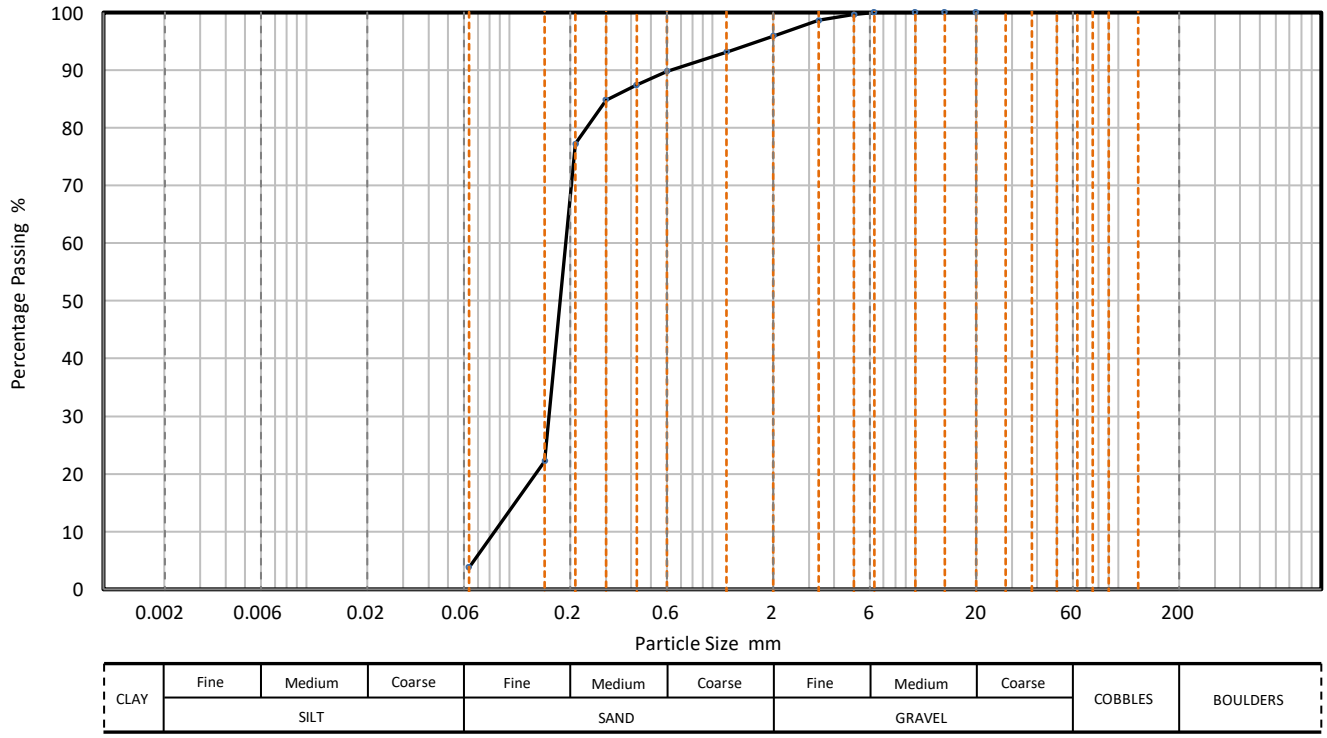
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10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-201	Lab sample ID	G2MT2025110545
Depth (Top) m	-8.50	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	96		
1.18	93		
0.6	90		
0.425	87		
0.3	85		
0.212	77		
0.15	22		
0.063	4		

Dry Mass of sample, g: 1005

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	4.1
Sand	92.1
Fines <0.063mm	4.0

Grading Analysis		
D100	mm	
D60	mm	0.19
D30	mm	0.158
D10	mm	0.0844
Uniformity Coefficient		2.3
Curvature Coefficient		1.5

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:11

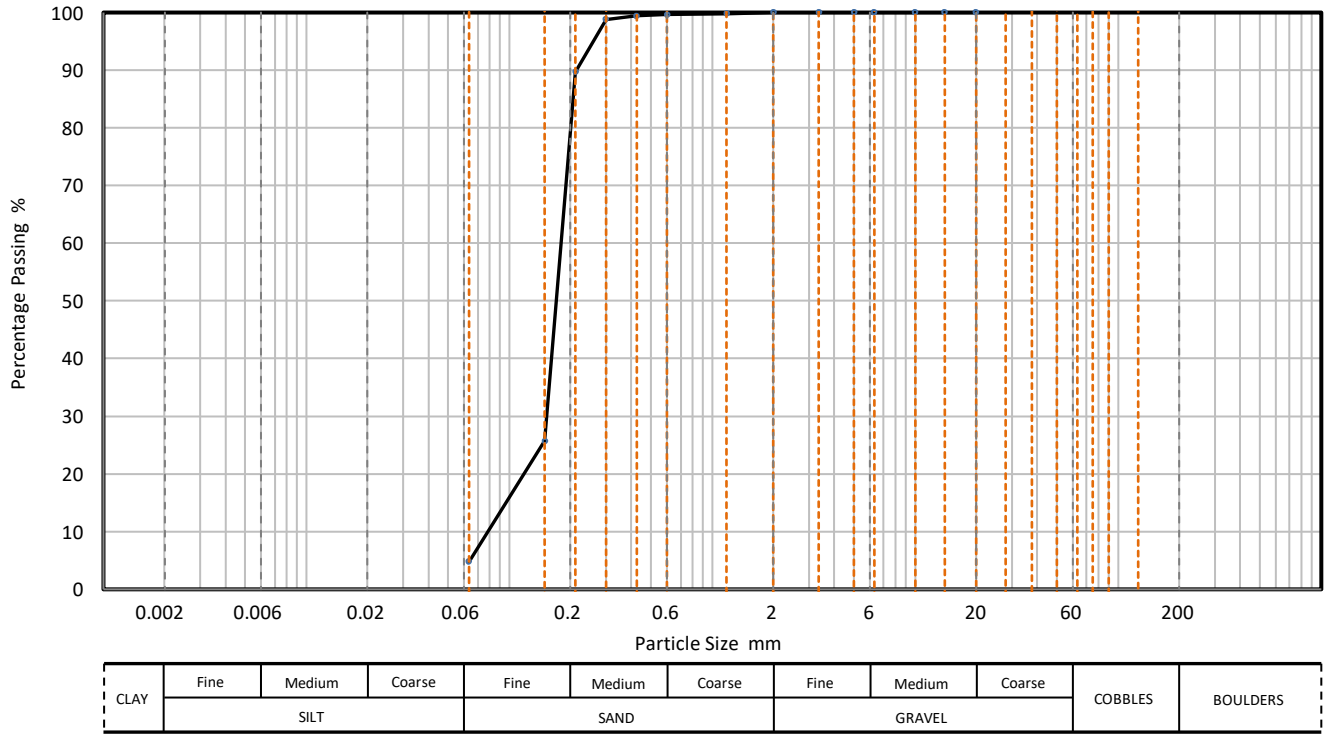
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-201	Lab sample ID	G2MT2025110547
Depth (Top) m	-13.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	99		
0.212	90		
0.15	26		
0.063	5		

Dry Mass of sample, g	874

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.0
Sand	95.2
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.181
D30	mm	0.153
D10	mm	0.0781
Uniformity Coefficient		2.3
Curvature Coefficient		1.7

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:51

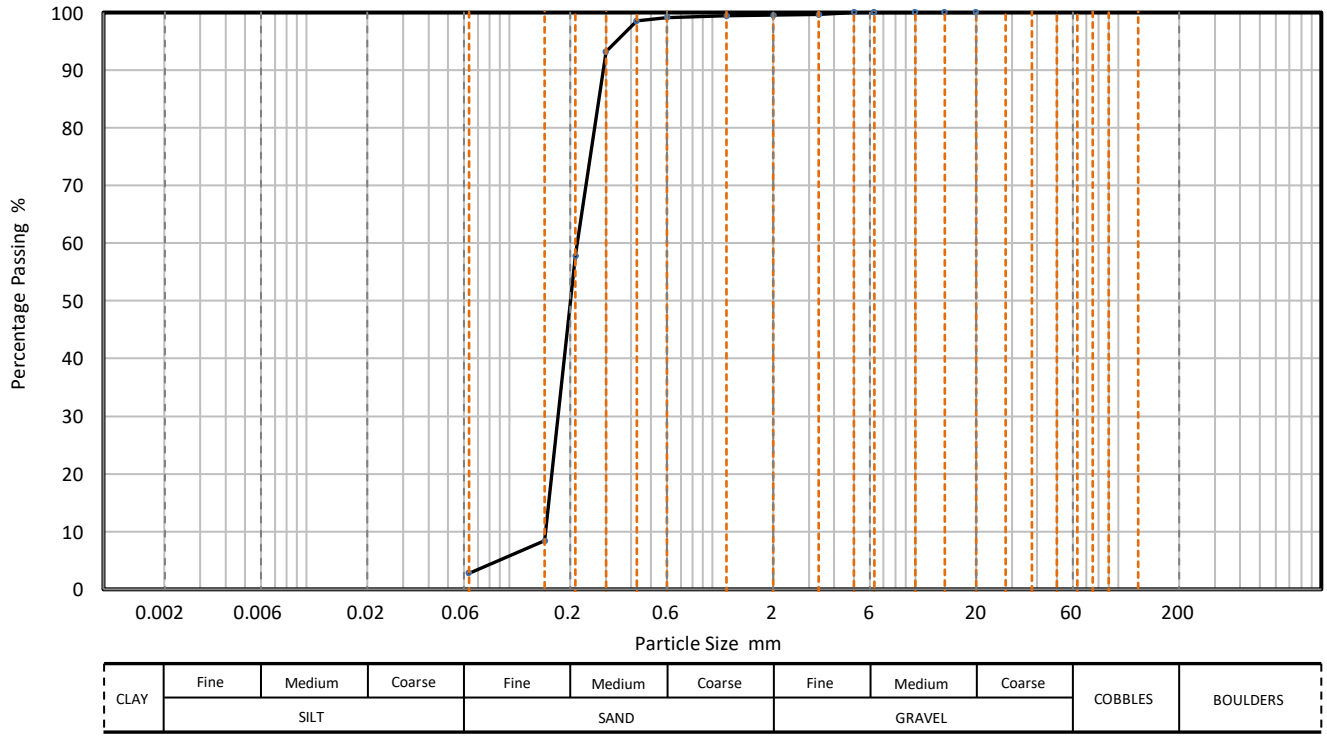
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-202	Lab sample ID	G2MT2025110548
Depth (Top) m	2.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	99		
0.425	99		
0.3	93		
0.212	58		
0.15	8		
0.063	3		

Dry Mass of sample, g: 1109

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.5
Sand	96.7
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.217
D30	mm	0.175
D10	mm	0.152
Uniformity Coefficient		1.4
Curvature Coefficient		0.93

Remarks

Preparation and testing in accordance with test method unless noted below

Accreditation status

Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 13:57

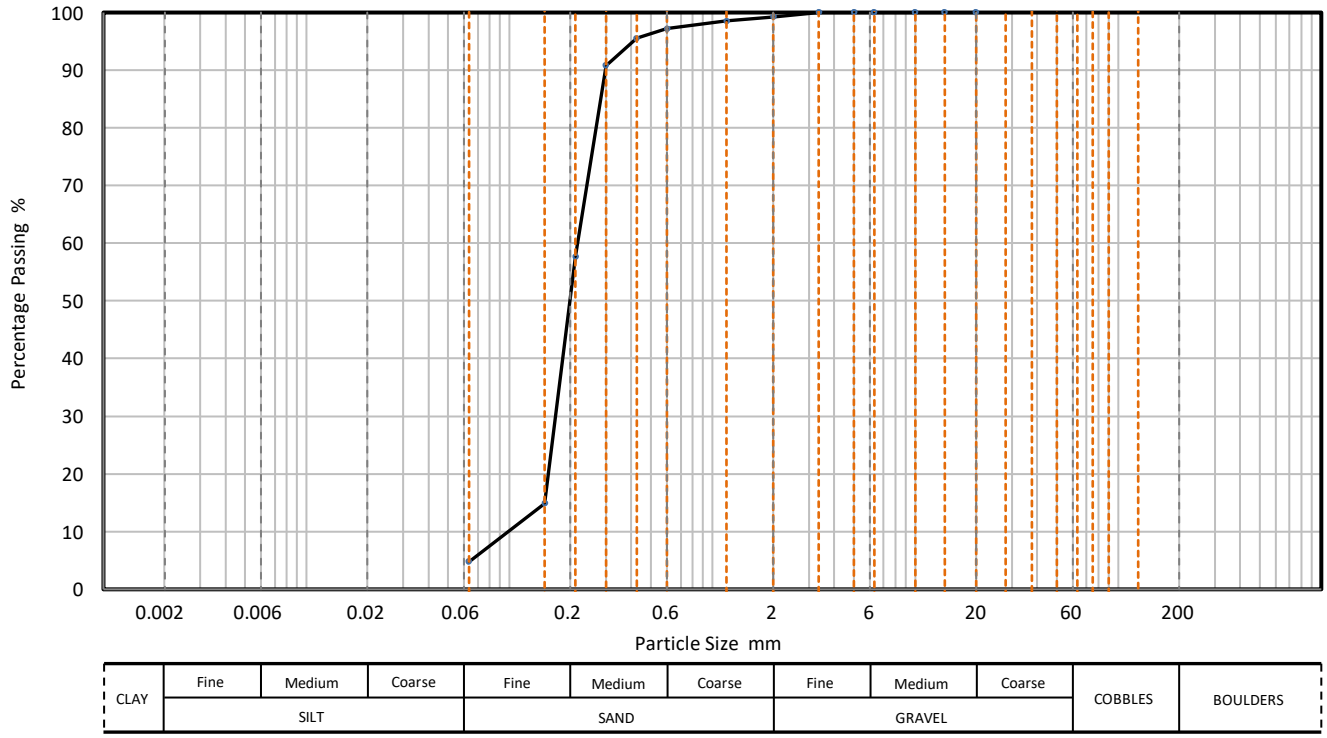
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-202	Lab sample ID	G2MT2025110550
Depth (Top) m	-4.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	97		
0.425	96		
0.3	91		
0.212	58		
0.15	15		
0.063	5		

Dry Mass of sample, g	823

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.8
Sand	94.4
Fines <0.063mm	5.0

Grading Analysis		
D100	mm	
D60	mm	0.217
D30	mm	0.17
D10	mm	0.0988
Uniformity Coefficient		2.2
Curvature Coefficient		1.3

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:28

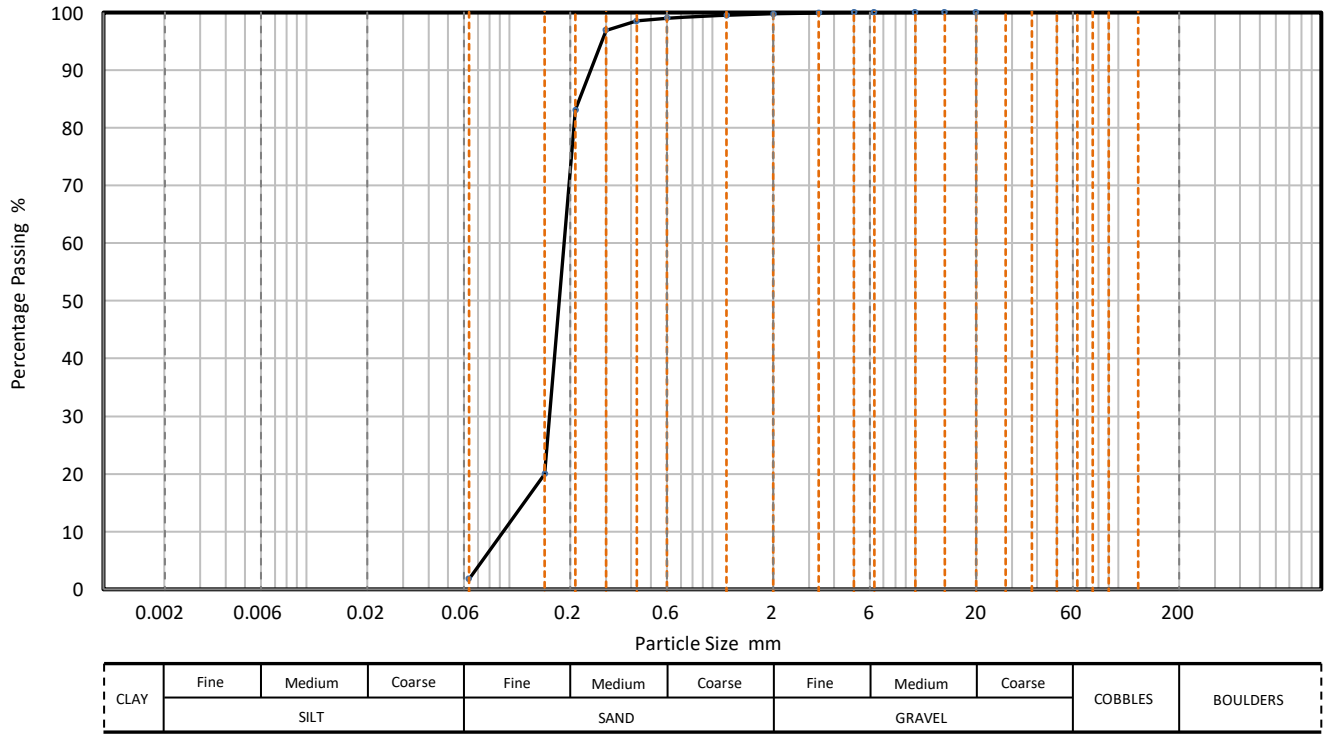
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10258

Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-202	Lab sample ID	G2MT2025110552
Depth (Top) m	-7.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Very slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99		
0.425	99		
0.3	97		
0.212	83		
0.15	20		
0.063	2		

Dry Mass of sample, g	884

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.3
Sand	97.9
Fines <0.063mm	2.0

Grading Analysis		
D100	mm	
D60	mm	0.187
D30	mm	0.158
D10	mm	0.0929
Uniformity Coefficient		2
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:14

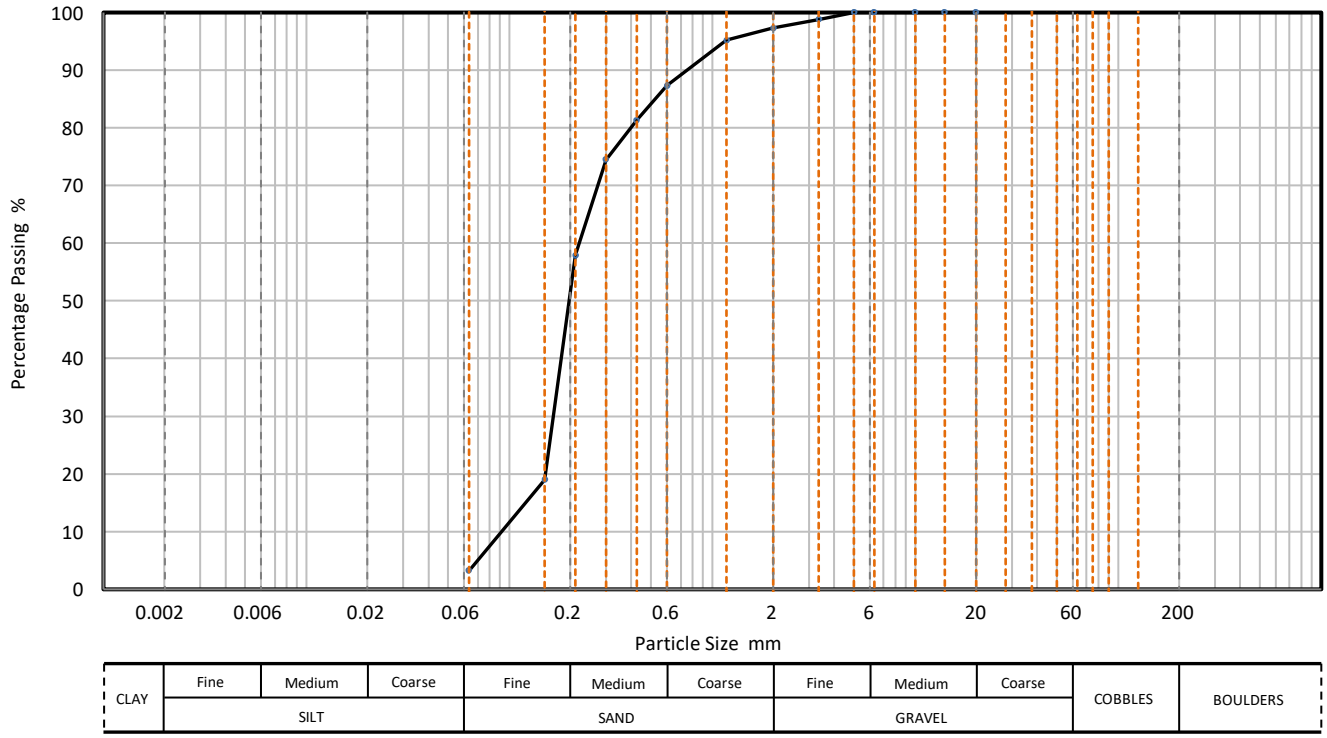
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Site name	Job number
Marine GI - Ardersier Port	S250403

Hole	CP-202	Lab sample ID	G2MT2025110554
Depth (Top) m	-13.00	Test Method	BS 1377 - 2 : 1990 Clause 9.2
Depth (Base) m		Soil Description	Slightly Gravelly, slightly Silty, SAND
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	97		
1.18	95		
0.6	87		
0.425	81		
0.3	75		
0.212	58		
0.15	19		
0.063	3		

Dry Mass of sample, g	818

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	2.7
Sand	94.0
Fines <0.063mm	3.0

Grading Analysis		
D100	mm	
D60	mm	0.221
D30	mm	0.165
D10	mm	0.0912
Uniformity Coefficient		2.4
Curvature Coefficient		1.4

Remarks
Preparation and testing in accordance with test method unless noted below

Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	D Anderson
Approval date	24/11/2025 14:15

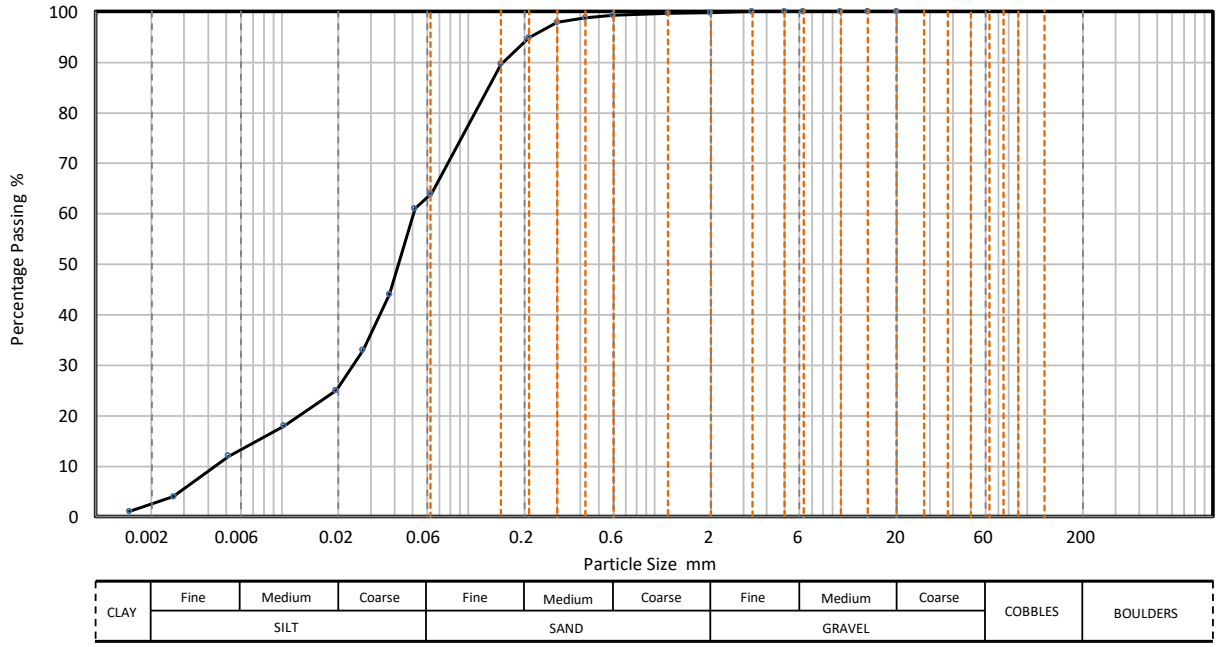
PARTICLE SIZE DISTRIBUTION

Site name	Job number
Marine GI - Ardersier Port	S250403

G2M Testing (Stockton)
12-16 Yarm Road
Stockton on Tees
TS18 3NA
01642 033318
info@g2mtesting.co.uk

UKAS TESTING
10258

Hole	CP-202	Lab sample ID	G2MT2025110557
Depth (Top) m	-16.00	Test Method	BS 1377 - 2 : 1990 Clauses 9.2 and 9.5
Depth (Base) m		Soil Description	Slightly Clayey, Very Sandy SILT
Sample type	B		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0630	64
		0.0517	61
		0.0377	44
		0.0272	33
		0.0195	25
		0.0102	18
		0.0052	12
20	100	0.0026	4
14	100	0.0015	1
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	99	Particle density	(assumed)
0.425	99	2.65	Mg/m3
0.3	98		
0.212	95		
0.15	90		
0.063	64		

Dry Mass of sample, g: 851

Sample Proportions	% dry mass
Very coarse	0.0
Gravel	0.2
Sand	36.0
Silt	61.5
Clay	2.3

Grading Analysis		
D100	mm	
D60	mm	0.0511
D30	mm	0.0238
D10	mm	0.00444
Uniformity Coefficient		12
Curvature Coefficient		2.5

Remarks
Preparation and testing in accordance with test method unless noted below

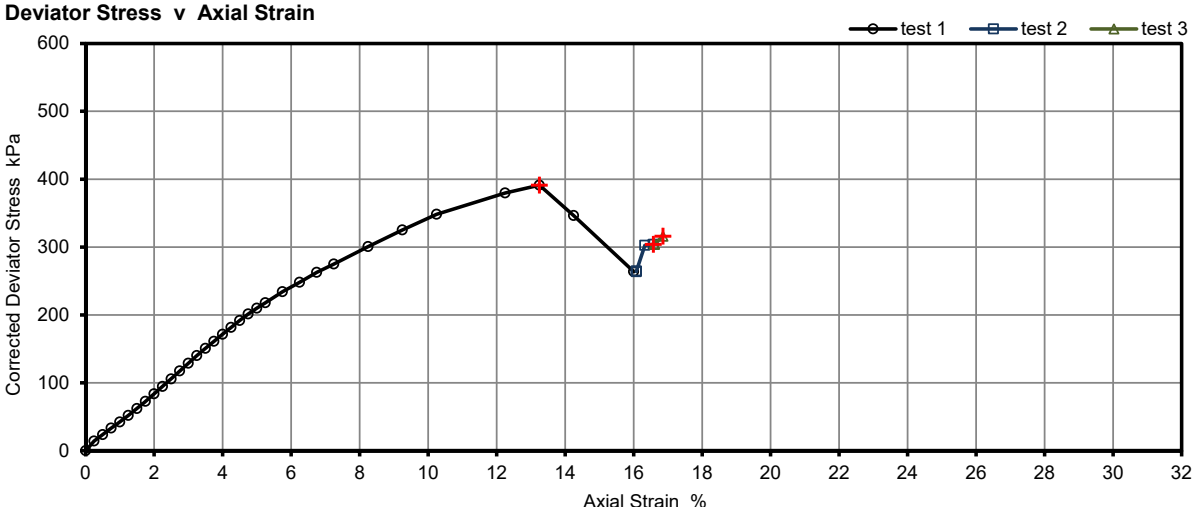
Accreditation status
Hydrometer is the usual Sedimentation method carried out by G2M Testing and is part of the G2M Testing UKAS accreditation schedule.

Approved by	JBrischuk
Approval date	03/12/2025 09:40

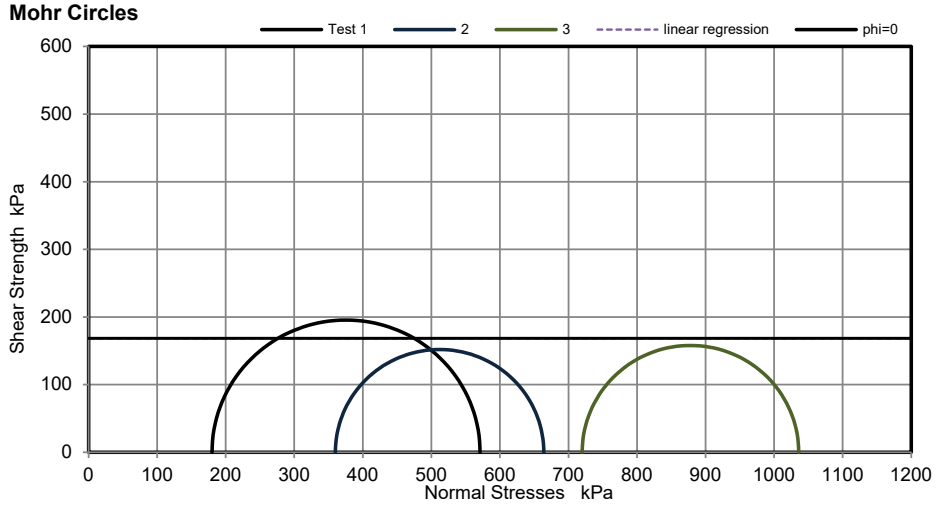
UKAS TESTING 10258	**Unconsolidated Undrained Triaxial Compression Test without measurement of pore pressure - Multistage test**			Job Ref	S250403
				Borehole/Pit No.	BH-205
Site Name	Marine GI - Ardersier Port			Sample No.	
Soil Description				Depth	-17.12
Specimen Reference	BH-205	Specimen Depth	-17.12 m	Sample Type	U
Specimen Description	Very High Strength CLAY			KeyLAB ID	G2MT2025101443
Test Method	BS1377:Part 7:1990, clause 9, multistage test on a single specim			Date of test	28/10/2025

				No of membranes used	
Length		mm	200.0		
Diameter		mm	100.0	Total thickness (mm)	
Bulk Density		Mg/m3	2.55		
Moisture Content		%	11	Membrane Correction	
Dry Density		Mg/m3	2.29		
Rate of Strain		%/min	2.00		
Stage Number			1	2	3
Cell Pressure		kPa	180	360	720
End of stage	Axial Strain	%	13.2	16.6	16.9
	Deviator Stress, (σ1 - σ3) corrected for area and membrane	kPa	391.1	304.0	315.9
	Shear strength, cu	kPa	195.6	152.0	158.0
	Mode of failure		Plastic		

Deviator Stress v Axial Strain



Mohr Circles



ϕu = 0

Average cu 169 kPa

Linear Regression

ϕu 0.0 °

cu 169 kPa

Mohr circles and their interpretation is not covered by BS1377. These are provided for information only.

Remarks

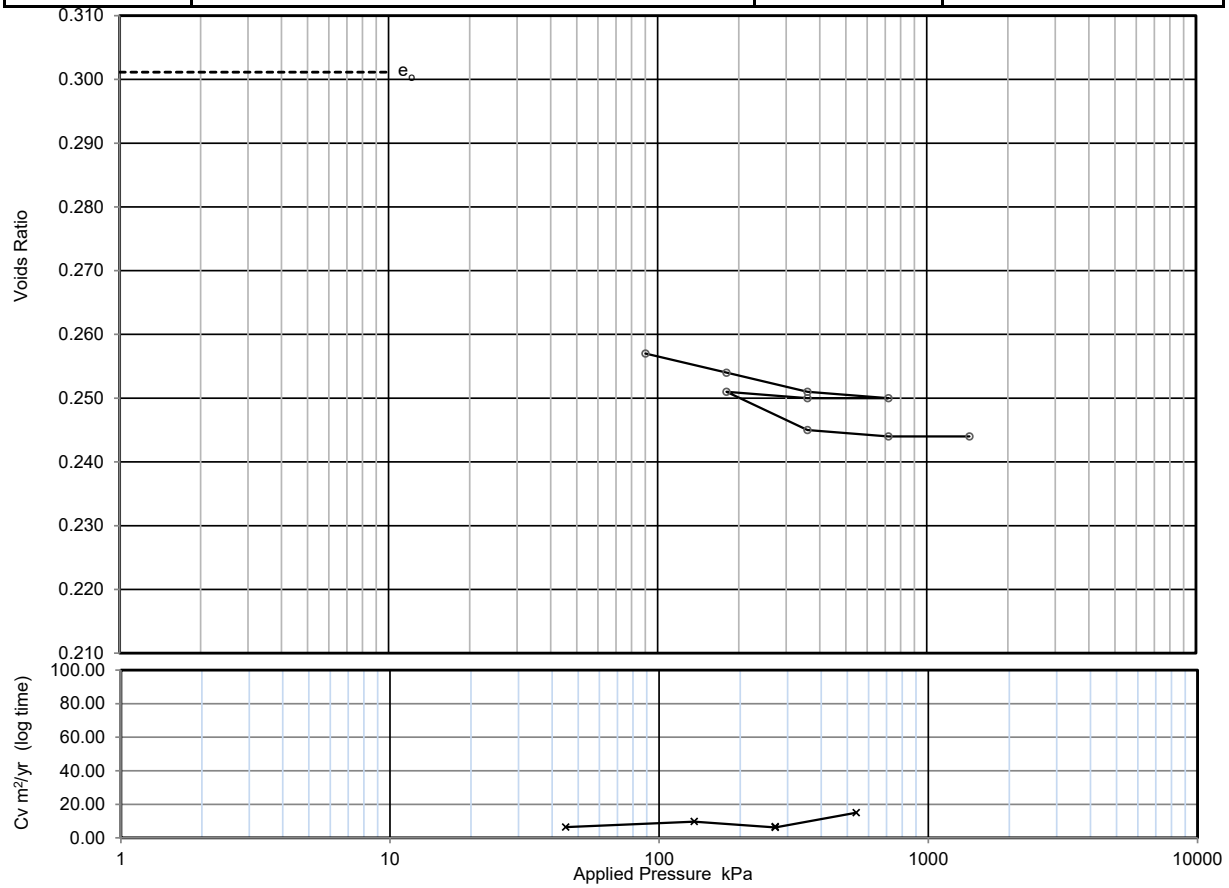
Approved	Printed
JBrischuk	19/02/2026 09:07

Lab Sheet Reference :

Fig. No. 1

Sheet 1

UKAS TESTING 10258	**ONE DIMENSIONAL CONSOLIDATION TEST ISO 17892-5:2017**			Job Ref	S250403
				Borehole/Pit No.	BH-205
Site Name	Marine GI - Ardersier Port			Sample No.	
Soil Description				Depth	-17.12
Specimen Reference	BH-205	Specimen Depth	-17.12 m	Sample Type	U
Specimen Description				KeyLAB ID	G2MT2025101443
Test Method	ISO 17892-5:2017			Date started	04/11/2025



Applied Pressure kPa	Voids ratio	Mv m2/MN	Cv (t50, log) m2/yr	Cv (t90, root) m2/yr	Csec
0.0	0.301	-	-	-	-
90	0.257	0.37	6.4	8.8	0.00032
180	0.254	0.025	9.7	22	0.00047
360	0.251	0.013	6.2	54	0.00063
720	0.250	0.0036	15	140	0.00063
360	0.250	0.0014			
180	0.251	0.0032			
360	0.245	0.029	6.7	600	-2.15E+09
720	0.244	0.0017	54	170	0.0003
1,440	0.244	0.00015	32	37	0.00083

Preparation

Index tests Liquid limit % Plastic limit %

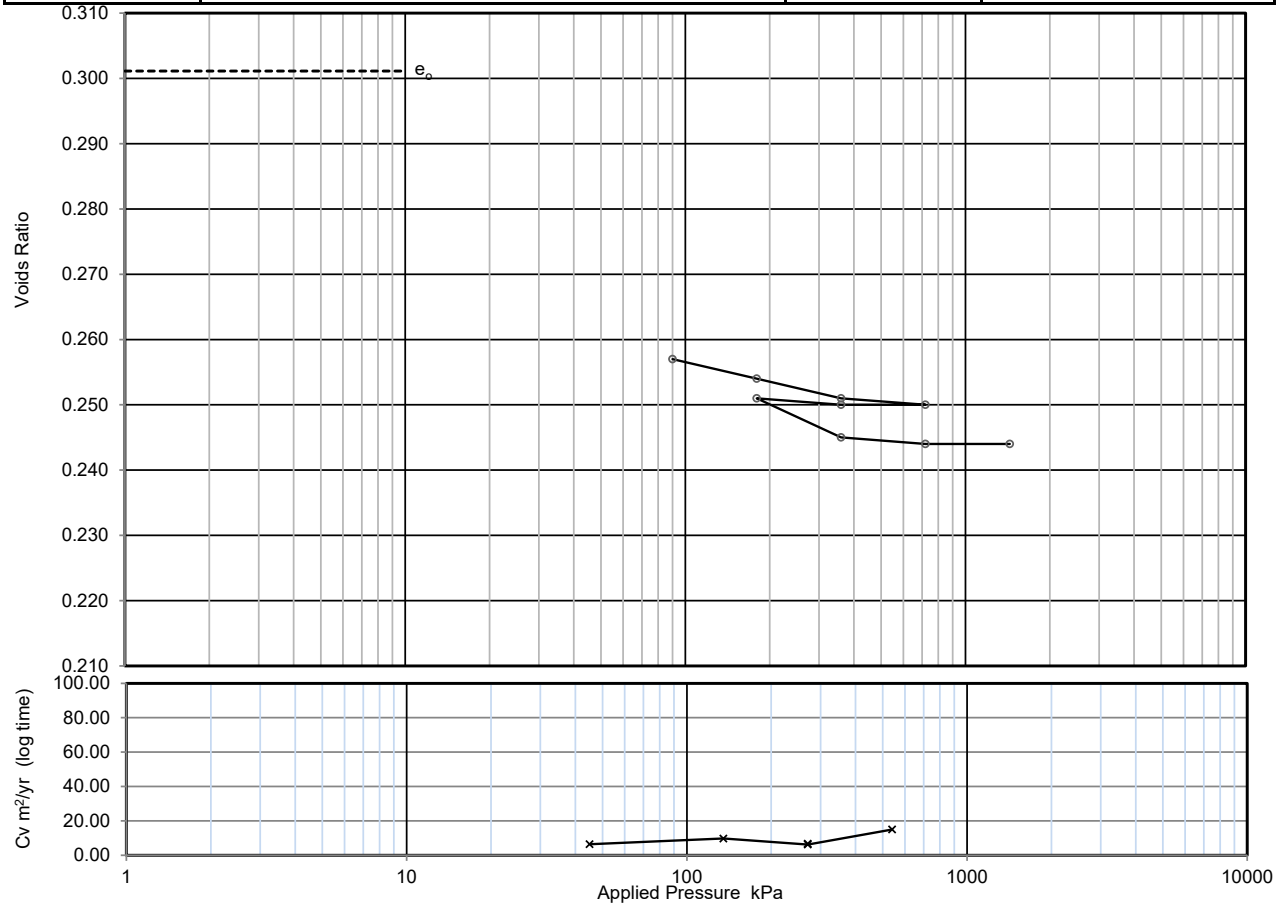
Particle density assumed 2.65 Mg/m3

Specimen details	Initial	Final	
Diameter	75.03	-	mm
Height	20.06	19.17	mm
Water Content	12	10	%
Bulk density	2.27		Mg/m3
Dry density	2.04		Mg/m3
Voids Ratio	0.301		
Saturation	103		%
Average temperature for test	21.0		oC
Swelling Pressure			kPa
Settlement on saturation			%

Remarks

Final values should be used with caution Cv plotted at mid point of load increments Cv corrected to 20oC	Tested	Checked	Approved	Printed : 19/02/2026 09:07	Fig. No 1

UKAS TESTING 10258	**ONE DIMENSIONAL CONSOLIDATION TEST ISO 17892-5:2017**			Job Ref	S250403
				Borehole/Pit No.	BH-205
Site Name	Marine GI - Ardersier Port			Sample No.	
Soil Description				Depth	-17.12
Specimen Reference	BH-205	Specimen Depth	-17.12 m	Sample Type	U
Specimen Description				KeyLAB ID	G2MT2025101443
Test Method	ISO 17892-5:2017			Date started	04/11/2025



Applied Pressure kPa	Voids ratio	Mv m2/MN	Cv (t50, log) m2/yr	Cv (t90, root) m2/yr	Csec
0.0	0.301	-	-	-	-
90	0.257	0.37	6.4	8.8	0.00032
180	0.254	0.025	9.7	22	0.00047
360	0.251	0.013	6.2	54	0.00063
720	0.250	0.0036	15	140	0.00063
360	0.250	0.0014			
180	0.251	0.0032			
360	0.245	0.029	6.7	600	-2.15E+09
720	0.244	0.0017	54	170	0.0003
1,440	0.244	0.00015	32	37	0.00083

Preparation

Index tests Liquid limit % Plastic limit %

Particle density assumed 2.65 Mg/m3

Specimen details	Initial	Final	
Diameter	75.03	-	mm
Height	20.06	19.17	mm
Water Content	12	10	%
Bulk density	2.27		Mg/m3
Dry density	2.04		Mg/m3
Voids Ratio	0.301		
Saturation	103		%
Average temperature for test	21.0		oC
Swelling Pressure			kPa
Settlement on saturation			%

Remarks

Final values should be used with caution Cv plotted at mid point of load increments Cv corrected to 20oC	Tested	Checked	Approved	Printed : 19/02/2026 09:07	Fig. No 1

Density Tests - Summary of Results

Project No.: S250403

Project Name: Marine GI - Ardersier Port

Hole No.	Sample Ref	Sample Top	Sample Base	Sample Type	Soil Description	Linear Measurement Bulk density Mg/m3	Linear Measurement Dry density Mg/m3	Linear Measurement w %	Immersion in water Bulk density Mg/m3	Immersion in water Dry density Mg/m3	Immersion in water w %	Water displacement Bulk density Mg/m3	Water displacement Dry density Mg/m3	Water displacement w %	Remarks
BH-113		-16.58		D		1.96	1.57	24.2							
BH-116		-10.50		B		1.82	1.49	22.5							
BH-203		-12.00		B		2.17	1.90	14.1							

Legend: w moisture content of the density test specimen

Notes

Tests carried out in accordance with BS1377:Part2:1990 and the following clauses unless annotated otherwise

Linear measurement	clause 7.2
Immersion in water	clause 7.3
Water displacement	clause 7.4

Date Printed: 19/02/2026

Approved By: D Anderson

Table: 1

sheet: 1

Particle Density by Gas Jar Tests - Summary of Results

Project No.	Project Name
S250403	Marine GI - Ardersier Port

Hole No.	Sample				Soil Description at test horizon	Particle Density Mg/m3	Remarks
	Ref	Top	Base	Type			
BH-102		3.50		B		2.66	
BH-202		-10.20		B		2.65	
BH-202		-13.20		B		2.72	
BH-205		-2.08		B		2.66	
BH-205		-6.80		B		2.65	
CP-202		-16.00		B		2.70	

Notes	Date Printed	Table
Tests performed in accordance with BS 1377 unless annotated otherwise Gas Jar tests to BS1377: Part 2 : 1990, clause 8.2	19/02/2026	sheet

SITE NAME:
JOB NUMBER:

Hole	Depth m	Type	Hand Vane (kPa)
BH-207	-28.24	U100	12, 10, 10

Checked & Approved by: J.Brischuk
Date: 22/09/2025

Certificate of Analysis

Certificate Number 25-21353 *Issued:* 23-Sep-25

Client G2M Testing Ltd
12 Yarm Road
Stockton On Tees
Cleveland
TS18 3NA

Our Reference 25-21353

Client Reference ~ S250403

Order No ~ LAB2464

Contract Title ~ MARINE GI-Ardersier Port

Description 3 Soil samples.

Date Received 15-Sep-25

Date Started 15-Sep-25

Date Completed 23-Sep-25

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Reyhan Irfan
Operations Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Symbol key
at end of report

Summary of Chemical Analysis
Soil Samples

Our Ref 25-21353
Client Ref ~ S250403
Contract Title ~ MARINE GI-Ardersier Port

			Lab No	2568400	2568401	2568402
			Sample ID ~	BH-116	BH-114	BH-117
			Depth ~			
			Other ID ~			
			Sample Type ~	D	D	D
			Sampling Date ~	n/s	n/s	n/s
			Sampling Time ~	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Inorganics						
Organic matter	DETSC 2002#	0.1	%	0.2	1.4	0.6

Symbol key at end of report

Information in Support of the Analytical Results

Our Ref 25-21353
Client Ref ~ S250403
Contract ~ MARINE GI-Ardersier Port

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2568400	BH-116 SOIL		PT 500ml	Sample date not supplied, Organic Matter (Manual) (28 days)	
2568401	BH-114 SOIL		PT 500ml	Sample date not supplied, Organic Matter (Manual) (28 days)	
2568402	BH-117 SOIL		PT 500ml	Sample date not supplied, Organic Matter (Manual) (28 days)	

Key: P-Plastic T-Tub
Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.09.01

Symbol key at end of report

Certificate of Analysis

Certificate Number	25-21764	*Issued:*	29-Sep-25

Client G2M Testing Ltd
12 Yarm Road
Stockton On Tees
Cleveland
TS18 3NA

Our Reference	25-21764
Client Reference ~	S250403
Order No ~	LAB2468
Contract Title ~	Marine GI - Ardersier
Description	1 Soil sample.
Date Received	19-Sep-25
Date Started	19-Sep-25
Date Completed	29-Sep-25
Test Procedures	Identified by prefix DETSn (details on request).
Notes	Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Louise Cook
Contracts Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Summary of Chemical Analysis
Soil Samples

Our Ref 25-21764
Client Ref ~ S250403
Contract Title ~ Marine GI - Ardersier

Lab No	2570948
Sample ID ~	BH-108
Depth ~	4.80
Other ID ~	
Sample Type ~	D
Sampling Date ~	n/s
Sampling Time ~	n/s

Test	Method	LOD	Units	
Inorganics				
Organic matter	DETSC 2002#	0.1	%	0.4

Symbol key at end of report

Information in Support of the Analytical Results

Our Ref 25-21764
Client Ref ~ S250403
Contract ~ Marine GI - Ardersier

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2570948	BH-108 4.80 SOIL		PT 1L	Sample date not supplied, Organic Matter (Manual) (28 days)	

Key: P-Plastic T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.09.01

Symbol key at end of report

Certificate of Analysis

Certificate Number	25-22803	*Issued:*	09-Oct-25

Client G2M Testing Ltd
12 Yarm Road
Stockton On Tees
Cleveland
TS18 3NA

Our Reference	25-22803
Client Reference ~	S250403
Order No ~	LAB2480
Contract Title ~	Marine GI - Ardersier Port Sch 11, 16, 17 Comb
Description	1 Soil sample.
Date Received	03-Oct-25
Date Started	03-Oct-25
Date Completed	09-Oct-25
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Louise Cook
Contracts Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Symbol key
at end of report

Summary of Chemical Analysis
Soil Samples

Our Ref 25-22803
Client Ref ~ S250403
Contract Title ~ Marine GI - Ardersier Port Sch 11, 16, 17 Comb

Lab No	2577144
Sample ID ~	BH119
Depth ~	6.20
Other ID ~	
Sample Type ~	D
Sampling Date ~	n/s
Sampling Time ~	n/s

Test	Method	LOD	Units	
Inorganics				
Organic matter	DETSC 2002#	0.1	%	0.6

Symbol key at end of report

Information in Support of the Analytical Results

Our Ref 25-22803
Client Ref ~ S250403
Contract ~ Marine GI - Ardersier Port Sch 11, 16, 17 Comb

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2577144	BH119 6.20 SOIL		PT 1L	Sample date not supplied, Organic Matter (Manual) (28 days)	

Key: P-Plastic T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.10.01

Certificate of Analysis

Certificate Number	25-23928	*Issued:*	23-Oct-25

Client G2M Testing Ltd
12 Yarm Road
Stockton On Tees
Cleveland
TS18 3NA

Our Reference	25-23928
Client Reference ~	S250403
Order No ~	LAB2490
Contract Title ~	Marine GI - Ardersier Port SCH 12, 13, 14, 18, 19, 20, 21, 25, 26, (
Description	2 Soil samples.
Date Received	16-Oct-25
Date Started	16-Oct-25
Date Completed	23-Oct-25
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Reyhan Irfan
Operations Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Summary of Chemical Analysis
Soil Samples

Our Ref 25-23928
Client Ref ~ S250403
Contract Title ~ Marine GI - Ardersier Port SCH 12, 13, 14, 18, 19, 20, 21, 25, 26, Comb

Lab No	2583871	2583872
Sample ID ~	BH-202	BH-201
Depth ~	4.10	4.70
Other ID ~		
Sample Type ~	D	D
Sampling Date ~	n/s	n/s
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
Inorganics					
Organic matter	DETSC 2002#	0.1	%	4.6	0.4

Symbol key at end of report

Information in Support of the Analytical Results

Our Ref 25-23928
Client Ref ~ S250403
Contract ~ Marine GI - Ardersier Port SCH 12, 13, 14, 18, 19, 20, 21, 25, 26, Comb

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2583871	BH-202 4.10 SOIL		PT 1L	Sample date not supplied, Organic Matter (Manual) (28 days)	
2583872	BH-201 4.70 SOIL		PT 1L	Sample date not supplied, Organic Matter (Manual) (28 days)	

Key: P-Plastic T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
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# -MCERTS (accreditation only applies if report carries the MCERTS logo).
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I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.10.01

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	0.8
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010625
Test Method	BS EN ISO 17892-10:2018			Date of test	

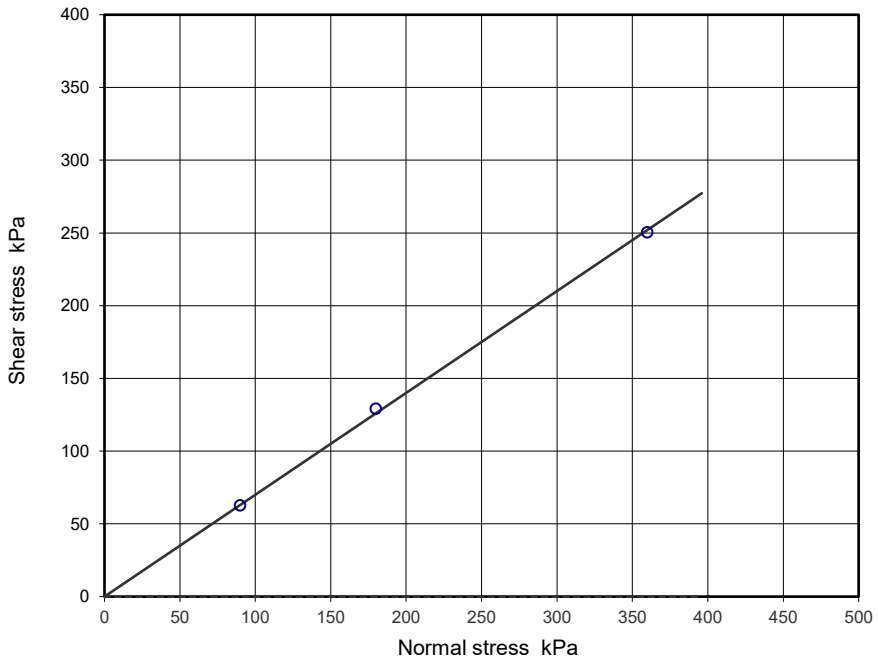
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.4	26.3				mm
	Bulk Density		1.76	1.76	1.76				Mg/m³
	Moisture Content		10.3	10.3	10.3				%
	Dry density		1.60	1.60	1.60				Mg/m³
	Voids ratio		0.656	0.656	0.656				
	Degree of Saturation		42	42	42				%
Consolidation	Consolidation / Normal Stress applied		**90**	**180**	**360**				kPa
	Change in height during consolidation*		-0.144	-0.214	-0.538				mm
	Voids ratio after consolidation		0.647	0.643	0.622				
After test	Final Moisture content		24.0	23.9	23.2				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	0.90	1.30	1.75				mm
	Shear stress	62.7	129.2	250.3				kPa
	Vertical Movement at peak shear stress*	-0.06	-0.10	-0.45				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[2.2]	0
Ø '	degrees	[34.5]	35

Residual strength, (x)

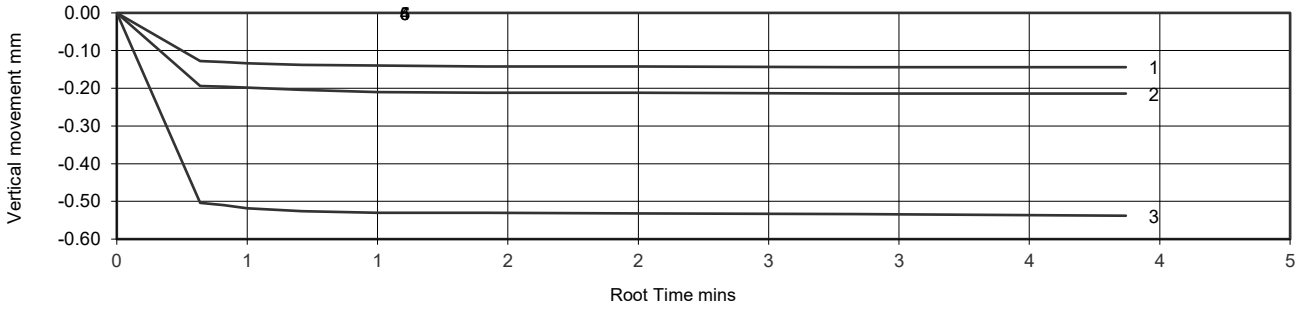
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

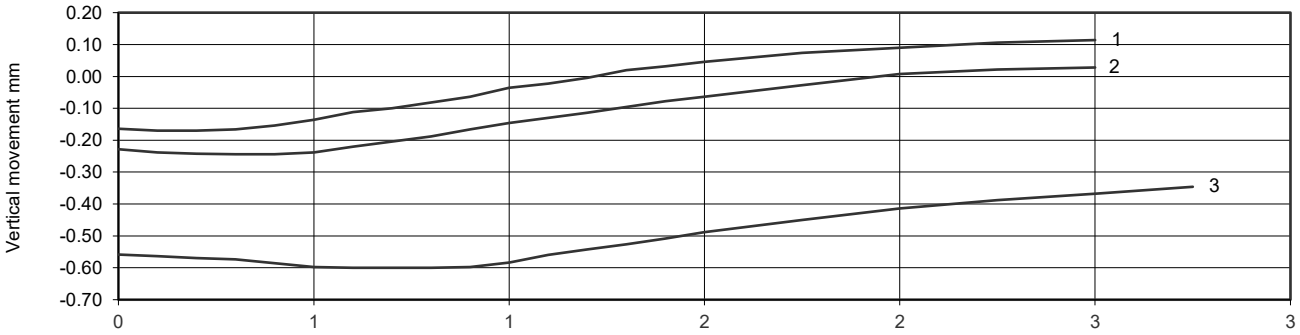
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	27/02/2026	UKAS TESTING 7758	TTL	**SSB**

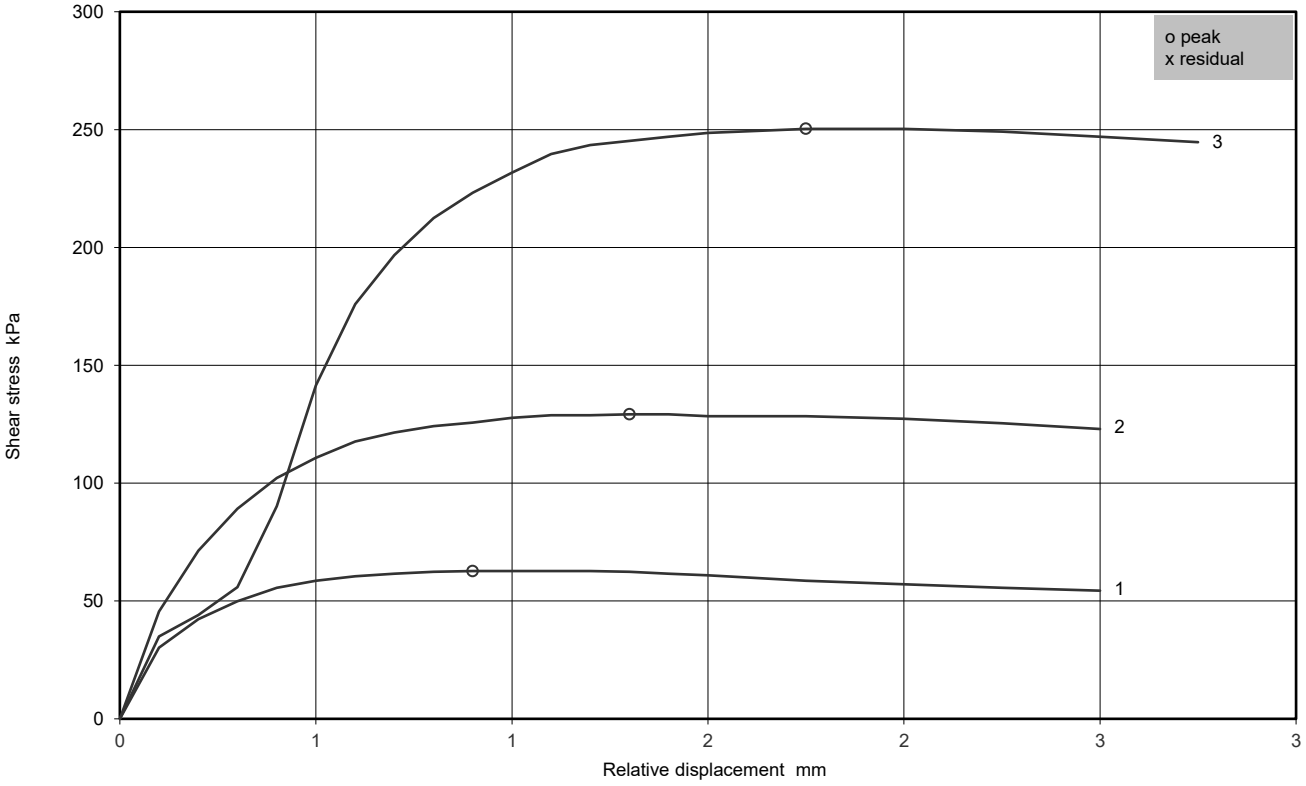
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	0.8
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010625

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	27/02/2026			

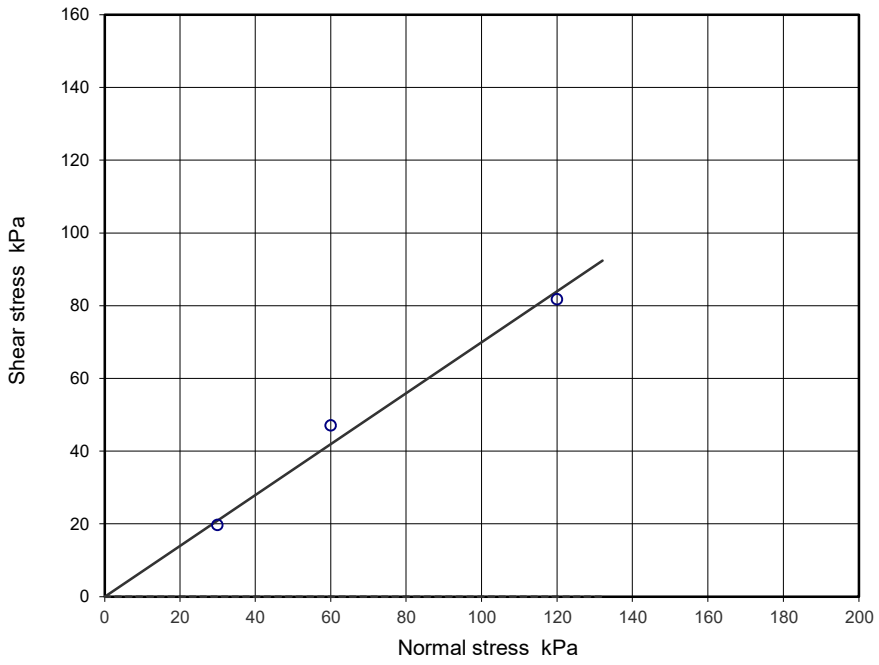
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey and brown silty SAND			Depth m	2.2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010624
Test Method	BS EN ISO 17892-10:2018			Date of test	

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details	Test No.	**1**	**2**	**3**				
Initial	Height	26.3	26.4	26.4				mm
	Bulk Density	1.81	1.81	1.81				Mg/m³
	Moisture Content	22.1	22.1	22.1				%
	Dry density	1.48	1.48	1.48				Mg/m³
	Voids ratio	0.791	0.791	0.791				
	Degree of Saturation	74	74	74				%
Consolidation	Consolidation / Normal Stress applied	**30**	**60**	**120**				kPa
	Change in height during consolidation*	-0.082	-0.204	-0.366				mm
	Voids ratio after consolidation	0.785	0.777	0.766				
After test	Final Moisture content	24.4	23.8	24.1				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	1.00	1.30	1.30				mm
	Shear stress	19.7	47.1	81.7				kPa
	Vertical Movement at peak shear stress*	0.03	-0.15	-0.30				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[2.4]	0
Ø '	degrees	[34.0]	35

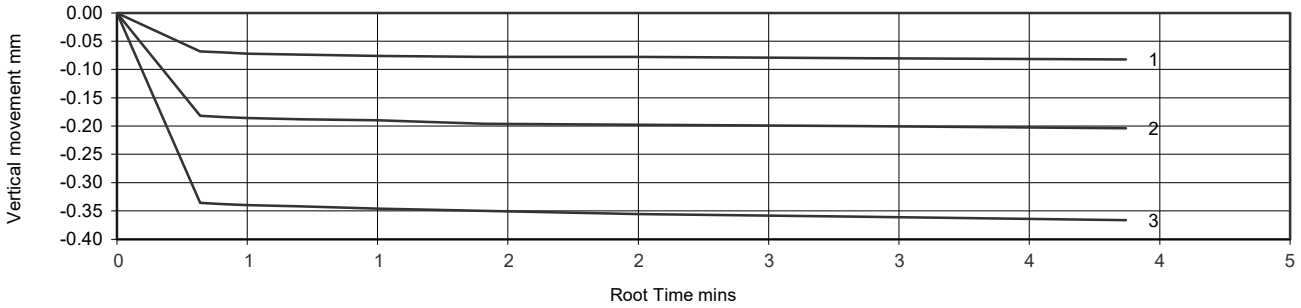
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

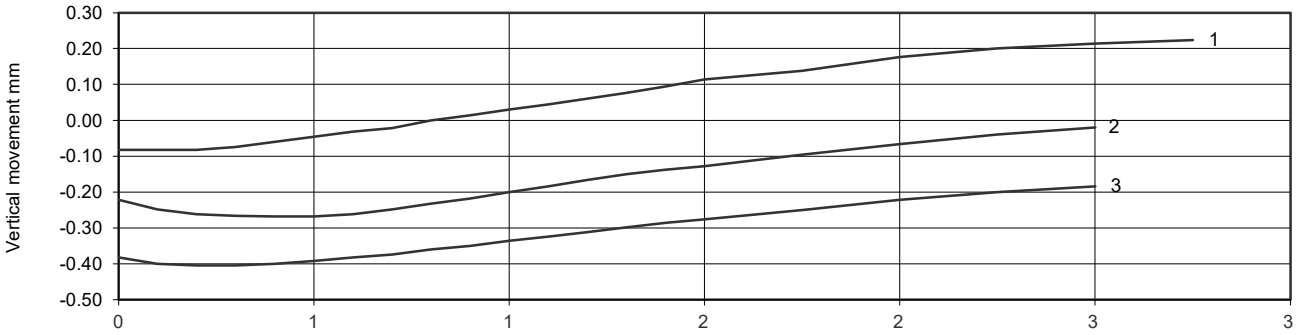
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	26/02/2026	UKAS TESTING 7758	TTL	**SSB**

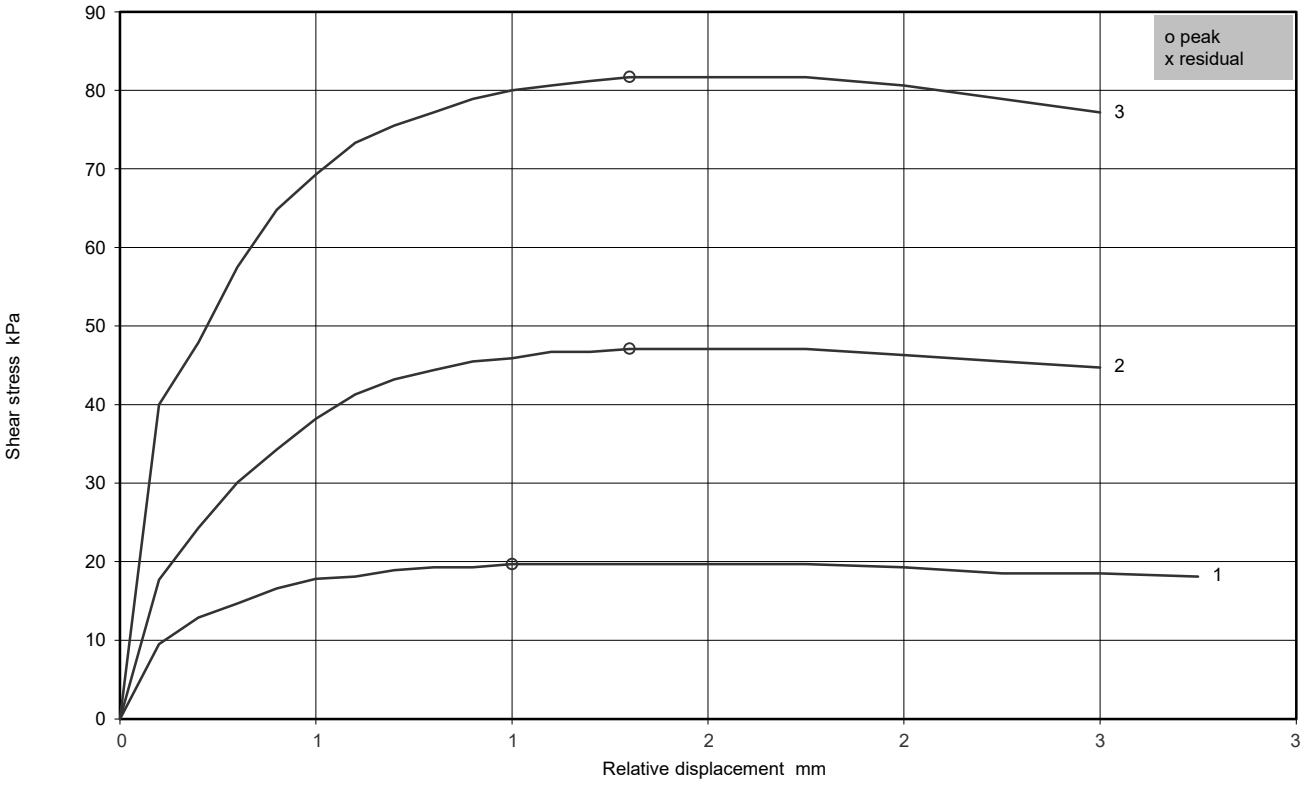
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey and brown silty SAND				Depth m	2.2
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010624

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

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26/02/2026			SSB

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	5.3
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010626
Test Method	BS EN ISO 17892-10:2018			Date of test	03/02/2026

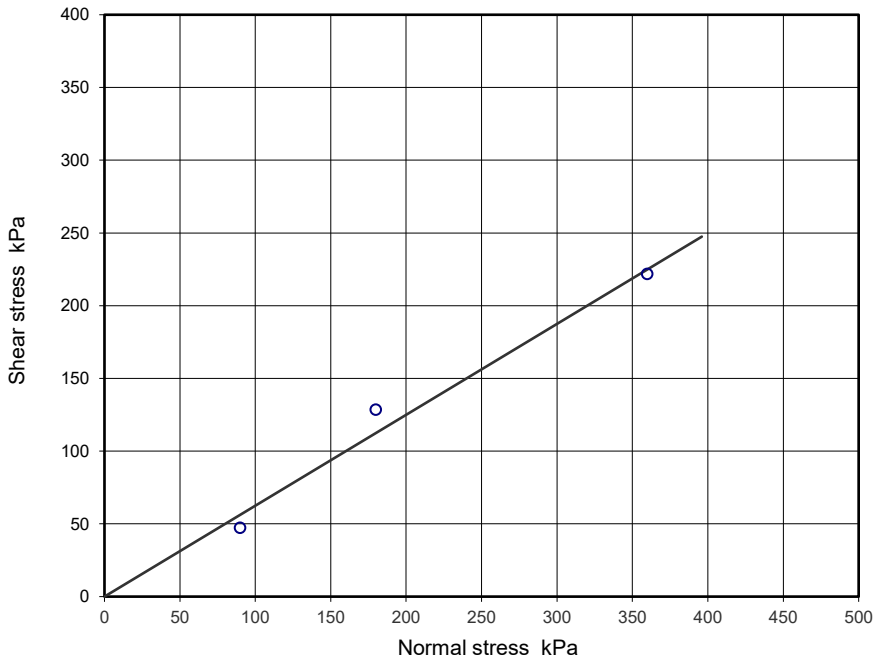
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.0	26.1				mm
	Bulk Density		1.78	1.78	1.78				Mg/m³
	Moisture Content		24.4	24.4	24.4				%
	Dry density		1.43	1.43	1.43				Mg/m³
	Voids ratio		0.853	0.853	0.853				
	Degree of Saturation		76	76	76				%
Consolidation	Consolidation / Normal Stress applied		**90**	**180**	**360**				kPa
	Change in height during consolidation*		-0.508	-0.498	-0.600				mm
	Voids ratio after consolidation		0.817	0.818	0.810				
After test	Final Moisture content		24.3	23.6	23.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	7.00	5.00	2.75				mm
	Shear stress	47.3	128.5	221.7				kPa
	Vertical Movement at peak shear stress*	-1.13	-0.71	-0.67				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[0.7]	0
Ø '	degrees	[32.0]	32

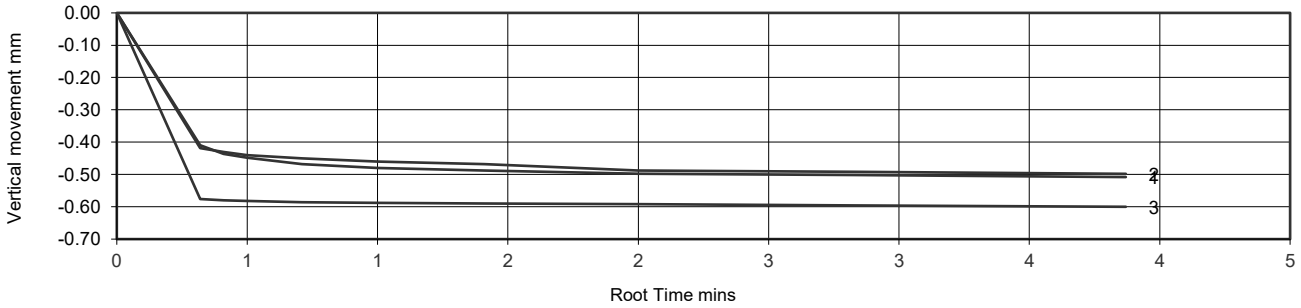
Residual strength, (x)			
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

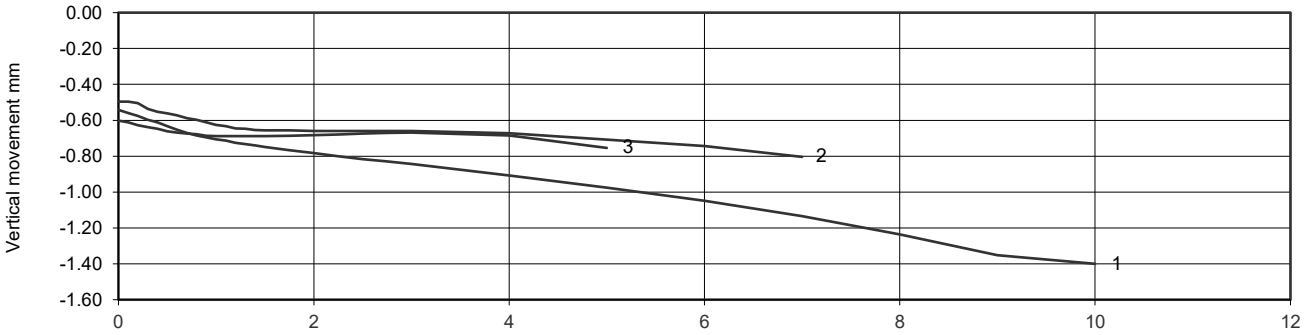
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	04/03/2026	UKAS TESTING 7758	TTL	**SSB**

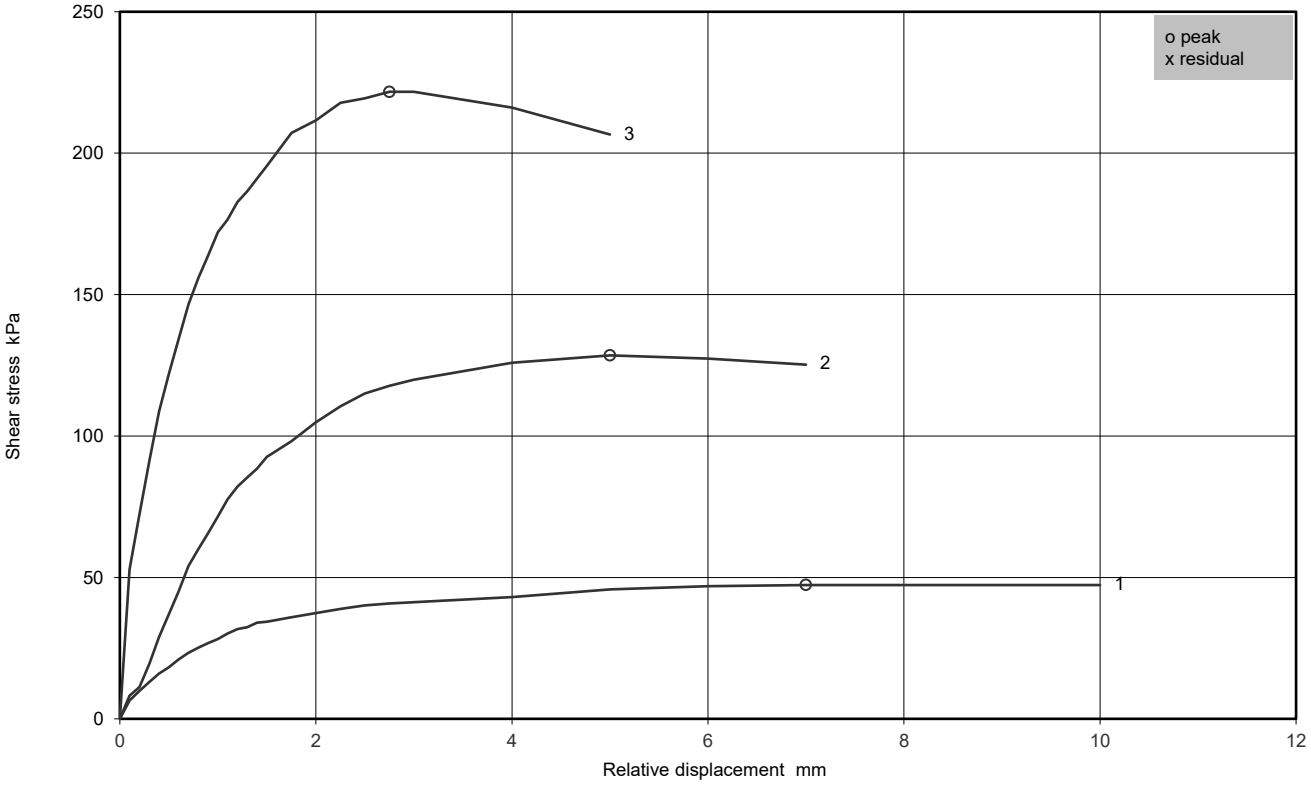
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	5.3
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010626

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
04/03/2026			SSB

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	1
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010631
Test Method	BS EN ISO 17892-10:2018			Date of test	03/02/2026

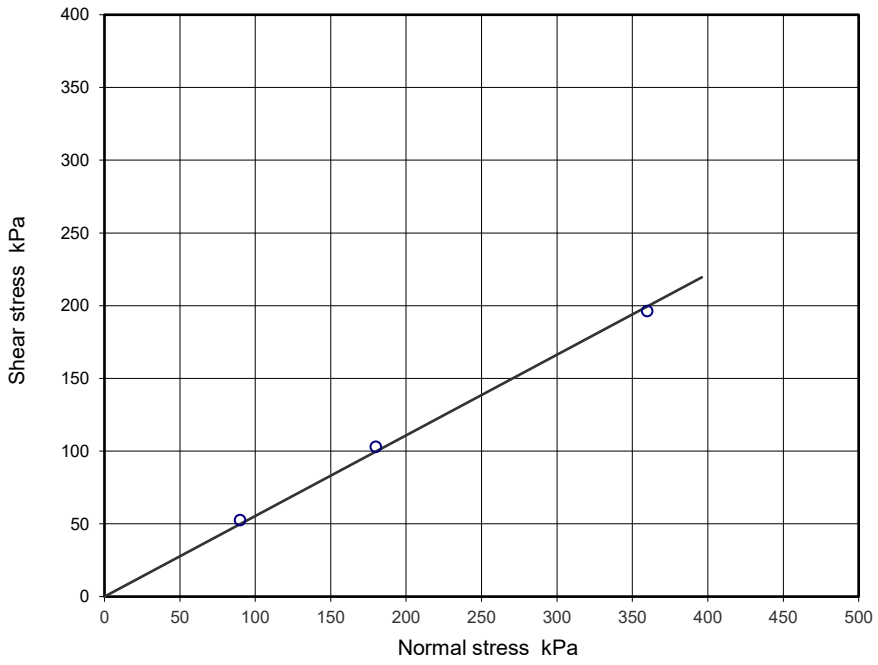
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.3	26.3				mm
	Bulk Density		1.77	1.77	1.77				Mg/m³
	Moisture Content		18.6	18.6	18.6				%
	Dry density		1.49	1.49	1.49				Mg/m³
	Voids ratio		0.779	0.779	0.779				
	Degree of Saturation		63	63	63				%
Consolidation	Consolidation / Normal Stress applied		**90**	**180**	**360**				kPa
	Change in height during consolidation*		-0.290	-0.394	-0.600				mm
	Voids ratio after consolidation		0.759	0.752	0.738				
After test	Final Moisture content		23.2	22.2	23.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	5.00	5.00	2.75				mm
	Shear stress	52.5	103.0	196.2				kPa
	Vertical Movement at peak shear stress*	-0.70	-0.68	-0.83				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[5.9]	0
Ø '	degrees	[28.0]	29

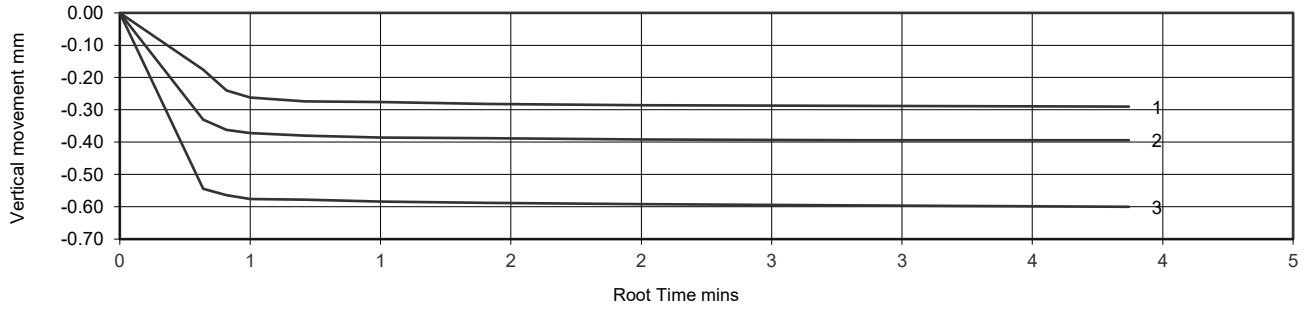
Residual strength, (x)			
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

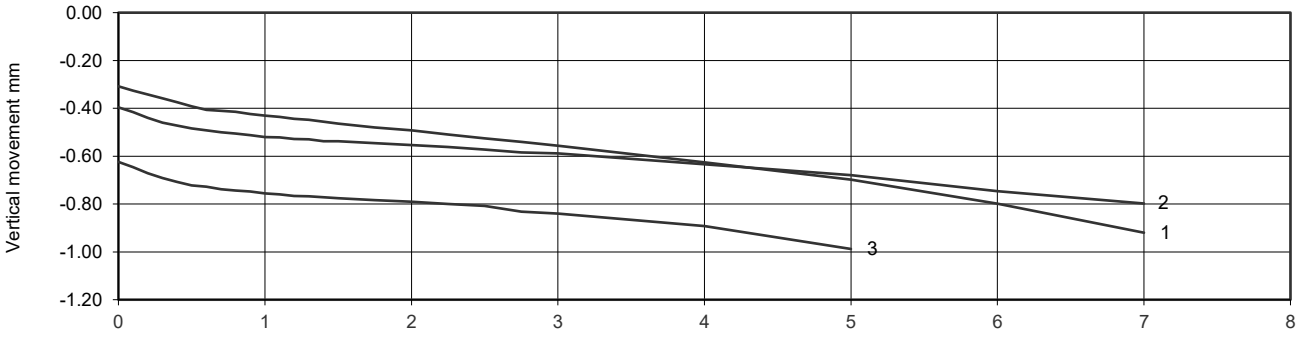
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	04/03/2026	UKAS TESTING 7758	TTL	**SSB**

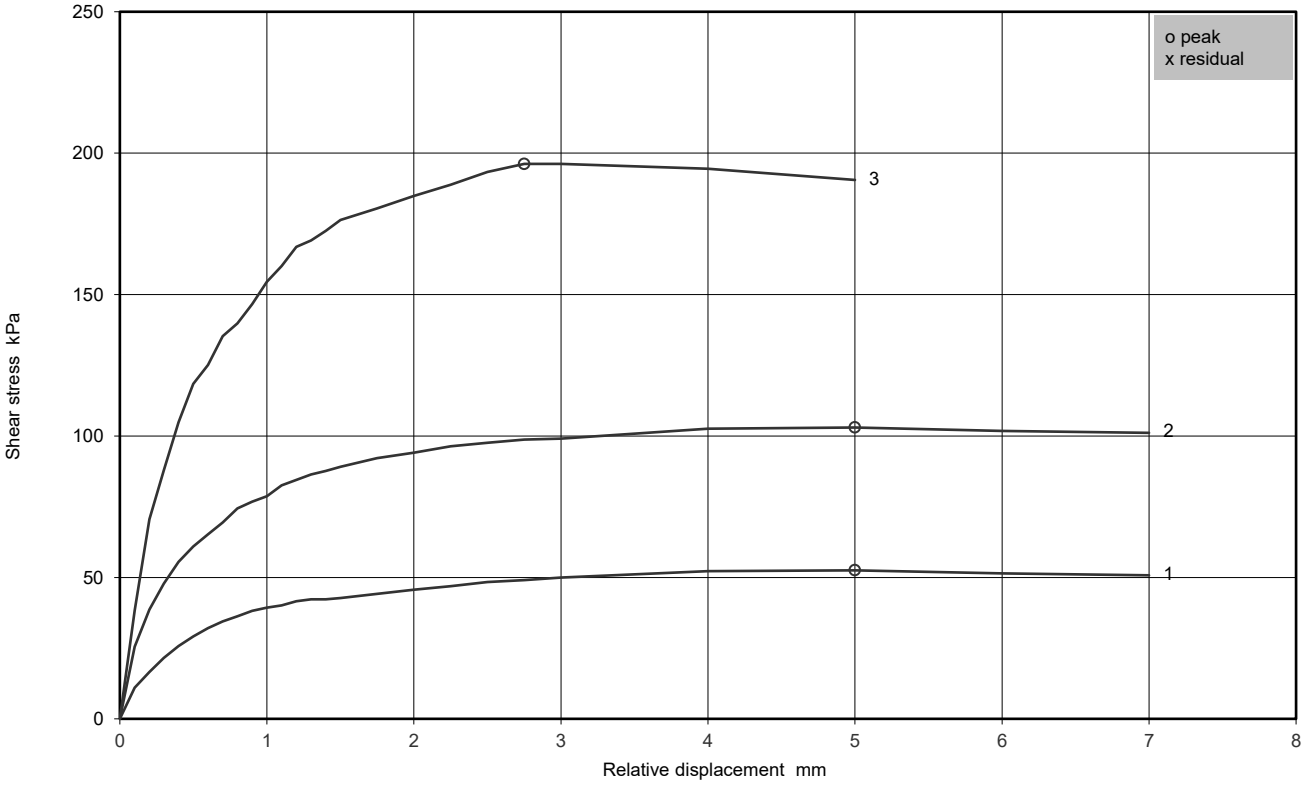
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	1
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010631

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	04/03/2026			

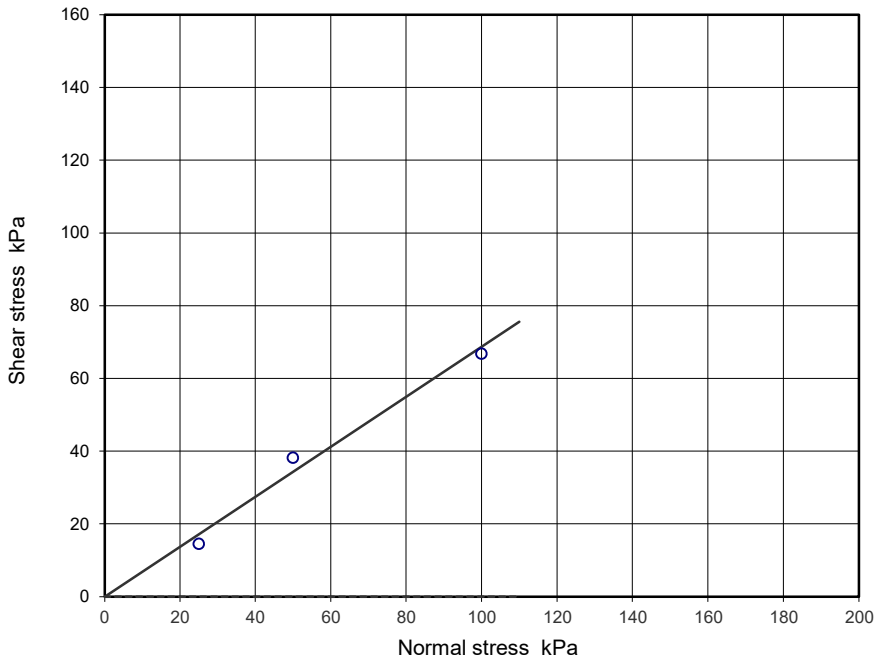
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey and brown silty SAND			Depth m	3.5
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010630
Test Method	BS EN ISO 17892-10:2018			Date of test	

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details	Test No.	**1**	**2**	**3**				
Initial	Height	26.1	26.0	26.1				mm
	Bulk Density	1.90	1.90	1.90				Mg/m³
	Moisture Content	24.7	24.7	24.7				%
	Dry density	1.52	1.52	1.52				Mg/m³
	Voids ratio	0.743	0.743	0.743				
	Degree of Saturation	88	88	88				%
Consolidation	Consolidation / Normal Stress applied	**25**	**50**	**100**				kPa
	Change in height during consolidation*	-0.068	-0.174	-0.398				mm
	Voids ratio after consolidation	0.738	0.731	0.716				
After test	Final Moisture content	25.1	24.5	25.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	2.50	4.00	10.00				mm
	Shear stress	14.5	38.2	66.8				kPa
	Vertical Movement at peak shear stress*	-0.01	-0.16	-0.84				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[0.2]	0
Ø '	degrees	[34.0]	34.5

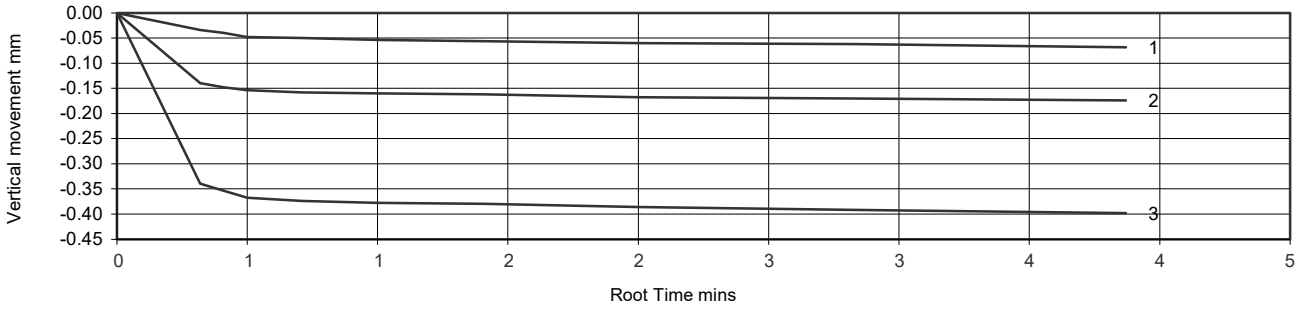
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

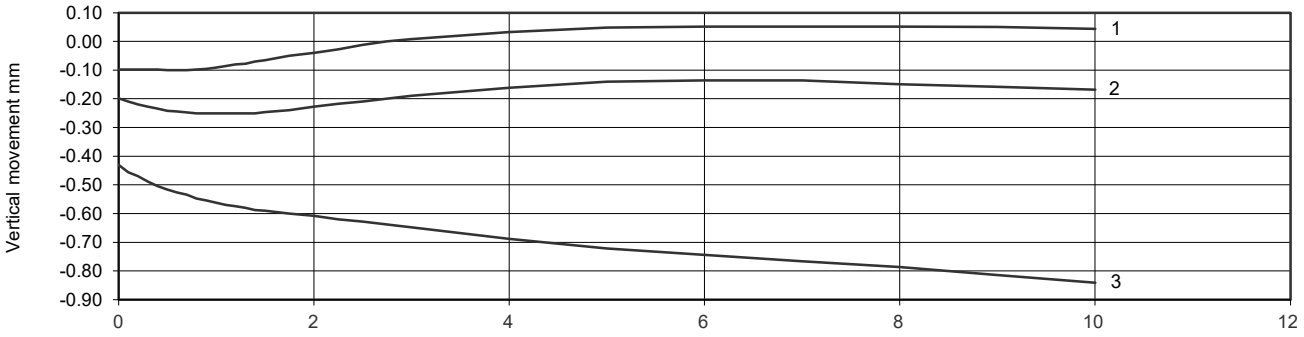
	Date Printed			
	26/02/2026	UKAS TESTING 7758	TTL	**SSB**

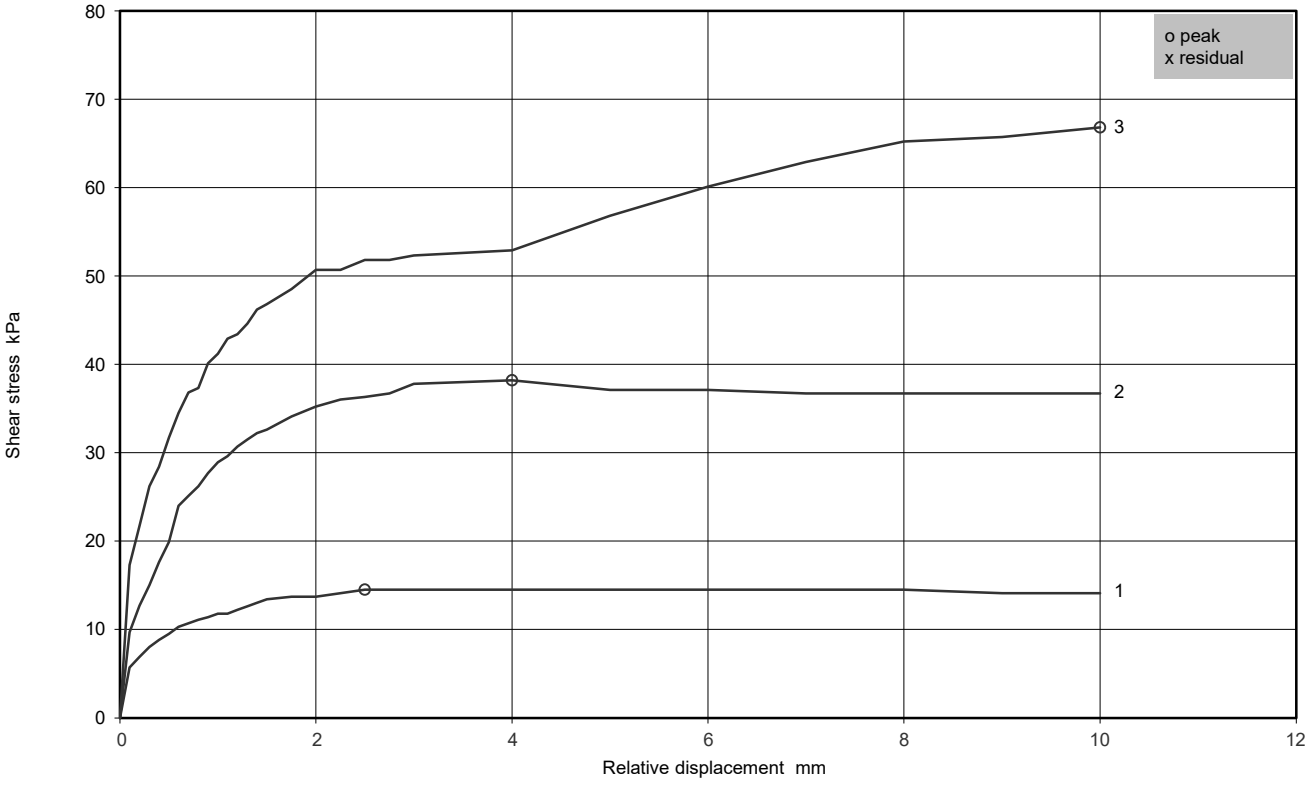
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey and brown silty SAND				Depth m	3.5
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010630

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
26/02/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	7
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010632
Test Method	BS EN ISO 17892-10:2018			Date of test	

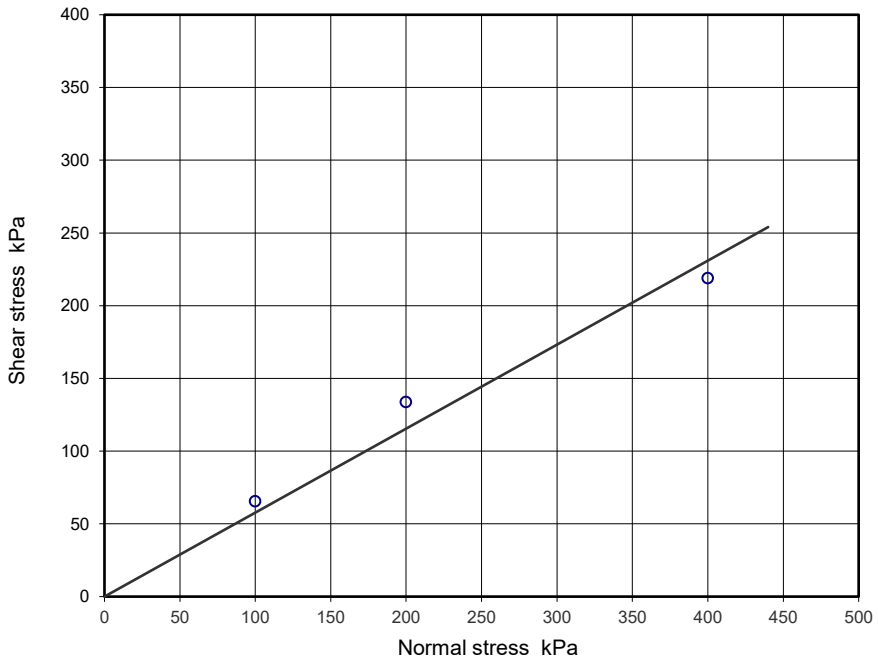
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.1	26.1				mm
	Bulk Density		1.78	1.78	1.78				Mg/m³
	Moisture Content		22.5	22.5	22.5				%
	Dry density		1.45	1.45	1.45				Mg/m³
	Voids ratio		0.828	0.828	0.828				
	Degree of Saturation		72	72	72				%
Consolidation	Consolidation / Normal Stress applied		**100**	**200**	**400**				kPa
	Change in height during consolidation*		-0.328	-0.718	-0.832				mm
	Voids ratio after consolidation		0.805	0.778	0.770				
After test	Final Moisture content		24.1	24.1	23.4				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	10.00	7.00	2.25				mm
	Shear stress	65.6	133.8	218.9				kPa
	Vertical Movement at peak shear stress*	-0.79	-1.07	-1.04				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[23]	0
Ø '	degrees	[26.5]	30

Residual strength, (x)

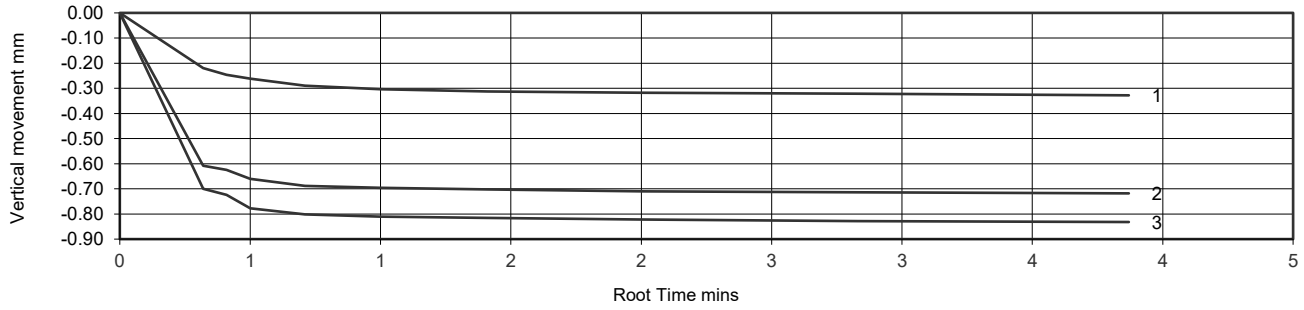
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

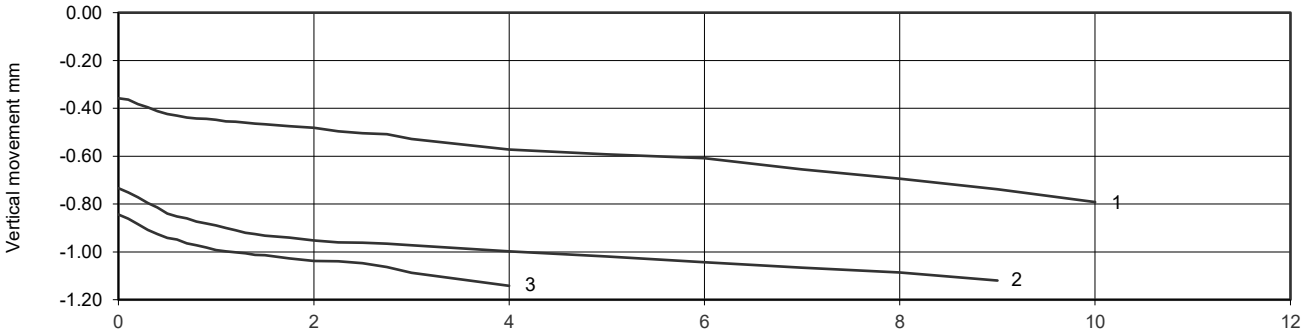
	Date Printed			
	04/03/2026	UKAS TESTING 7758	TTL	**SSB**

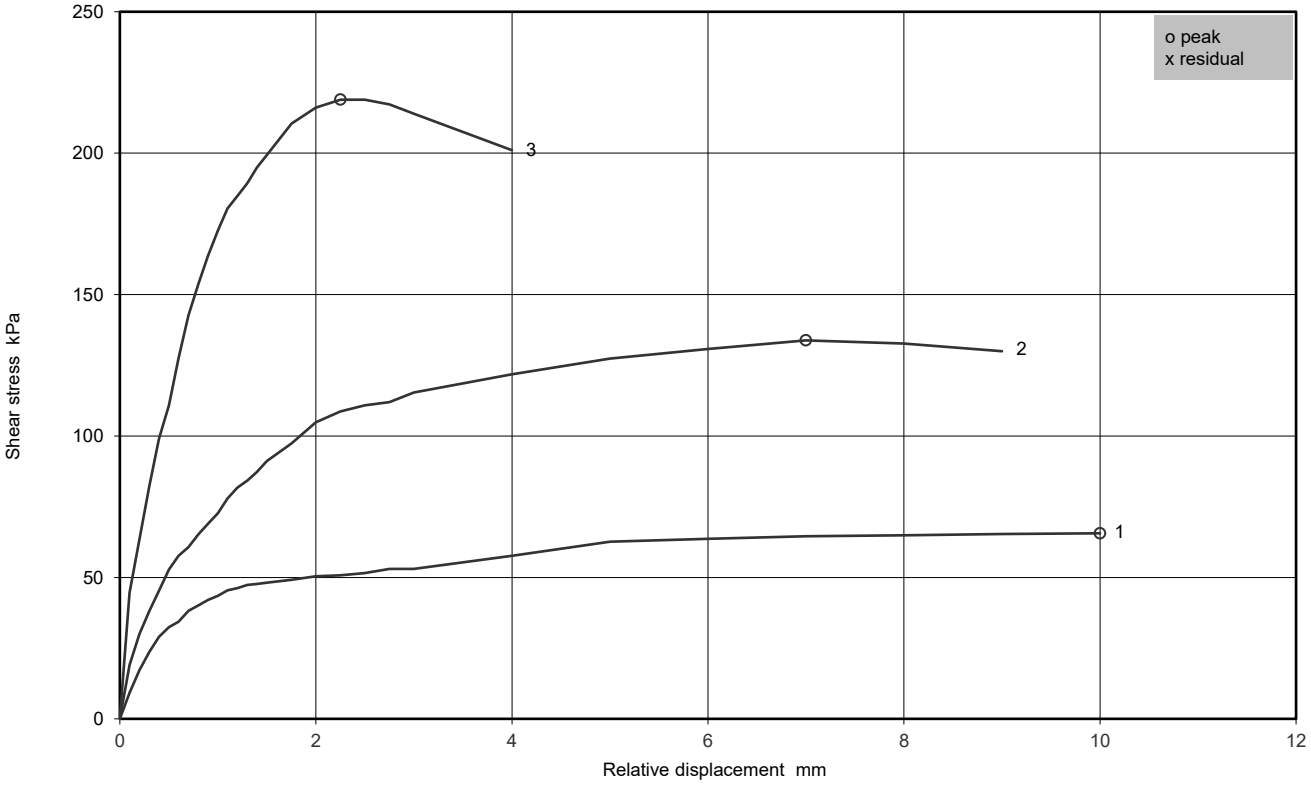
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	7
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010632

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
04/03/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	12
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010633
Test Method	BS EN ISO 17892-10:2018			Date of test	

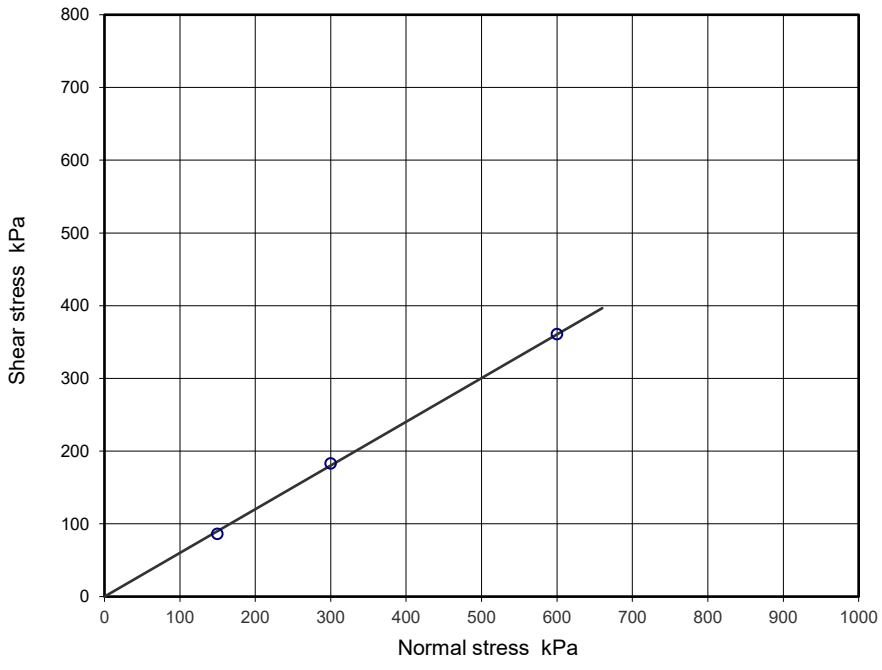
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.3	26.3				mm
	Bulk Density		1.80	1.80	1.80				Mg/m³
	Moisture Content		24.1	24.1	24.1				%
	Dry density		1.45	1.45	1.45				Mg/m³
	Voids ratio		0.828	0.828	0.828				
	Degree of Saturation		77	77	77				%
Consolidation	Consolidation / Normal Stress applied		**150**	**300**	**600**				kPa
	Change in height during consolidation*		-0.298	-0.482	-0.800				mm
	Voids ratio after consolidation		0.807	0.794	0.772				
After test	Final Moisture content		35.0	26.9	26.2				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	9.00	8.00	4.00				mm
	Shear stress	86.2	182.8	360.8				kPa
	Vertical Movement at peak shear stress*	-0.53	-0.68	-0.94				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[-2.8]	0
Ø '	degrees	[31.5]	31

Residual strength, (x)

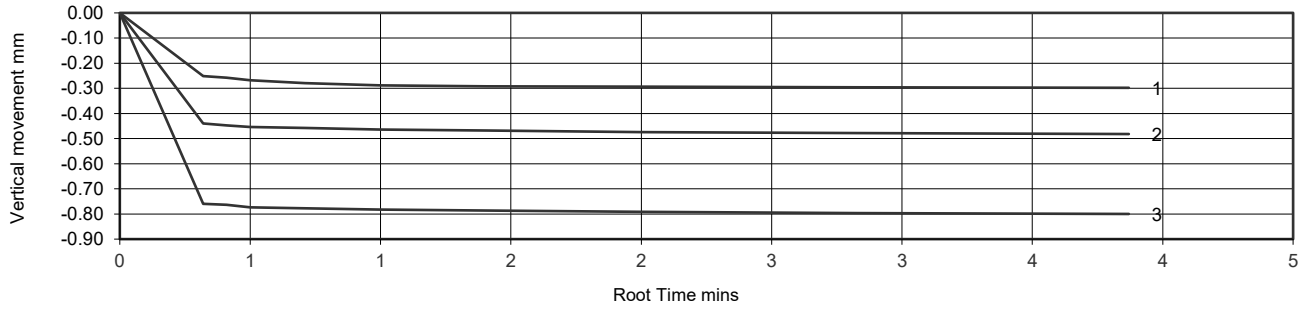
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

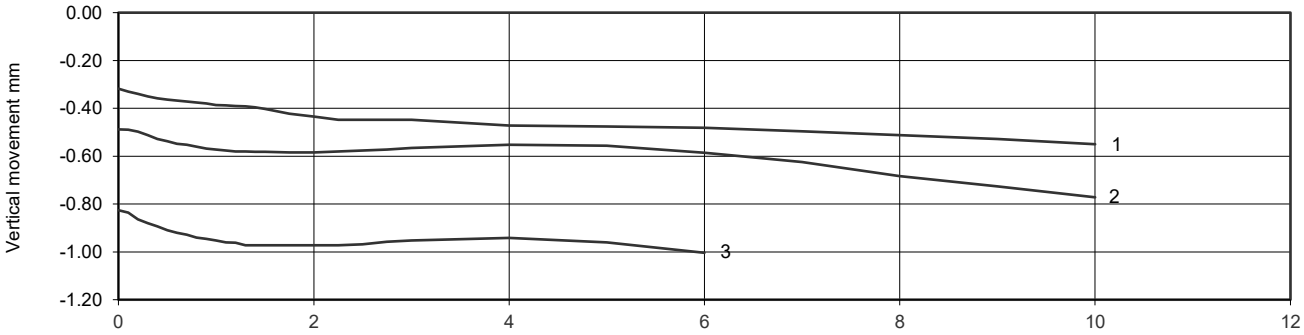
	Date Printed			
	04/03/2026	UKAS TESTING 7758	TTL	**SSB**

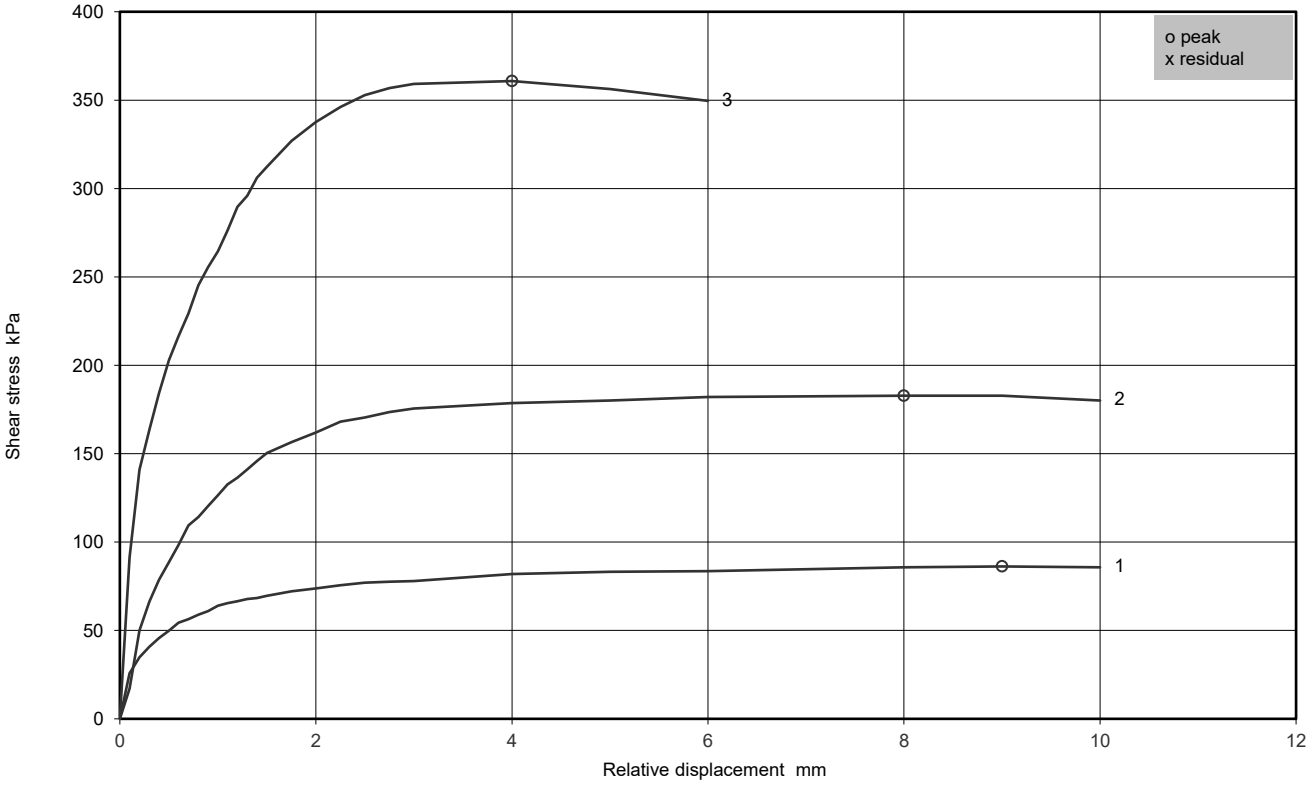
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	12
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010633

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	04/03/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH106
Project Name	Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	7.91
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026021610
Test Method	BS EN ISO 17892-10:2018			Date of test	20/02/2026

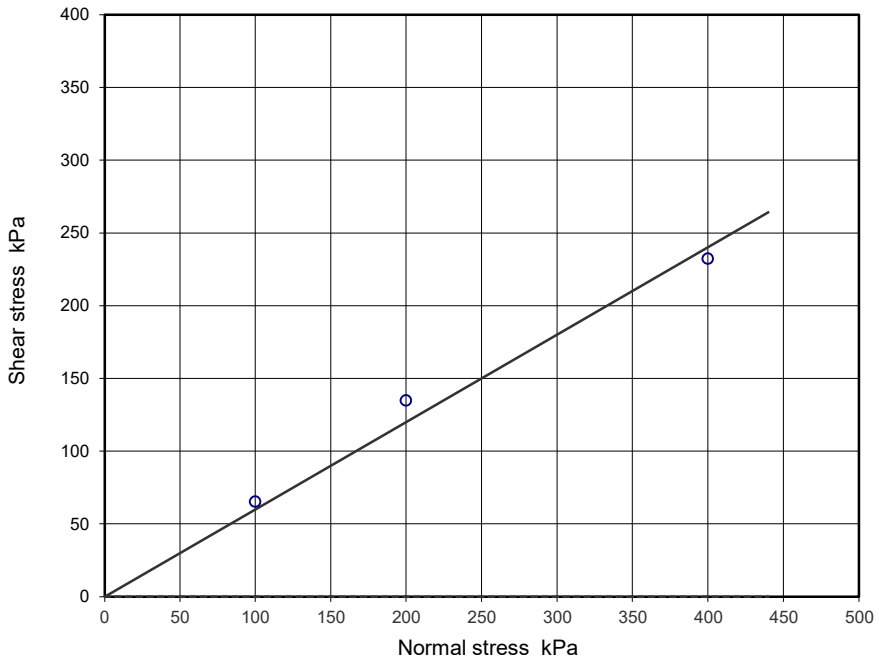
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	1	2	3				
Initial	Height		26.1	26.0	26.0				mm
	Bulk Density		1.83	1.83	1.83				Mg/m³
	Moisture Content		22.1	22.1	22.1				%
	Dry density		1.50	1.50	1.50				Mg/m³
	Voids ratio		0.767	0.767	0.767				
	Degree of Saturation		76	76	76				%
Consolidation	Consolidation / Normal Stress applied		**100**	**200**	**400**				kPa
	Change in height during consolidation*		-0.312	-0.528	-0.724				mm
	Voids ratio after consolidation		0.746	0.731	0.718				
After test	Final Moisture content		21.1	21.5	22.6				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	2.75	4.00	2.75				mm
	Shear stress	65.3	134.9	232.2				kPa
	Vertical Movement at peak shear stress*	-0.19	-0.56	-0.82				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[17]	0
Ø '	degrees	[28.5]	31

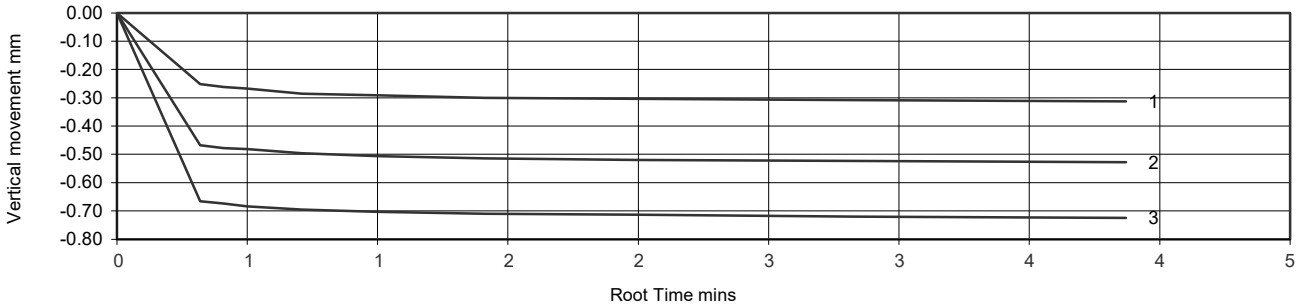
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

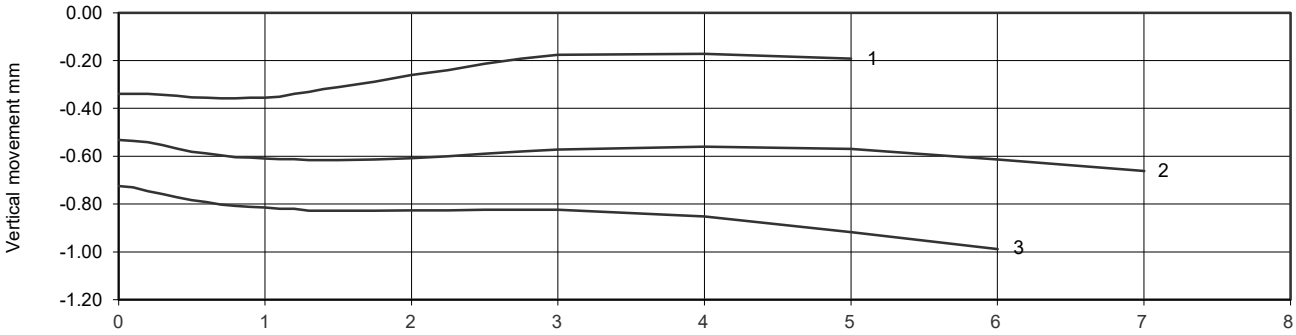
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	23/02/2026	UKAS TESTING 7758	TTL	**SSB**

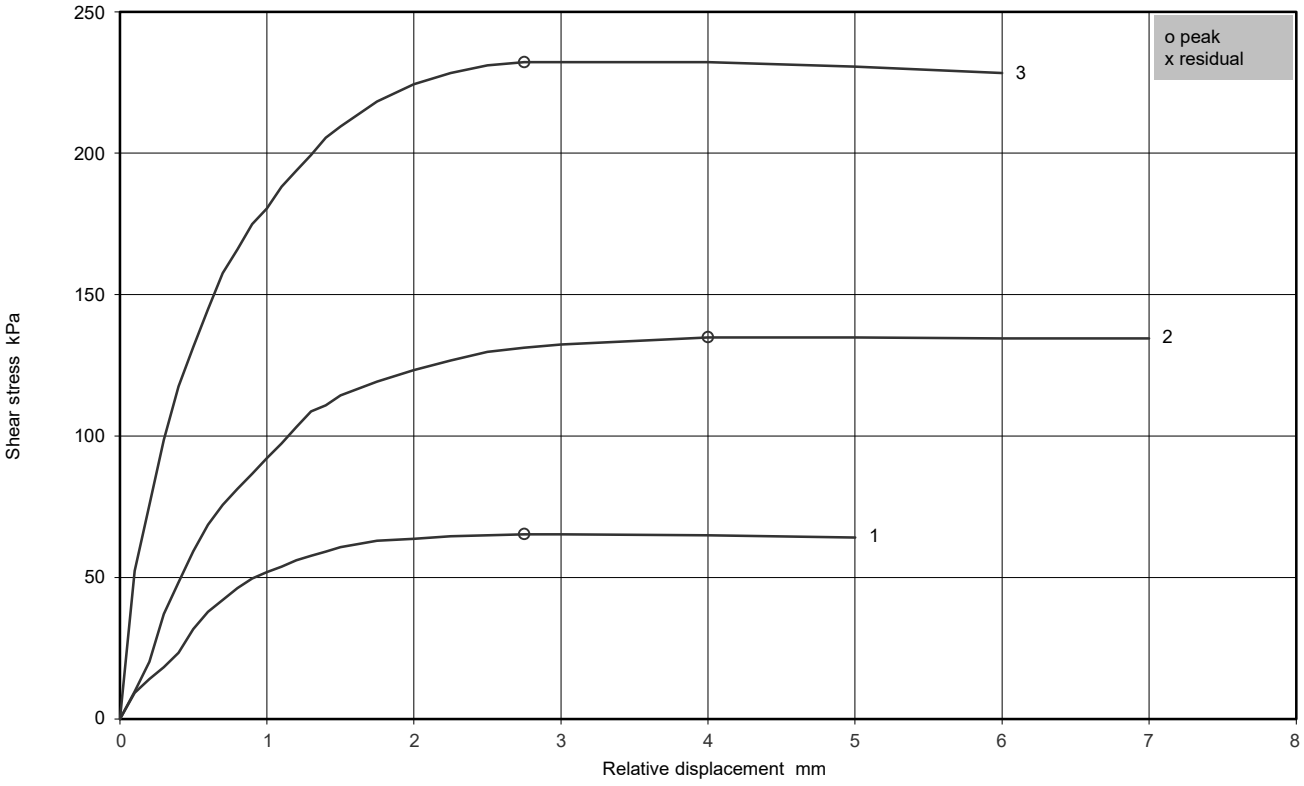
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH106
Project Name	Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	7.91
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026021610

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
23/02/2026			

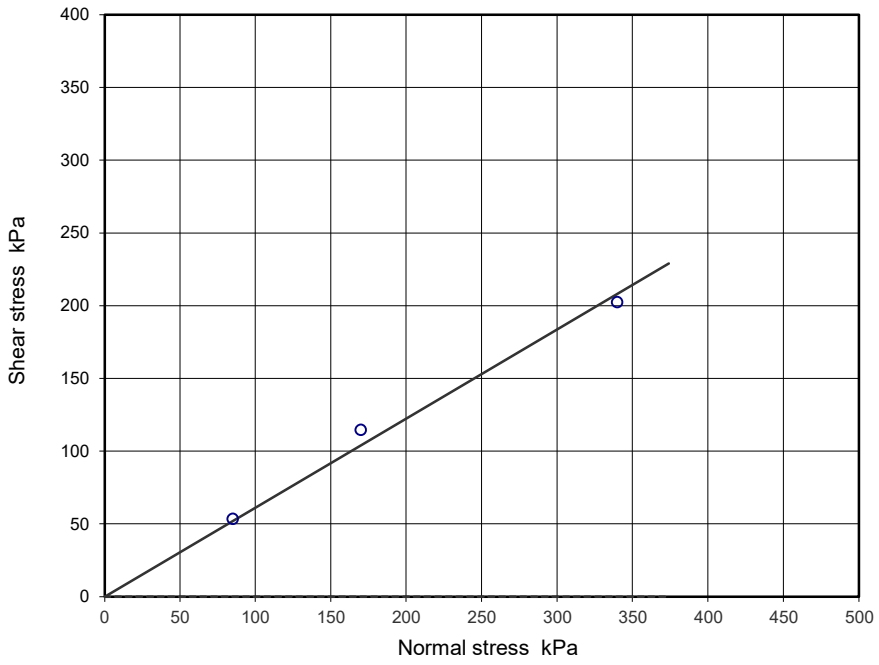
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH107
Project Name	Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	5.5
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202602169
Test Method	BS EN ISO 17892-10:2018			Date of test	20/02/2026

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.3	26.3				mm
	Bulk Density		1.76	1.76	1.76				Mg/m³
	Moisture Content		21.1	21.1	21.1				%
	Dry density		1.45	1.45	1.45				Mg/m³
	Voids ratio		0.828	0.828	0.828				
	Degree of Saturation		68	68	68				%
Consolidation	Consolidation / Normal Stress applied		**85**	**170**	**340**				kPa
	Change in height during consolidation*		-0.288	-0.558	-0.828				mm
	Voids ratio after consolidation		0.808	0.789	0.770				
After test	Final Moisture content		24.2	23.9	23.0				

Shearing stage(s)

Rate of displacement	Peak		0.60000	0.60000	0.60000				mm/min
	Residual								mm/min
Peak values, (o)	Relative horizontal displacement		10.00	10.00	10.00				mm
	Shear stress		53.3	114.6	202.4				kPa
	Vertical Movement at peak shear stress*		-0.84	-0.77	-1.33				mm
Residual values, (x)	No. of traverses (including peak run)		1	1	1				
	Relative horizontal displacement								mm
	Shear stress								kPa
	Vertical movement at residual shear stress*								mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[9.4]	0
Ø '	degrees	[30.0]	31.5

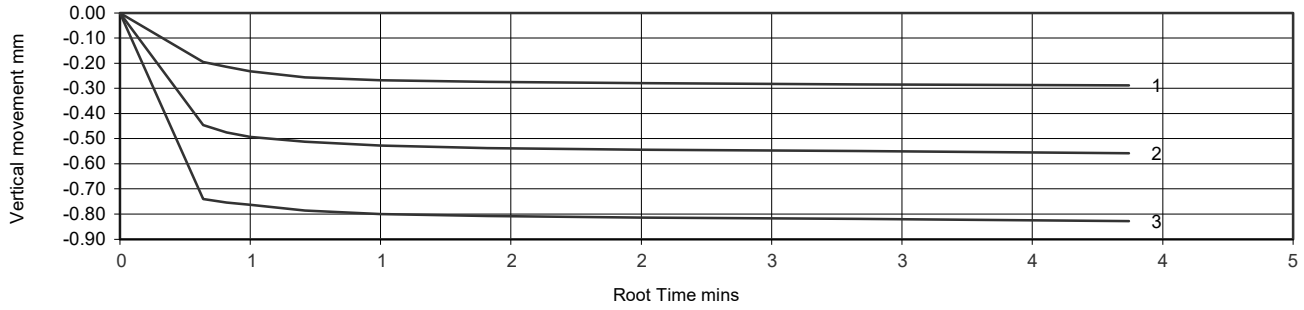
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

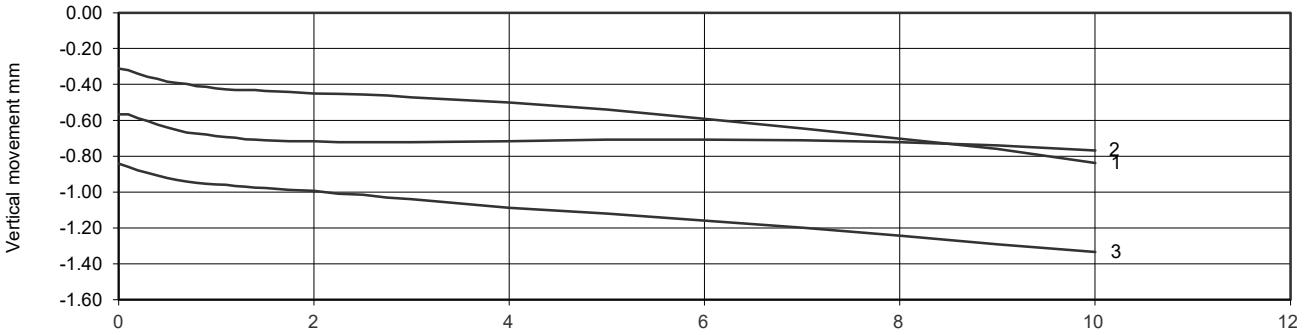
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	23/02/2026	UKAS TESTING 7758	TTL	**SSB**

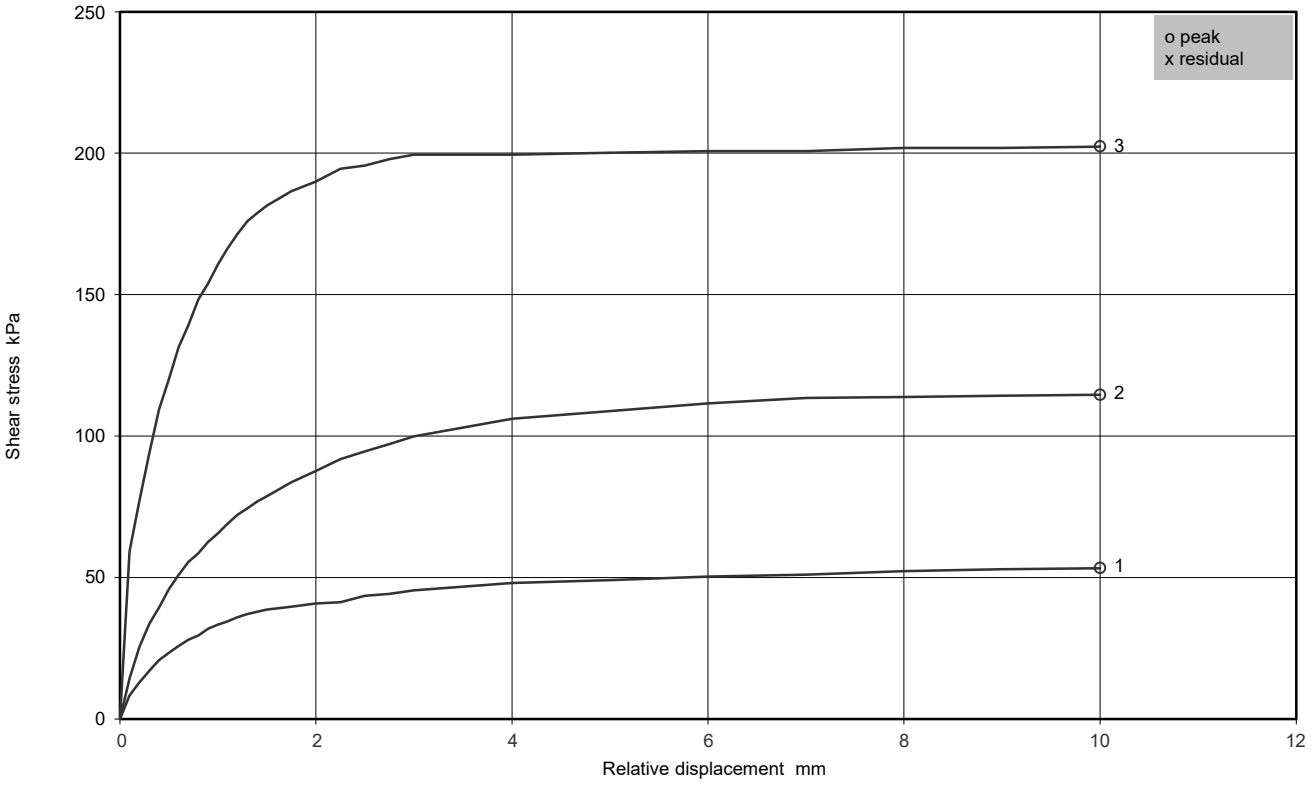
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH107
Project Name	Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	5.5
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202602169

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
23/02/2026			

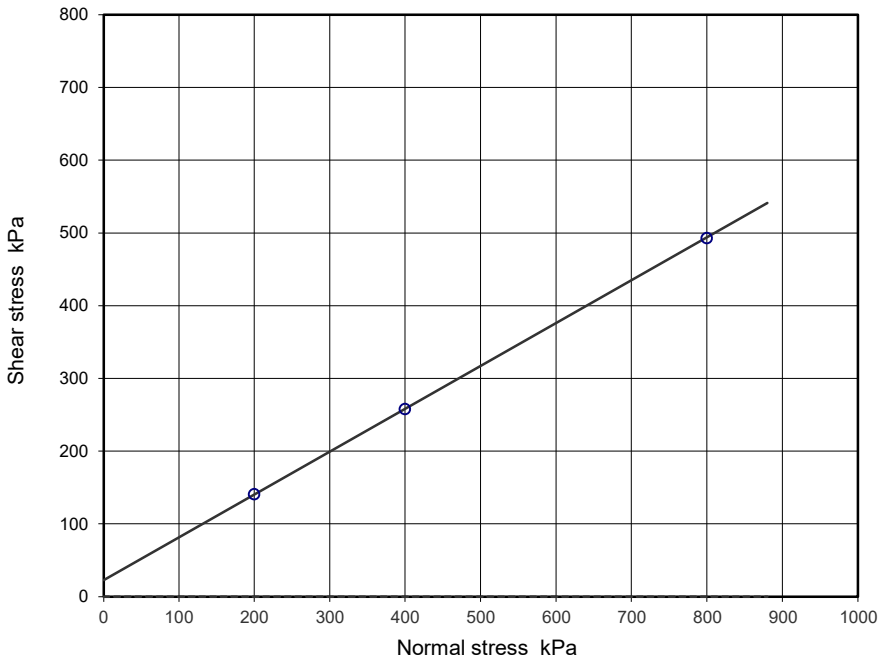
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J326001
				Borehole/Pit No.	BH-108
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey brown SAND			Depth m	18.7
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2025112043
Test Method	BS EN ISO 17892-10:2018			Date of test	19/11/2025

Preparation Details -2mm material. Recompacted to 50% of the relative density at as received moisture content.

Specimen Details		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.0	26.1				mm
	Bulk Density		1.61	1.61	1.61				Mg/m³
	Moisture Content		20.4	20.4	20.4				%
	Dry density		1.34	1.34	1.34				Mg/m³
	Voids ratio		0.978	0.978	0.978				
	Degree of Saturation		55	55	55				%
Consolidation	Consolidation / Normal Stress applied		**200**	**400**	**800**				kPa
	Change in height during consolidation*		-1.028	-1.266	-2.012				mm
	Voids ratio after consolidation		0.900	0.882	0.825				
After test	Final Moisture content		22.7	22.4	22.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	10.00	8.00	5.00				mm
	Shear stress	140.8	257.8	492.9				kPa
	Vertical Movement at peak shear stress*	-1.93	-1.95	-2.58				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	23	-
Ø '	degrees	30.5	-

Residual strength, (x)

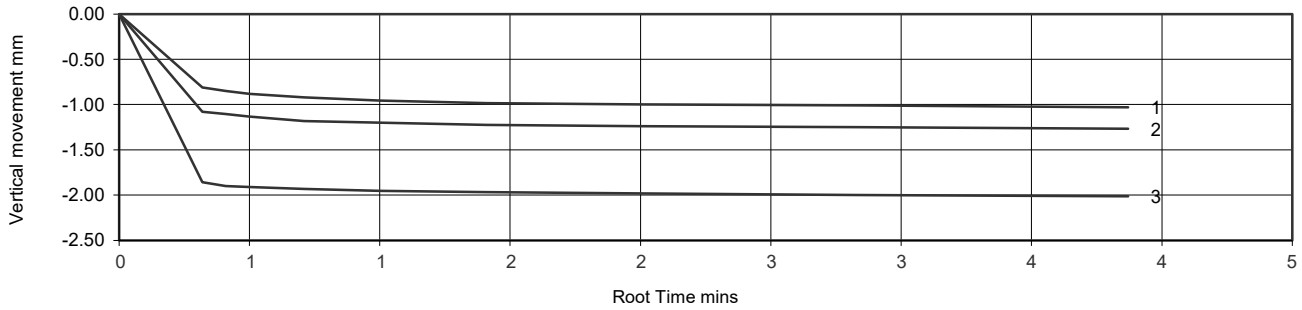
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

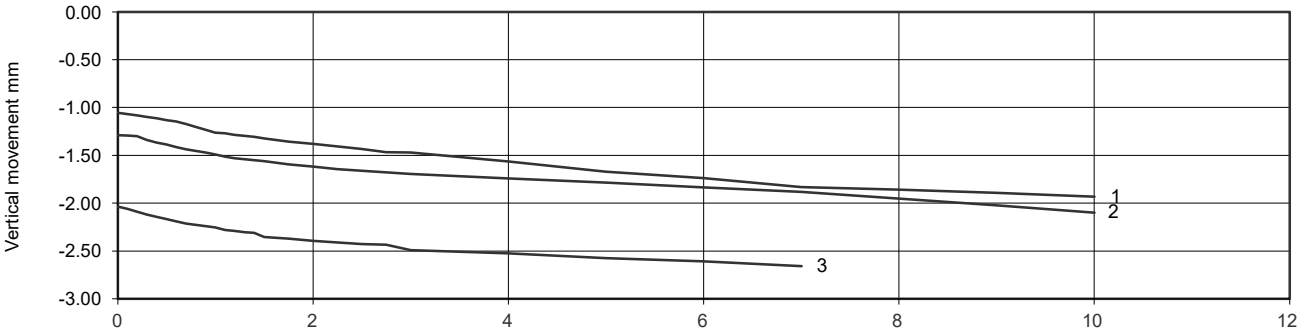
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	20/11/2025	UKAS TESTING 7758	TTL	**SSB**

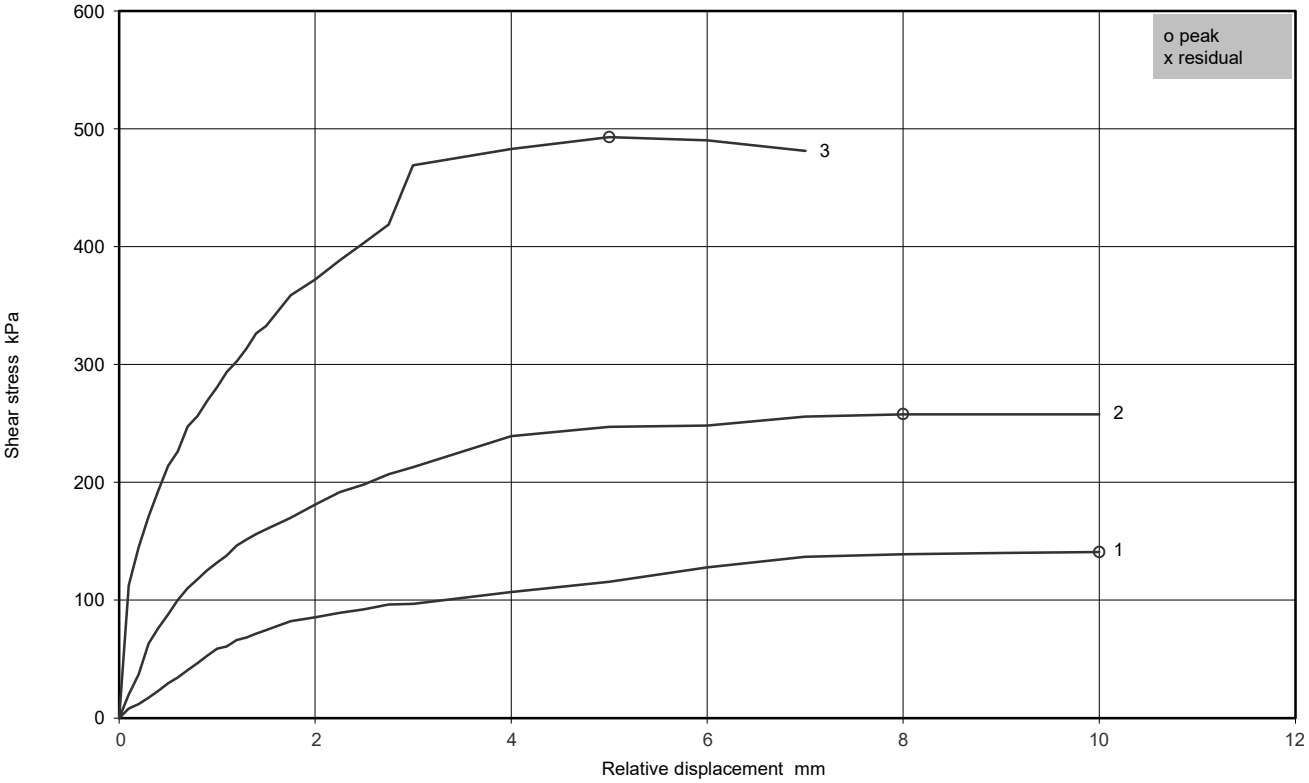
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J326001
					Borehole/Pit No.	BH-108
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey brown SAND				Depth m	18.7
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2025112043

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	20/11/2025			

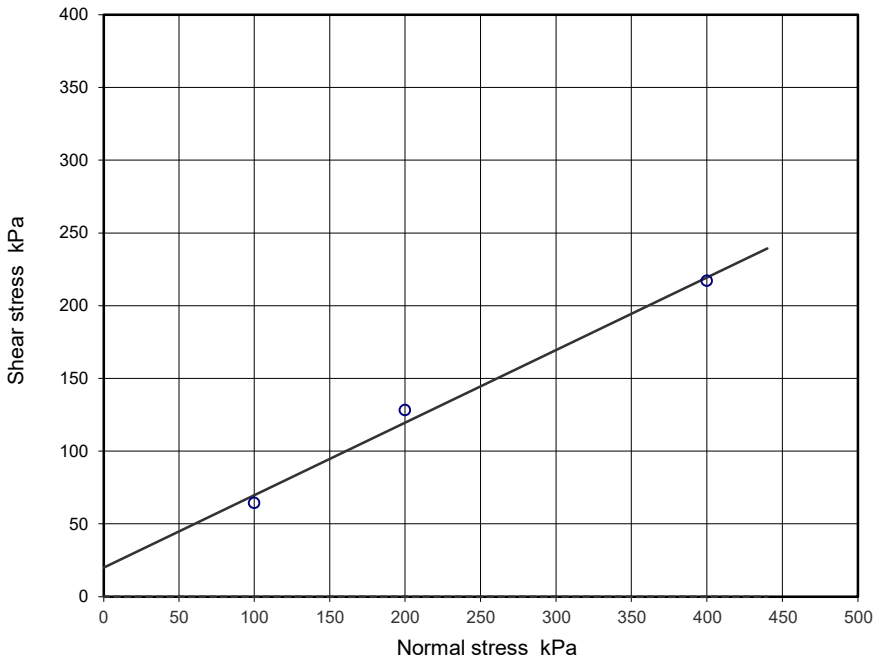
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J326001
				Borehole/Pit No.	BH-108
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey brown SAND			Depth m	11.2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2025112042
Test Method	BS EN ISO 17892-10:2018			Date of test	18/11/2025

Preparation Details -2mm material. Recompacted to 70% of the relative density at as received moisture content.

Specimen Details		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.1	26.1				mm
	Bulk Density		1.72	1.72	1.72				Mg/m³
	Moisture Content		20.8	20.8	20.8				%
	Dry density		1.42	1.42	1.42				Mg/m³
	Voids ratio		0.866	0.866	0.866				
	Degree of Saturation		64	64	64				%
Consolidation	Consolidation / Normal Stress applied		**100**	**200**	**400**				kPa
	Change in height during consolidation*		-0.490	-0.492	-0.832				mm
	Voids ratio after consolidation		0.831	0.831	0.806				
After test	Final Moisture content		23.4	23.2	22.9				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	6.00	5.00	4.00				mm
	Shear stress	64.5	128.2	217.2				kPa
	Vertical Movement at peak shear stress*	-0.90	-0.85	-1.29				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	20	-
Ø '	degrees	26.5	-

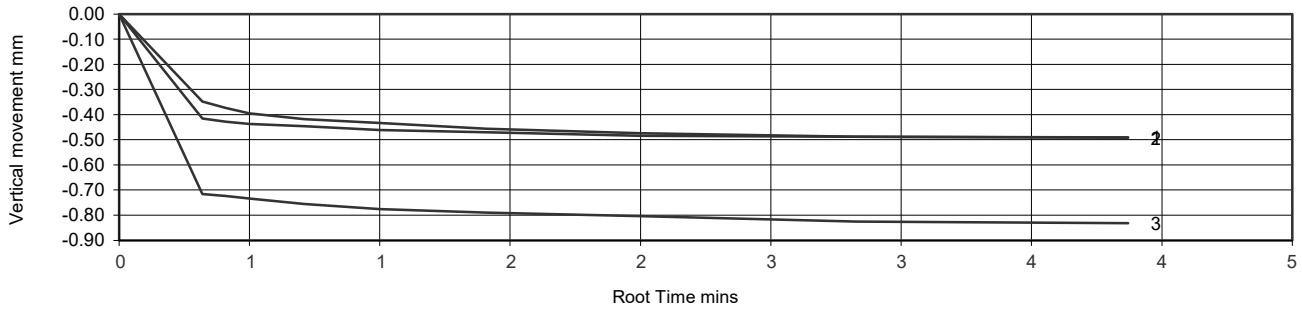
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

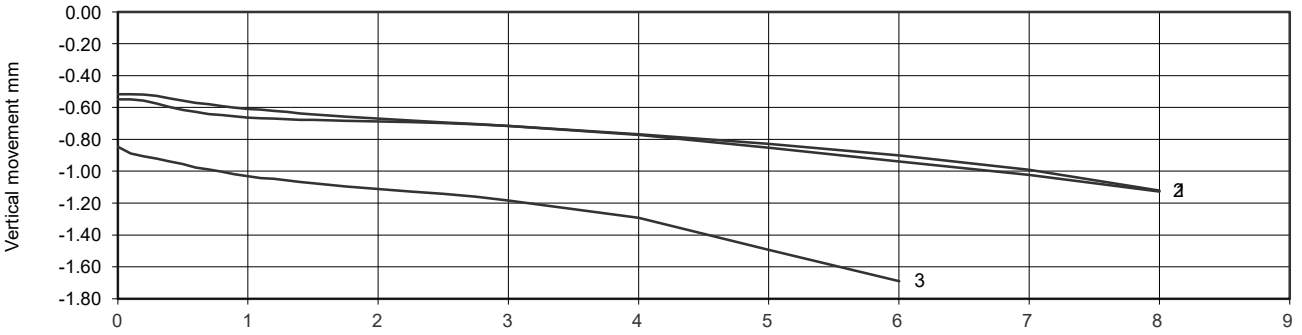
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	20/11/2025	UKAS TESTING 7758	TTL	**SSB**

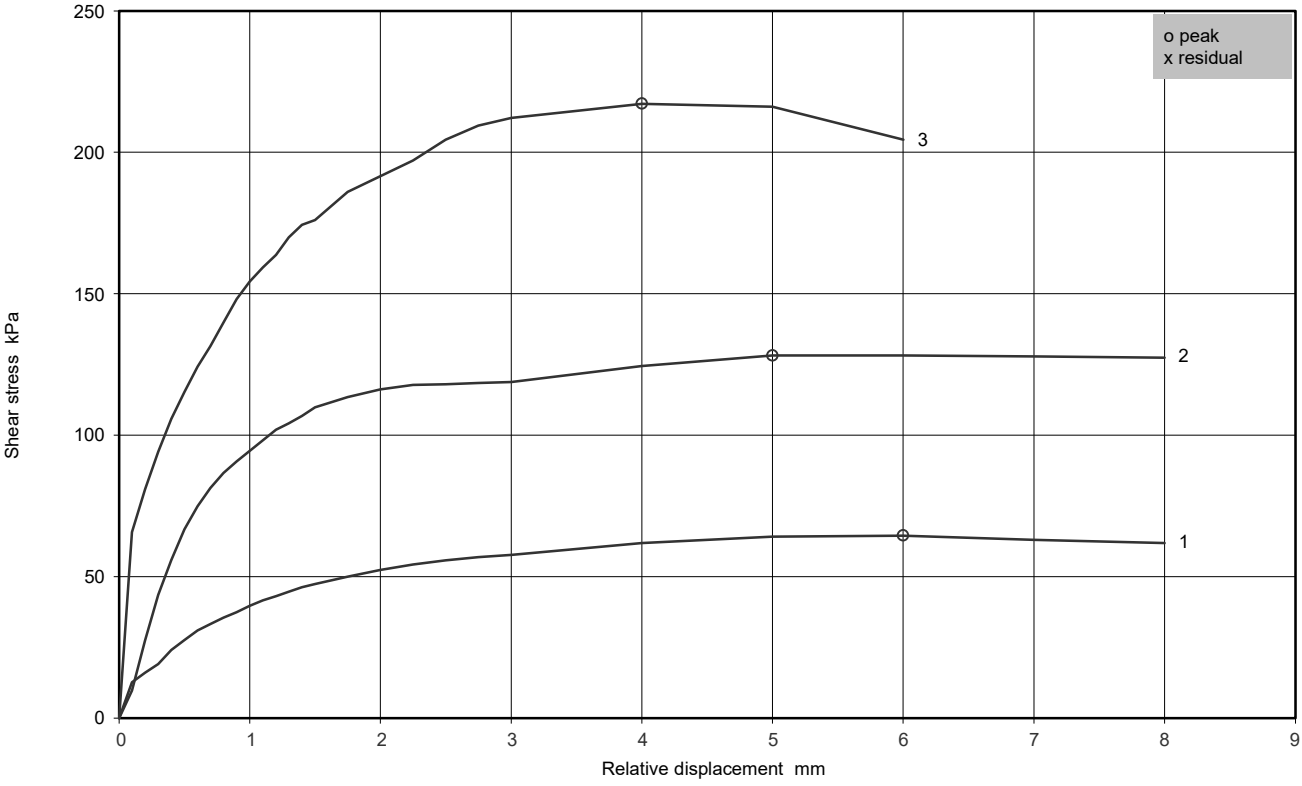
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J326001
					Borehole/Pit No.	BH-108
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey brown SAND				Depth m	11.2
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2025112042

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	20/11/2025			

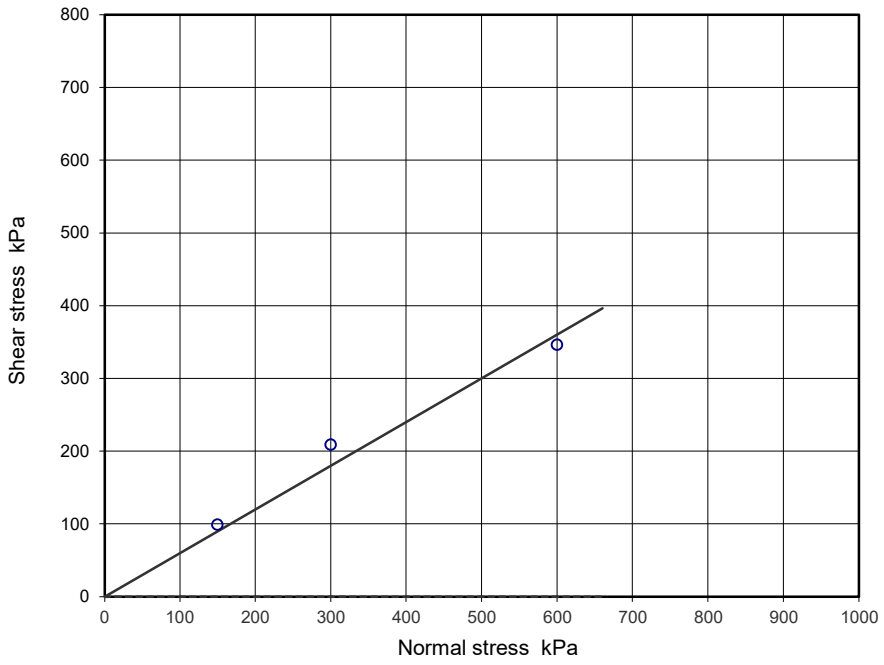
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH109
Project Name	Ardersier Port			Sample No.	
Soil Description	Dark brown SAND			Depth m	13.2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026021614
Test Method	BS EN ISO 17892-10:2018			Date of test	20/02/2026

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details	Test No.	**1**	**2**	**3**				
Initial	Height	26.1	26.0	26.0				mm
	Bulk Density	1.75	1.75	1.75				Mg/m³
	Moisture Content	27.0	27.0	27.0				%
	Dry density	1.38	1.38	1.38				Mg/m³
	Voids ratio	0.920	0.920	0.920				
	Degree of Saturation	78	78	78				%
Consolidation	Consolidation / Normal Stress applied	**150**	**300**	**600**				kPa
	Change in height during consolidation*	-0.648	-0.806	-0.960				mm
	Voids ratio after consolidation	0.872	0.861	0.849				
After test	Final Moisture content	26.7	26.5	26.4				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	10.00	5.00	5.00				mm
	Shear stress	98.8	209.1	346.4				kPa
	Vertical Movement at peak shear stress*	-1.34	-0.97	-1.34				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[30]	0
Ø '	degrees	[28.0]	31

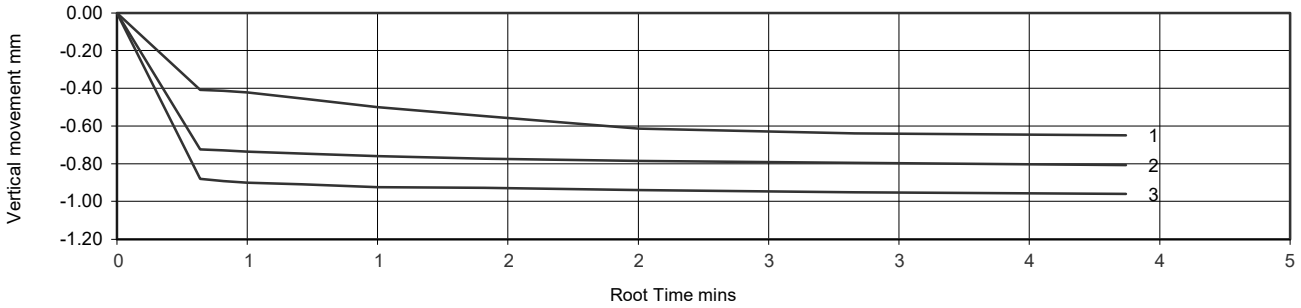
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

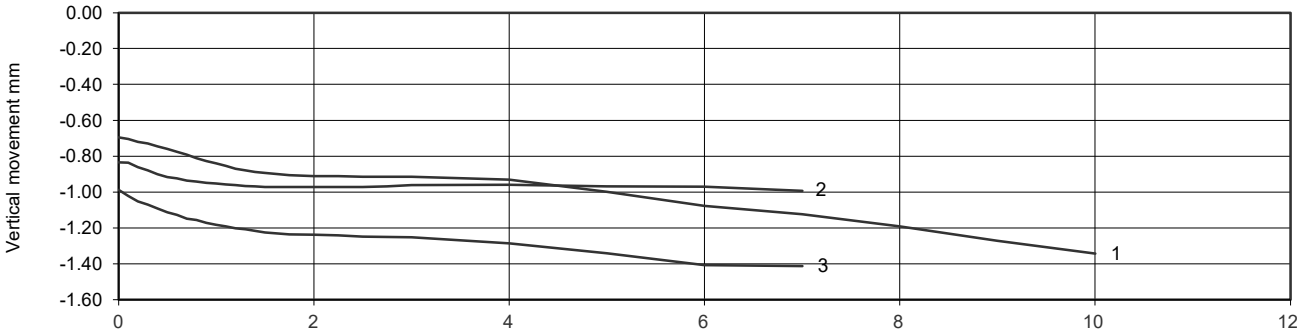
	Date Printed			
	23/02/2026	UKAS TESTING 7758	TTL	**SSB**

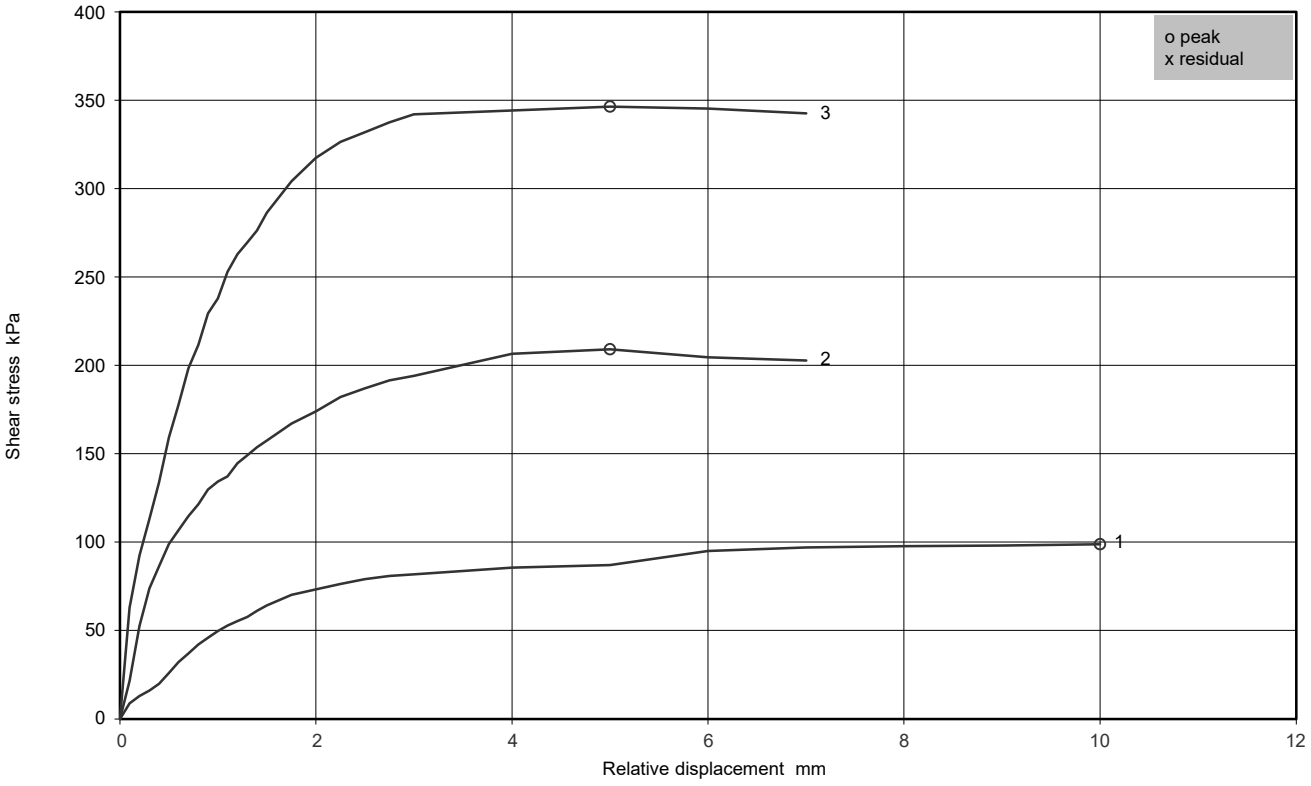
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH109
Project Name	Ardersier Port				Sample No.	
Soil Description	Dark brown SAND				Depth m	13.2
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026021614

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
23/02/2026			SSB

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH110
Project Name	Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	14
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026021611
Test Method	BS EN ISO 17892-10:2018			Date of test	23/02/2026

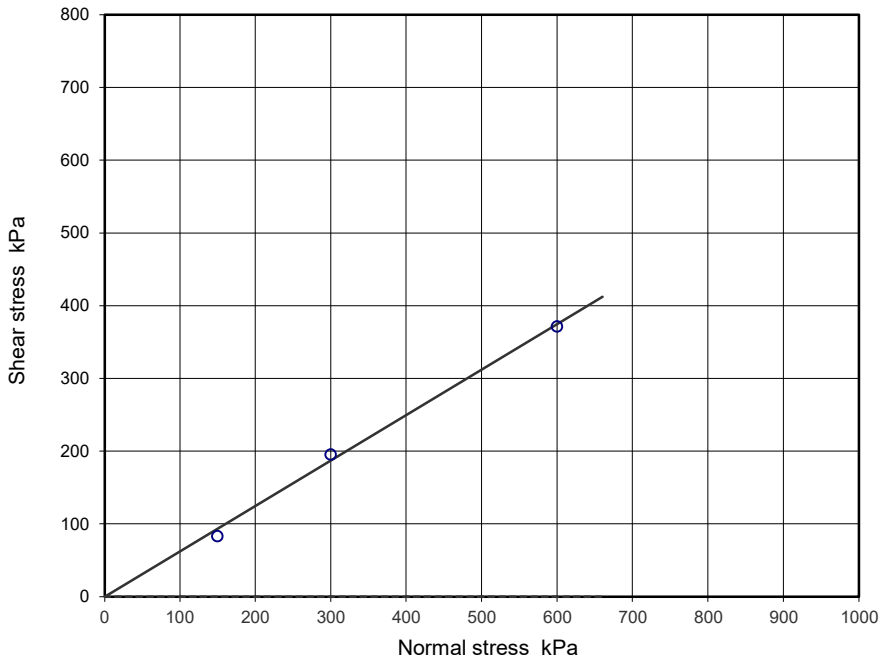
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.1	26.1				mm
	Bulk Density		1.70	1.70	1.70				Mg/m³
	Moisture Content		21.2	21.2	21.2				%
	Dry density		1.40	1.40	1.40				Mg/m³
	Voids ratio		0.893	0.893	0.893				
	Degree of Saturation		63	63	63				%
Consolidation	Consolidation / Normal Stress applied		**150**	**300**	**600**				kPa
	Change in height during consolidation*		-1.252	-1.452	-1.928				mm
	Voids ratio after consolidation		0.802	0.788	0.753				
After test	Final Moisture content		21.3	21.1	21.4				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	7.00	9.00	9.00				mm
	Shear stress	82.8	195.2	371.5				kPa
	Vertical Movement at peak shear stress*	-2.06	-1.93	-2.89				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[-5.4]	0
Ø '	degrees	[32.5]	32

Residual strength, (x)

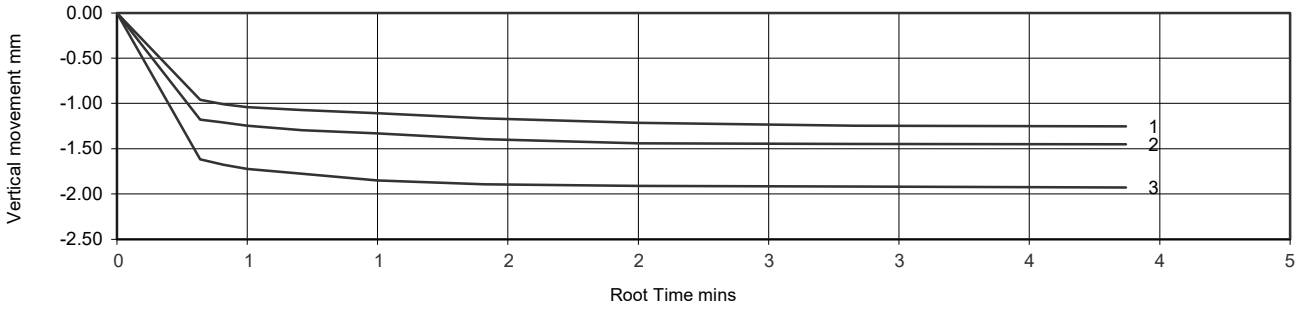
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

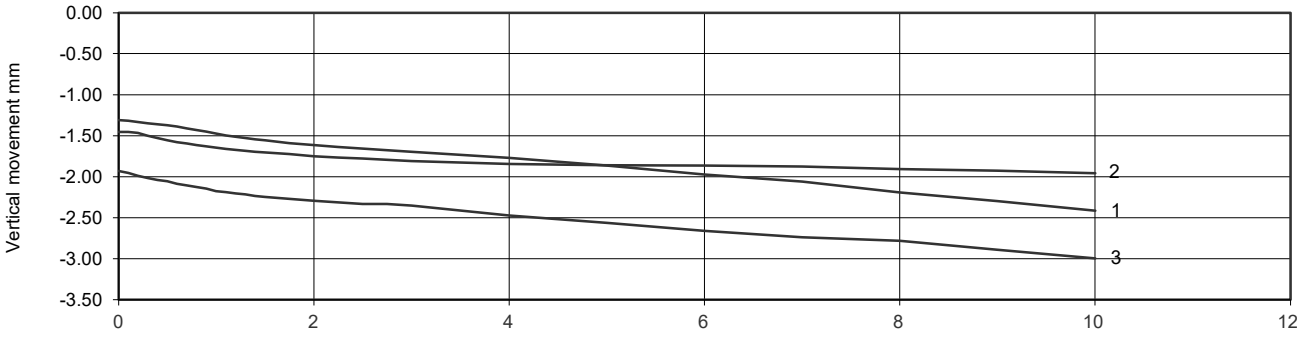
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	24/02/2026	UKAS TESTING 7758	TTL	**SSB**

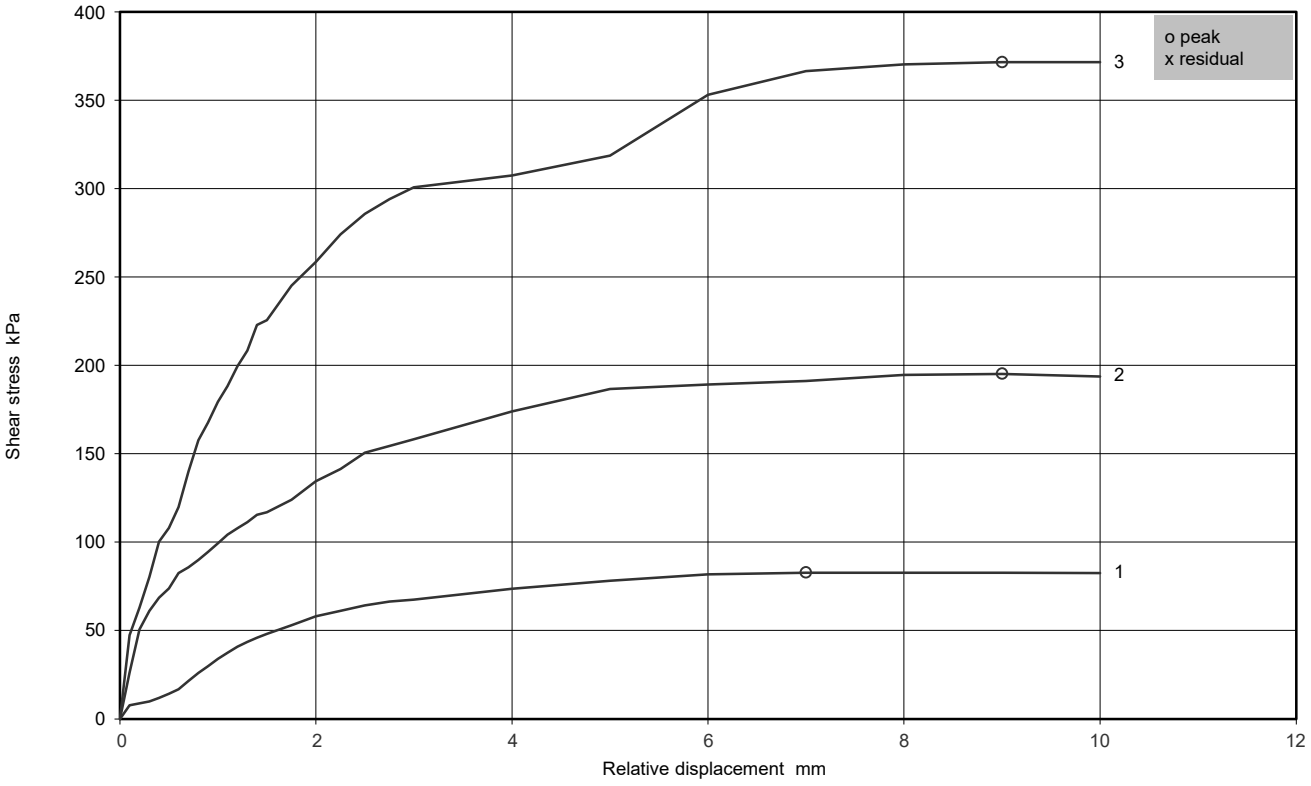
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH110
Project Name	Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	14
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026021611

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	24/02/2026			

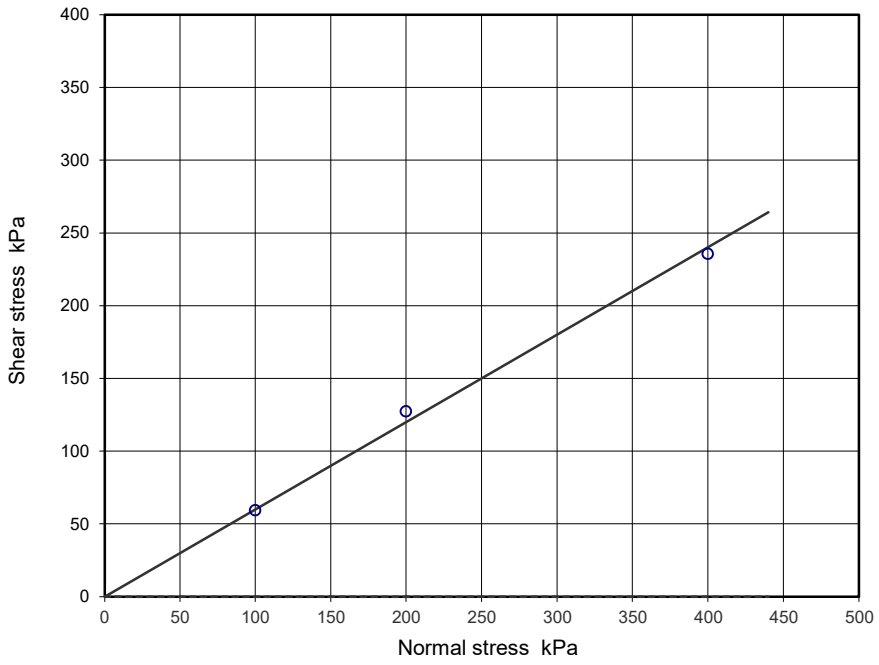
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH111
Project Name	Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	11.7
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026021612
Test Method	BS EN ISO 17892-10:2018			Date of test	23/02/2026

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.3	26.3				mm
	Bulk Density		1.60	1.60	1.60				Mg/m³
	Moisture Content		13.2	13.2	13.2				%
	Dry density		1.41	1.41	1.41				Mg/m³
	Voids ratio		0.879	0.879	0.879				
	Degree of Saturation		40	40	40				%
Consolidation	Consolidation / Normal Stress applied		**100**	**200**	**400**				kPa
	Change in height during consolidation*		-2.528	-2.940	-3.028				mm
	Voids ratio after consolidation		0.699	0.669	0.662				
After test	Final Moisture content		19.3	18.0	20.3				

Shearing stage(s)

Rate of displacement	Peak		0.60000	0.60000	0.60000				mm/min
	Residual								mm/min
Peak values, (o)	Relative horizontal displacement		10.00	6.00	6.00				mm
	Shear stress		59.3	127.3	235.6				kPa
	Vertical Movement at peak shear stress*		-3.64	-3.47	-3.67				mm
Residual values, (x)	No. of traverses (including peak run)		1	1	1				
	Relative horizontal displacement								mm
	Shear stress								kPa
	Vertical movement at residual shear stress*								mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[5.2]	0
Ø '	degrees	[30.0]	31

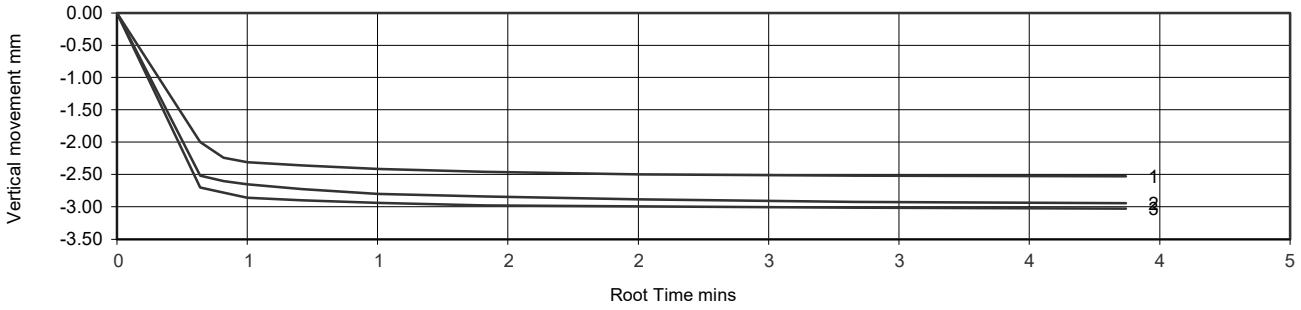
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

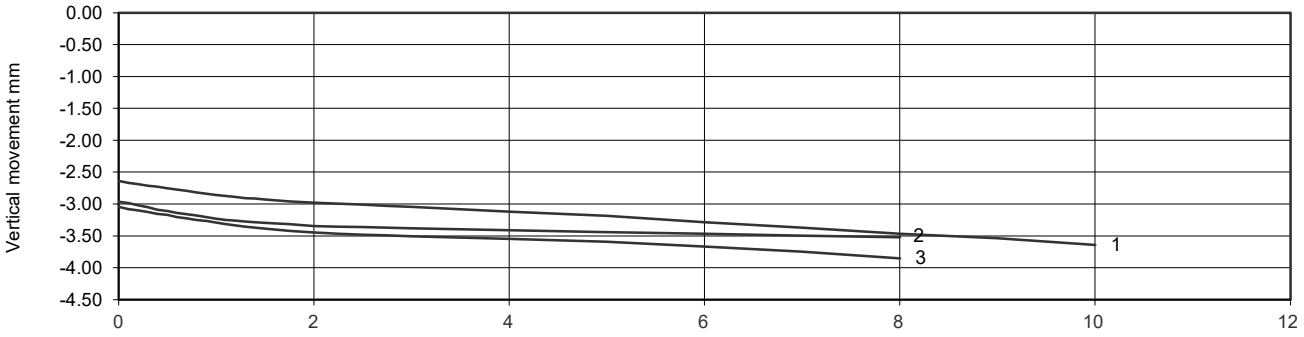
	Date Printed			
	24/02/2026	UKAS TESTING 7758	TTL	**SSB**

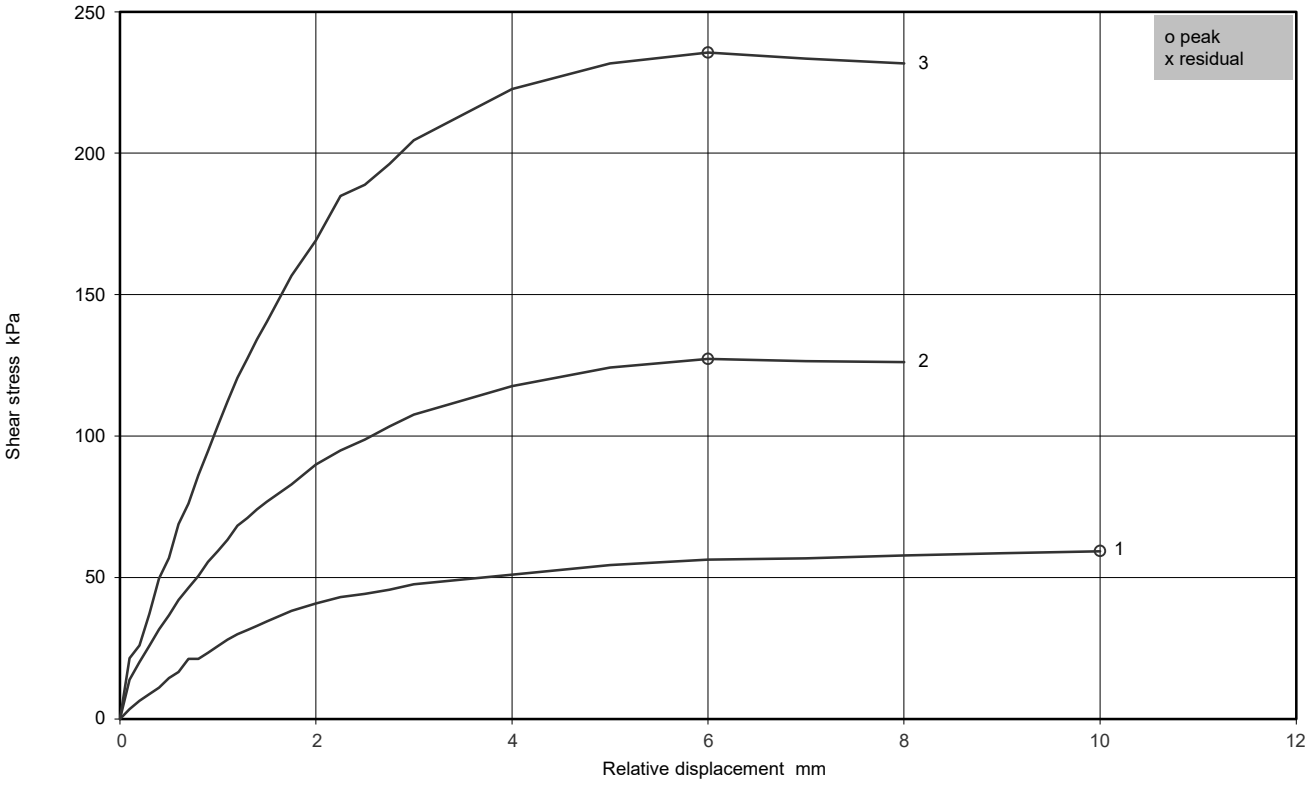
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH111
Project Name	Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	11.7
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026021612

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	24/02/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey brown SAND			Depth m	6.3
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511250
Test Method	BS EN ISO 17892-10:2018			Date of test	25/11/2025

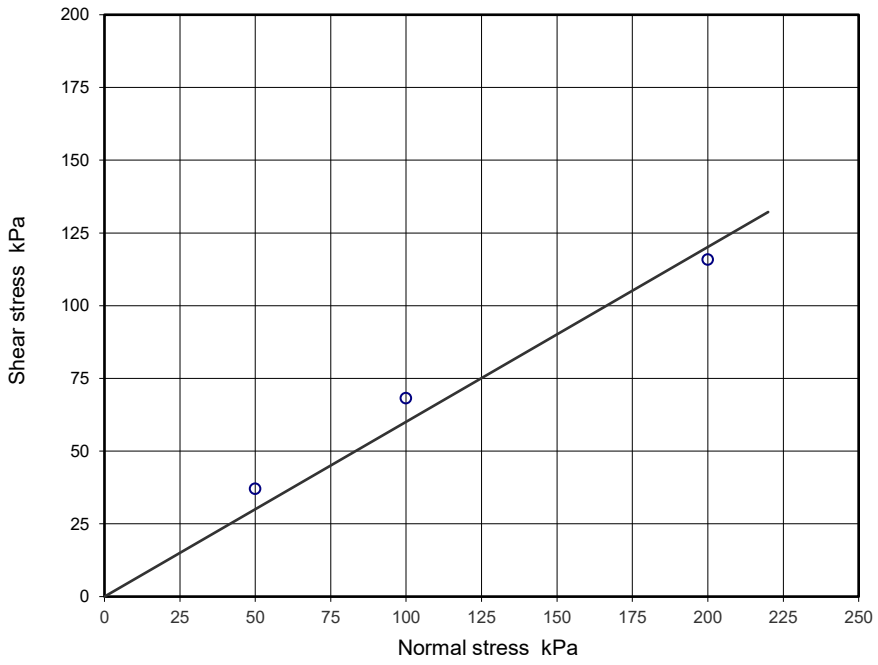
Preparation Details -2mm material. Recompacted to 65% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.2	23.2				mm
	Bulk Density		1.91	1.91	1.91				Mg/m³
	Moisture Content		22.7	22.7	22.7				%
	Dry density		1.56	1.56	1.56				Mg/m³
	Voids ratio		0.699	0.699	0.699				
	Degree of Saturation		86	86	86				%
Consolidation	Consolidation / Normal Stress applied		**50**	**100**	**200**				kPa
	Change in height during consolidation*		-0.218	-0.960	-2.882				mm
	Voids ratio after consolidation		0.683	0.629	0.488				
After test	Final Moisture content		23.8	23.7	23.6				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	7.00	8.00	5.00				mm
	Shear stress	37.0	68.2	115.8				kPa
	Vertical Movement at peak shear stress*	-0.44	-1.44	-3.26				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[13]	0
Ø '	degrees	[27.5]	31

Residual strength, (x)

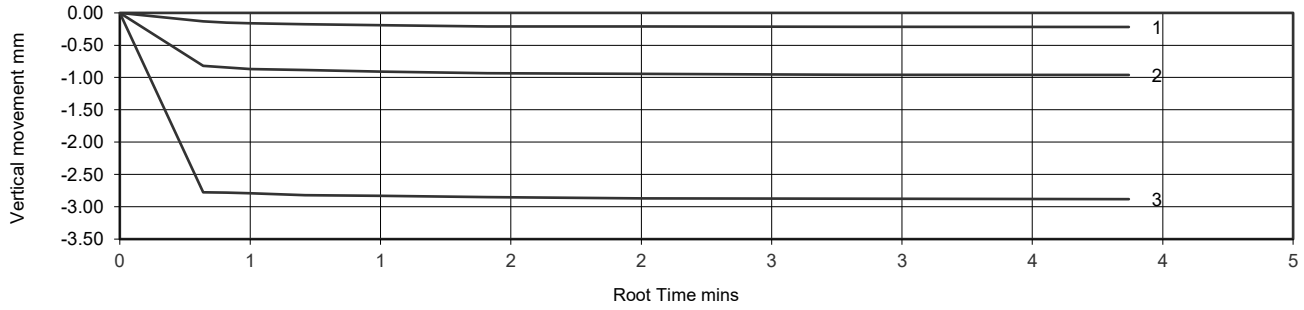
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

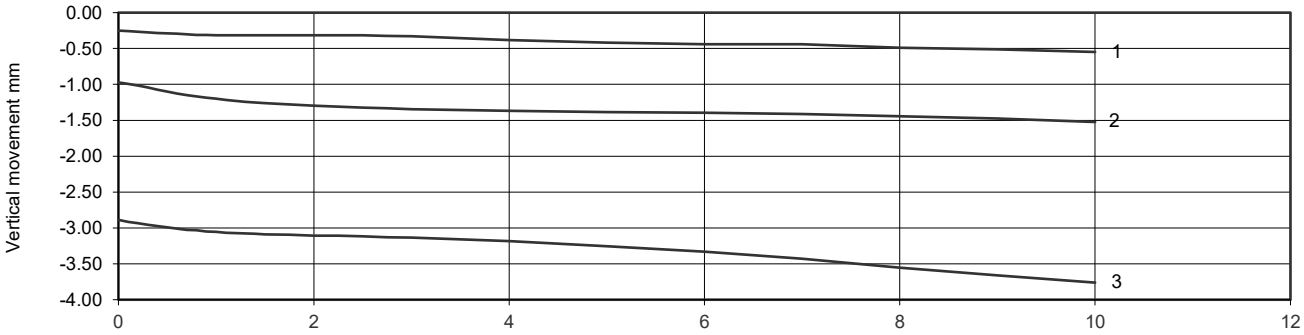
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	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

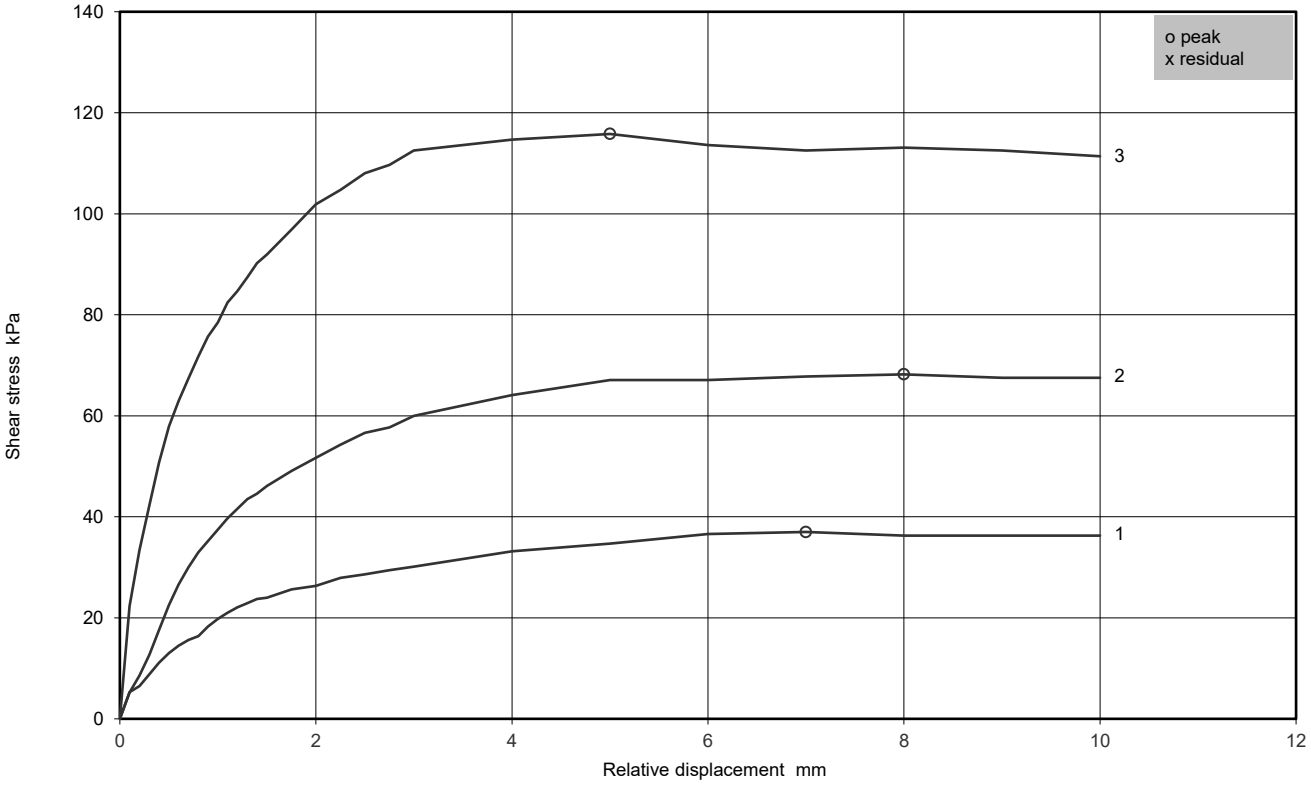
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey brown SAND				Depth m	6.3
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511250

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey brown SAND			Depth m	12.3
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511251
Test Method	BS EN ISO 17892-10:2018			Date of test	26/11/2025

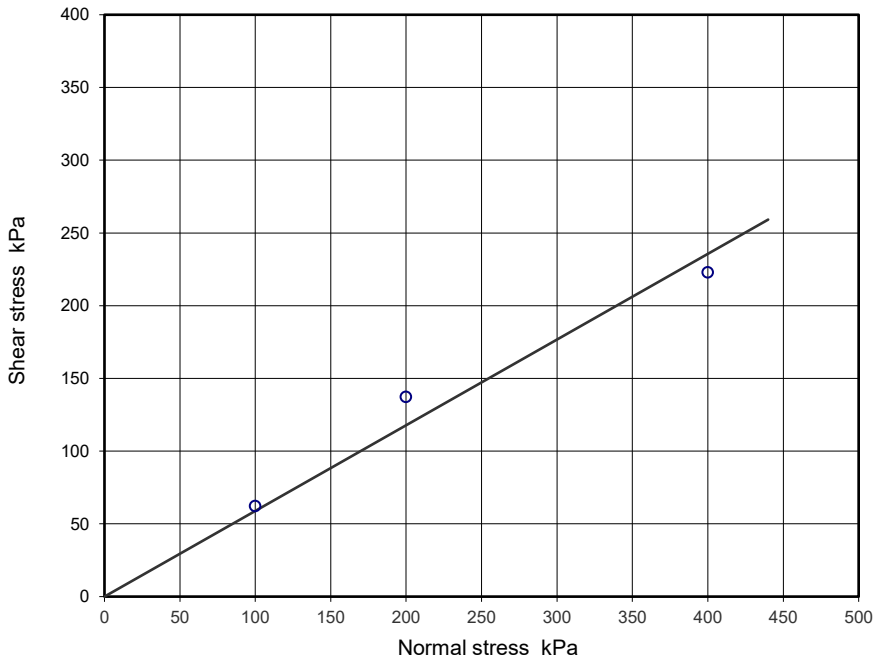
Preparation Details -2mm material. Recompacted to 65% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.1				mm
	Bulk Density		1.87	1.87	1.87				Mg/m³
	Moisture Content		19.2	19.2	19.2				%
	Dry density		1.57	1.57	1.57				Mg/m³
	Voids ratio		0.688	0.688	0.688				
	Degree of Saturation		74	74	74				%
Consolidation	Consolidation / Normal Stress applied		**100**	**200**	**400**				kPa
	Change in height during consolidation*		-0.462	-0.694	-1.048				mm
	Voids ratio after consolidation		0.654	0.637	0.611				
After test	Final Moisture content		22.9	22.0	22.3				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	9.00	8.00	4.00				mm
	Shear stress	62.2	137.2	222.8				kPa
	Vertical Movement at peak shear stress*	-1.29	-1.31	-1.40				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[19]	0
Ø '	degrees	[27.5]	30.5

Residual strength, (x)

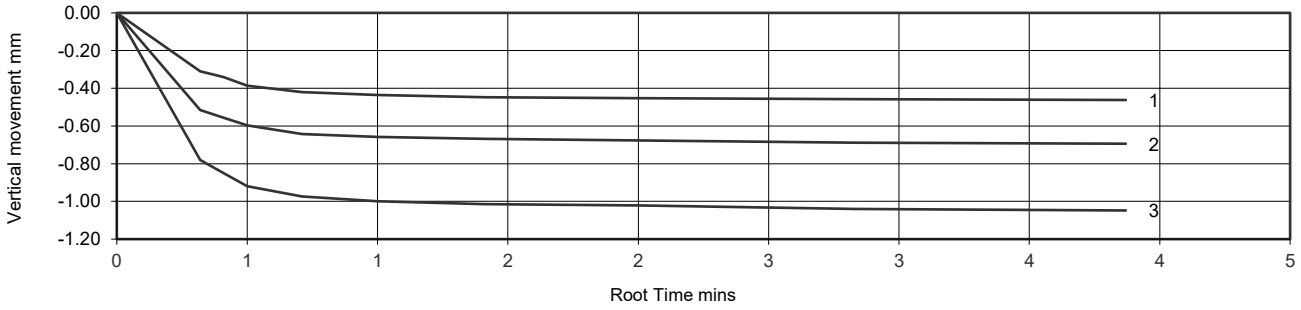
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

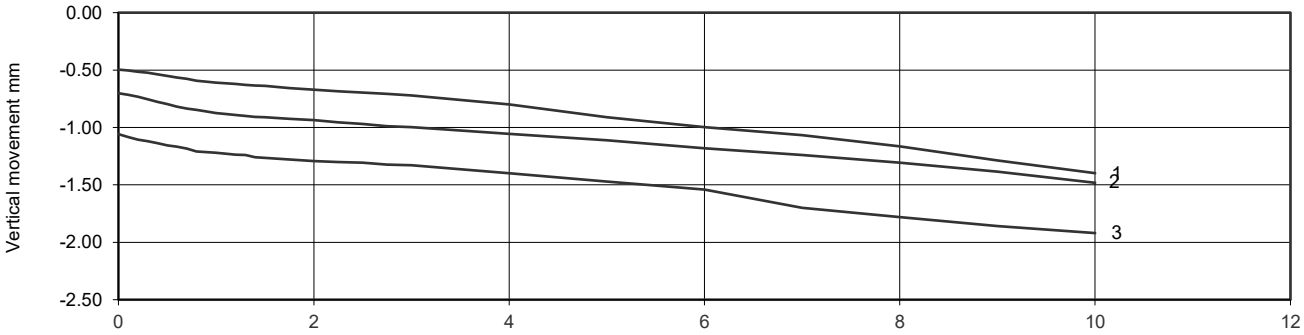
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	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

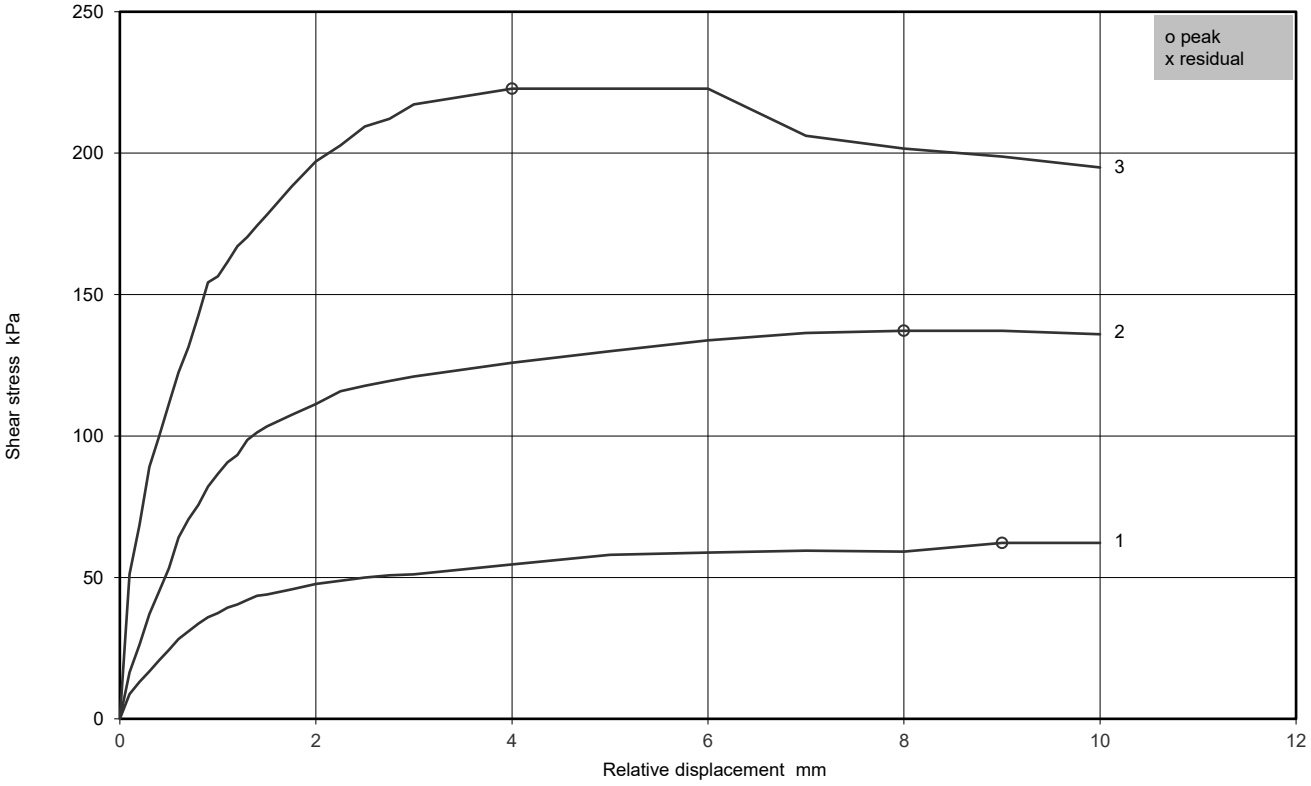
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey brown SAND				Depth m	12.3
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511251

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	19.8
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511252
Test Method	BS EN ISO 17892-10:2018			Date of test	12/02/2025

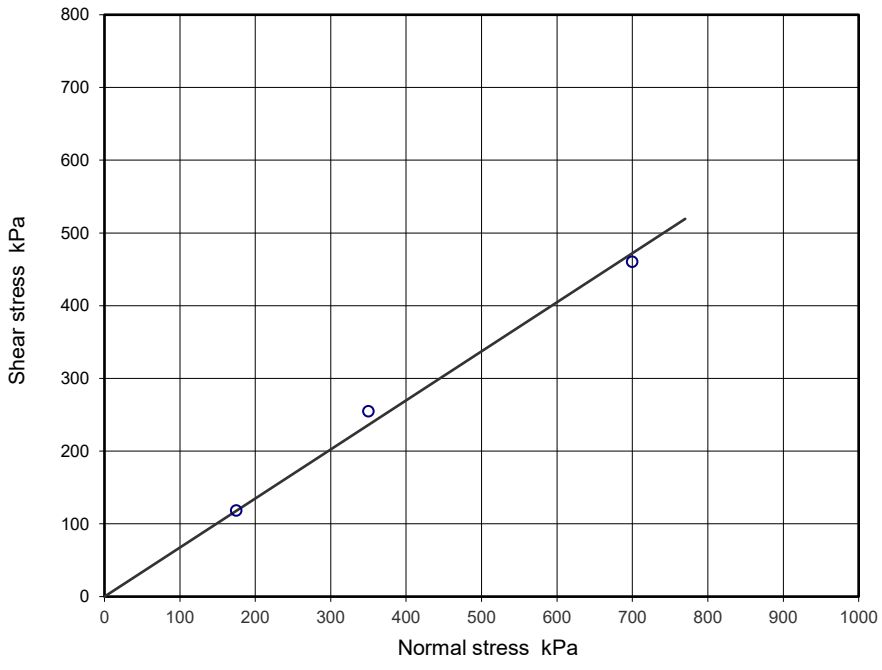
Preparation Details -2mm material. Recompacted to 45% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.1				mm
	Bulk Density		1.79	1.79	1.79				Mg/m³
	Moisture Content		18.3	18.3	18.3				%
	Dry density		1.51	1.51	1.51				Mg/m³
	Voids ratio		0.755	0.755	0.755				
	Degree of Saturation		64	64	64				%
Consolidation	Consolidation / Normal Stress applied		**175**	**350**	**700**				kPa
	Change in height during consolidation*		-0.848	-1.392	-1.674				mm
	Voids ratio after consolidation		0.691	0.649	0.628				
After test	Final Moisture content		19.8	18.7	19.2				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	8.00	4.00	5.00				mm
	Shear stress	118.3	254.8	460.0				kPa
	Vertical Movement at peak shear stress*	-1.12	-1.54	-1.97				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[16]	0
Ø '	degrees	[32.5]	34

Residual strength, (x)

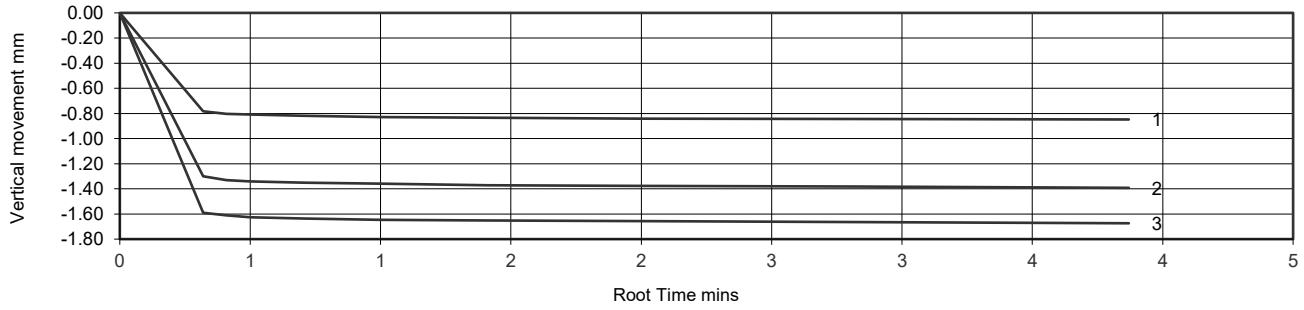
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

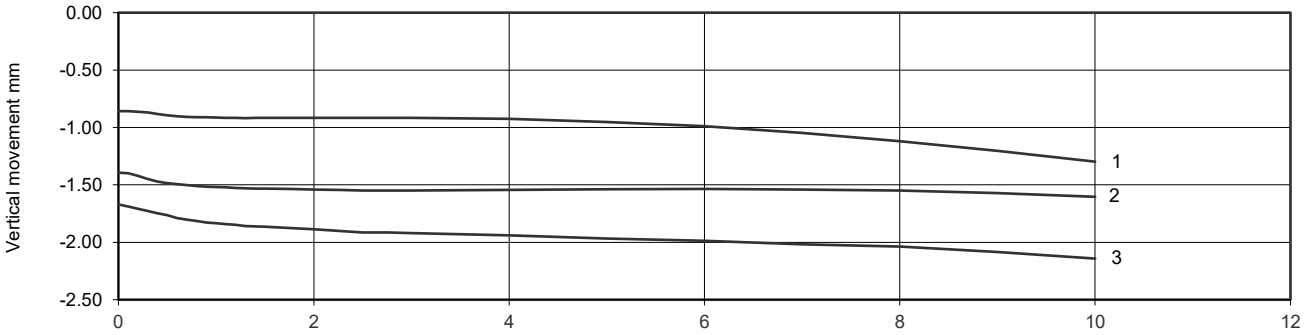
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

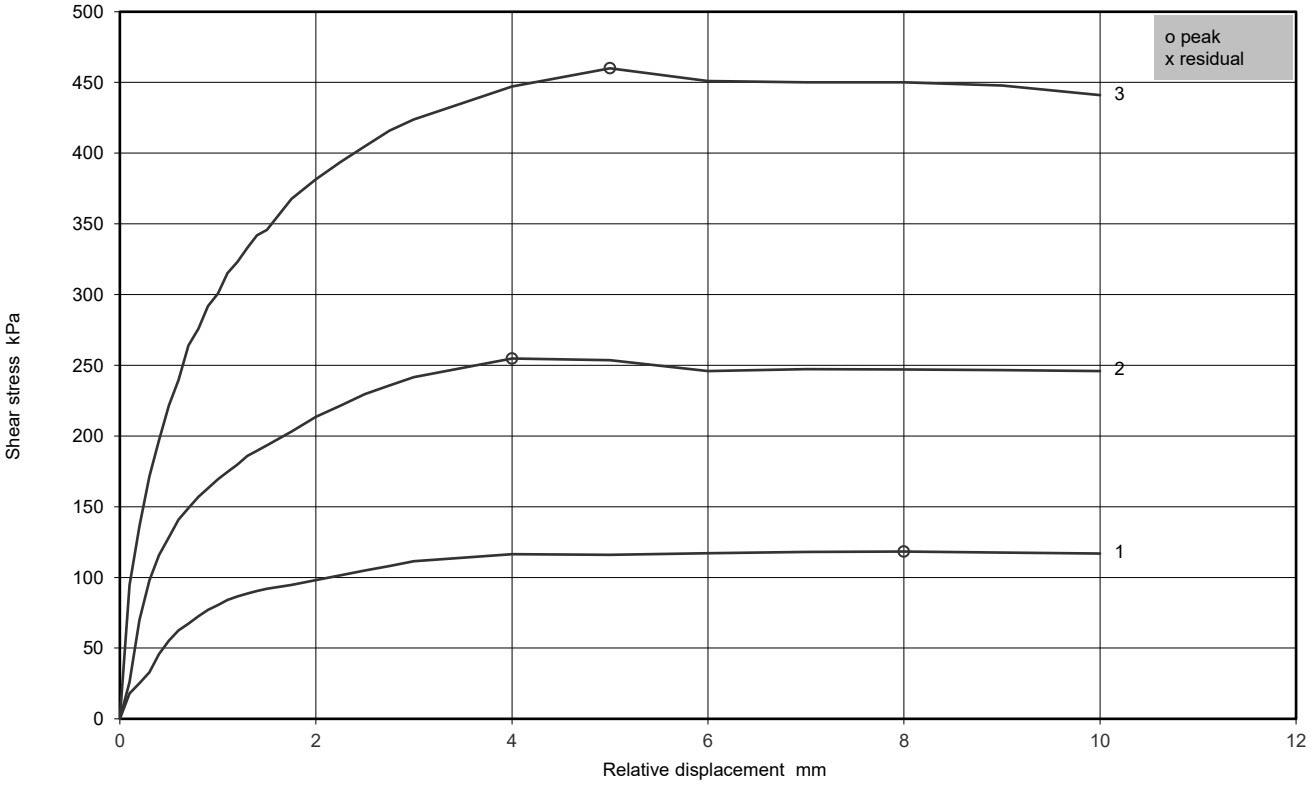
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown slightly gravelly silty SAND				Depth m	19.8
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511252

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly SAND			Depth m	21.3
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511253
Test Method	BS EN ISO 17892-10:2018			Date of test	12/02/2025

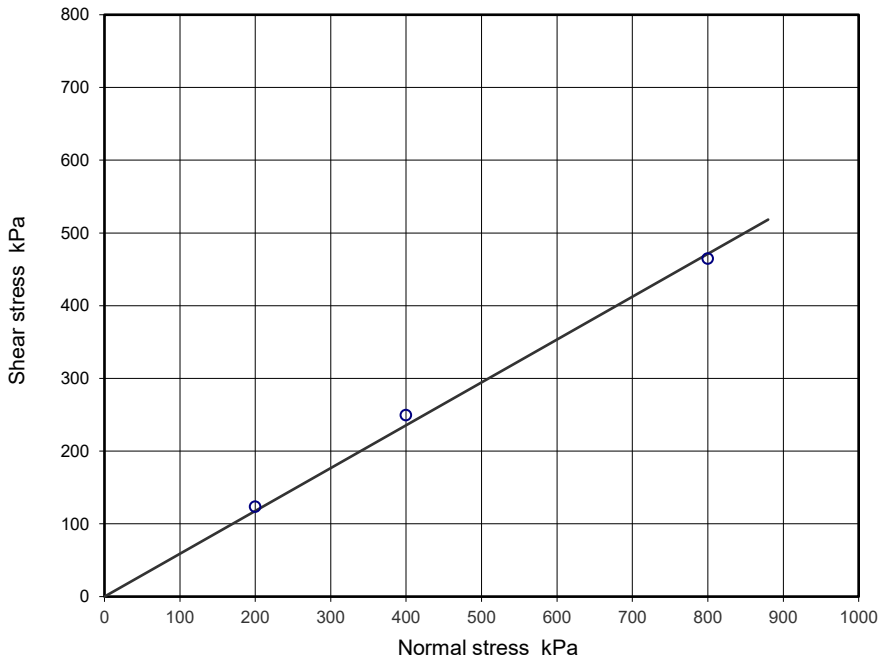
Preparation Details -2mm material. Recompacted to 40% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.2	23.2	23.2				mm
	Bulk Density		1.77	1.77	1.77				Mg/m³
	Moisture Content		14.9	14.9	14.9				%
	Dry density		1.54	1.54	1.54				Mg/m³
	Voids ratio		0.721	0.721	0.721				
	Degree of Saturation		55	55	55				%
Consolidation	Consolidation / Normal Stress applied		**200**	**400**	**800**				kPa
	Change in height during consolidation*		-2.006	-1.946	-2.208				mm
	Voids ratio after consolidation		0.572	0.576	0.557				
After test	Final Moisture content		17.7	17.8	16.9				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	7.00	7.00	5.00				mm
	Shear stress	123.6	249.6	464.5				kPa
	Vertical Movement at peak shear stress*	-2.65	-2.86	-2.74				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[16]	0
Ø '	degrees	[29.5]	30.5

Residual strength, (x)

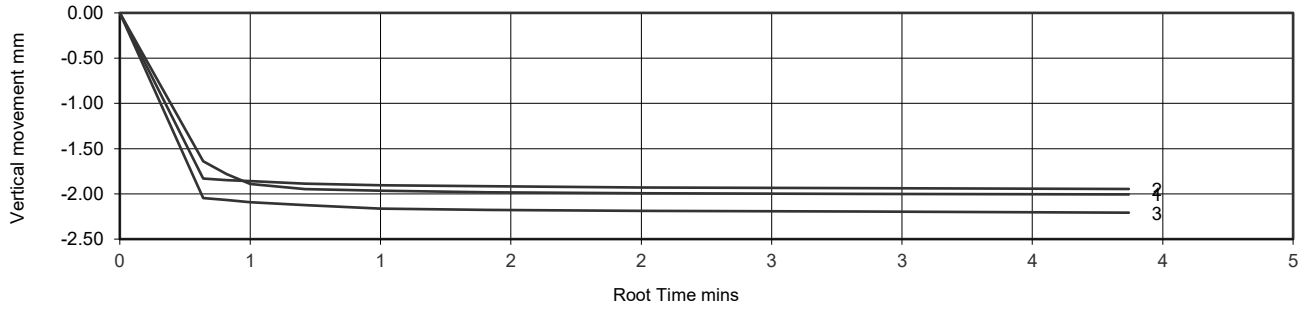
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

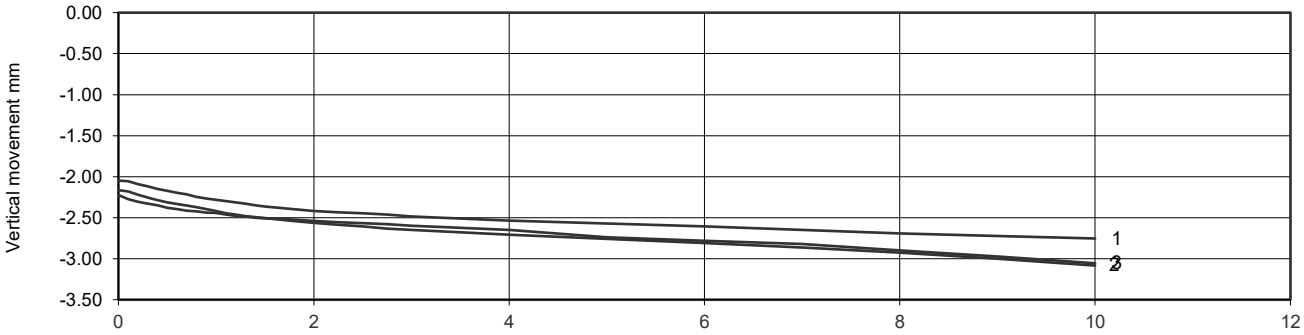
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

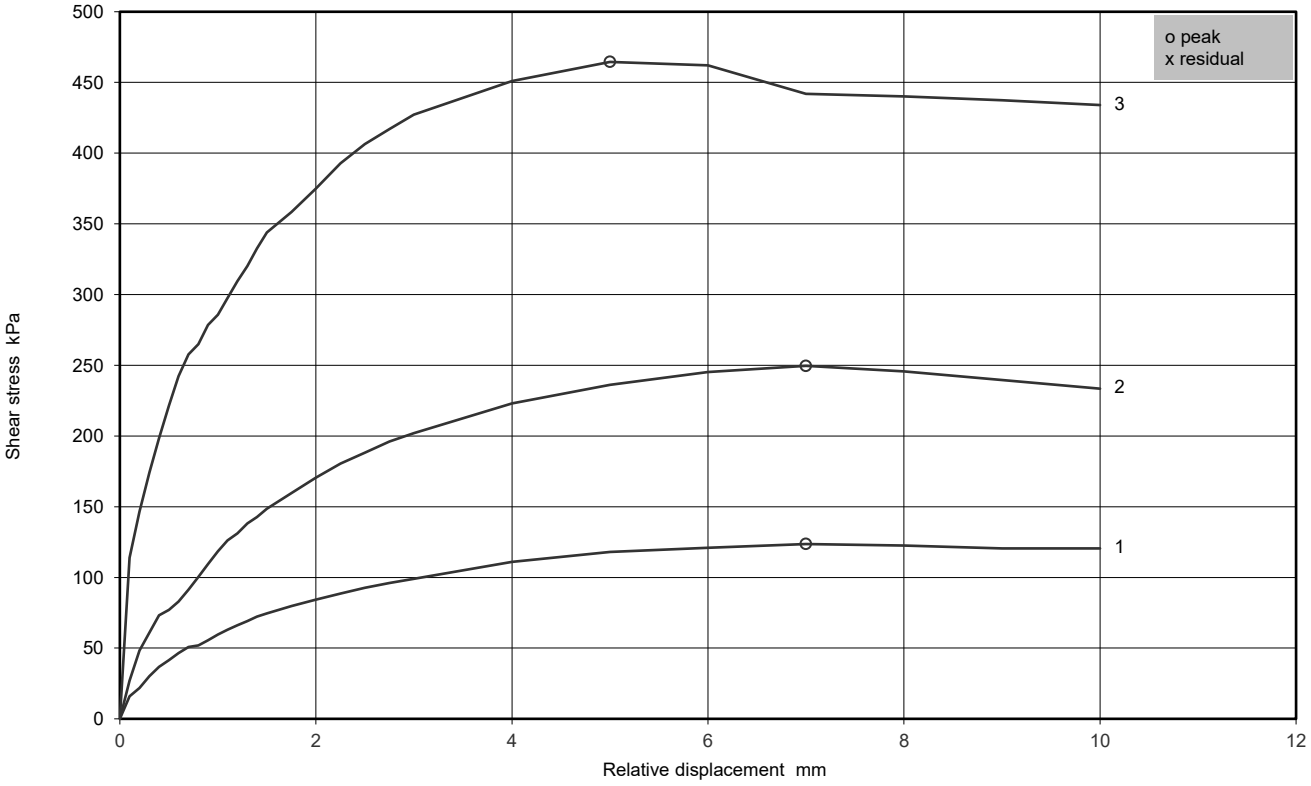
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	BH-119
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown slightly gravelly SAND				Depth m	21.3
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511253

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH201
Project Name	Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	6.5
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202602164
Test Method	BS EN ISO 17892-10:2018			Date of test	23/02/2026

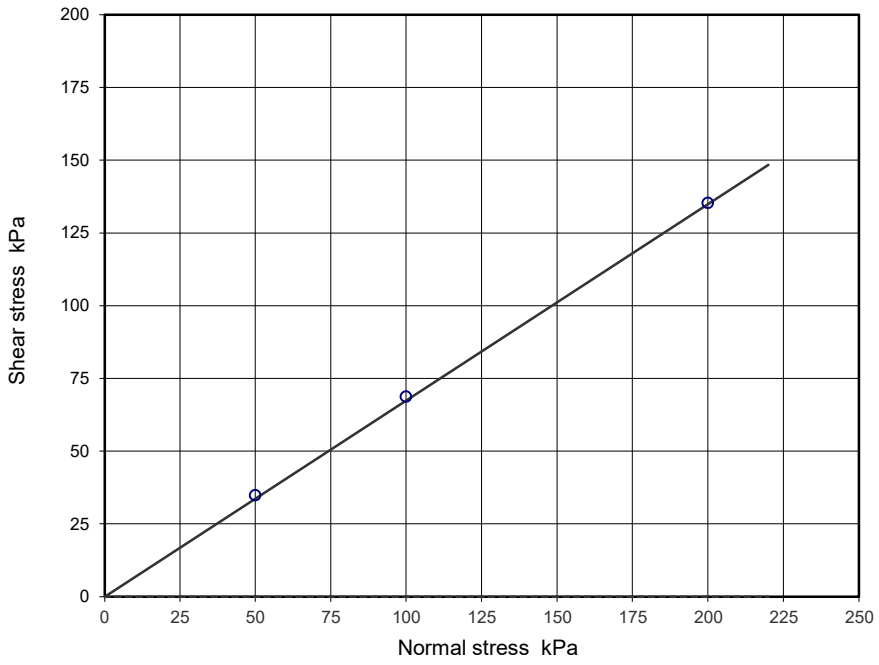
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.3	26.3				mm
	Bulk Density		1.80	1.80	1.80				Mg/m³
	Moisture Content		29.7	29.7	29.7				%
	Dry density		1.39	1.39	1.39				Mg/m³
	Voids ratio		0.906	0.906	0.906				
	Degree of Saturation		87	87	87				%
Consolidation	Consolidation / Normal Stress applied		**50**	**100**	**200**				kPa
	Change in height during consolidation*		-0.276	-0.372	-0.604				mm
	Voids ratio after consolidation		0.886	0.879	0.862				
After test	Final Moisture content		26.0	25.5	25.5				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	2.75	2.25	3.00				mm
	Shear stress	34.8	68.7	135.3				kPa
	Vertical Movement at peak shear stress*	-0.27	-0.34	-0.65				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[1.5]	0
Ø '	degrees	[34.0]	34

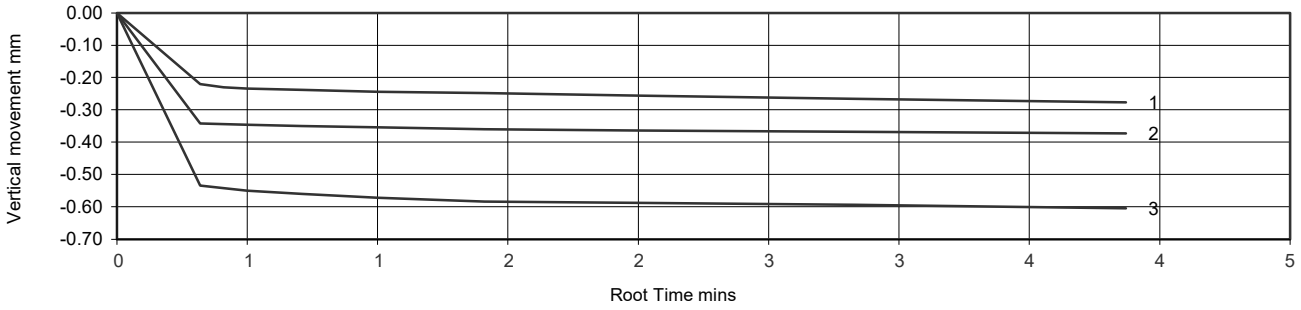
Residual strength, (x)			
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

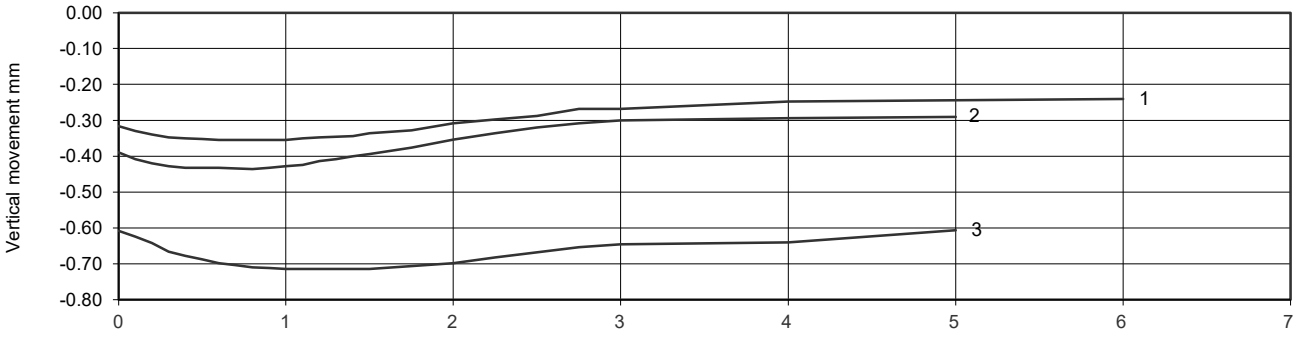
	Date Printed			
	24/02/2026	UKAS TESTING 7758	TTL	**SSB**

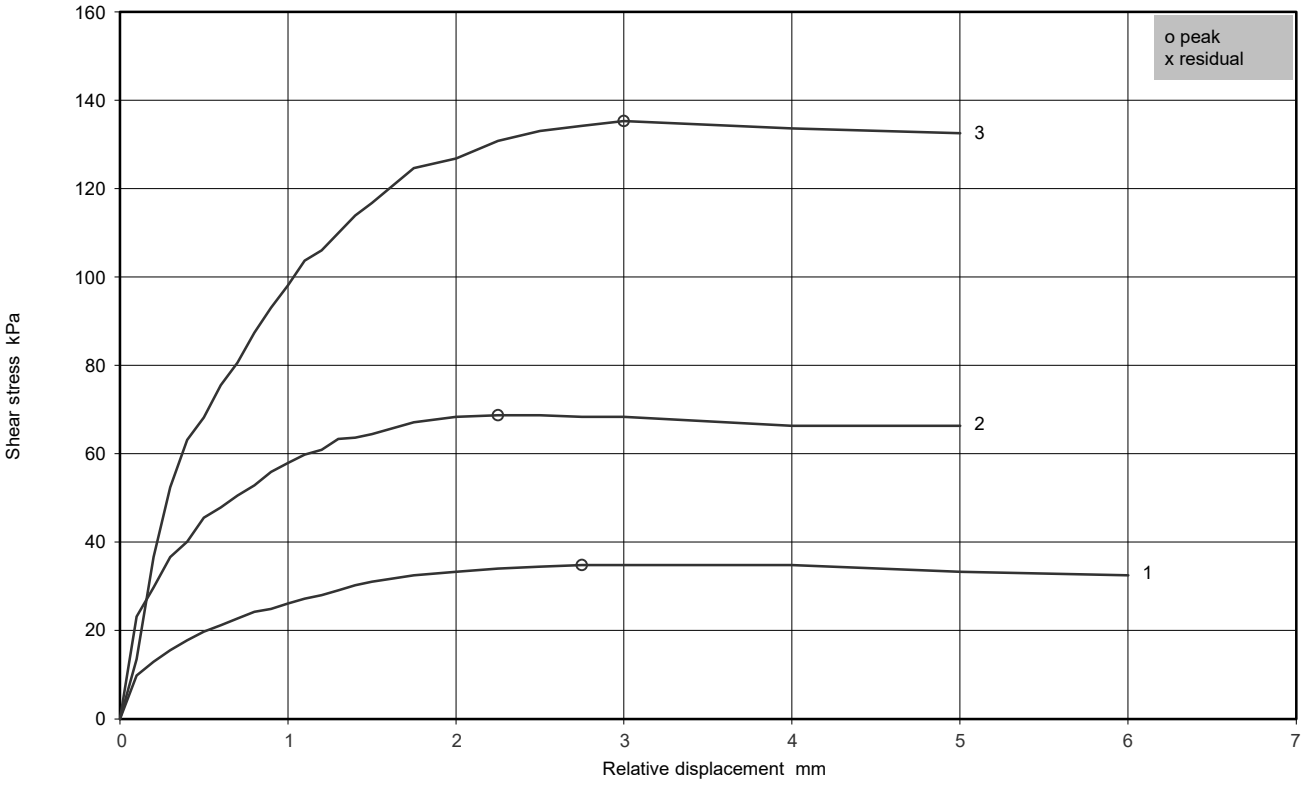
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH201
Project Name	Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	6.5
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202602164

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
24/02/2026			SSB

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331545
				Borehole/Pit No.	BH201
Project Name	Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	5
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202602163
Test Method	BS EN ISO 17892-10:2018			Date of test	23/02/2026

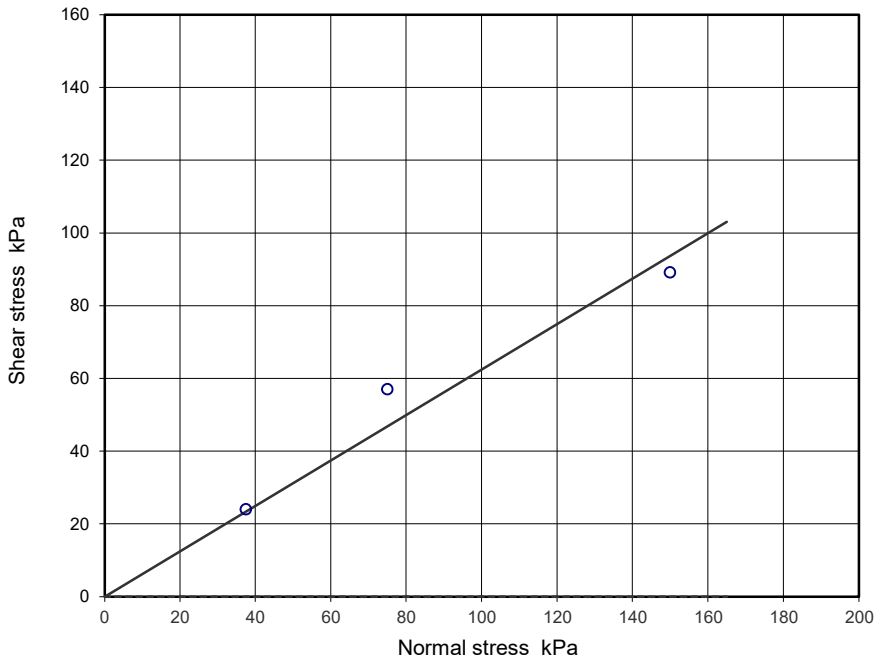
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.1	26.1				mm
	Bulk Density		1.67	1.67	1.67				Mg/m³
	Moisture Content		26.7	26.7	26.7				%
	Dry density		1.32	1.32	1.32				Mg/m³
	Voids ratio		1.008	1.008	1.008				
	Degree of Saturation		70	70	70				%
Consolidation	Consolidation / Normal Stress applied		**38**	**75**	**150**				kPa
	Change in height during consolidation*		-0.154	-0.826	-0.628				mm
	Voids ratio after consolidation		0.996	0.944	0.960				
After test	Final Moisture content		26.3	27.3	27.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	10.00	10.00	10.00				mm
	Shear stress	24.0	57.0	89.1				kPa
	Vertical Movement at peak shear stress*	-0.76	-1.35	-1.03				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[8.0]	0
Ø '	degrees	[29.0]	32

Residual strength, (x)

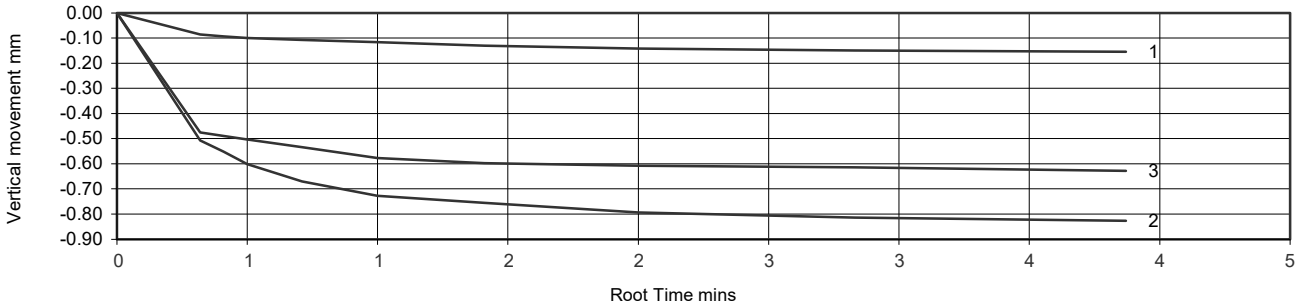
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

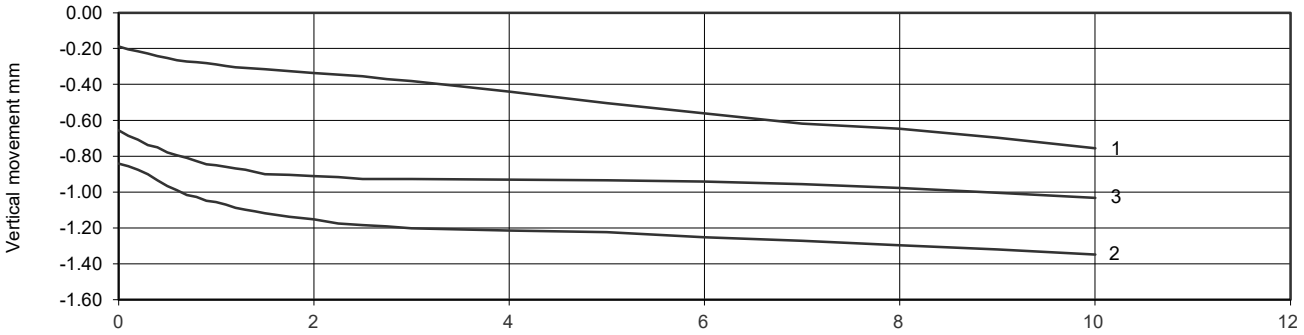
	Date Printed			
	24/02/2026	UKAS TESTING 7758	TTL	**SSB**

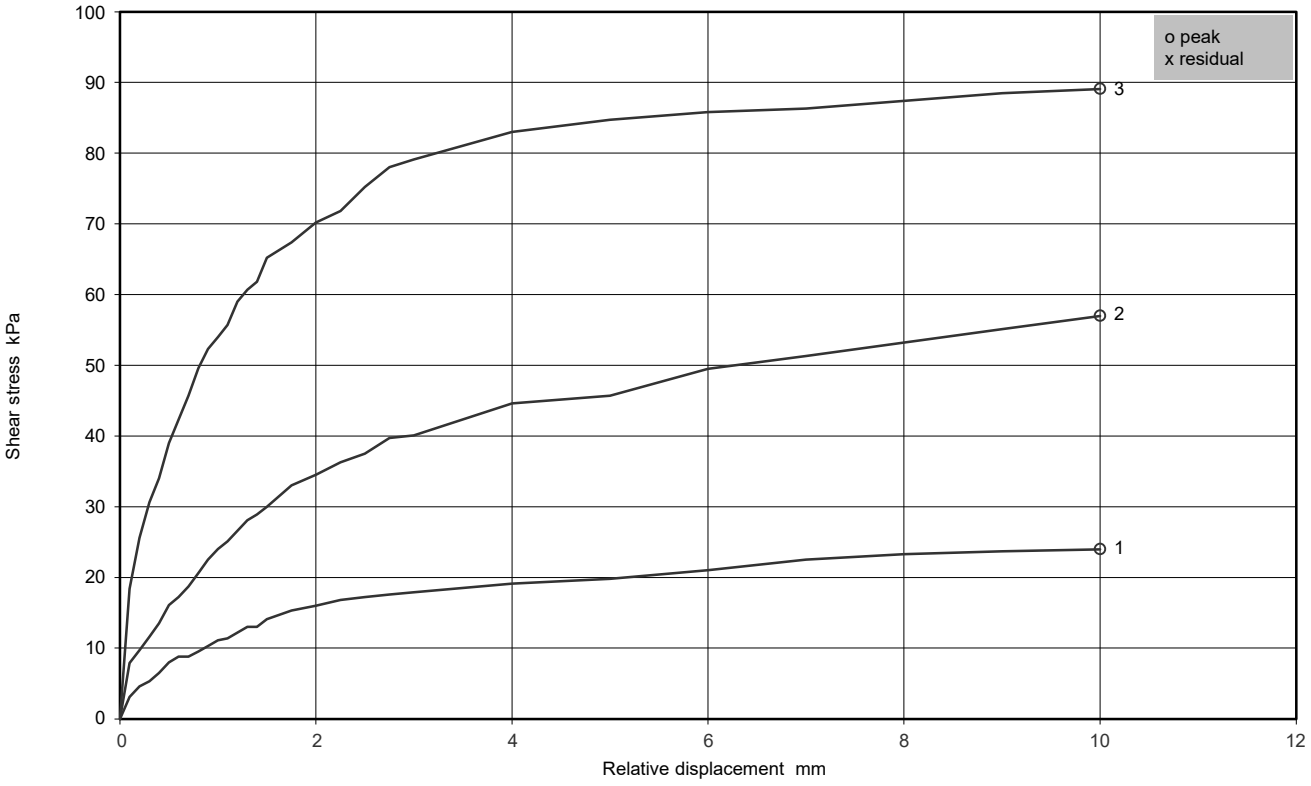
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331545
					Borehole/Pit No.	BH201
Project Name	Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	5
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202602163

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
24/02/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly silty SAND			Depth m	2.1
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511254
Test Method	BS EN ISO 17892-10:2018			Date of test	12/04/2025

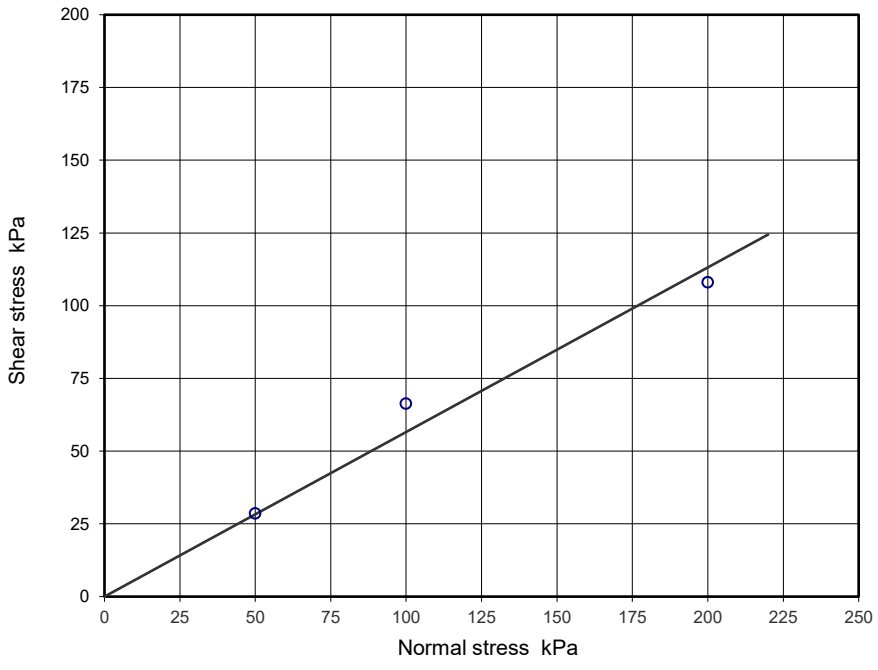
Preparation Details -2mm material. Recompacted to 45% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.1				mm
	Bulk Density		1.72	1.72	1.72				Mg/m³
	Moisture Content		13.3	13.3	13.3				%
	Dry density		1.52	1.52	1.52				Mg/m³
	Voids ratio		0.743	0.743	0.743				
	Degree of Saturation		47	47	47				%
Consolidation	Consolidation / Normal Stress applied		**50**	**100**	**200**				kPa
	Change in height during consolidation*		-0.688	-0.834	-0.968				mm
	Voids ratio after consolidation		0.691	0.680	0.670				
After test	Final Moisture content		25.8	25.1	24.5				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	10.00	9.00	7.00				mm
	Shear stress	28.6	66.3	108.0				kPa
	Vertical Movement at peak shear stress*	-1.17	-1.48	-1.64				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[7.8]	0
Ø '	degrees	[27.0]	29.5

Residual strength, (x)

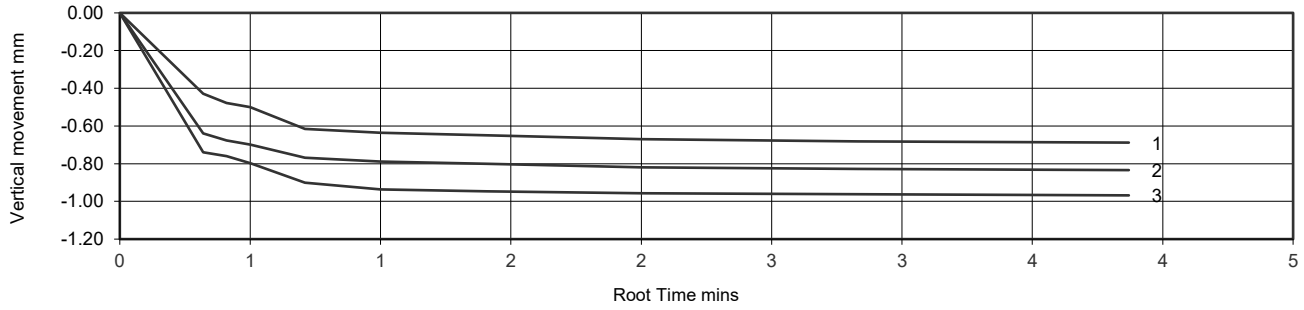
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

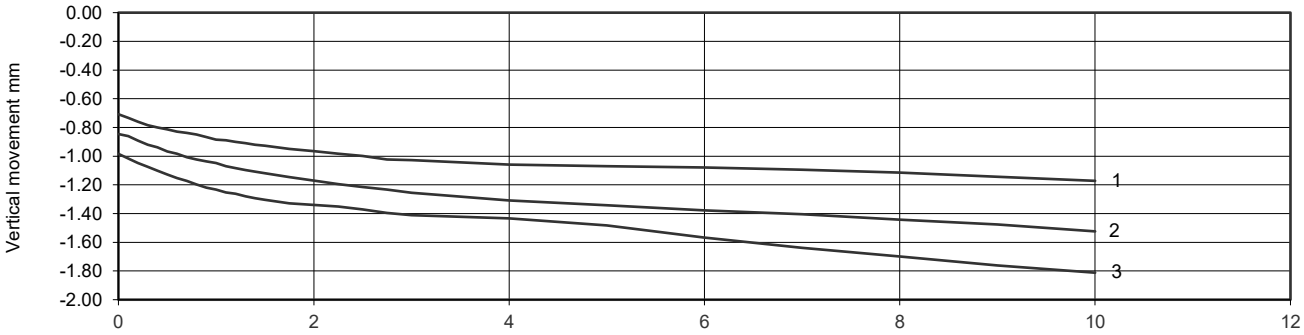
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	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

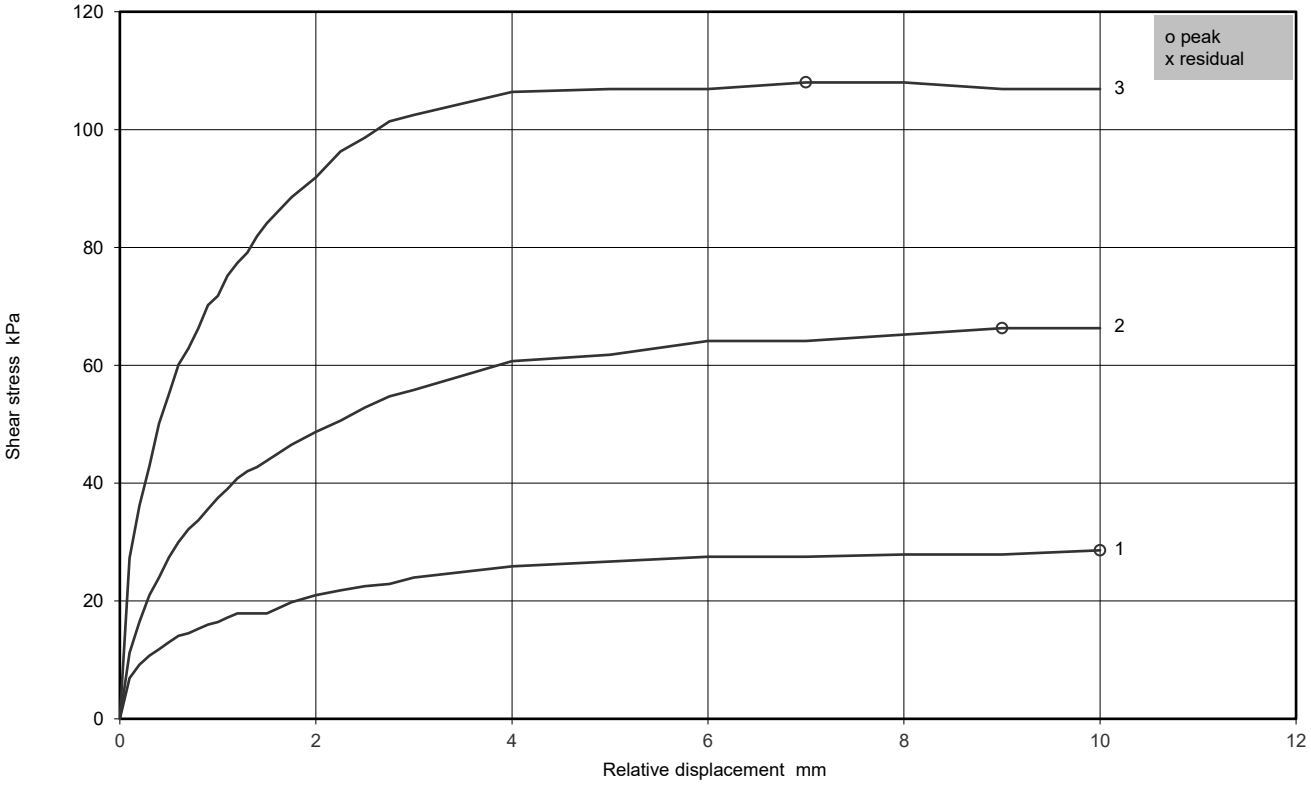
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Light brown slightly gravelly silty SAND				Depth m	2.1
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511254

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			SSB
30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly SAND			Depth m	5.4
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511255
Test Method	BS EN ISO 17892-10:2018			Date of test	12/02/2025

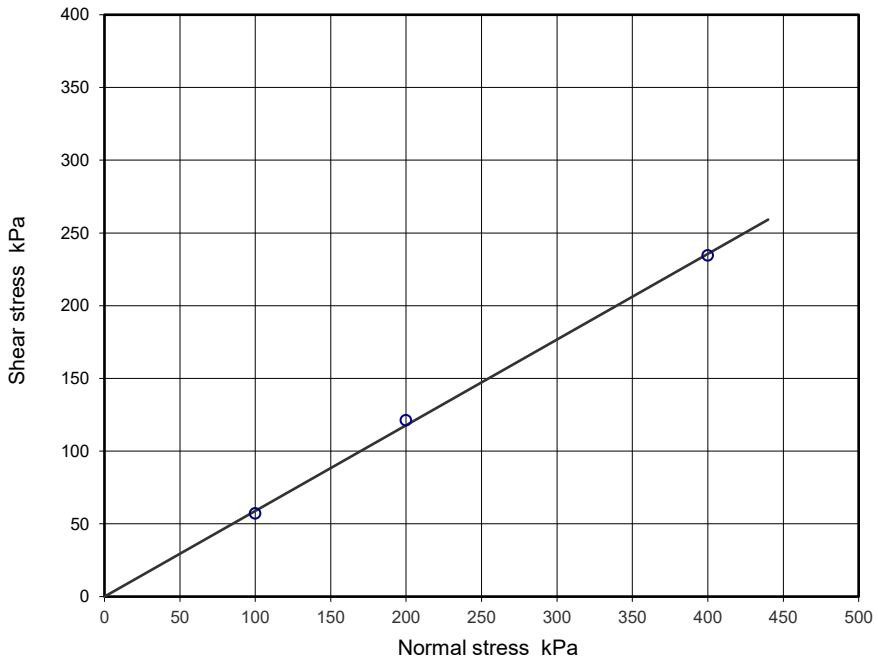
Preparation Details -2mm material. Recompacted to 65% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.2	23.3	23.2				mm
	Bulk Density		1.72	1.72	1.72				Mg/m³
	Moisture Content		21.9	21.9	21.9				%
	Dry density		1.41	1.41	1.41				Mg/m³
	Voids ratio		0.879	0.879	0.879				
	Degree of Saturation		66	66	66				%
Consolidation	Consolidation / Normal Stress applied		**100**	**200**	**400**				kPa
	Change in height during consolidation*		-0.616	-0.710	-0.846				mm
	Voids ratio after consolidation		0.829	0.822	0.810				
After test	Final Moisture content		25.0	24.2	24.1				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	5.00	10.00	7.00				mm
	Shear stress	57.1	121.1	234.5				kPa
	Vertical Movement at peak shear stress*	-0.92	-1.06	-1.11				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[0.4]	0
Ø '	degrees	[30.5]	30.5

Residual strength, (x)

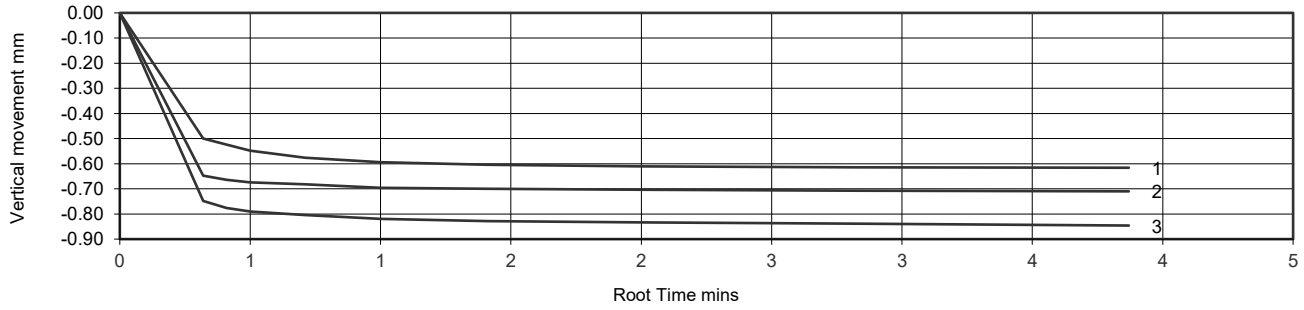
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

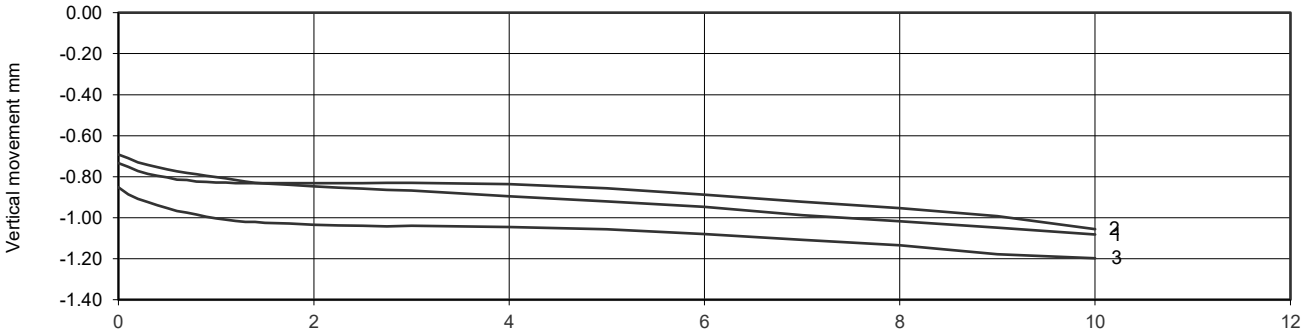
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	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

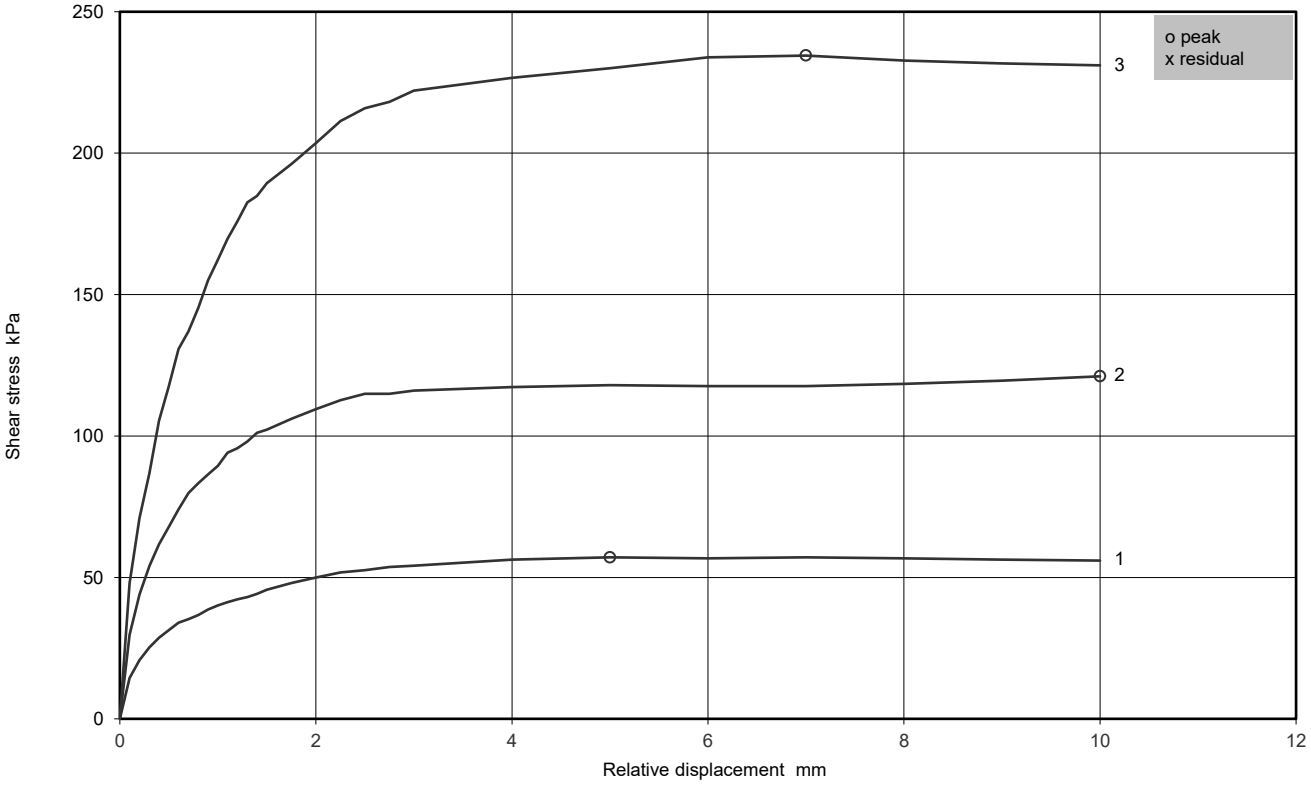
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown slightly gravelly SAND				Depth m	5.4
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511255

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	8.4
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511256
Test Method	BS EN ISO 17892-10:2018			Date of test	12/12/2025

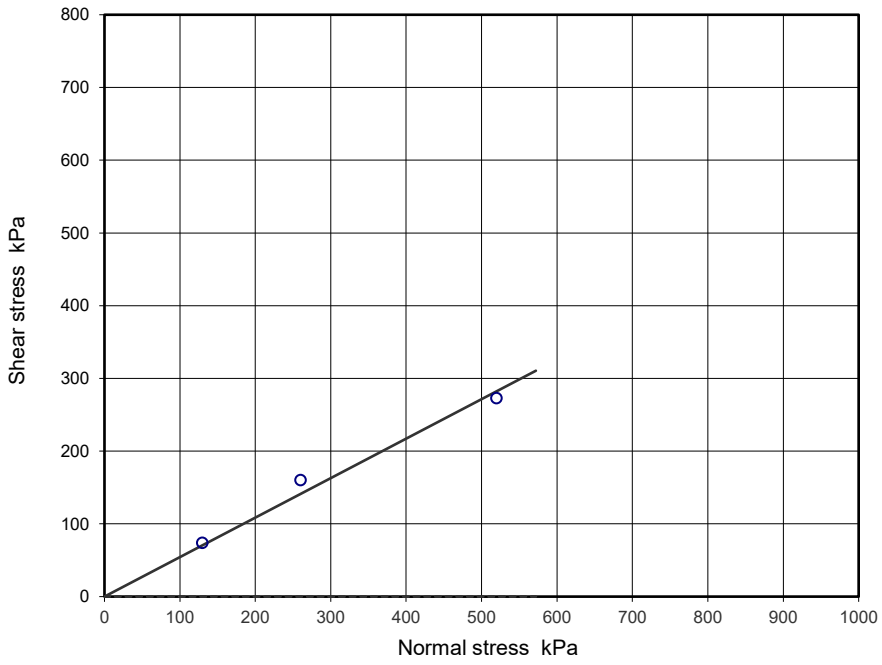
Preparation Details -2mm material. Recompacted to 55% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.1				mm
	Bulk Density		1.78	1.78	1.78				Mg/m³
	Moisture Content		26.9	26.9	26.9				%
	Dry density		1.40	1.40	1.40				Mg/m³
	Voids ratio		0.893	0.893	0.893				
	Degree of Saturation		80	80	80				%
Consolidation	Consolidation / Normal Stress applied		**130**	**260**	**520**				kPa
	Change in height during consolidation*		-0.914	-1.162	-1.224				mm
	Voids ratio after consolidation		0.818	0.798	0.793				
After test	Final Moisture content		27.6	27.0	26.6				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	5.00	7.00	4.00				mm
	Shear stress	73.6	160.0	272.9				kPa
	Vertical Movement at peak shear stress*	-1.27	-1.62	-1.60				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[17]	0
Ø '	degrees	[26.5]	28.5

Residual strength, (x)

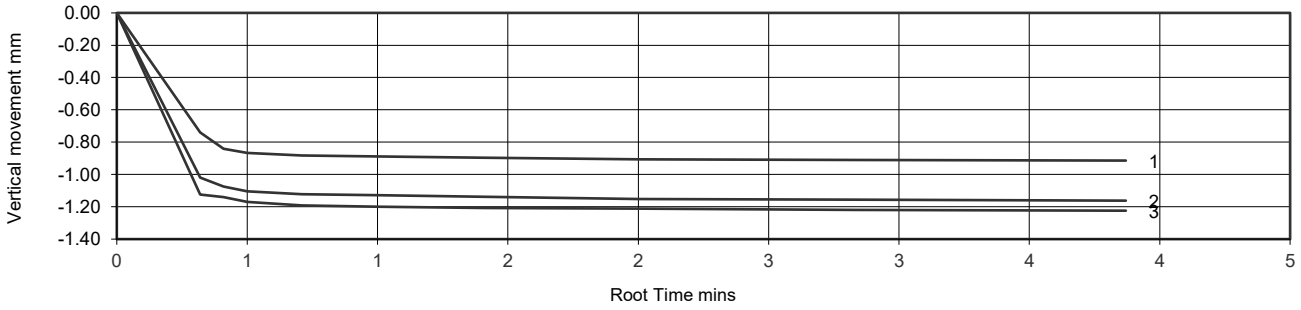
c 'R	kPa	[0.0]	0
Ø 'R	degrees	[ ]	0

Remarks

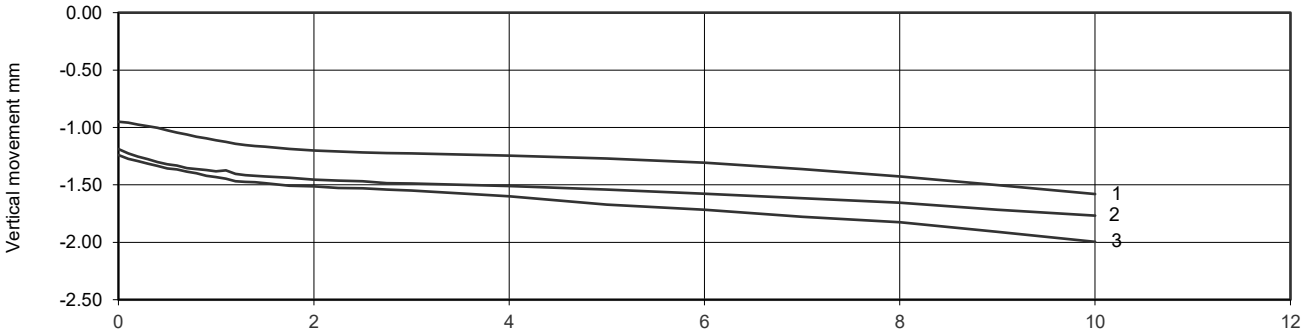
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

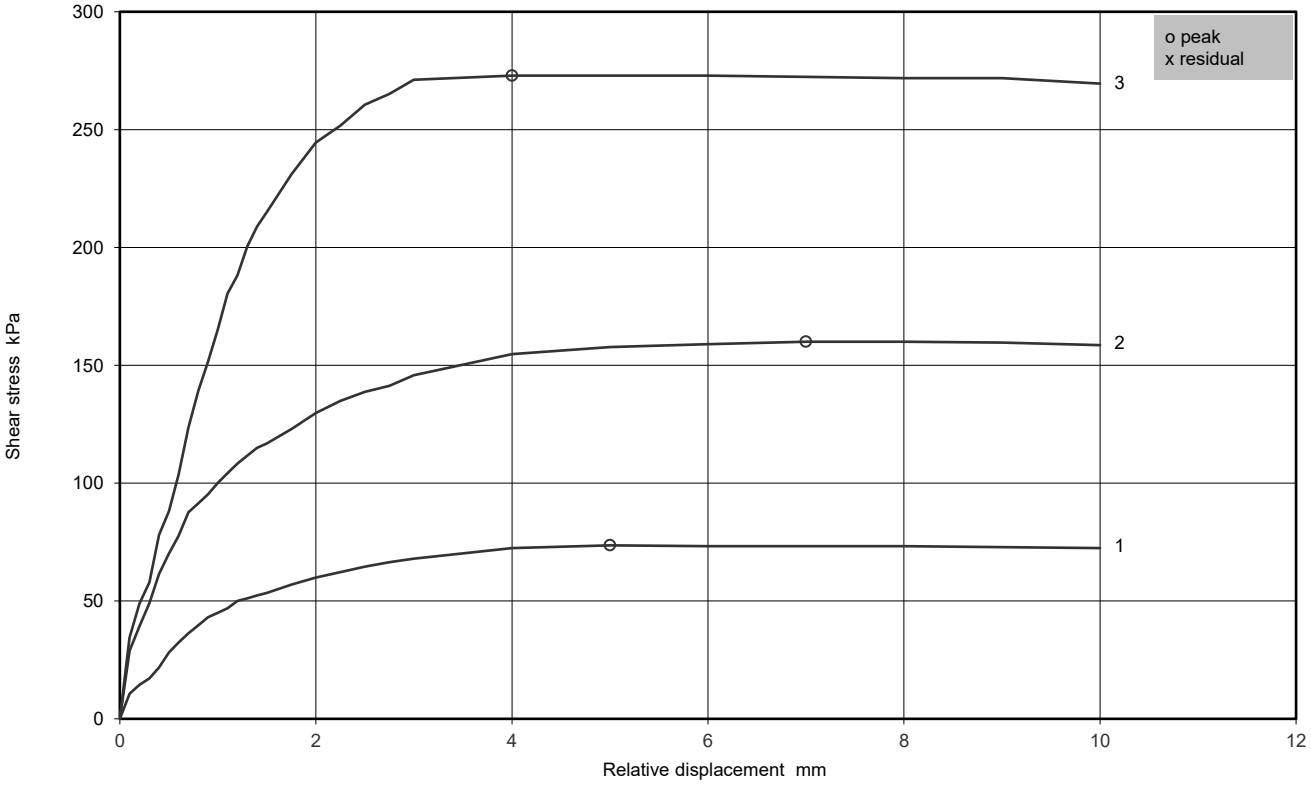
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	8.4
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511256

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey brown SAND			Depth m	11.4
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511257
Test Method	BS EN ISO 17892-10:2018			Date of test	16/12/2025

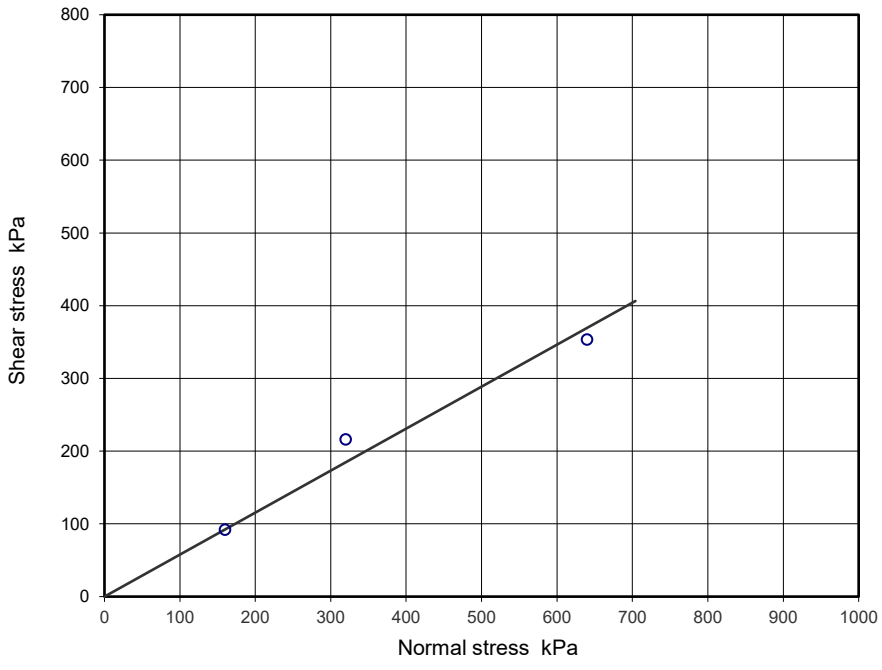
Preparation Details -2mm material. Recompacted to 45% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.1				mm
	Bulk Density		1.70	1.70	1.70				Mg/m³
	Moisture Content		24.2	24.2	24.2				%
	Dry density		1.37	1.37	1.37				Mg/m³
	Voids ratio		0.934	0.934	0.934				
	Degree of Saturation		69	69	69				%
Consolidation	Consolidation / Normal Stress applied		**160**	**320**	**640**				kPa
	Change in height during consolidation*		-1.196	-1.696	-1.924				mm
	Voids ratio after consolidation		0.834	0.792	0.773				
After test	Final Moisture content		27.0	26.6	26.3				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	8.00	7.00	6.00				mm
	Shear stress	91.6	215.8	353.1				kPa
	Vertical Movement at peak shear stress*	-1.99	-2.22	-2.57				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[23]	0
Ø '	degrees	[28.0]	30

Residual strength, (x)

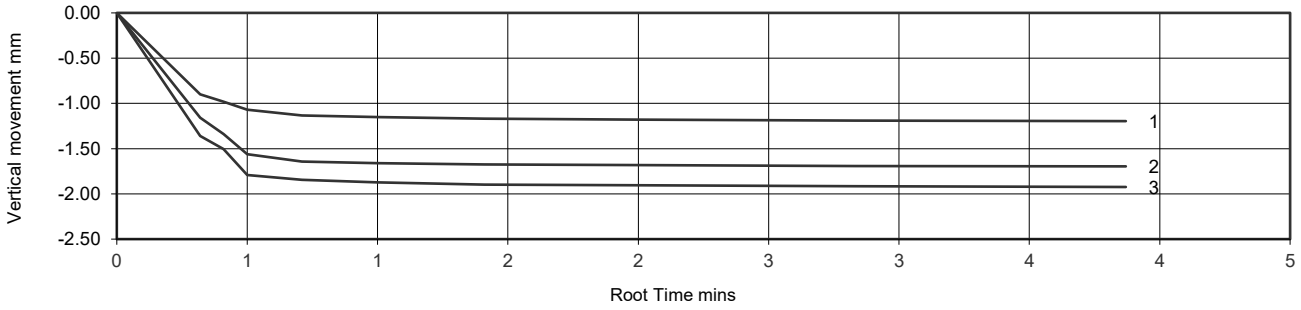
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

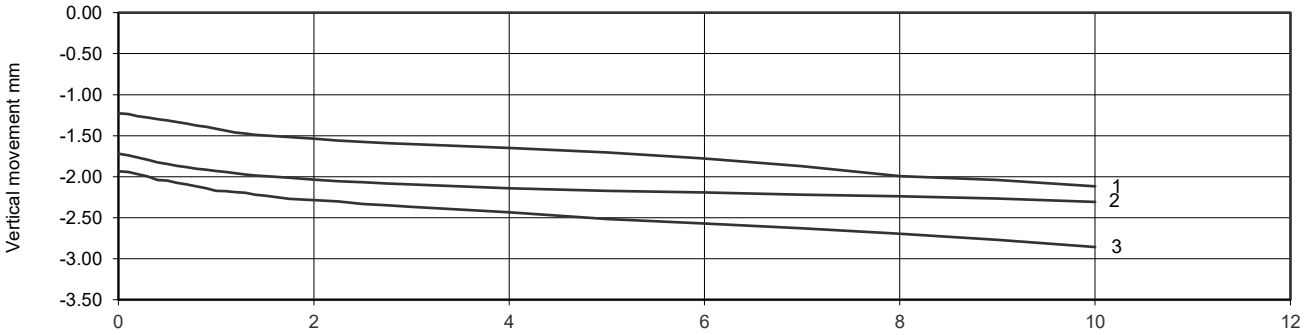
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

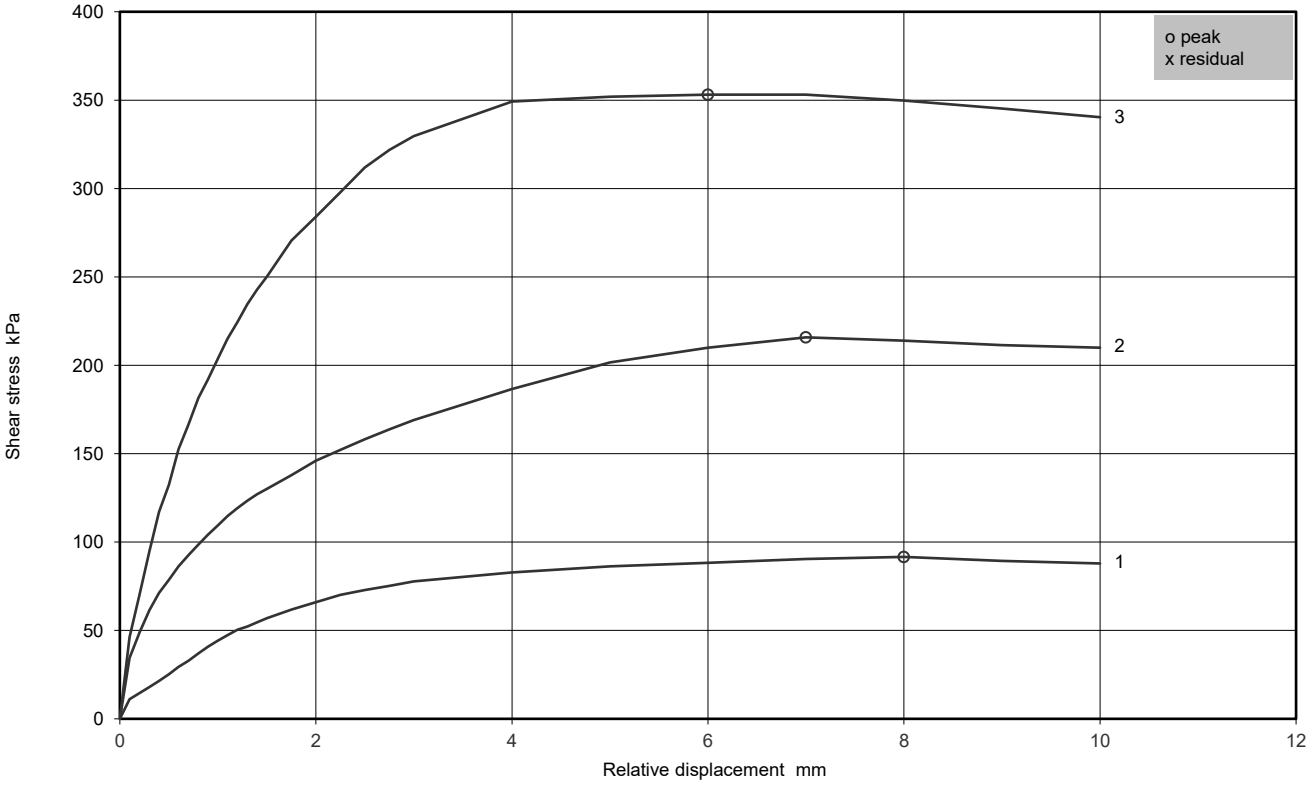
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Grey brown SAND				Depth m	11.4
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511257

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	CP-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	9.1
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202511259
Test Method	BS EN ISO 17892-10:2018			Date of test	18/12/2025

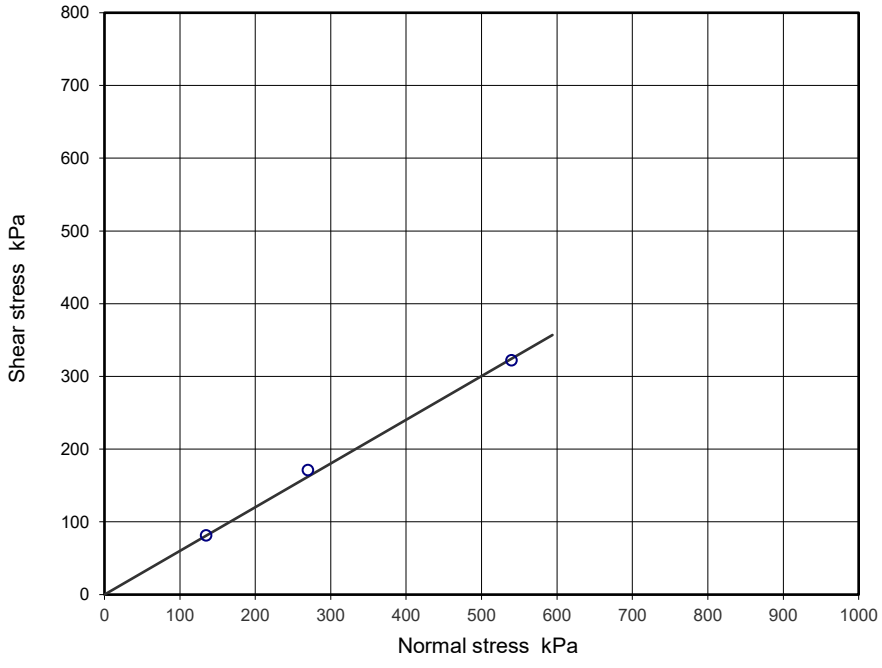
Preparation Details -2mm material. Recompacted to 45% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.2				mm
	Bulk Density		1.73	1.73	1.73				Mg/m³
	Moisture Content		23.9	23.9	23.9				%
	Dry density		1.40	1.40	1.40				Mg/m³
	Voids ratio		0.893	0.893	0.893				
	Degree of Saturation		71	71	71				%
Consolidation	Consolidation / Normal Stress applied		**135**	**270**	**540**				kPa
	Change in height during consolidation*		-0.864	-1.058	-1.436				mm
	Voids ratio after consolidation		0.822	0.806	0.776				
After test	Final Moisture content		25.2	25.1	25.5				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	6.00	7.00	5.00				mm
	Shear stress	81.3	170.9	321.9				kPa
	Vertical Movement at peak shear stress*	-1.38	-1.63	-1.72				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[5.8]	0
Ø '	degrees	[30.5]	31

Residual strength, (x)

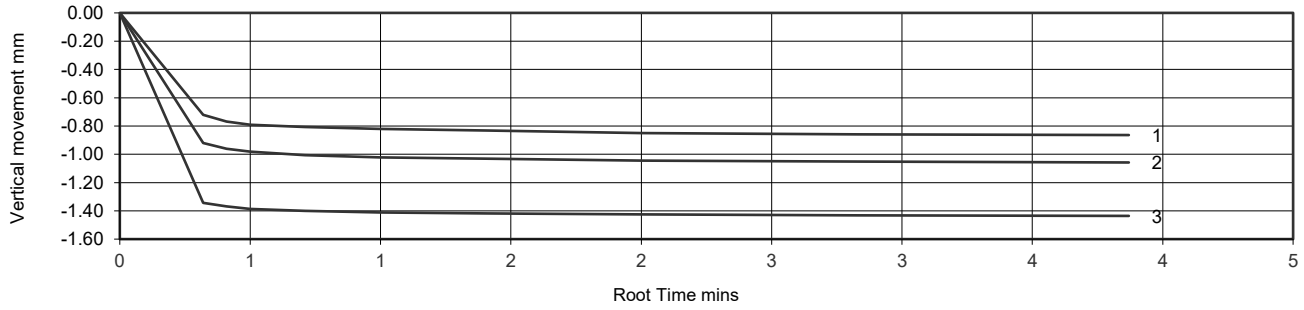
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

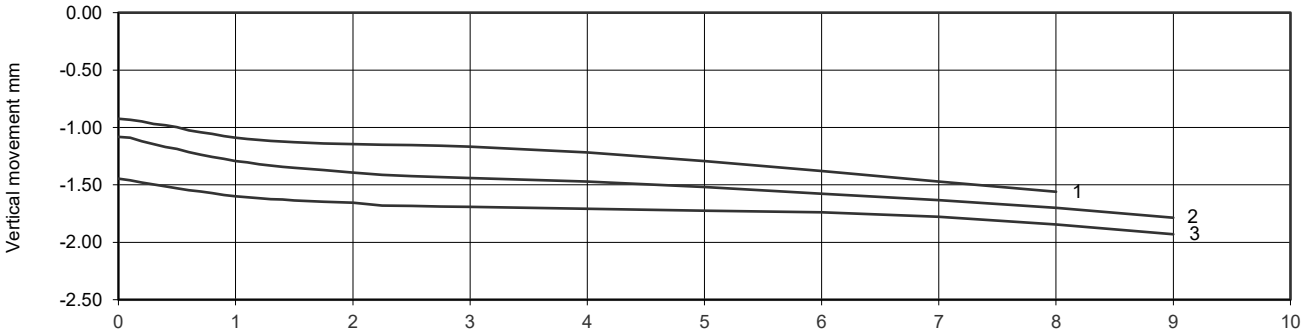
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

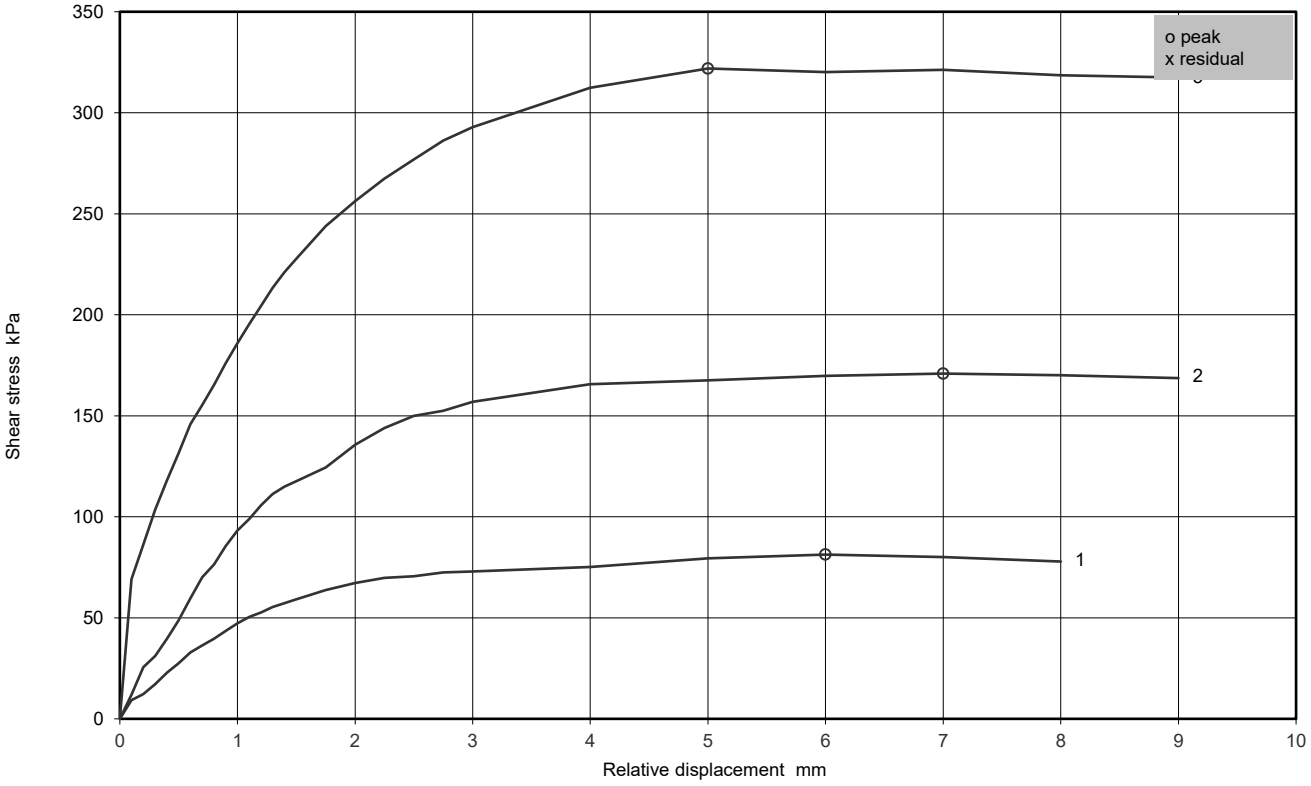
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	CP-102
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	9.1
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP202511259

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
30/12/2025			SSB

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J327997
				Borehole/Pit No.	CP-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	13.6
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2025112510
Test Method	BS EN ISO 17892-10:2018			Date of test	19/12/2025

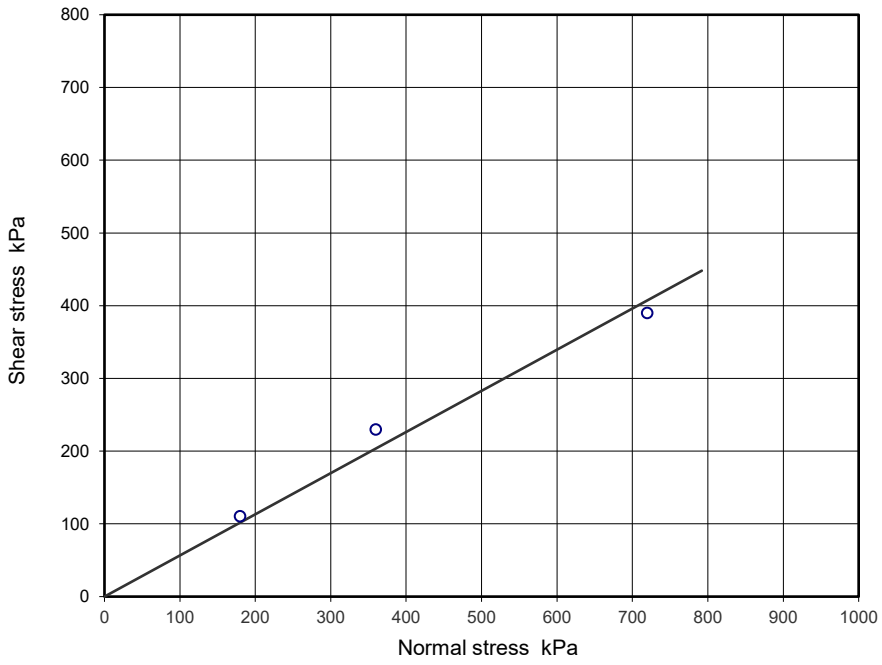
Preparation Details -2mm material. Recompacted to 45% relative density at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		23.1	23.1	23.1				mm
	Bulk Density		1.72	1.72	1.72				Mg/m³
	Moisture Content		24.6	24.6	24.6				%
	Dry density		1.38	1.38	1.38				Mg/m³
	Voids ratio		0.920	0.920	0.920				
	Degree of Saturation		71	71	71				%
Consolidation	Consolidation / Normal Stress applied		**180**	**360**	**720**				kPa
	Change in height during consolidation*		-0.950	-1.204	-2.106				mm
	Voids ratio after consolidation		0.841	0.820	0.745				
After test	Final Moisture content		25.2	24.4	25.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	10.00	5.00	3.00				mm
	Shear stress	110.3	229.7	389.8				kPa
	Vertical Movement at peak shear stress*	-1.99	-1.62	-2.53				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[30]	0
Ø '	degrees	[27.0]	29.5

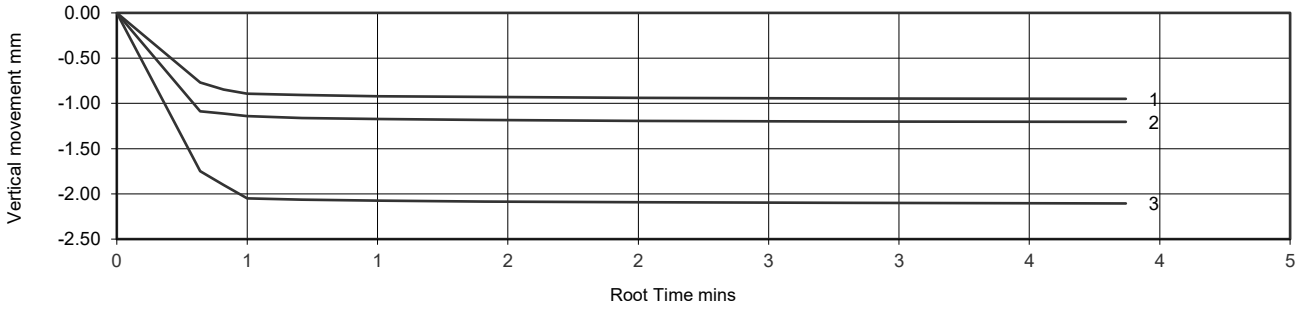
Residual strength, (x)			
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

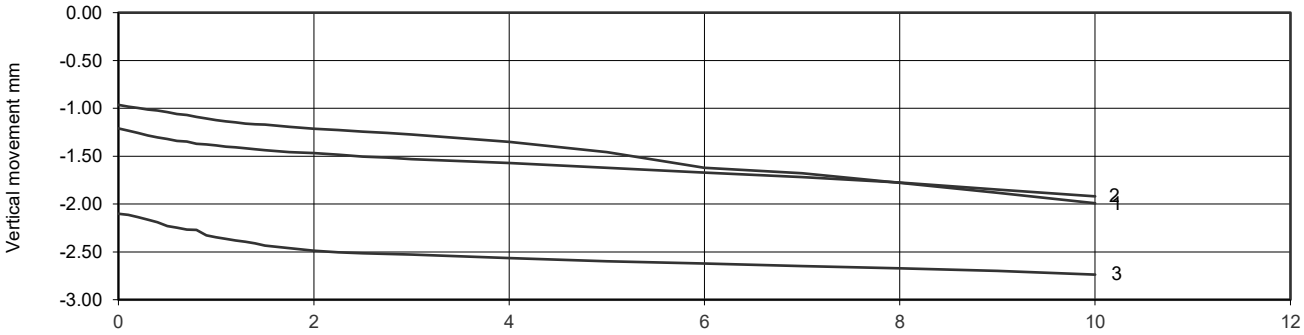
	Date Printed			
	30/12/2025	UKAS TESTING 7758	TTL	**SSB**

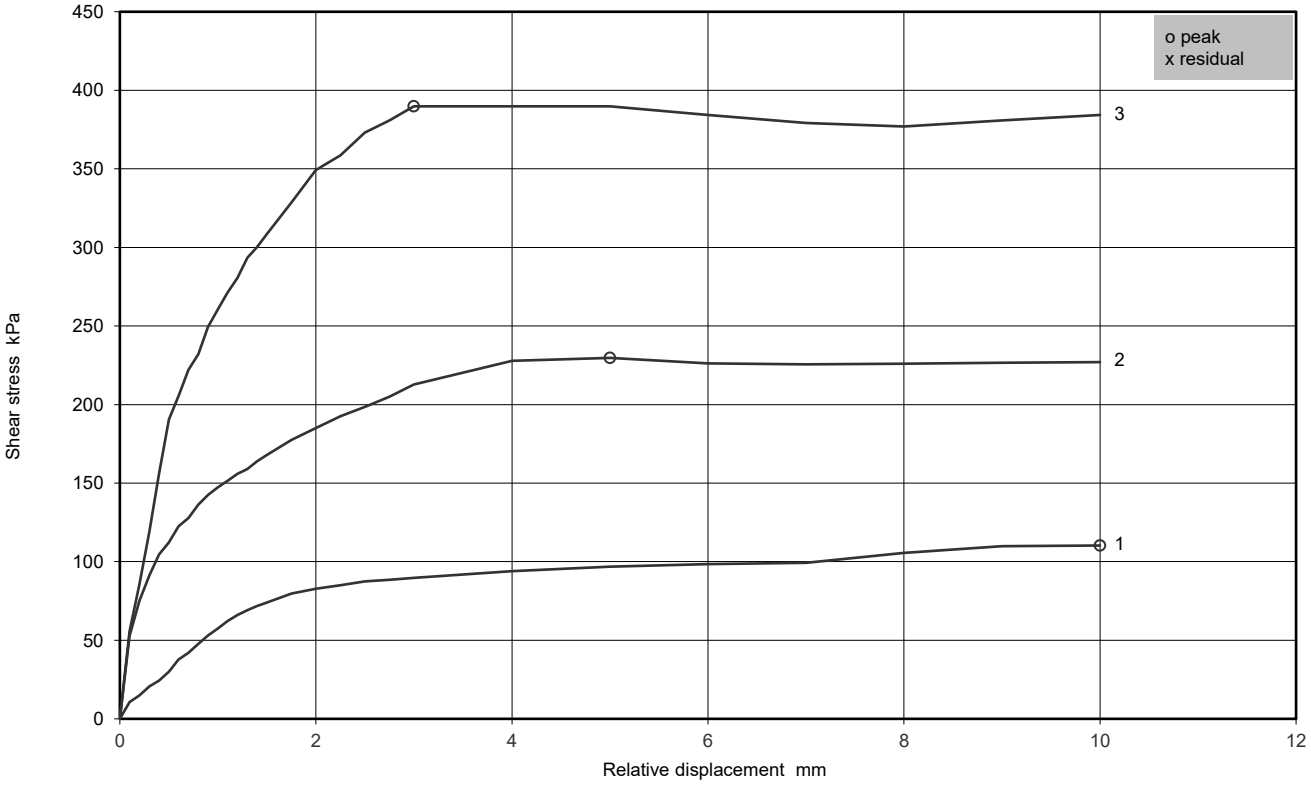
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J327997
					Borehole/Pit No.	CP-102
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	13.6
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2025112510

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	30/12/2025			

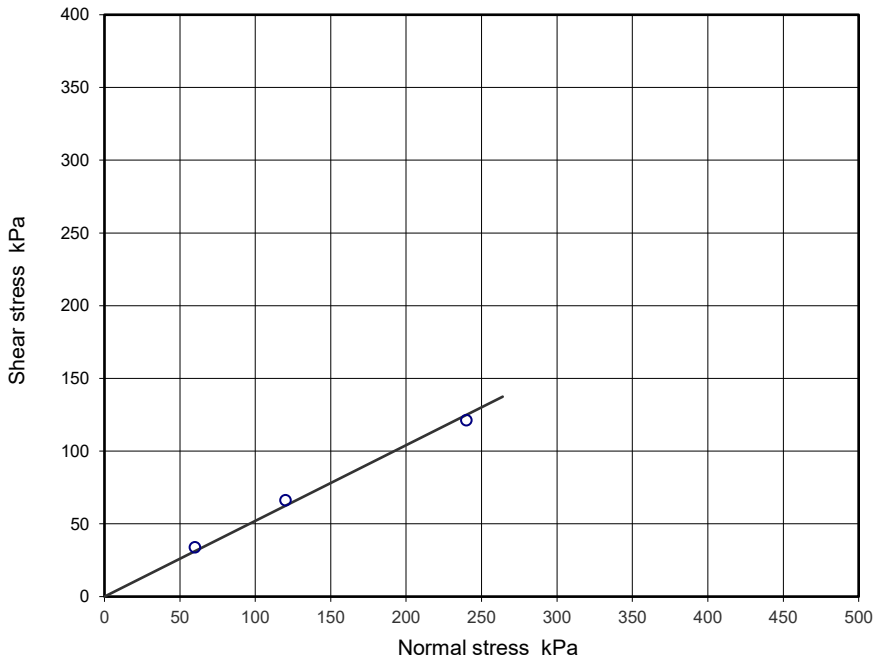
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-103
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown silty SAND			Depth m	1.2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010620
Test Method	BS EN ISO 17892-10:2018			Date of test	26/02/2026

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details	Test No.	**1**	**2**	**3**				
Initial	Height	26.1	26.0	26.1				mm
	Bulk Density	1.68	1.68	1.68				Mg/m³
	Moisture Content	18.9	18.9	18.9				%
	Dry density	1.41	1.41	1.41				Mg/m³
	Voids ratio	0.879	0.879	0.879				
	Degree of Saturation	57	57	57				%
Consolidation	Consolidation / Normal Stress applied	**60**	**120**	**240**				kPa
	Change in height during consolidation*	-0.614	-0.726	-0.692				mm
	Voids ratio after consolidation	0.835	0.827	0.829				
After test	Final Moisture content	23.0	22.8	22.2				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	7.00	6.00	4.00				mm
	Shear stress	33.9	66.2	121.2				kPa
	Vertical Movement at peak shear stress*	-1.24	-1.24	-1.14				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[6.4]	0
Ø '	degrees	[25.5]	27.5

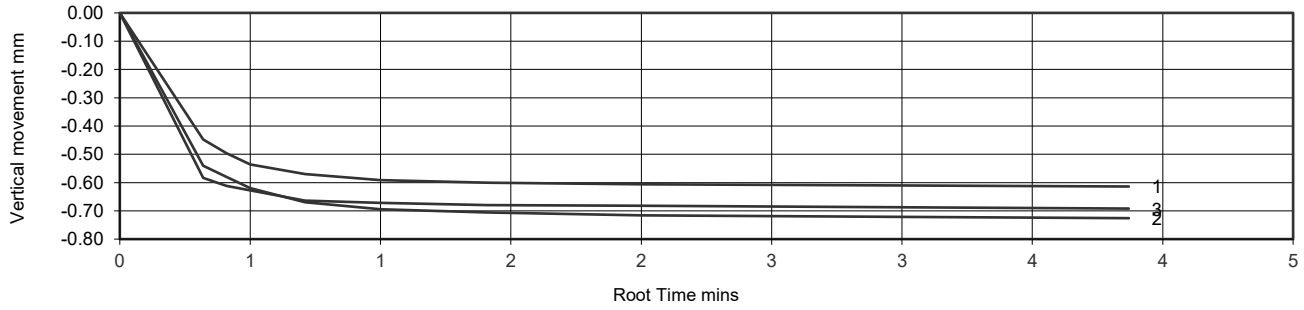
Residual strength, (x)			
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

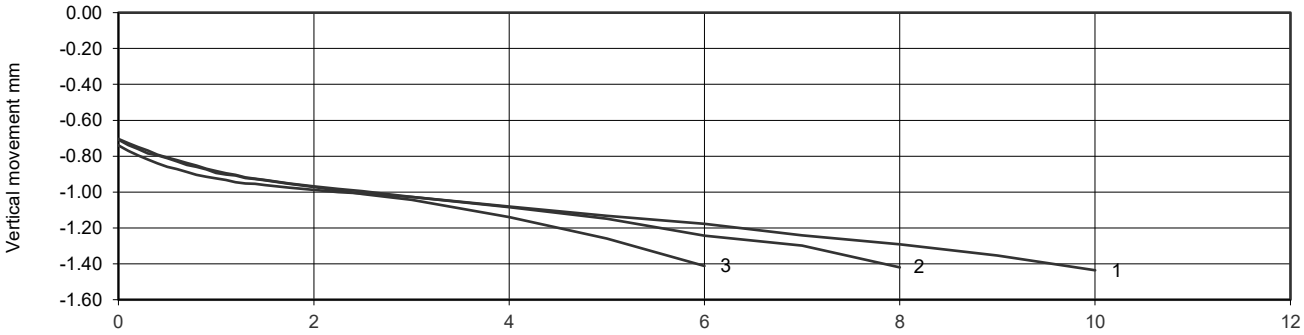
	Date Printed			
	27/02/2026	UKAS TESTING 7758	TTL	**SSB**

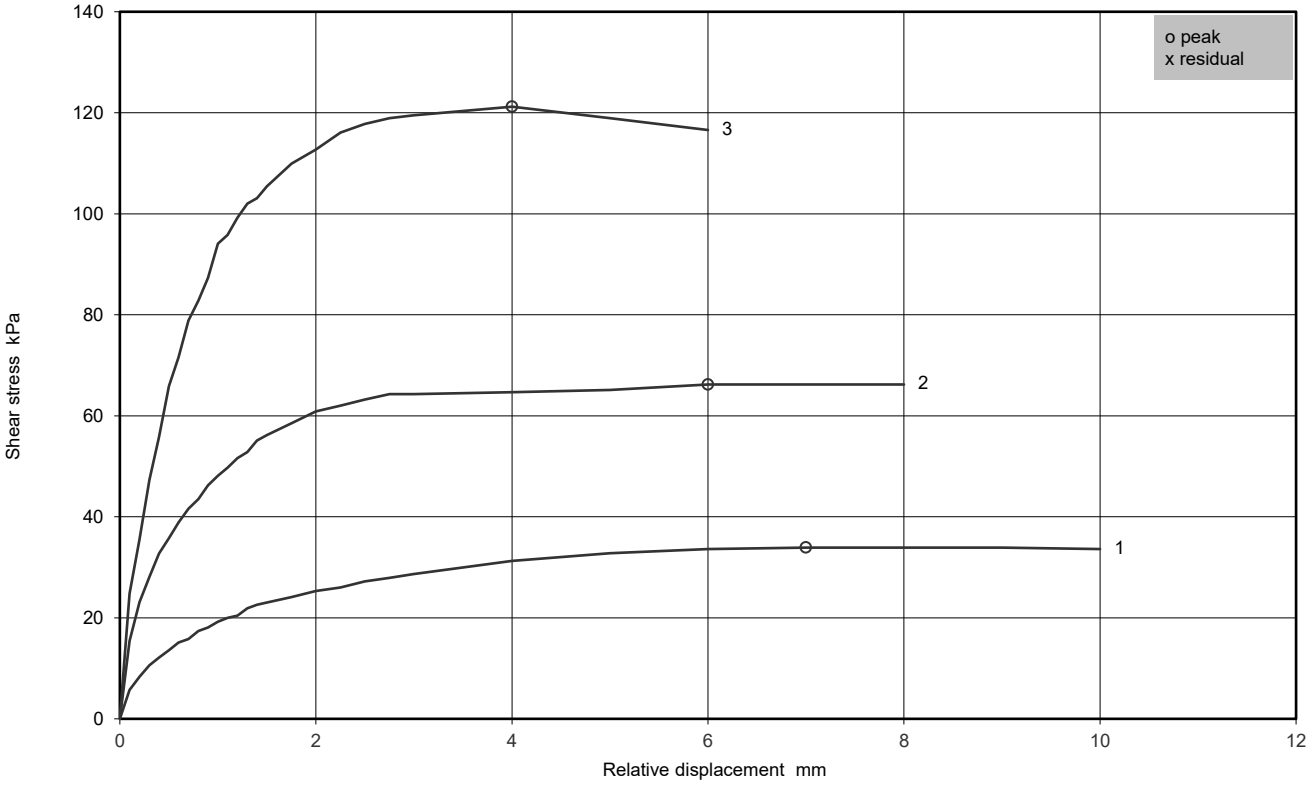
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-103
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown silty SAND				Depth m	1.2
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010620

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
27/02/2026			SSB

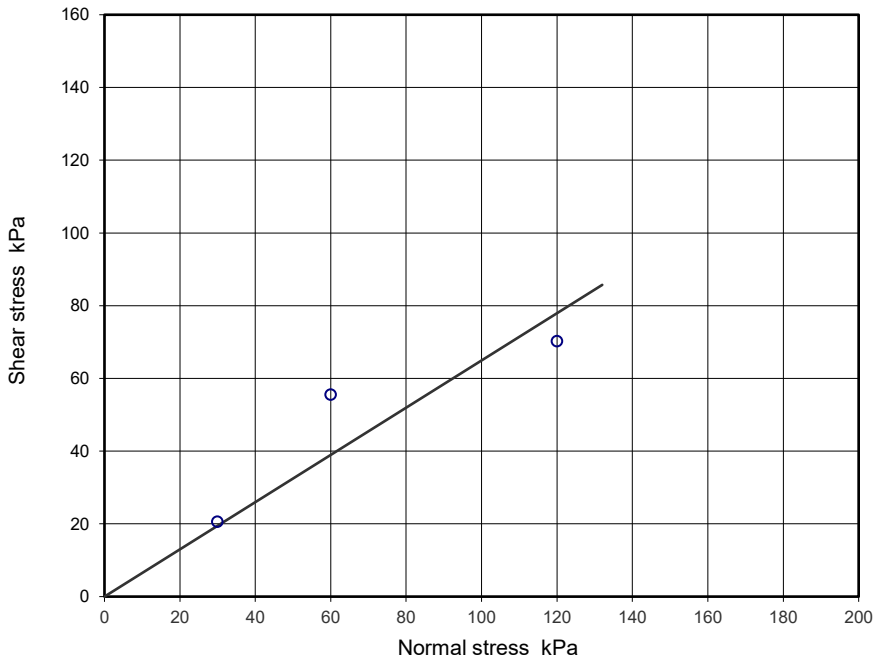
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly SAND			Depth m	2.5
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010621
Test Method	BS EN ISO 17892-10:2018			Date of test	26/02/2026

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details	Test No.	**1**	**2**	**3**				
Initial	Height	26.3	26.3	26.3				mm
	Bulk Density	1.95	1.95	1.95				Mg/m³
	Moisture Content	21.0	21.0	21.0				%
	Dry density	1.61	1.61	1.61				Mg/m³
	Voids ratio	0.646	0.646	0.646				
	Degree of Saturation	86	86	86				%
Consolidation	Consolidation / Normal Stress applied	**30**	**60**	**120**				kPa
	Change in height during consolidation*	-0.008	-0.116	-0.254				mm
	Voids ratio after consolidation	0.646	0.639	0.630				
After test	Final Moisture content	21.8	21.6	22.1				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	1.10	1.30	2.00				mm
	Shear stress	20.6	55.5	70.2				kPa
	Vertical Movement at peak shear stress*	0.10	-0.01	-0.25				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[13]	0
Ø '	degrees	[27.0]	33

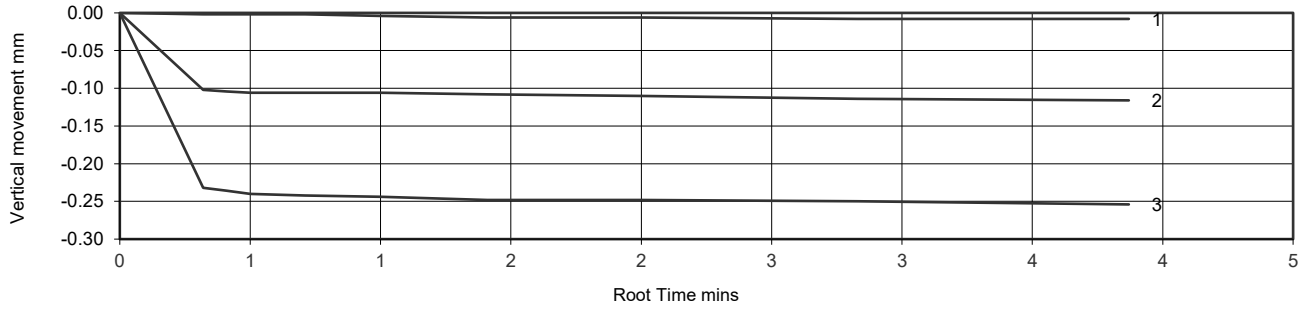
Residual strength, (x)			
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

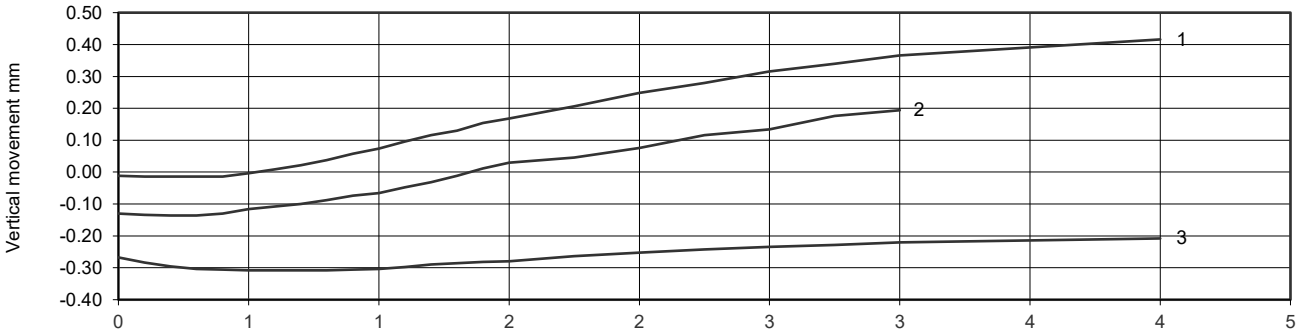
	Date Printed			
	27/02/2026	UKAS TESTING 7758	TTL	**SSB**

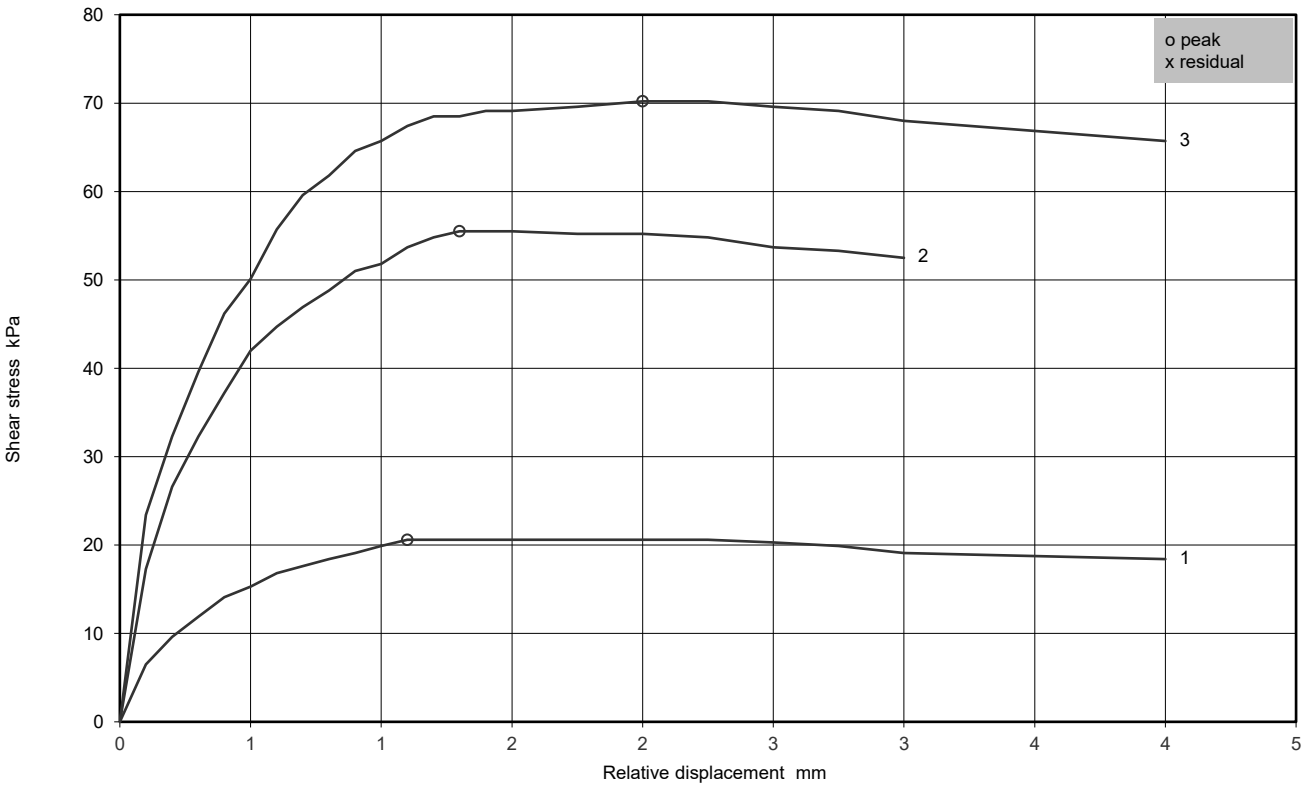
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Light brown slightly gravelly SAND				Depth m	2.5
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010621

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	27/02/2026			

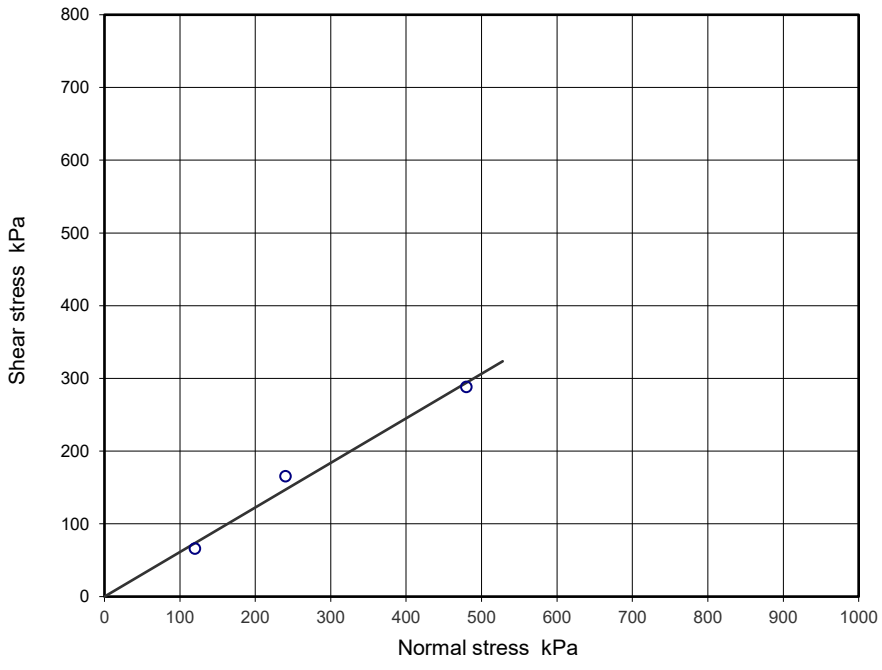
GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	8
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010622
Test Method	BS EN ISO 17892-10:2018			Date of test	03/03/2026

Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details	Test No.	**1**	**2**	**3**				
Initial	Height	26.1	26.1	26.1				mm
	Bulk Density	1.81	1.81	1.81				Mg/m³
	Moisture Content	23.2	23.2	23.2				%
	Dry density	1.47	1.47	1.47				Mg/m³
	Voids ratio	0.803	0.803	0.803				
	Degree of Saturation	77	77	77				%
Consolidation	Consolidation / Normal Stress applied	**120**	**240**	**480**				kPa
	Change in height during consolidation*	-0.498	-0.628	-0.712				mm
	Voids ratio after consolidation	0.769	0.760	0.754				
After test	Final Moisture content	23.4	22.3	21.7				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	5.00	4.00	3.00				mm
	Shear stress	66.0	165.3	287.9				kPa
	Vertical Movement at peak shear stress*	-0.63	-0.77	-0.87				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[4.7]	0
Ø '	degrees	[31.0]	31.5

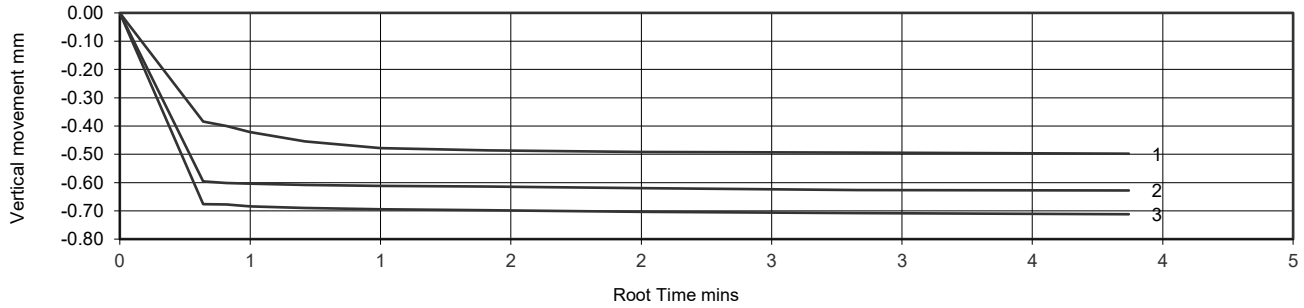
Residual strength, (x)			
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

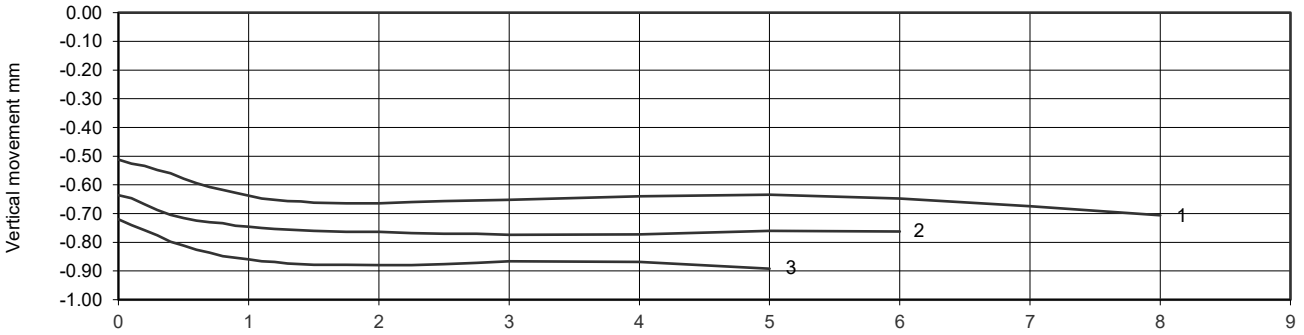
	Date Printed			
	04/03/2026	UKAS TESTING 7758	TTL	**SSB**

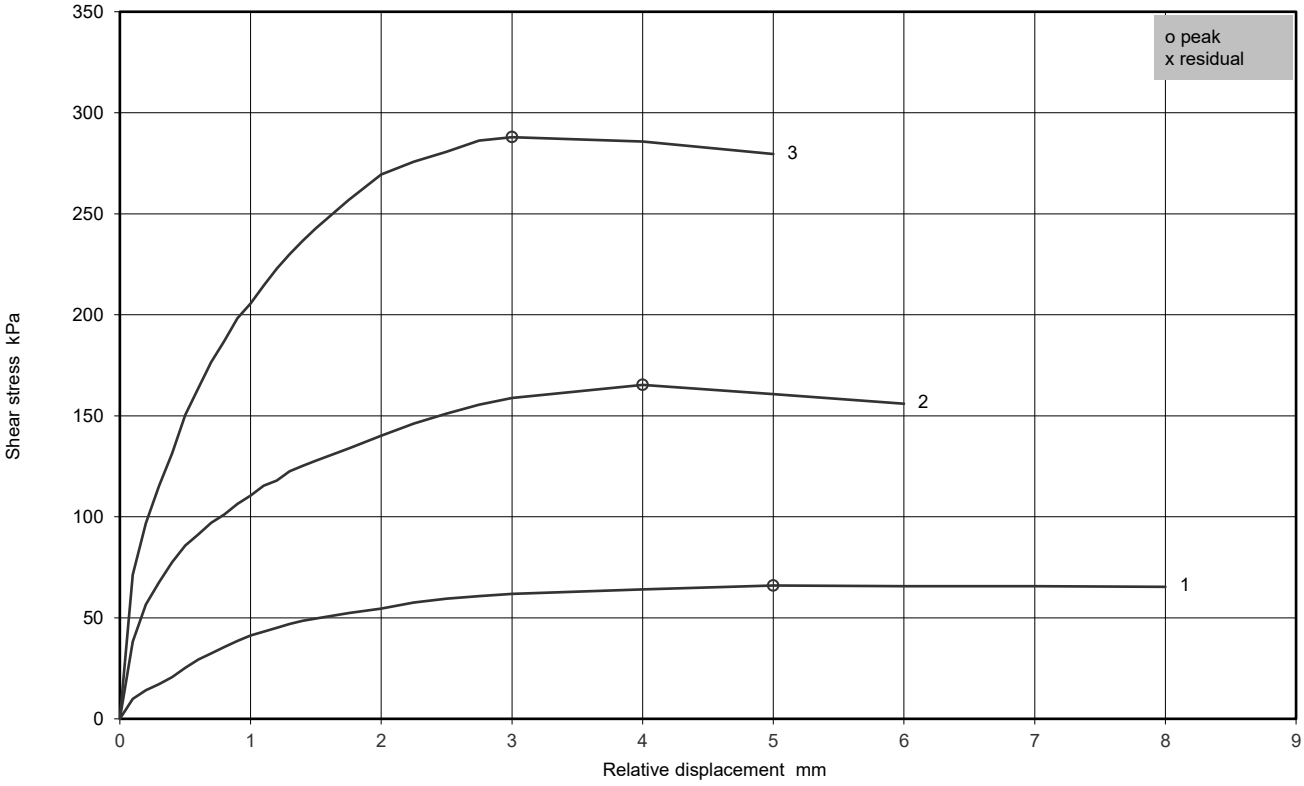
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	8
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010622

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).

Date Printed			
04/03/2026			SSB

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	11
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010623
Test Method	BS EN ISO 17892-10:2018			Date of test	03/03/2026

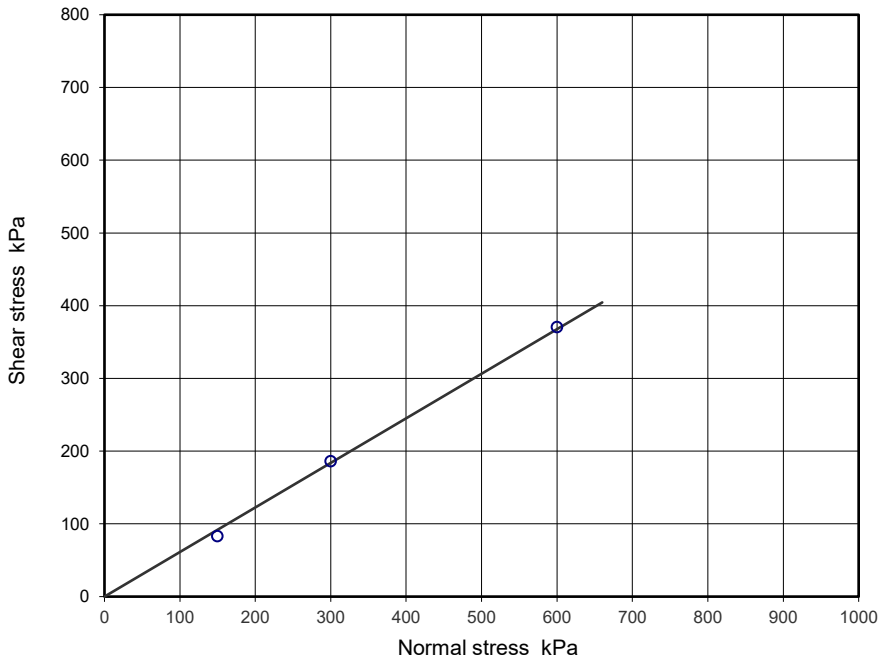
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.3	26.3				mm
	Bulk Density		1.75	1.75	1.75				Mg/m³
	Moisture Content		15.0	15.0	15.0				%
	Dry density		1.52	1.52	1.52				Mg/m³
	Voids ratio		0.743	0.743	0.743				
	Degree of Saturation		53	53	53				%
Consolidation	Consolidation / Normal Stress applied		**150**	**300**	**600**				kPa
	Change in height during consolidation*		-1.172	-1.342	-2.004				mm
	Voids ratio after consolidation		0.665	0.654	0.610				
After test	Final Moisture content		18.6	18.6	18.6				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	6.00	6.00	5.00				mm
	Shear stress	83.2	185.9	370.3				kPa
	Vertical Movement at peak shear stress*	-1.83	-1.81	-2.36				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[-9.0]	0
Ø '	degrees	[32.5]	31.5

Residual strength, (x)

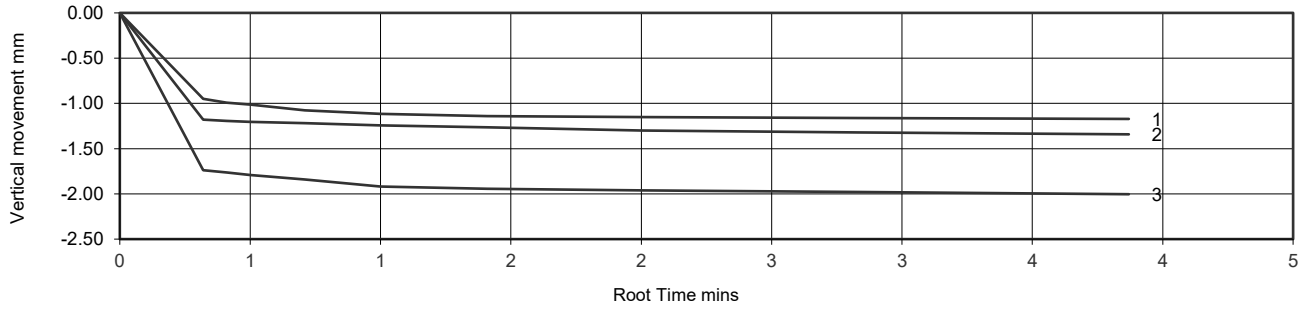
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

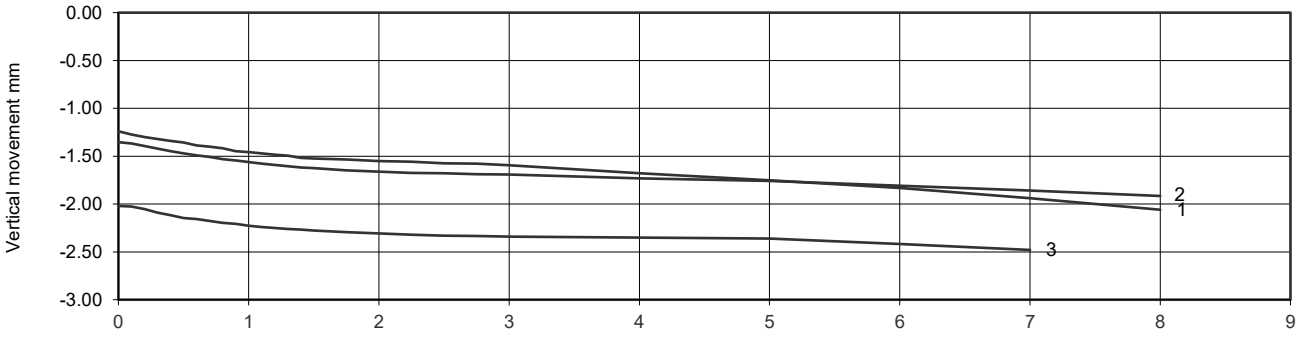
	Date Printed			
	04/03/2026	UKAS TESTING 7758	TTL	**SSB**

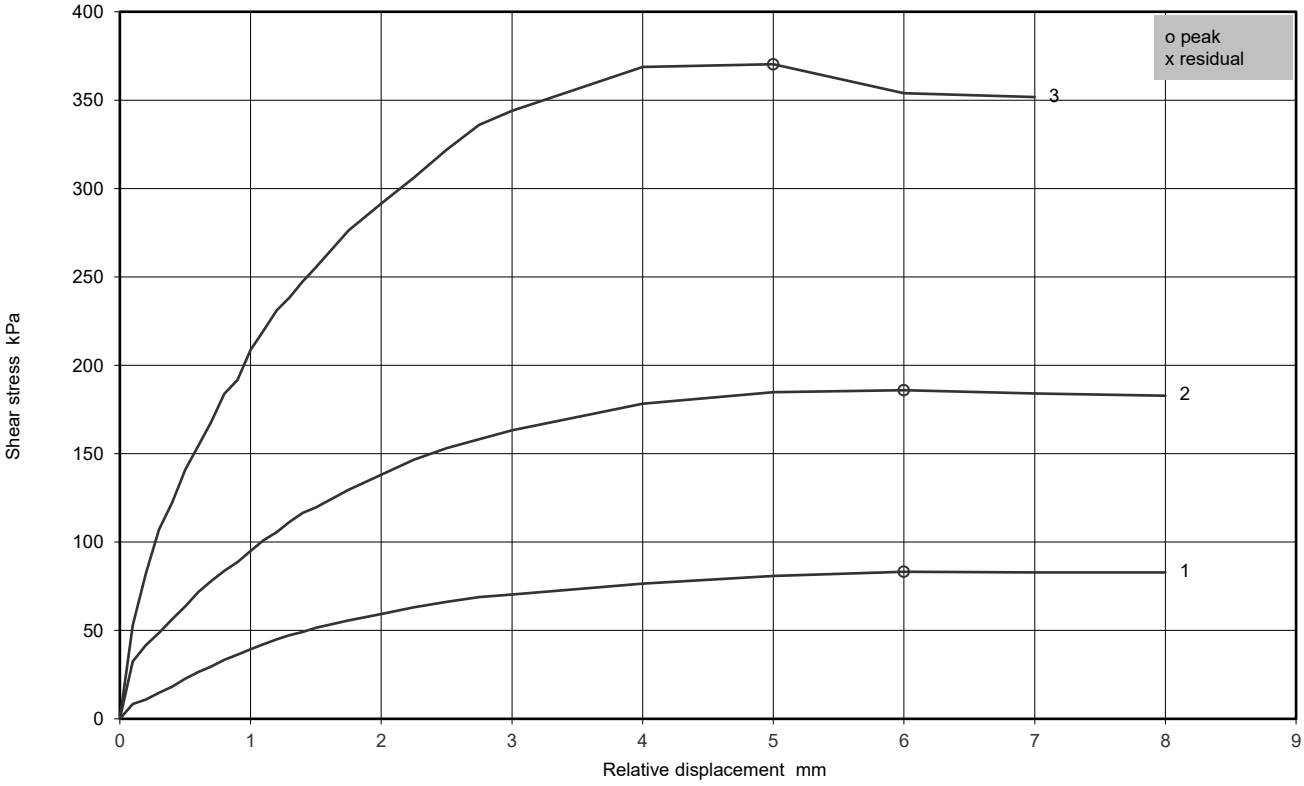
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	11
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010623

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	04/03/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-201
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010627
Test Method	BS EN ISO 17892-10:2018			Date of test	26/02/2026

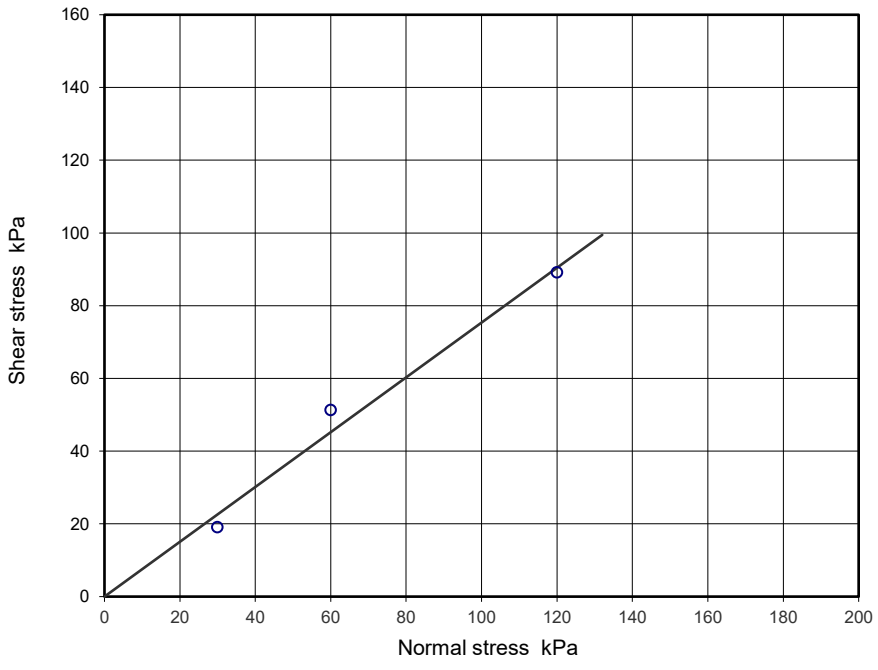
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.1	26.1				mm
	Bulk Density		1.72	1.72	1.72				Mg/m³
	Moisture Content		11.8	11.8	11.8				%
	Dry density		1.54	1.54	1.54				Mg/m³
	Voids ratio		0.721	0.721	0.721				
	Degree of Saturation		43	43	43				%
Consolidation	Consolidation / Normal Stress applied		**30**	**60**	**120**				kPa
	Change in height during consolidation*		-0.162	-0.228	-0.448				mm
	Voids ratio after consolidation		0.710	0.706	0.691				
After test	Final Moisture content		23.7	23.2	22.4				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	2.00	2.25	2.00				mm
	Shear stress	19.1	51.3	89.1				kPa
	Vertical Movement at peak shear stress*	-0.08	-1.94	-0.37				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[0.2]	0
Ø '	degrees	[37.0]	37

Residual strength, (x)

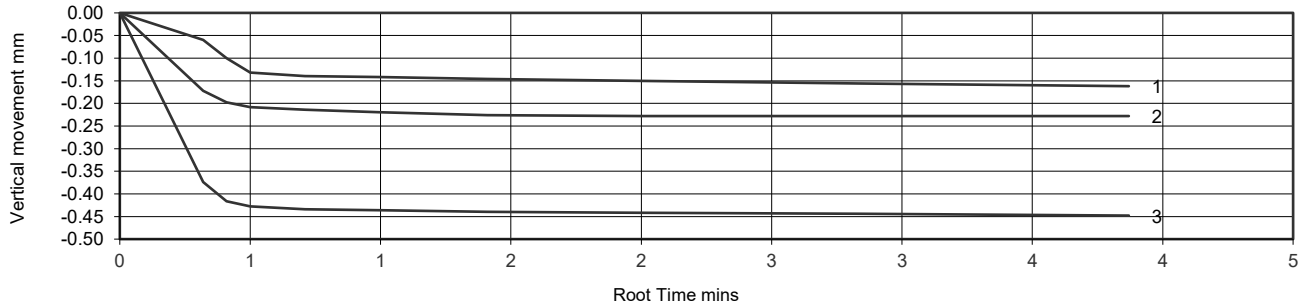
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

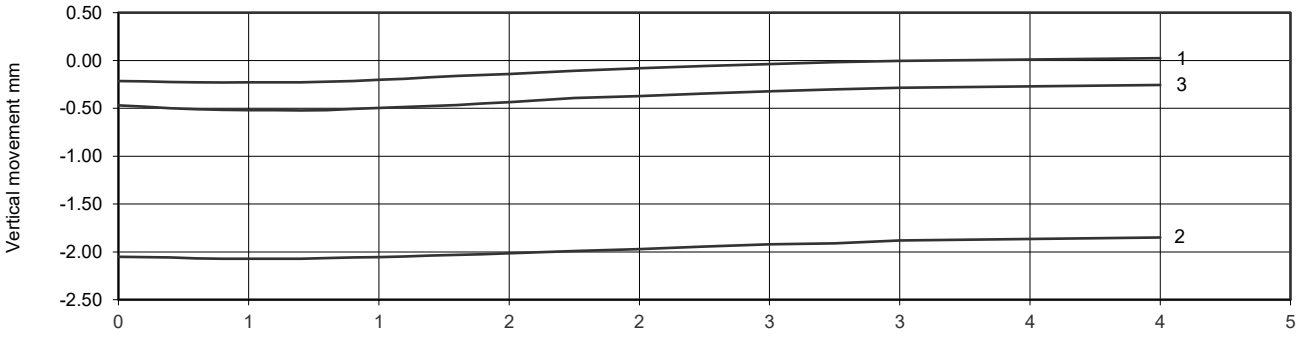
	Date Printed			
	27/02/2026	UKAS TESTING 7758	TTL	**SSB**

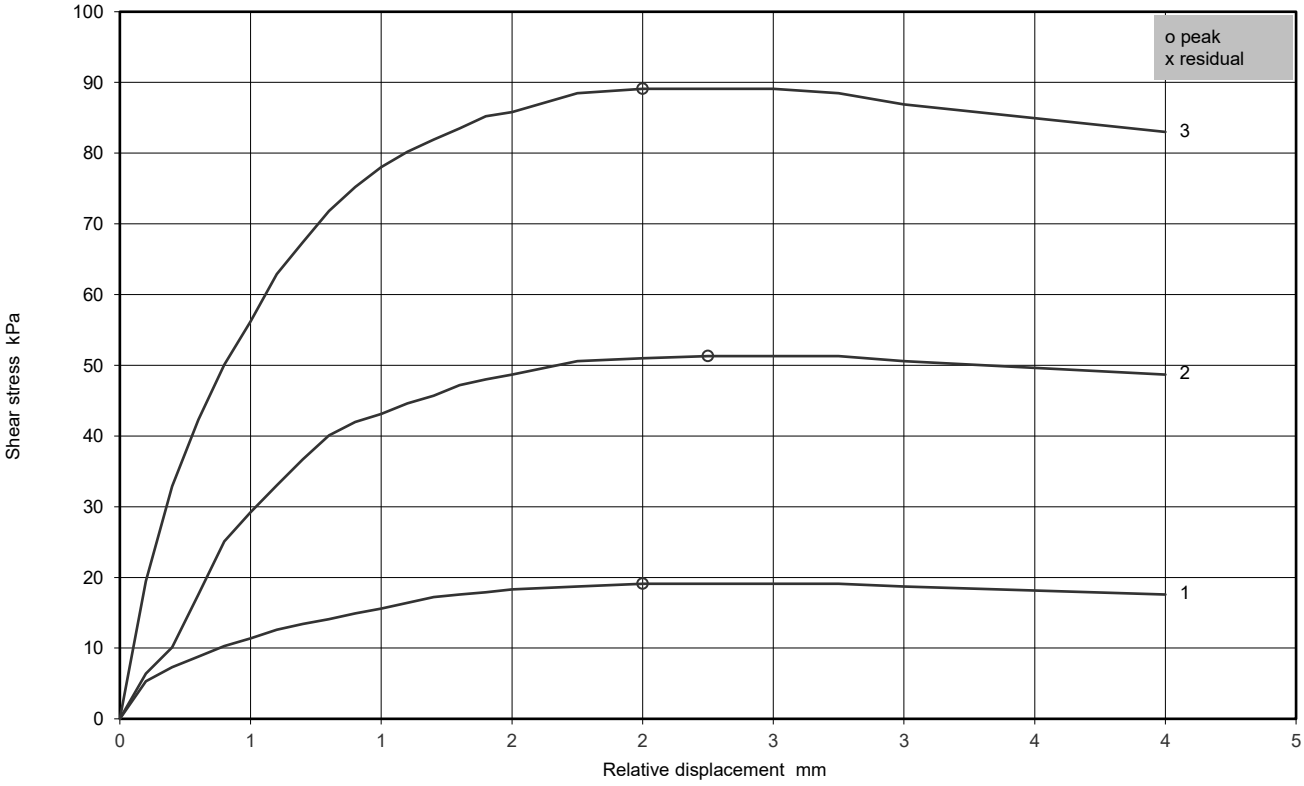
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-201
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown slightly gravelly silty SAND				Depth m	2
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010627

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	27/02/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-201
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown SAND			Depth m	4
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010628
Test Method	BS EN ISO 17892-10:2018			Date of test	03/03/2026

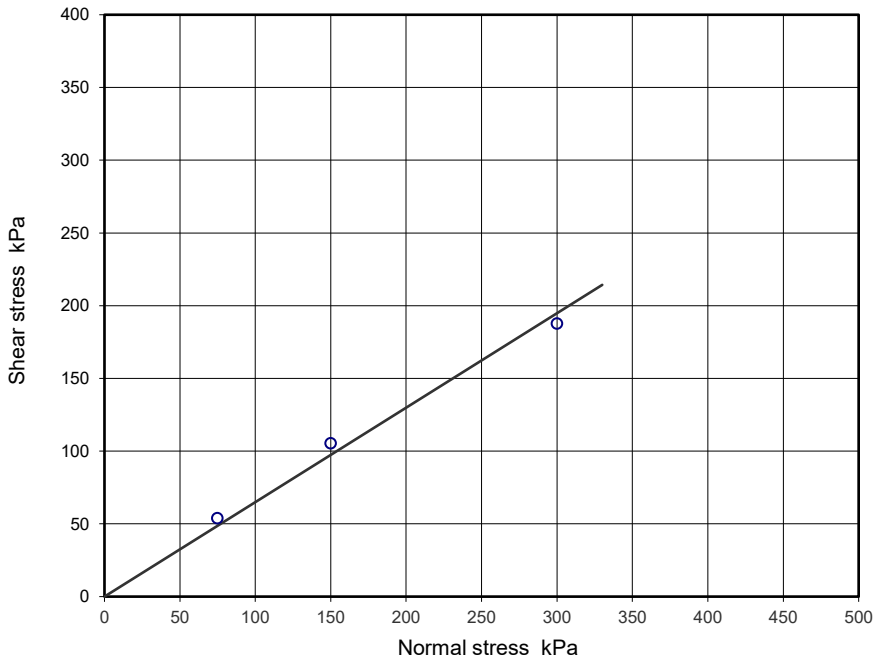
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.1	26.0	26.1				mm
	Bulk Density		1.92	1.92	1.92				Mg/m³
	Moisture Content		27.1	27.1	27.1				%
	Dry density		1.51	1.51	1.51				Mg/m³
	Voids ratio		0.755	0.755	0.755				
	Degree of Saturation		95	95	95				%
Consolidation	Consolidation / Normal Stress applied		**75**	**150**	**300**				kPa
	Change in height during consolidation*		-0.146	-0.320	-0.498				mm
	Voids ratio after consolidation		0.745	0.733	0.721				
After test	Final Moisture content		24.8	24.7	24.7				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	1.75	2.75	2.75				mm
	Shear stress	53.8	105.3	187.7				kPa
	Vertical Movement at peak shear stress*	-0.22	-0.43	-0.59				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[13]	0
Ø '	degrees	[30.5]	33

Residual strength, (x)

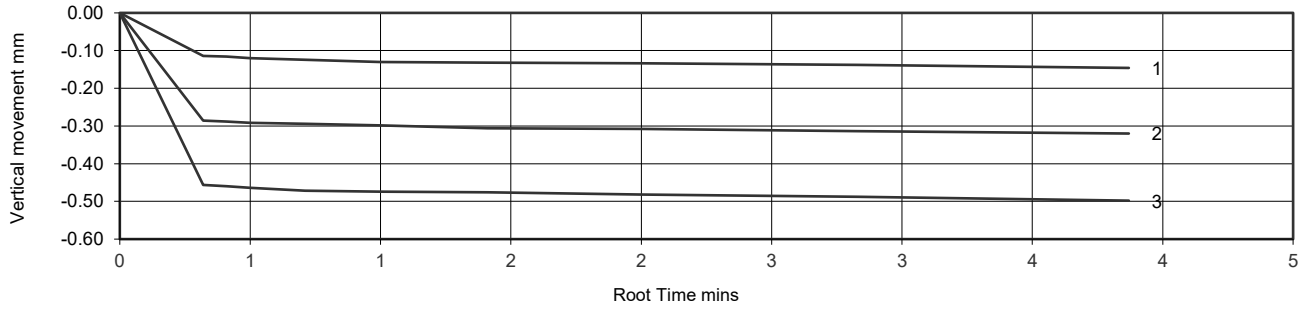
c 'R	kPa	not assessed	-
Ø 'R	degrees	not assessed	-

Remarks

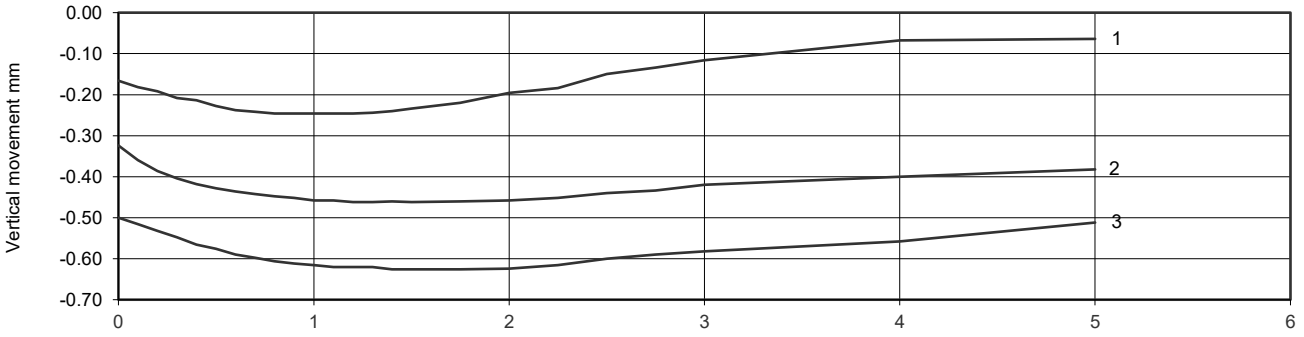
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	04/03/2026	UKAS TESTING 7758	TTL	**SSB**

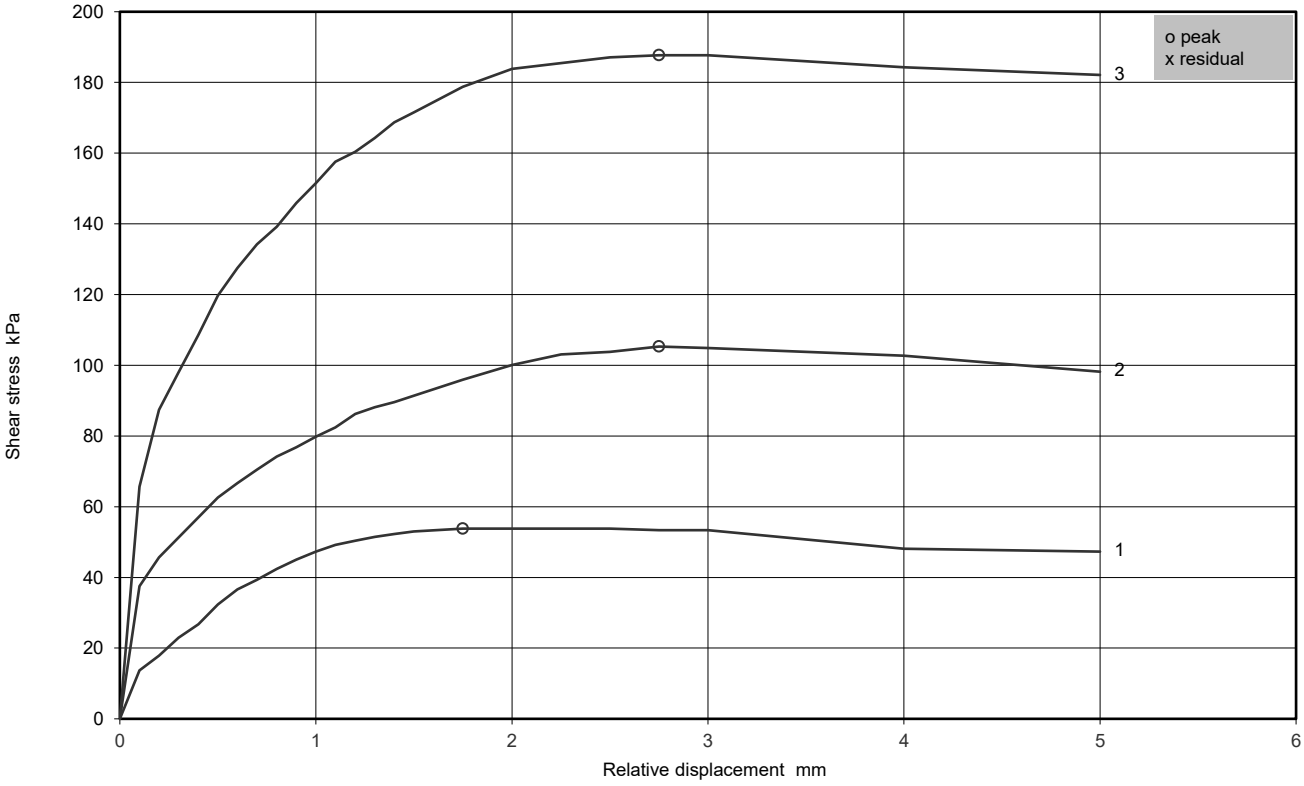
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-201
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown SAND				Depth m	4
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010628

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	04/03/2026			

GQF-008-64 Issue 01 - Oct 22	**Determination of shear strength using the Small Direct Shearbox Apparatus**			Job Ref	J331504
				Borehole/Pit No.	CP-202
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP2026010629
Test Method	BS EN ISO 17892-10:2018			Date of test	26/02/2026

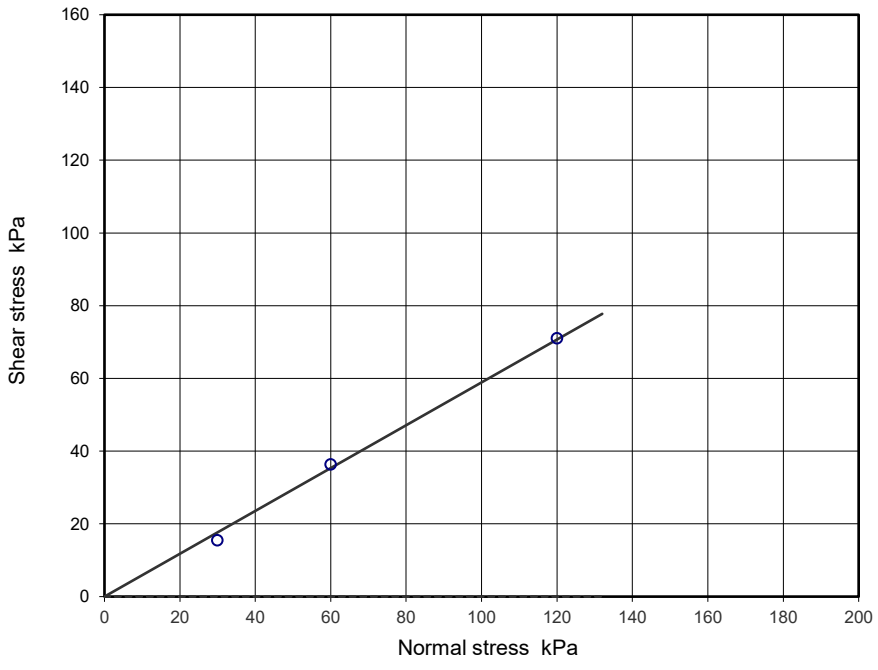
Preparation Details -2mm material. Recompacted to the relative density provided, at as received moisture content.

Specimen Details

		Test No.	**1**	**2**	**3**				
Initial	Height		26.3	26.4	26.4				mm
	Bulk Density		1.67	1.67	1.67				Mg/m³
	Moisture Content		15.5	15.5	15.5				%
	Dry density		1.45	1.45	1.45				Mg/m³
	Voids ratio		0.828	0.828	0.828				
	Degree of Saturation		50	50	50				%
Consolidation	Consolidation / Normal Stress applied		**30**	**60**	**120**				kPa
	Change in height during consolidation*		-0.304	-0.320	-0.448				mm
	Voids ratio after consolidation		0.807	0.806	0.797				
After test	Final Moisture content		24.3	24.5	24.0				

Shearing stage(s)

Rate of displacement	Peak	0.60000	0.60000	0.60000				mm/min
	Residual							mm/min
Peak values, (o)	Relative horizontal displacement	5.00	4.00	6.00				mm
	Shear stress	15.5	36.3	71.0				kPa
	Vertical Movement at peak shear stress*	-0.52	-0.51	-0.63				mm
Residual values, (x)	No. of traverses (including peak run)	1	1	1				
	Relative horizontal displacement							mm
	Shear stress							kPa
	Vertical movement at residual shear stress*							mm



Shear Strength Parameters

Peak strength, (o)		Regression	Manual
c '	kPa	[-1.9]	0
Ø '	degrees	[31.5]	30.5

Residual strength, (x)

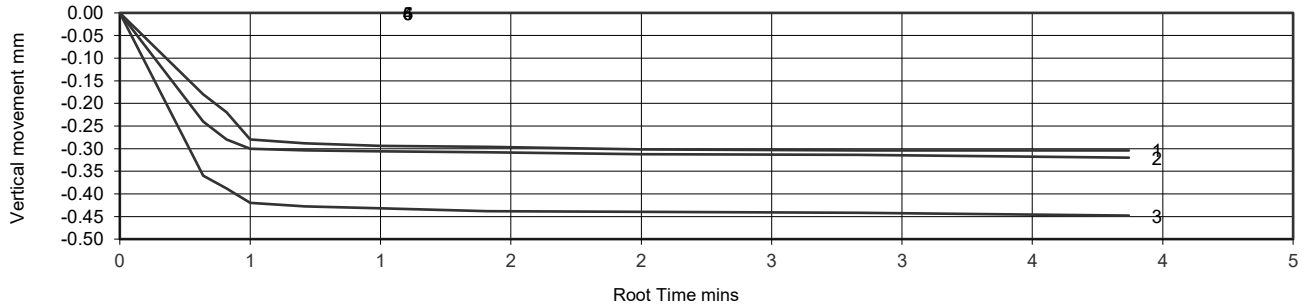
c'_R	kPa	not assessed	-
$Ø'_R$	degrees	not assessed	-

Remarks

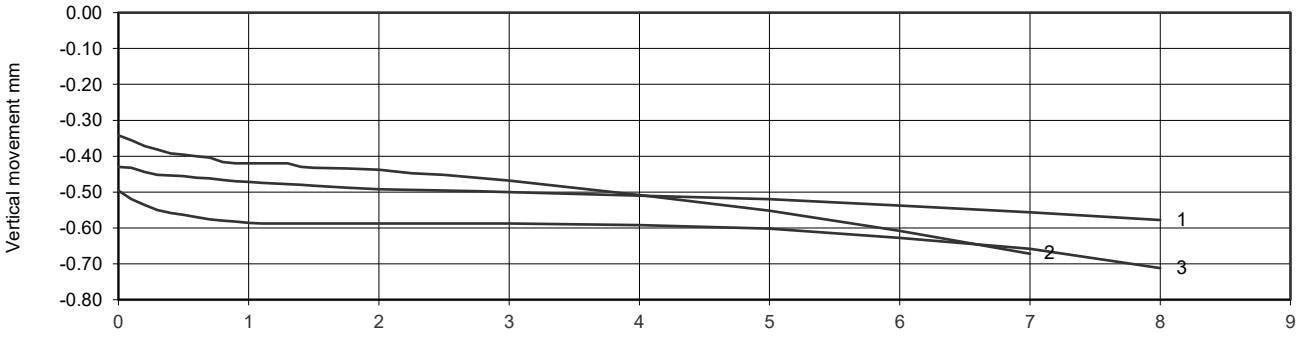
	Date Printed			
	27/02/2026	UKAS TESTING 7758	TTL	**SSB**

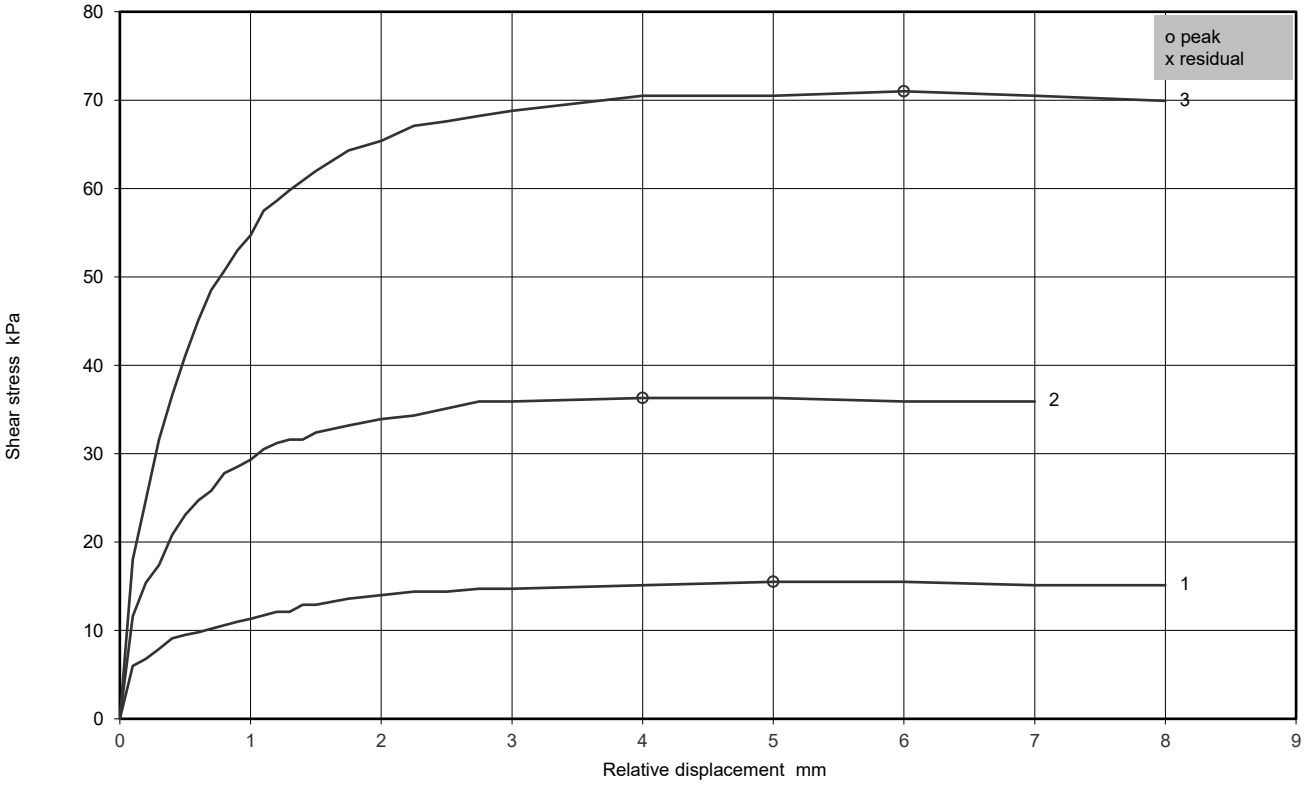
	Determination of shear strength using the Small Direct Shearbox Apparatus				Job Ref	J331504
					Borehole/Pit No.	CP-202
Project Name	Marine GI - Ardersier Port				Sample No.	
Soil Description	Brown slightly gravelly silty SAND				Depth m	2
Specimen Reference		Specimen Depth		m	Sample Type	B
Specimen Description					KeyLAB ID	TTLP2026010629

Consolidation stage(s)



Shearing stage(s)





*Note : Vertical movement/change in height is recorded as negative for reduced height (settlement) and positive for increased height (swell).	Date Printed			SSB
	27/02/2026			

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey and brown silty SAND			Depth m	2.20
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Greyish brown silty SAND.			KeyLAB ID	TTLP2026010624
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

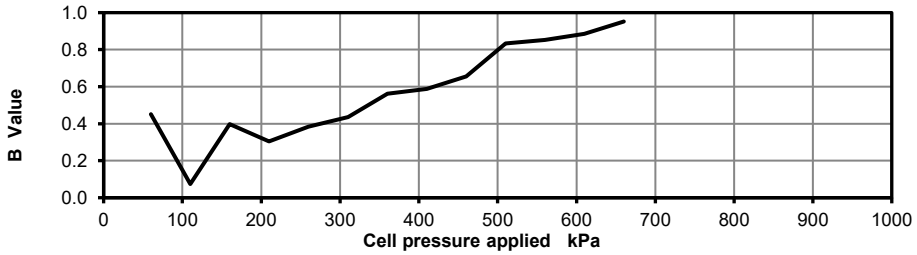
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.78	1.78	Mg/m³
Water Content				20.9	27.3	%
Average Length	96.0	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.48	1.40	Mg/m³
Voids ratio				0.796	0.892	
Degree of saturation				70	81	%

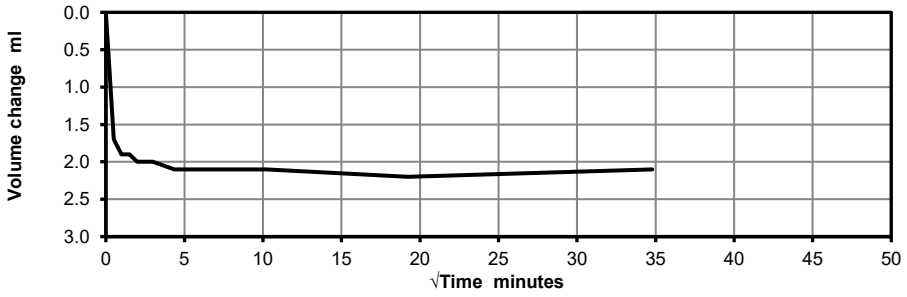
Saturation



Method: Increments of cell and back pressure

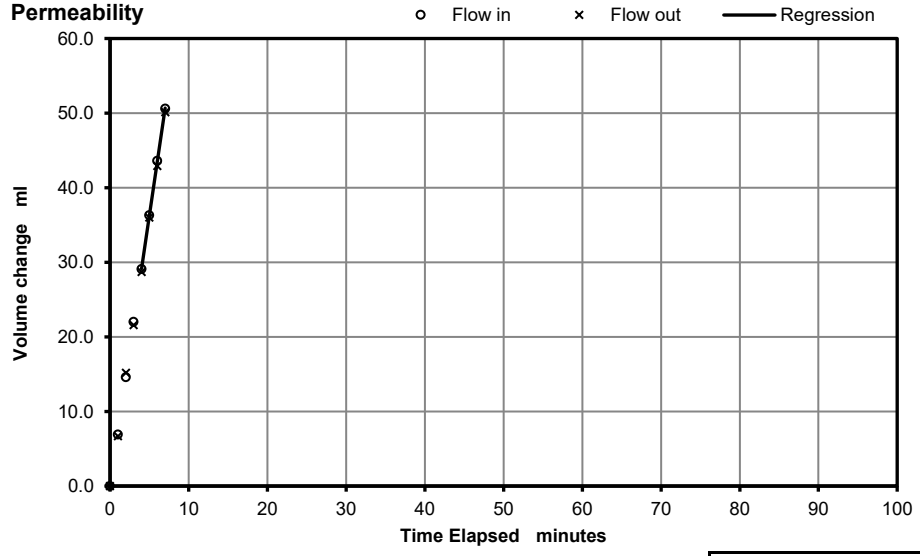
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	660	kPa
Final pore water pressure	651	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	700	kPa
Back pressure applied	650	kPa
Effective stress	50	kPa
Initial PWP	686	kPa
Final PWP	651	kPa
PWP dissipation	98	%

Permeability



Direction of Flow		
Cell Pressure	700	kPa
Top Pressure	655	kPa
Base Pressure	645	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	7.2	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.4×10^{-6} m/s

Remarks	H.G 10 kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey and brown silty SAND			Depth m	3.50
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Grey and brown silty SAND.			KeyLAB ID	TTLP2026010630
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

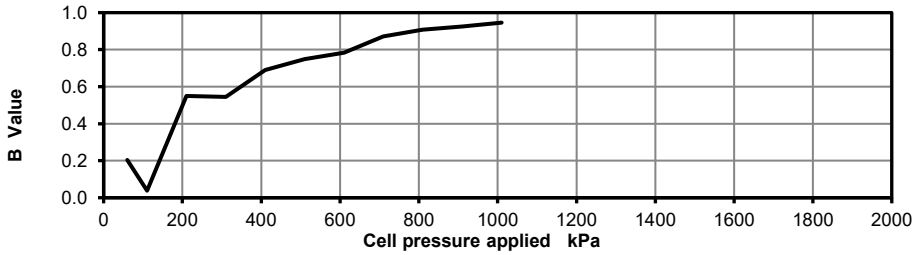
Specimen Details

Specimen Type /Preparation: REMOULDED using 2.5KG effort @ a workable MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.50	1.70	Mg/m³
Water Content				6.6	26.8	%
Average Length	96.0	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.40	1.34	Mg/m³
Voids ratio				0.887	0.973	
Degree of saturation				20	73	%

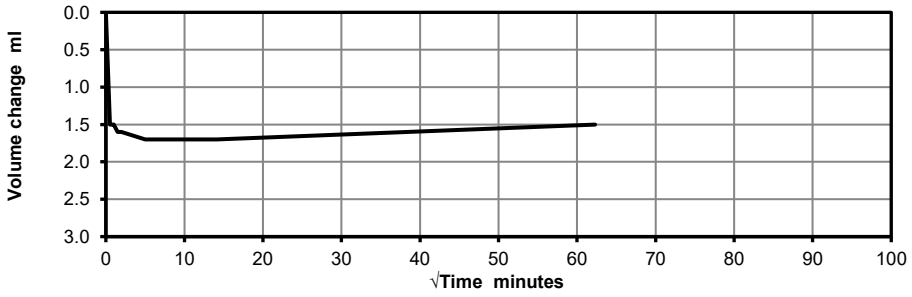
Saturation



Method: Increments of cell and back pressure

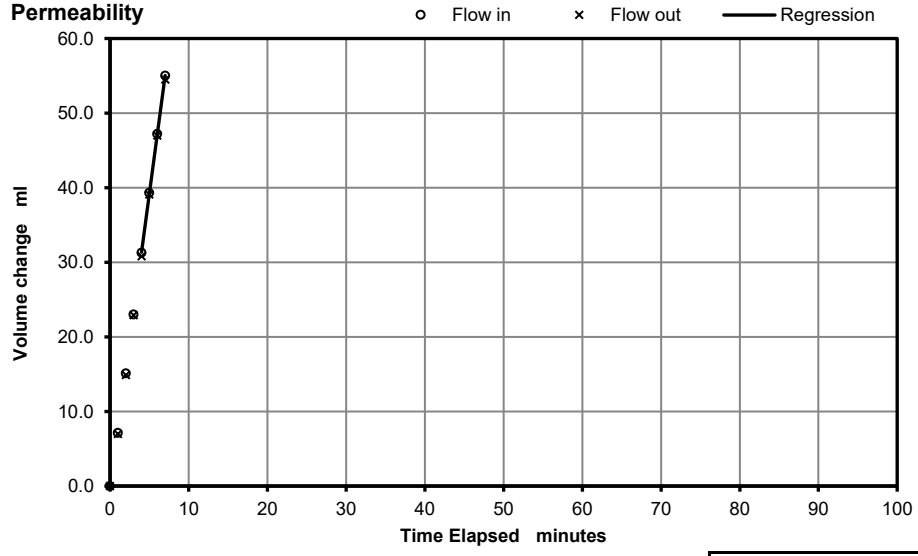
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	1010	kPa
Final pore water pressure	996	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	1050	kPa
Back pressure applied	1000	kPa
Effective stress	50	kPa
Initial PWP	1030	kPa
Final PWP	1001	kPa
PWP dissipation	96	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	1050	kPa
Top Pressure	1005	kPa
Base Pressure	995	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	7.9	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.5 x 10^{-6} m/s

Remarks	
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J328106
				Borehole/Pit No.	BH-116
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Dark brown slightly gravelly sandy organic CLAY			Depth m	4.50
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Dark brown slightly gravelly sandy organic CLAY.			KeyLAB ID	TTLP20251127122
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received mc

Size of material removed > 20 mm Proportion 0 %

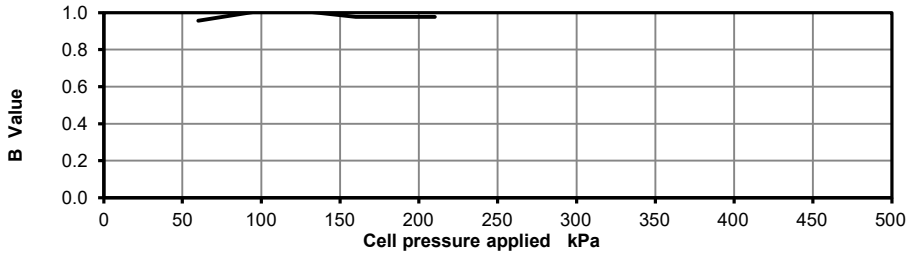
Average Length 96.0 mm

Average Diameter 103.2 mm

Particle density 2.65 Mg/m³ Assumed

	Initial	Final	
Bulk Density	1.83	1.94	Mg/m³
Water Content	30.1	30.5	%
Dry density	1.40	1.48	Mg/m³
Voids ratio	0.888	0.785	
Degree of saturation	90	103	%

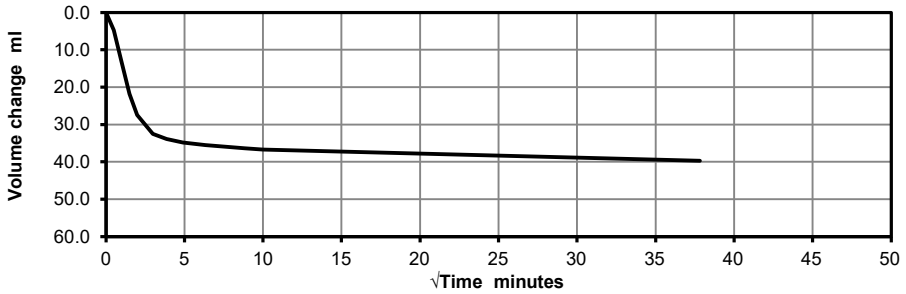
Saturation



Method: Increments of cell pressure only

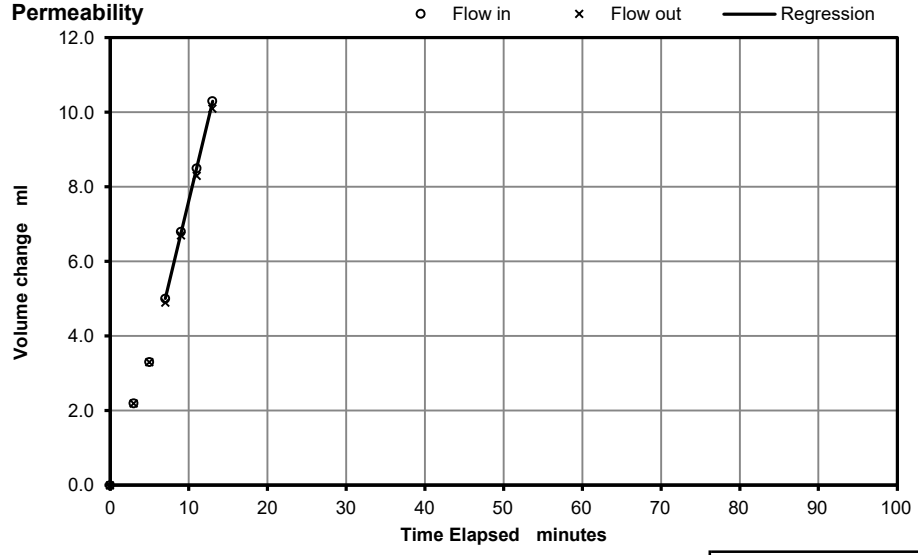
Cell pressure increments	50	kPa
Differential Pressure		kPa
Final Cell Pressure	210	kPa
Final pore water pressure	206	kPa
Final B Value	0.98	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	400	kPa
Back pressure applied	350	kPa
Effective stress	50	kPa
Initial PWP	394	kPa
Final PWP	349	kPa
PWP dissipation	103	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	400	kPa
Top Pressure	355	kPa
Base Pressure	345	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	11.1	
Mean rate of flow	0.88	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*

(at 20°C)

1.7×10^{-7} m/s

Remarks	H.G 10kPa
Date Printed	28/11/2025

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J327997
				Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly silty SAND			Depth m	2.10
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Light brown slightly gravelly silty SAND			KeyLAB ID	TTLP202511254
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

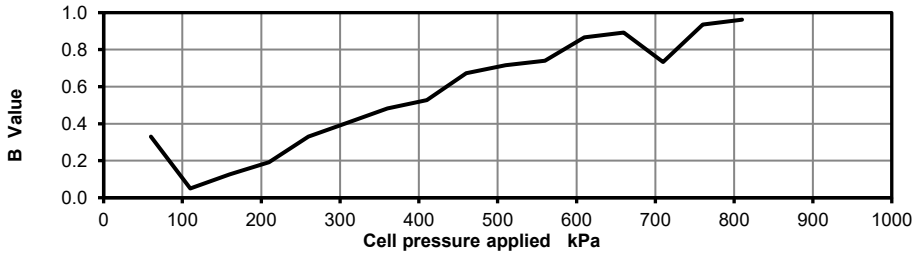
Specimen Type /Preparation: REMOULDED using 2.5KG effort @ received MC

Size of material removed > 16 mm Proportion 0 %

Average Length	96.0	mm	
Average Diameter	103.2	mm	
Particle density	2.65	Mg/m³	Assumed

	Initial	Final	
Bulk Density	1.79	1.77	Mg/m³
Water Content	23.1	26.0	%
Dry density	1.46	1.41	Mg/m³
Voids ratio	0.819	0.886	
Degree of saturation	75	78	%

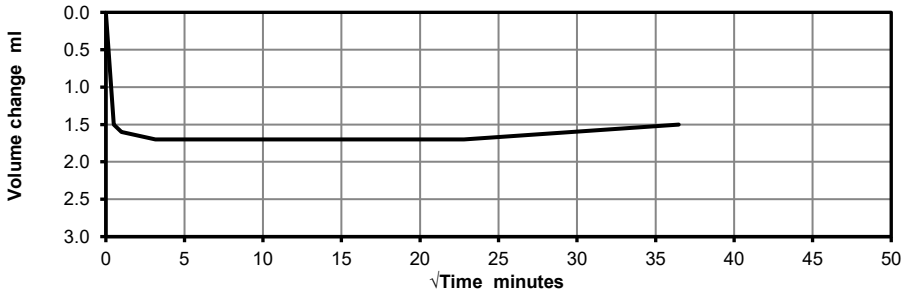
Saturation



Method: Increments of cell and back pressure

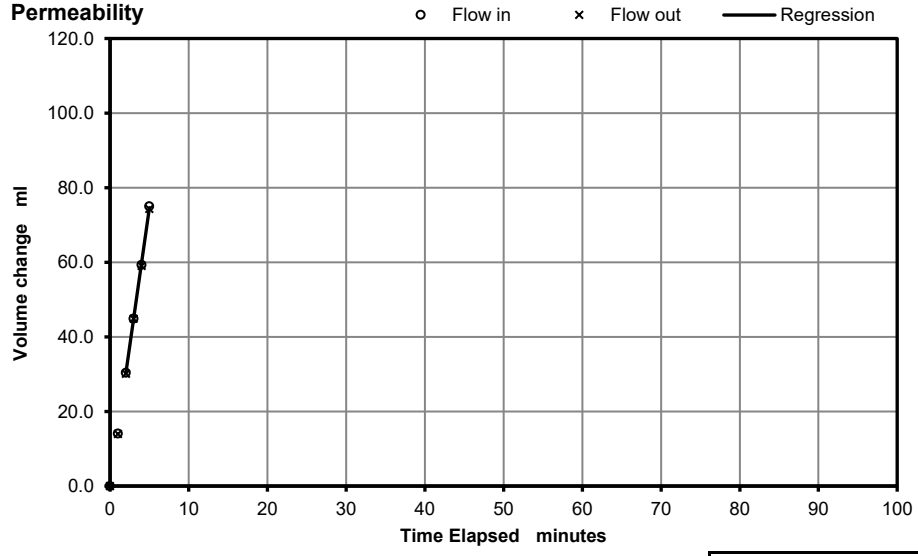
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	810	kPa
Final pore water pressure	802	kPa
Final B Value	0.96	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	850	kPa
Back pressure applied	800	kPa
Effective stress	50	kPa
Initial PWP	835	kPa
Final PWP	800	kPa
PWP dissipation	99	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	850	kPa
Top Pressure	805	kPa
Base Pressure	795	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	15	ml/min
Temperature during test	20	°C

PERMEABILITY, *kv*
(at 20°C)

2.8 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	25/11/2025

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J327997
				Borehole/Pit No.	CP-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly silty SAND			Depth m	1.40
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Light brown slight gravelly silty SAND.			KeyLAB ID	TTLP202511258
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

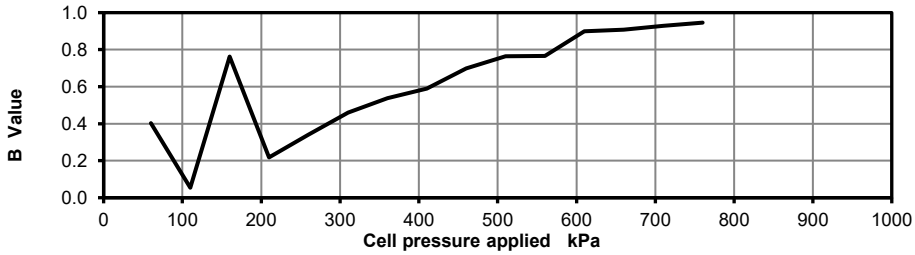
Specimen Type /Preparation: REMOULDED using 2.5KG effort @ received MC

Size of material removed > 16 mm Proportion 0 %

Average Length	96.0	mm	
Average Diameter	103.2	mm	
Particle density	2.65	Mg/m³	Assumed

	Initial	Final	
Bulk Density	1.78	1.80	Mg/m³
Water Content	24.5	27.3	%
Dry density	1.43	1.41	Mg/m³
Voids ratio	0.852	0.874	
Degree of saturation	76	83	%

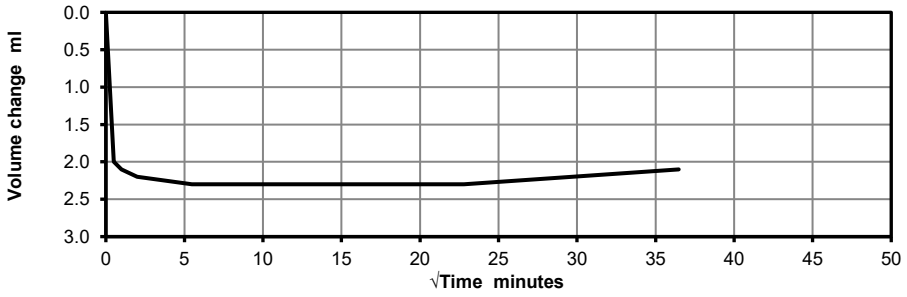
Saturation



Method: Increments of cell and back pressure

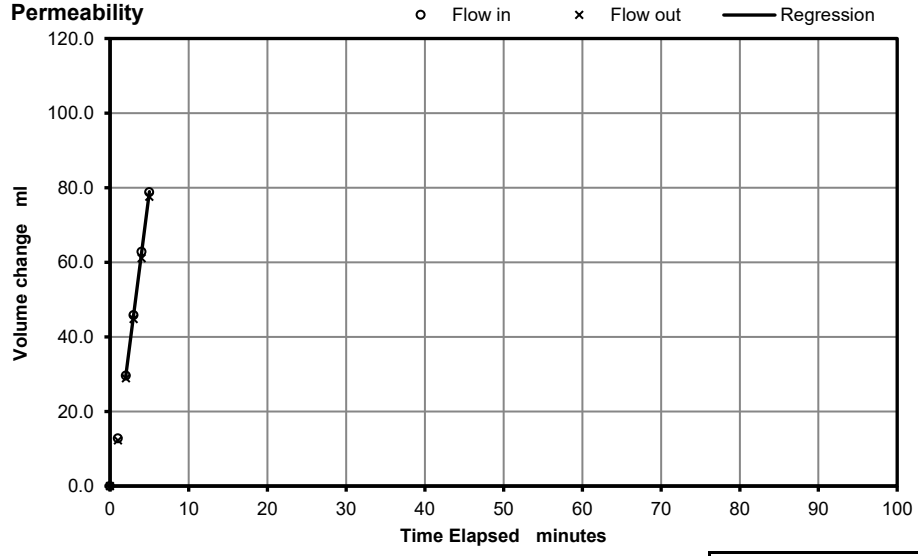
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	760	kPa
Final pore water pressure	750	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	810	kPa
Back pressure applied	750	kPa
Effective stress	60	kPa
Initial PWP	795	kPa
Final PWP	752	kPa
PWP dissipation	96	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	810	kPa
Top Pressure	755	kPa
Base Pressure	745	kPa
Mean Effective Stress	60	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	16	ml/min
Temperature during test	20	°C

PERMEABILITY, *kv*
(at 20°C)

3.1 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	25/11/2025

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-103
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown silty SAND			Depth m	1.20
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown silty SAND.			KeyLAB ID	TTLP2026010620
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

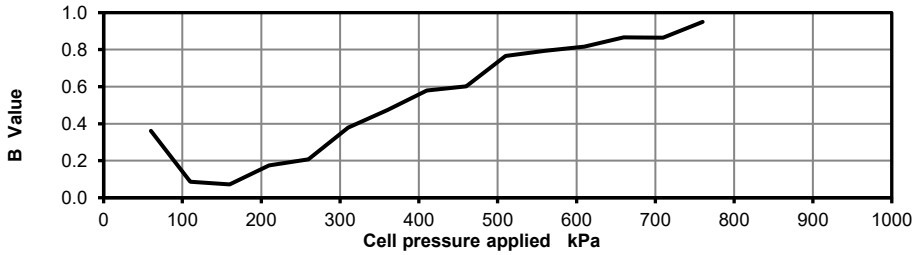
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.79	1.80	Mg/m³
Water Content				22.3	26.6	%
Average Length	95.7	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.46	1.42	Mg/m³
Voids ratio				0.812	0.863	
Degree of saturation				73	82	%

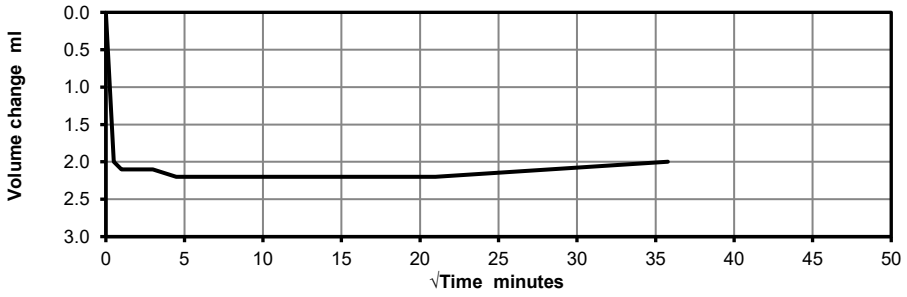
Saturation



Method: Increments of cell and back pressure

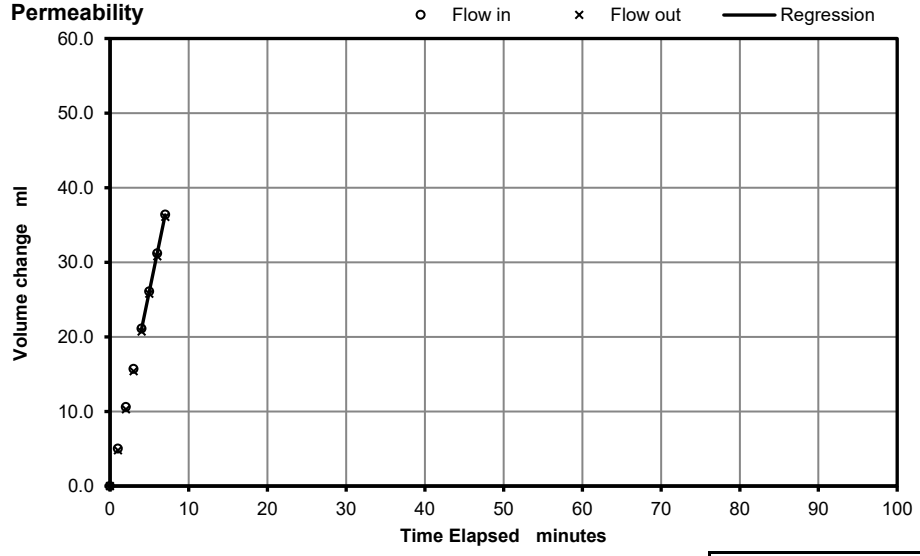
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	760	kPa
Final pore water pressure	746	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	800	kPa
Back pressure applied	750	kPa
Effective stress	50	kPa
Initial PWP	781	kPa
Final PWP	749	kPa
PWP dissipation	104	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	800	kPa
Top Pressure	755	kPa
Base Pressure	745	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.5	
Mean rate of flow	5.1	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

9.8×10^{-7} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-103
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	4.20
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown slightly gravelly silty SAND.			KeyLAB ID	TTLP2026010619
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

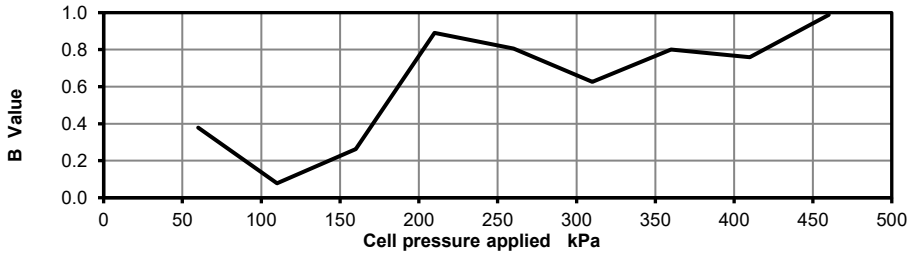
Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 14 %

Average Length	96.4	mm	
Average Diameter	103.2	mm	
Particle density	2.65	Mg/m³	Assumed

	Initial	Final	
Bulk Density	1.85	1.86	Mg/m³
Water Content	25.0	24.9	%
Dry density	1.48	1.49	Mg/m³
Voids ratio	0.794	0.784	
Degree of saturation	83	84	%

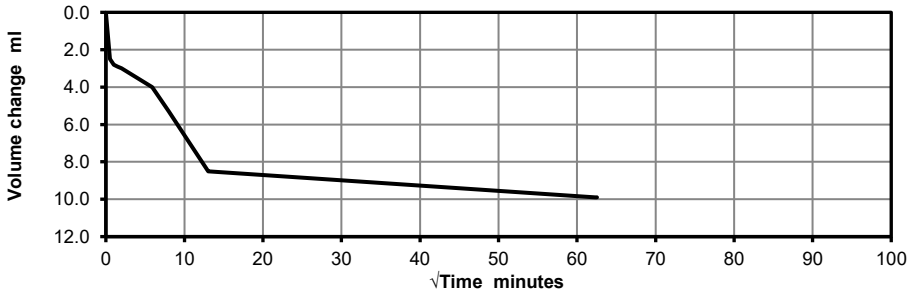
Saturation



Method: Increments of cell and back pressure

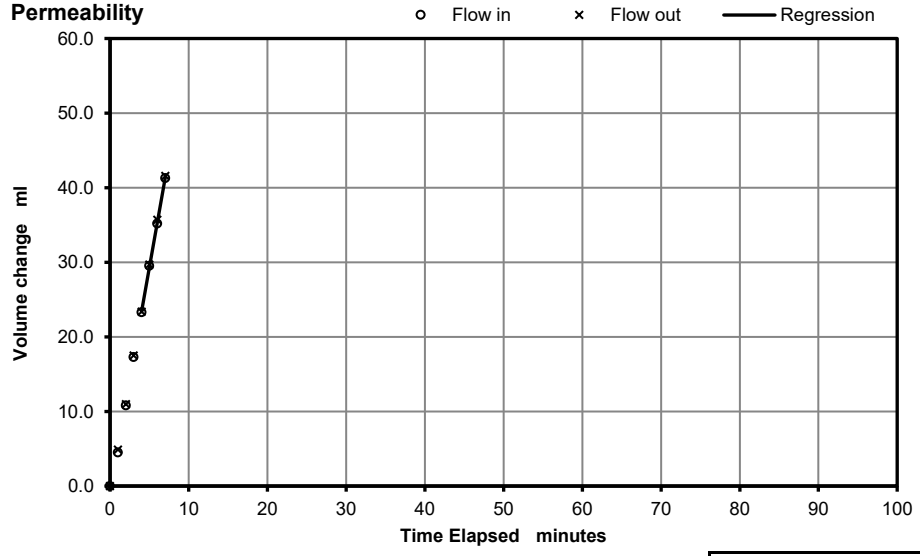
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	460	kPa
Final pore water pressure	449	kPa
Final B Value	0.99	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	500	kPa
Back pressure applied	450	kPa
Effective stress	50	kPa
Initial PWP	488	kPa
Final PWP	450	kPa
PWP dissipation	100	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	500	kPa
Top Pressure	455	kPa
Base Pressure	445	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	6.0	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.1 x 10^{-6} m/s

Remarks	
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly SAND			Depth m	2.50
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Light brown slightly gravelly SAND.			KeyLAB ID	TTLP2026010621
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

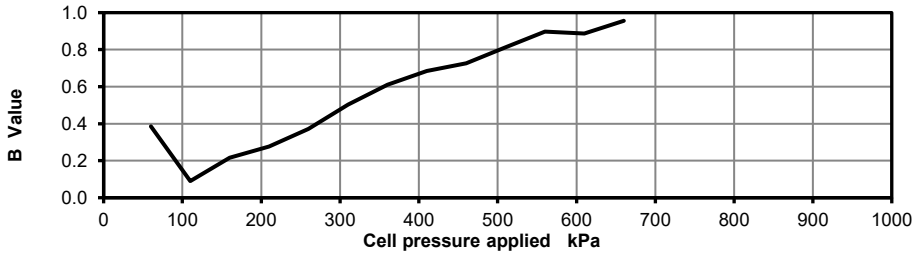
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.82	1.82	Mg/m³
Water Content				21.0	26.4	%
Average Length	96.0	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.50	1.44	Mg/m³
Voids ratio				0.763	0.841	
Degree of saturation				73	83	%

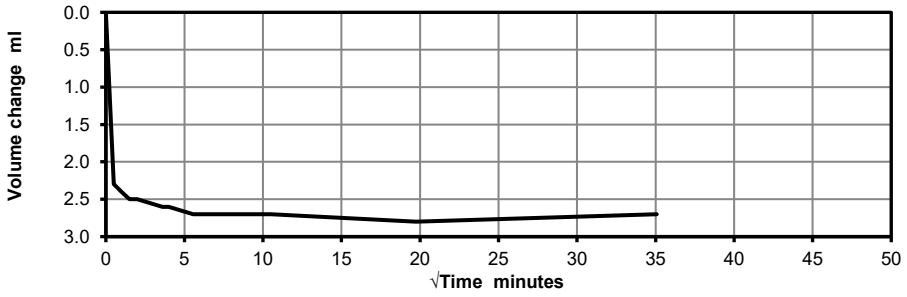
Saturation



Method: Increments of cell and back pressure

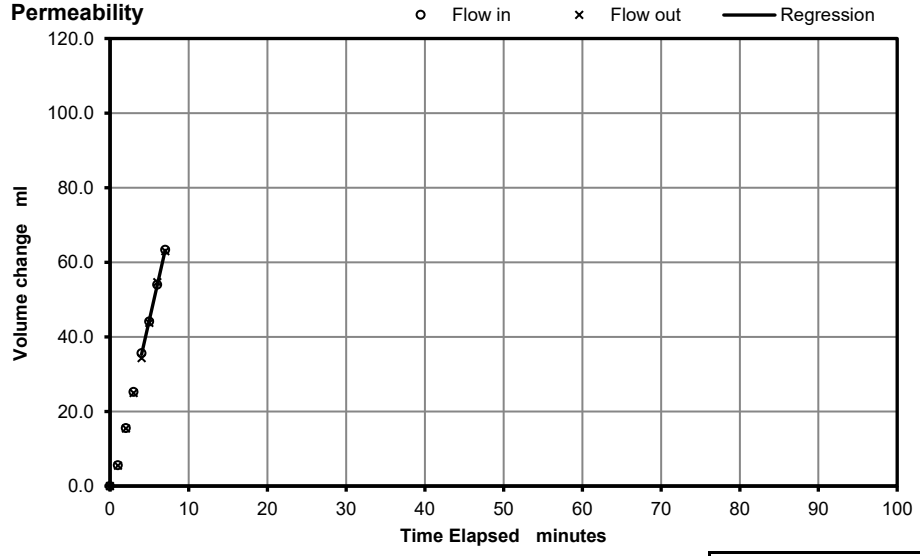
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	660	kPa
Final pore water pressure	648	kPa
Final B Value	0.96	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	700	kPa
Back pressure applied	650	kPa
Effective stress	50	kPa
Initial PWP	686	kPa
Final PWP	650	kPa
PWP dissipation	100	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	700	kPa
Top Pressure	655	kPa
Base Pressure	645	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	9.3	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.8×10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

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PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-201
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	2.00
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown slightly gravelly silty SAND.			KeyLAB ID	TTLP2026010627
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

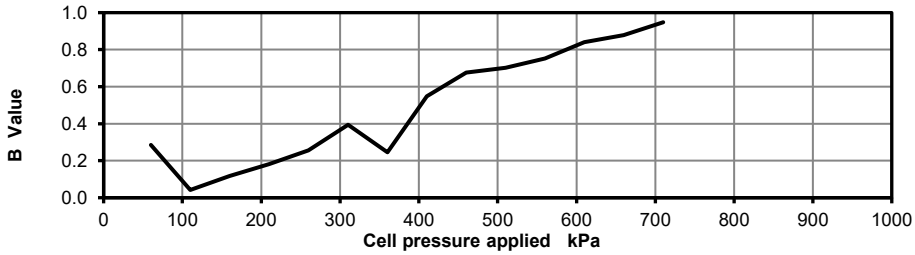
Specimen Details

Specimen Type /Preparation: REMOULDED using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.64	1.74	Mg/m³
Water Content				14.5	25.8	%
Average Length	96.0	mm				
Average Diameter	103.3	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.44	1.38	Mg/m³
Voids ratio				0.845	0.918	
Degree of saturation				45	75	%

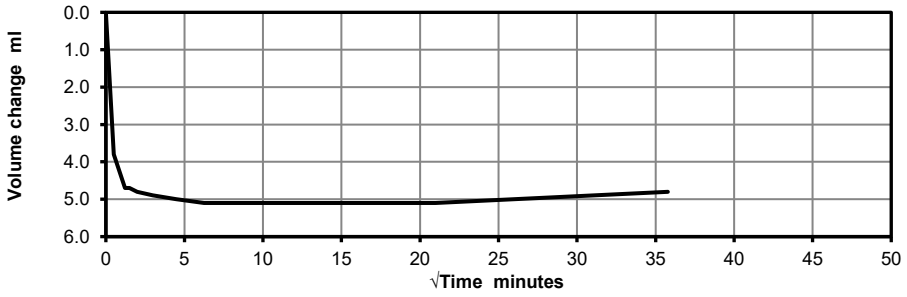
Saturation



Method: Increments of cell and back pressure

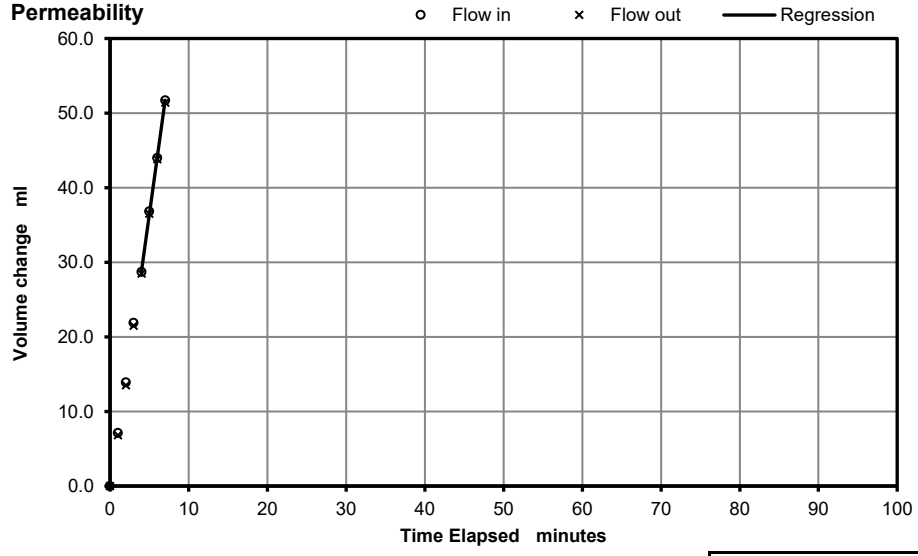
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	710	kPa
Final pore water pressure	698	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	750	kPa
Back pressure applied	700	kPa
Effective stress	50	kPa
Initial PWP	735	kPa
Final PWP	701	kPa
PWP dissipation	97	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	750	kPa
Top Pressure	705	kPa
Base Pressure	695	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	7.6	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.4 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-202
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	2.00
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown slightly gravelly silty SAND.			KeyLAB ID	TTLP2026010629
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

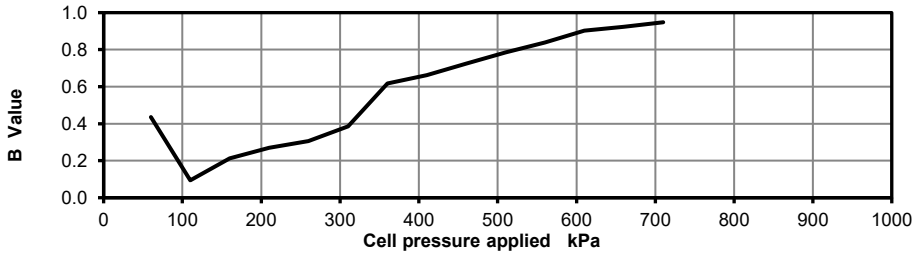
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > mm Proportion %

				Initial	Final	
Bulk Density				1.82	1.83	Mg/m³
Water Content				19.1	26.2	%
Average Length	96.0	mm		1.52	1.45	Mg/m³
Average Diameter	103.2	mm		0.738	0.832	
Particle density	2.65	Mg/m³	Assumed	69	83	%

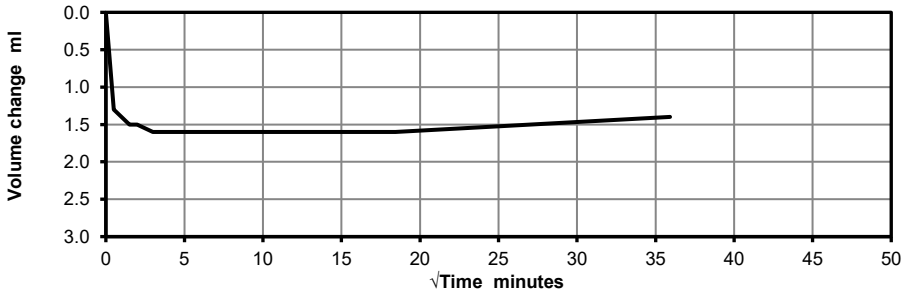
Saturation



Method: Increments of cell and back pressure

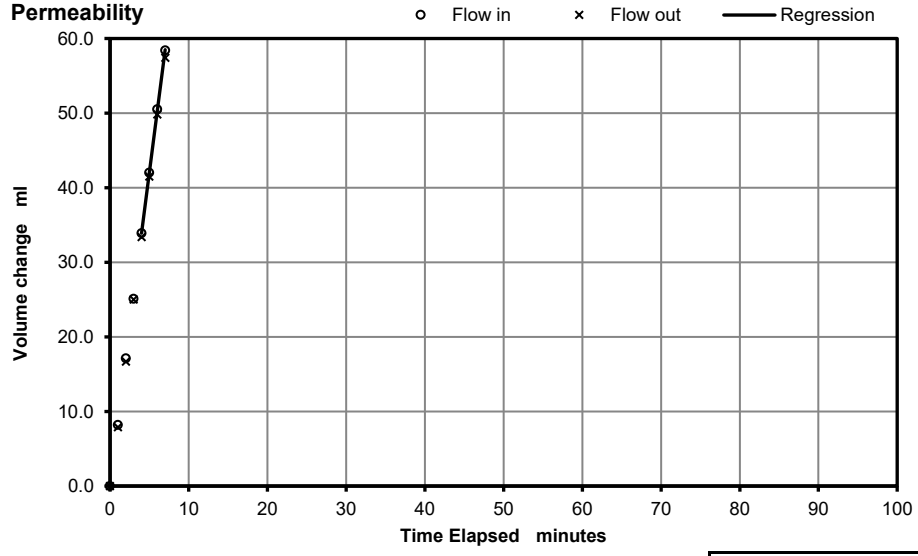
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	710	kPa
Final pore water pressure	699	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	750	kPa
Back pressure applied	700	kPa
Effective stress	50	kPa
Initial PWP	734	kPa
Final PWP	701	kPa
PWP dissipation	97	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	750	kPa
Top Pressure	705	kPa
Base Pressure	695	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	8.2	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.6 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-52 Issue 01 - Oct 22	Summary of Results for Maximum and Minimum Dry Density Tests
Project No. J331504	Project Name Marine GI - Ardersier Port

	Sample						Oversize material (as appropriate)			Dry density		
Hole No.	Ref	Top	Base	Type	Soil Description	Test Method	>37.5mm %	>6.3mm %	>2mm %	Maximum Mg/m_3	Minimum Mg/m_3	Remarks
BH-101		0.80	1.30	B	Brown SAND	4.2, 4.4	0	6	5	1.67	1.56	
BH-101		2.20	1.70	B	Grey and brown silty SAND	4.2, 4.4	0	0	0	1.54	1.43	
BH-101		5.30	5.80	B	Brown SAND	4.2, 4.4	0	3	2	1.47	1.35	
BH-102		1.00	1.50	B	Brown SAND	4.2, 4.4	0	2	1	1.55	1.43	
BH-102		3.50	3.00	B	Grey and brown silty SAND	4.2, 4.4	0	0	0	1.55	1.43	
BH-102		7.00	7.50	B	Brown SAND	4.2, 4.4	0	0	0	1.49	1.39	
BH-102		12.00	12.50	B	Brown SAND	4.2, 4.4	0	0	1	1.50	1.39	
BH-108		11.20	11.70	B	Grey brown SAND	4.2, 4.4	0	0	0	1.45	1.35	
BH-108		18.70	19.20	B	Grey brown SAND	4.2, 4.4	0	0	0	1.63	1.52	
BH-112		12.60	13.10	B	Brown slightly gravelly SAND		0	0	0	1.60	1.33	
BH-112		17.00	17.50	B	Brown slightly gravelly SAND		0	1	0	1.52	1.32	
BH-112		20.00	20.50	B	Brown slightly gravelly SAND		0	1	0	1.47	1.28	
BH-113		9.50	10.00	B	Brown slightly gravelly SAND		0	0	0	1.45	1.28	
BH-113		15.50	16.00	B	Brown slightly gravelly SAND		0	0	0	1.44	1.25	
BH-113		23.00	23.50	B	Grey and brown SAND		0	2	0	1.50	1.39	
BH-114		3.20	3.70	B	Grey brown SAND		0	0	0	1.37	1.25	
BH-114		7.70	8.20	B	Grey brown SAND		0	0	0	1.49	1.39	
BH-119		6.30	6.80	B	Grey brown SAND		0	1	0	1.64	1.41	
BH-119		12.30	12.80	B	Grey brown SAND		0	1	1	1.66	1.47	
BH-119		19.80	20.30	B	Brown slightly gravelly silty SAND		0	7	4	1.73	1.33	
BH-119		21.30	21.80	B	Brown slightly gravelly SAND		0	0	0	1.65	1.47	
BH-203		7.50	8.00	B	Brown slightly gravelly SAND		0	0	0	1.48	1.39	
BH-207		6.70	7.20	B	Brown slightly gravelly SAND		0	0	0	1.46	1.33	
BH-207		15.70	16.20	B	Brown slightly gravelly SAND		0	0	0	1.51	1.25	
BH-207		27.70	28.20	B	Brown SAND		0	0	0	1.47	1.20	
CP-101		2.10	1.60	B	Light brown slightly gravelly silty SAND		4	18	0	1.53	1.27	
CP-101		5.40	5.90	B	Brown slightly gravelly SAND		0	1	0	1.51	1.23	
CP-101		8.40	8.90	B	Brown SAND		0	0	0	1.44	1.35	
CP-101		11.40	11.90	B	Grey brown SAND		0	1	0	1.41	1.33	
CP-102		9.10	9.60	B	Brown SAND		0	0	0	1.45	1.32	
CP-102		13.60	14.10	B	Brown SAND		0	0	0	1.46	1.35	
CP-103		1.20	0.70	B	Brown silty SAND	4.2, 4.4	0	0	0	1.45	1.35	
CP-104		2.50	2.00	B	Light brown slightly gravelly SAND	4.2, 4.4	0	0	0	1.63	1.52	
CP-104		8.00	8.50	B	Brown SAND	4.2, 4.4	0	0	1	1.53	1.43	
CP-104		11.00	11.50	B	Brown SAND	4.2, 4.4	0	0	2	1.59	1.47	
CP-201		2.00	1.50	B	Brown slightly gravelly silty SAND	4.2, 4.4	0	0	0	1.58	1.47	
CP-201		4.00	4.50	B	Brown SAND	4.2, 4.4	1	18	2	1.59	1.43	
CP-202		2.00	1.50	B	Brown slightly gravelly silty SAND	4.2, 4.4	0	4	1	1.49	1.39	

Notes
Tests performed in accordance with BS 1377 : Part 4 : 1990 and clauses : 4.2, 4.4 sandy soil
4.3, 4.5 gravelly soil

UKAS TESTING

MAX MIN

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	BH-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey and brown silty SAND			Depth m	2.20
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Greyish brown silty SAND.			KeyLAB ID	TTLP2026010624
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

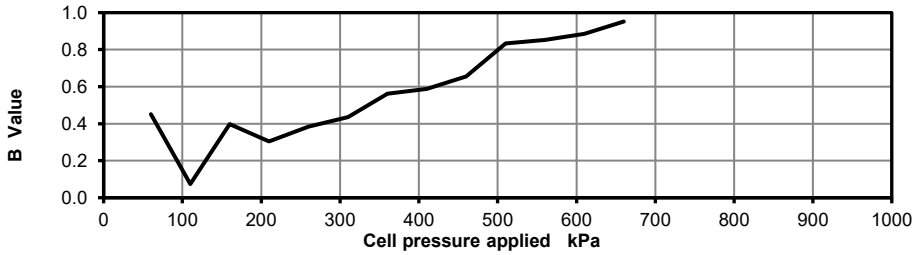
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.78	1.78	Mg/m³
Water Content				20.9	27.3	%
Average Length	96.0	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.48	1.40	Mg/m³
Voids ratio				0.796	0.892	
Degree of saturation				70	81	%

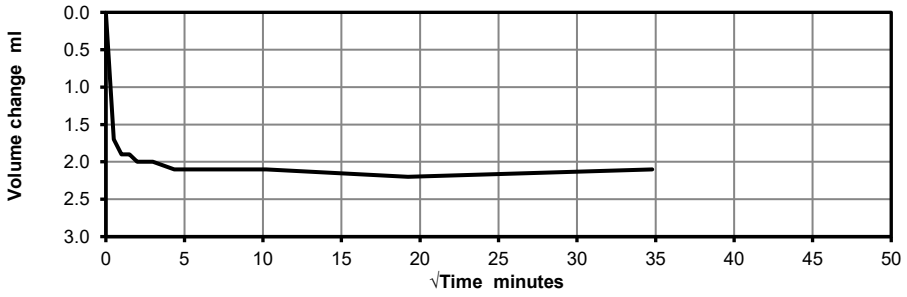
Saturation



Method: Increments of cell and back pressure

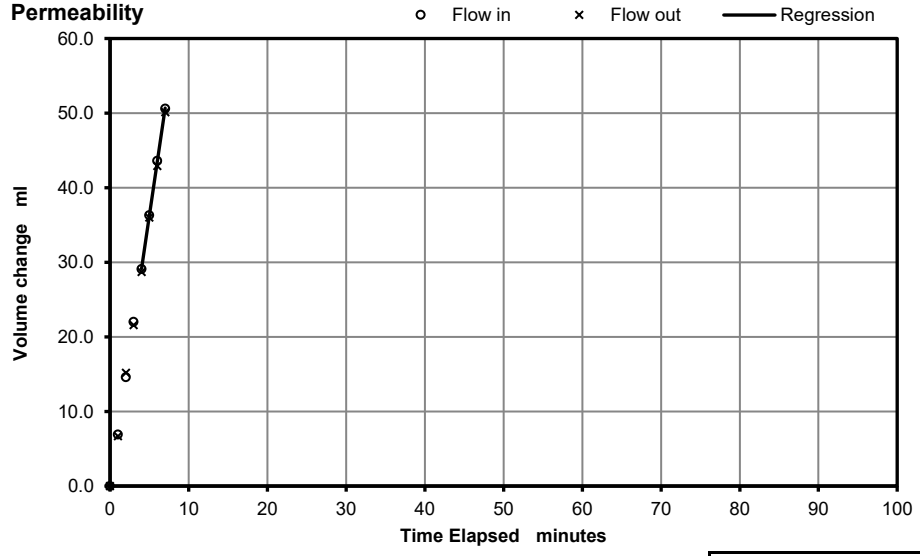
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	660	kPa
Final pore water pressure	651	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	700	kPa
Back pressure applied	650	kPa
Effective stress	50	kPa
Initial PWP	686	kPa
Final PWP	651	kPa
PWP dissipation	98	%

Permeability



Direction of Flow		
Cell Pressure	700	kPa
Top Pressure	655	kPa
Base Pressure	645	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	7.2	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.4 x 10^{-6} m/s

Remarks	H.G 10 kPa
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	BH-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Grey and brown silty SAND			Depth m	3.50
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Grey and brown silty SAND.			KeyLAB ID	TTLP2026010630
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

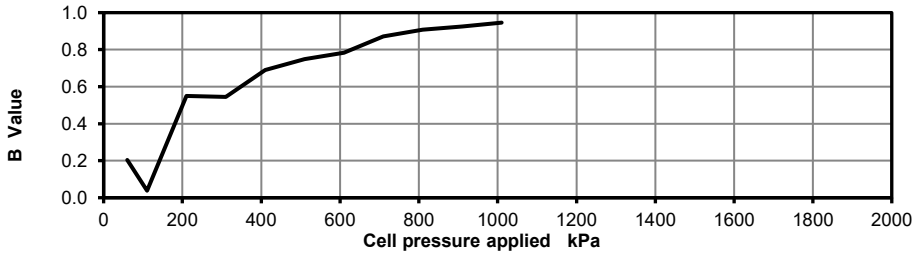
Specimen Details

Specimen Type /Preparation: REMOULDED using 2.5KG effort @ a workable MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.50	1.70	Mg/m³
Water Content				6.6	26.8	%
Average Length	96.0	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.40	1.34	Mg/m³
Voids ratio				0.887	0.973	
Degree of saturation				20	73	%

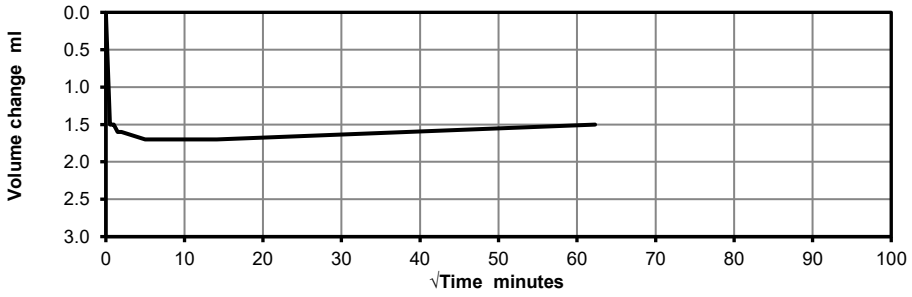
Saturation



Method: Increments of cell and back pressure

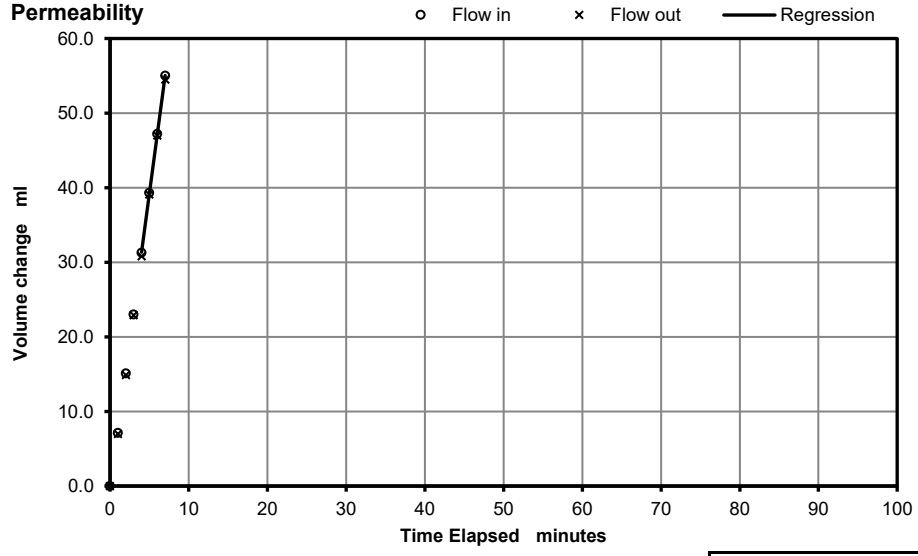
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	1010	kPa
Final pore water pressure	996	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	1050	kPa
Back pressure applied	1000	kPa
Effective stress	50	kPa
Initial PWP	1030	kPa
Final PWP	1001	kPa
PWP dissipation	96	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	1050	kPa
Top Pressure	1005	kPa
Base Pressure	995	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	7.9	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.5 x 10^{-6} m/s

Remarks	
Date Printed	06/01/2026

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J328106
				Borehole/Pit No.	BH-116
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Dark brown slightly gravelly sandy organic CLAY			Depth m	4.50
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Dark brown slightly gravelly sandy organic CLAY.			KeyLAB ID	TTLP20251127122
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received mc

Size of material removed > 20 mm Proportion 0 %

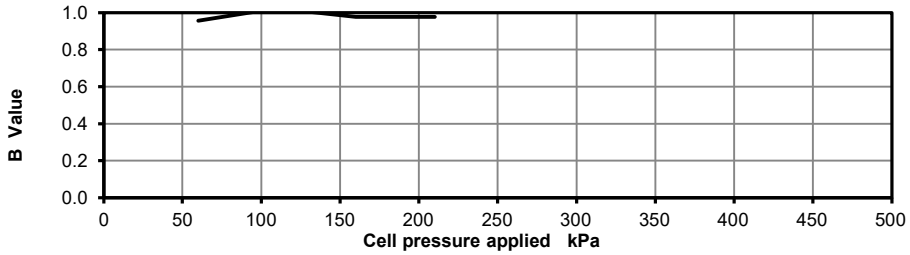
Average Length 96.0 mm

Average Diameter 103.2 mm

Particle density 2.65 Mg/m³ Assumed

	Initial	Final	
Bulk Density	1.83	1.94	Mg/m³
Water Content	30.1	30.5	%
Dry density	1.40	1.48	Mg/m³
Voids ratio	0.888	0.785	
Degree of saturation	90	103	%

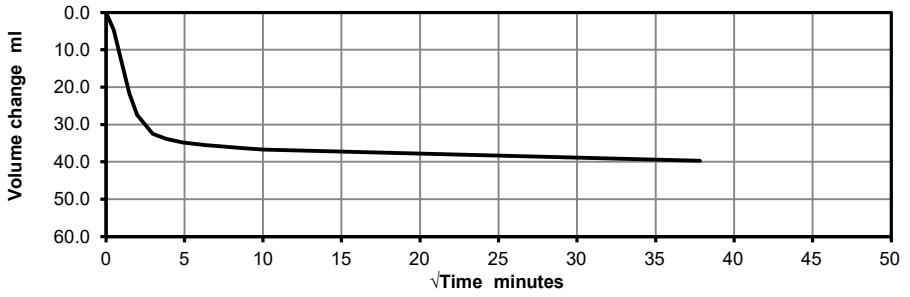
Saturation



Method: Increments of cell pressure only

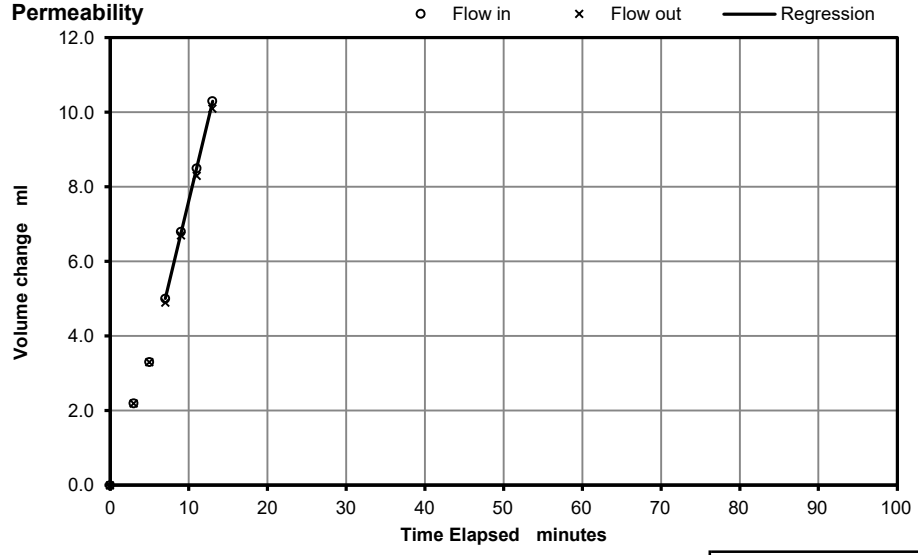
Cell pressure increments	50	kPa
Differential Pressure		kPa
Final Cell Pressure	210	kPa
Final pore water pressure	206	kPa
Final B Value	0.98	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	400	kPa
Back pressure applied	350	kPa
Effective stress	50	kPa
Initial PWP	394	kPa
Final PWP	349	kPa
PWP dissipation	103	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	400	kPa
Top Pressure	355	kPa
Base Pressure	345	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	11.1	
Mean rate of flow	0.88	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*

(at 20°C)

1.7×10^{-7} m/s

Remarks	H.G 10kPa
Date Printed	28/11/2025

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J327997
				Borehole/Pit No.	CP-101
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly silty SAND			Depth m	2.10
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Light brown slightly gravelly silty SAND			KeyLAB ID	TTLP202511254
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

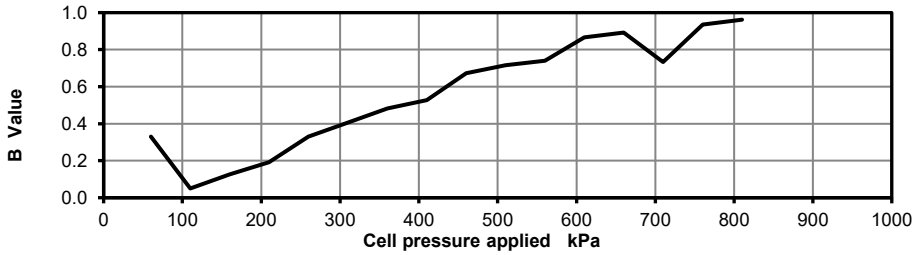
Specimen Type /Preparation: REMOULDED using 2.5KG effort @ received MC

Size of material removed > 16 mm Proportion 0 %

Average Length	96.0	mm	
Average Diameter	103.2	mm	
Particle density	2.65	Mg/m³	Assumed

	Initial	Final	
Bulk Density	1.79	1.77	Mg/m³
Water Content	23.1	26.0	%
Dry density	1.46	1.41	Mg/m³
Voids ratio	0.819	0.886	
Degree of saturation	75	78	%

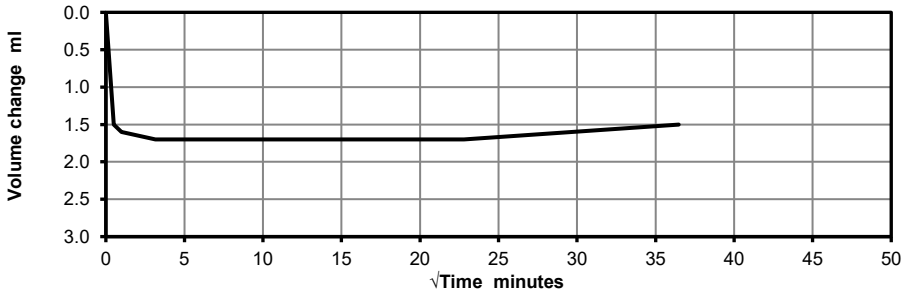
Saturation



Method: Increments of cell and back pressure

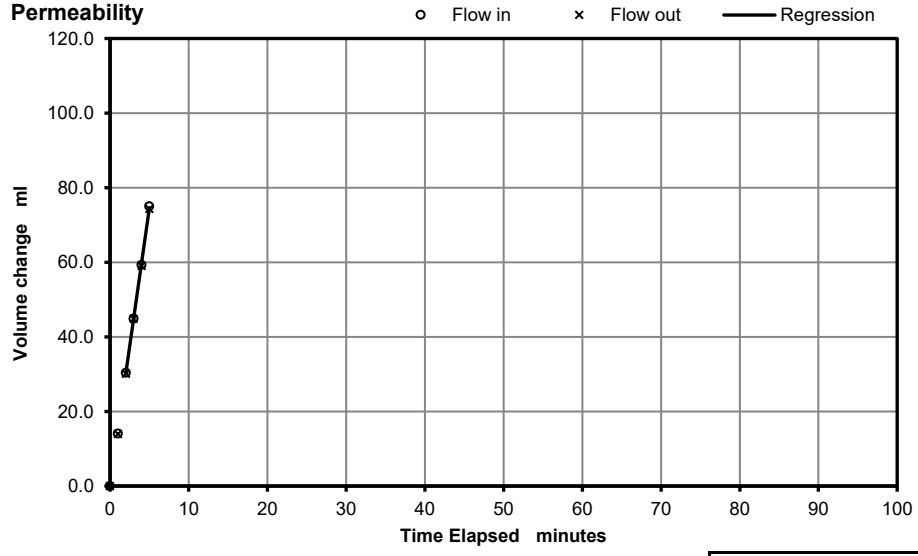
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	810	kPa
Final pore water pressure	802	kPa
Final B Value	0.96	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	850	kPa
Back pressure applied	800	kPa
Effective stress	50	kPa
Initial PWP	835	kPa
Final PWP	800	kPa
PWP dissipation	99	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	850	kPa
Top Pressure	805	kPa
Base Pressure	795	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	15	ml/min
Temperature during test	20	°C

PERMEABILITY, *kv*
(at 20°C)

2.8 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	25/11/2025

UKAS TESTING 7758

PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J327997
				Borehole/Pit No.	CP-102
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly silty SAND			Depth m	1.40
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Light brown slight gravelly silty SAND.			KeyLAB ID	TTLP202511258
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

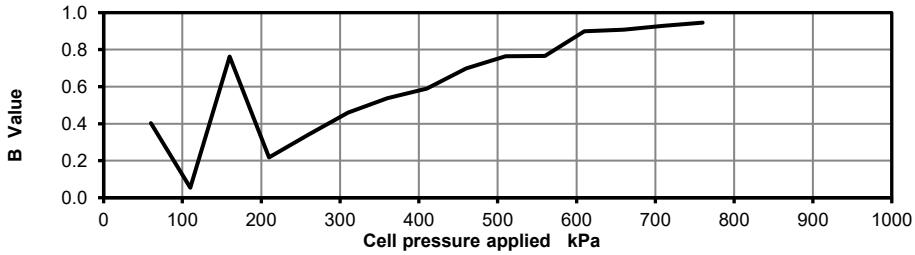
Specimen Type /Preparation: REMOULDED using 2.5KG effort @ received MC

Size of material removed > 16 mm Proportion 0 %

Average Length	96.0	mm	
Average Diameter	103.2	mm	
Particle density	2.65	Mg/m³	Assumed

	Initial	Final	
Bulk Density	1.78	1.80	Mg/m³
Water Content	24.5	27.3	%
Dry density	1.43	1.41	Mg/m³
Voids ratio	0.852	0.874	
Degree of saturation	76	83	%

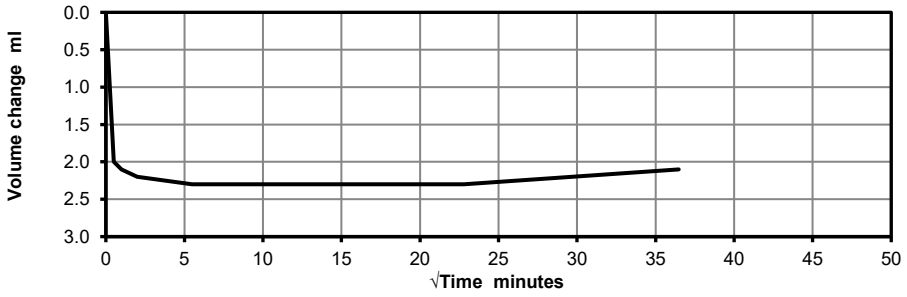
Saturation



Method: Increments of cell and back pressure

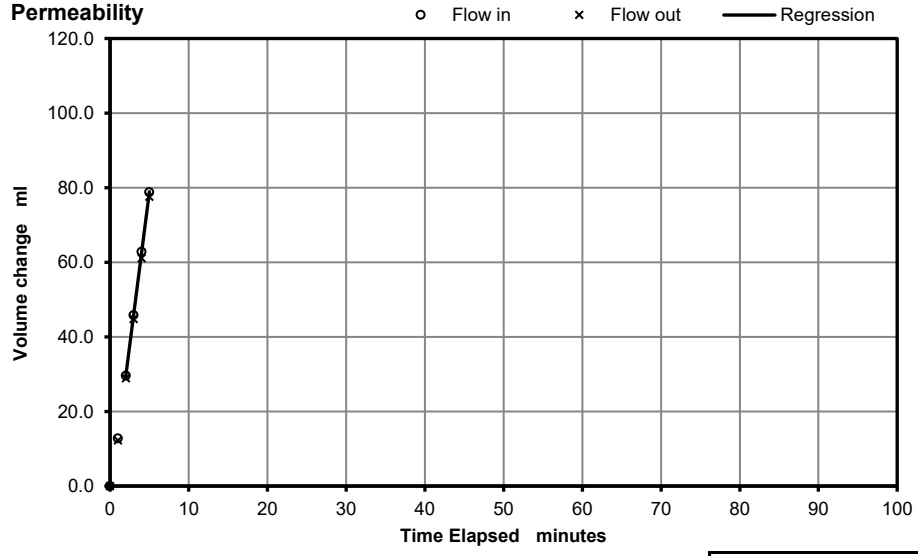
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	760	kPa
Final pore water pressure	750	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	810	kPa
Back pressure applied	750	kPa
Effective stress	60	kPa
Initial PWP	795	kPa
Final PWP	752	kPa
PWP dissipation	96	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	810	kPa
Top Pressure	755	kPa
Base Pressure	745	kPa
Mean Effective Stress	60	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	16	ml/min
Temperature during test	20	°C

PERMEABILITY, *kv*
(at 20°C)

3.1×10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	25/11/2025

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PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-103
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown silty SAND			Depth m	1.20
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown silty SAND.			KeyLAB ID	TTLP2026010620
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

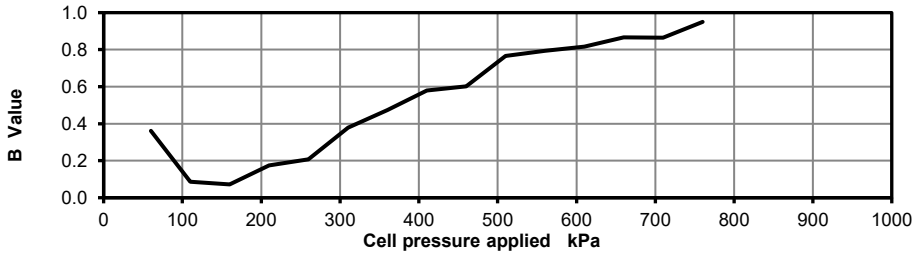
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.79	1.80	Mg/m³
Water Content				22.3	26.6	%
Average Length	95.7	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.46	1.42	Mg/m³
Voids ratio				0.812	0.863	
Degree of saturation				73	82	%

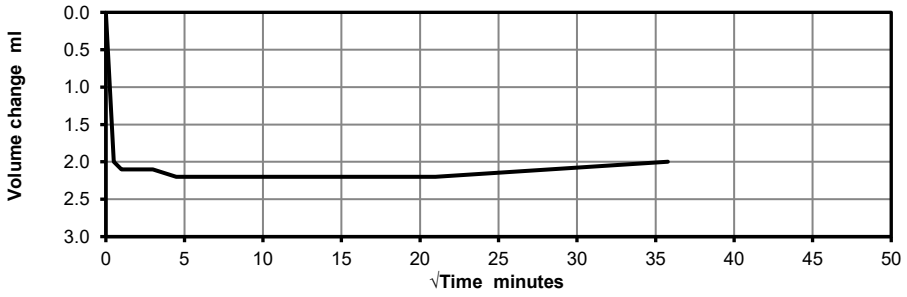
Saturation



Method: Increments of cell and back pressure

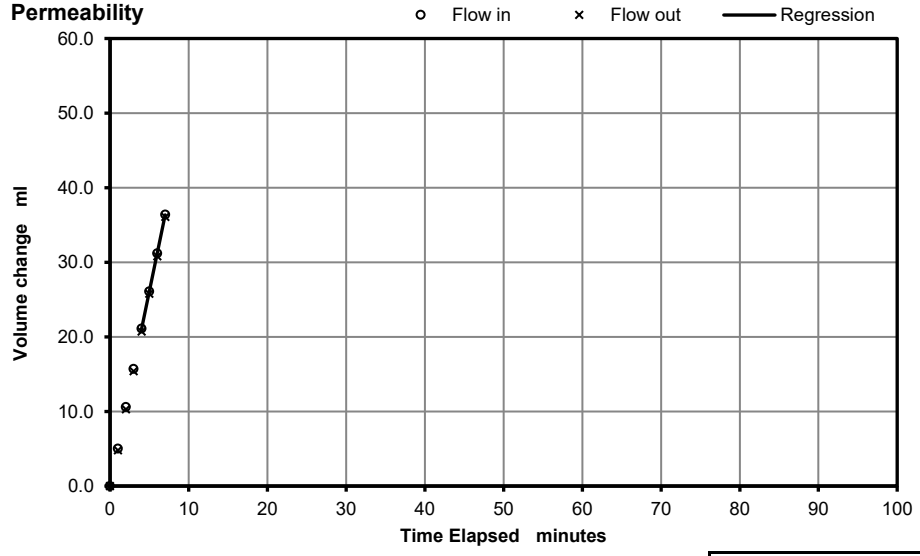
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	760	kPa
Final pore water pressure	746	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	800	kPa
Back pressure applied	750	kPa
Effective stress	50	kPa
Initial PWP	781	kPa
Final PWP	749	kPa
PWP dissipation	104	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	800	kPa
Top Pressure	755	kPa
Base Pressure	745	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.5	
Mean rate of flow	5.1	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

9.8×10^{-7} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

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PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-103
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	4.20
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown slightly gravelly silty SAND.			KeyLAB ID	TTLP2026010619
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

Specimen Details

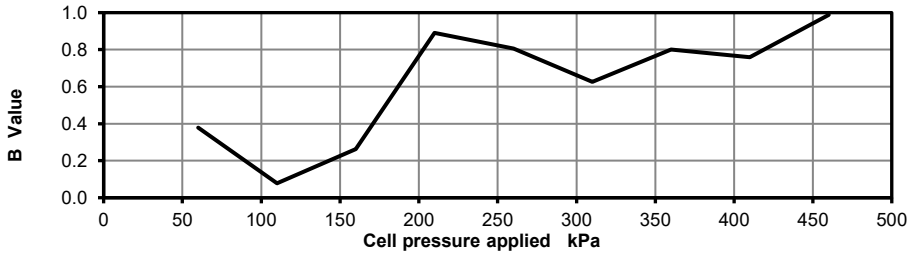
Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 14 %

Average Length	96.4	mm	
Average Diameter	103.2	mm	
Particle density	2.65	Mg/m³	Assumed

	Initial	Final	
Bulk Density	1.85	1.86	Mg/m³
Water Content	25.0	24.9	%
Dry density	1.48	1.49	Mg/m³
Voids ratio	0.794	0.784	
Degree of saturation	83	84	%

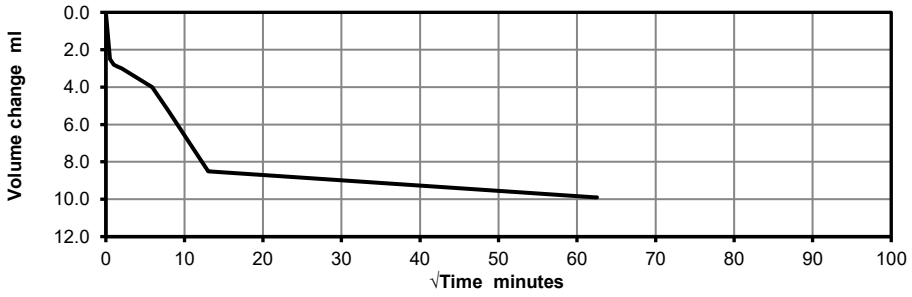
Saturation



Method: Increments of cell and back pressure

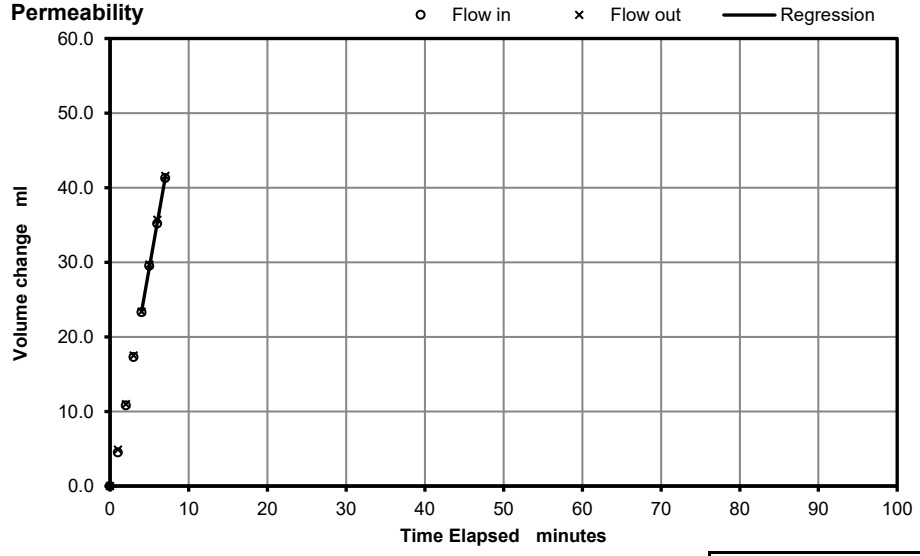
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	460	kPa
Final pore water pressure	449	kPa
Final B Value	0.99	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	500	kPa
Back pressure applied	450	kPa
Effective stress	50	kPa
Initial PWP	488	kPa
Final PWP	450	kPa
PWP dissipation	100	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	500	kPa
Top Pressure	455	kPa
Base Pressure	445	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	6.0	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.1 x 10^{-6} m/s

Remarks	
Date Printed	06/01/2026

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PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-104
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Light brown slightly gravelly SAND			Depth m	2.50
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Light brown slightly gravelly SAND.			KeyLAB ID	TTLP2026010621
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

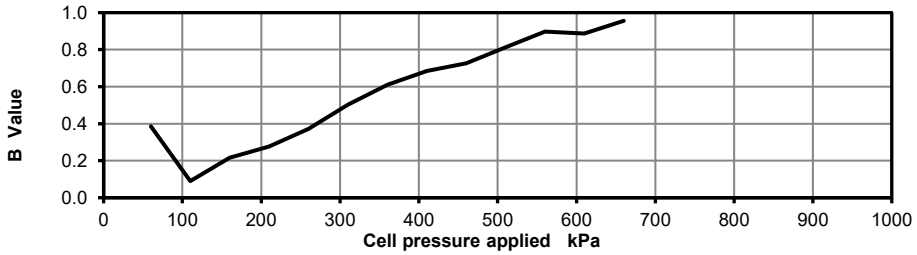
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.82	1.82	Mg/m³
Water Content				21.0	26.4	%
Average Length	96.0	mm				
Average Diameter	103.2	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.50	1.44	Mg/m³
Voids ratio				0.763	0.841	
Degree of saturation				73	83	%

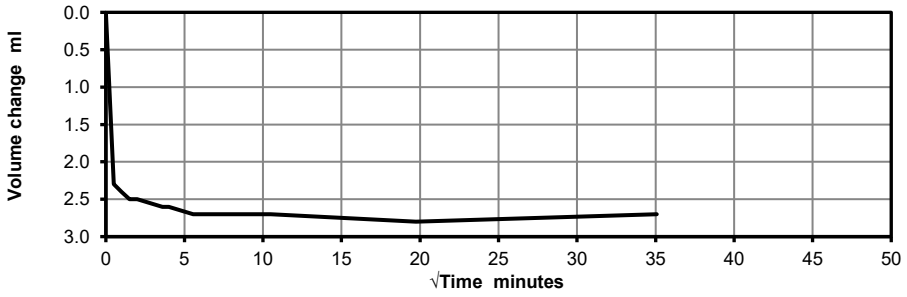
Saturation



Method: Increments of cell and back pressure

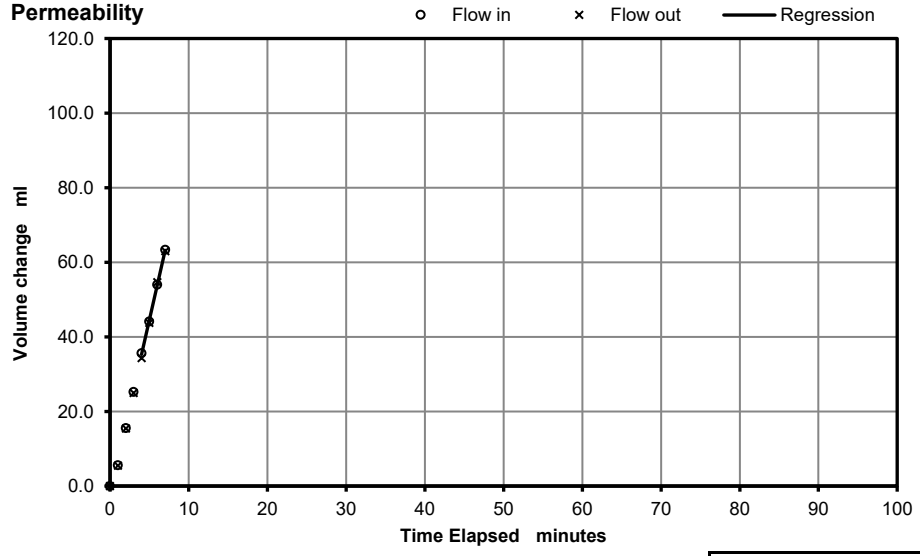
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	660	kPa
Final pore water pressure	648	kPa
Final B Value	0.96	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	700	kPa
Back pressure applied	650	kPa
Effective stress	50	kPa
Initial PWP	686	kPa
Final PWP	650	kPa
PWP dissipation	100	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	700	kPa
Top Pressure	655	kPa
Base Pressure	645	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	9.3	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.8×10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

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PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-201
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	2.00
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown slightly gravelly silty SAND.			KeyLAB ID	TTLP2026010627
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

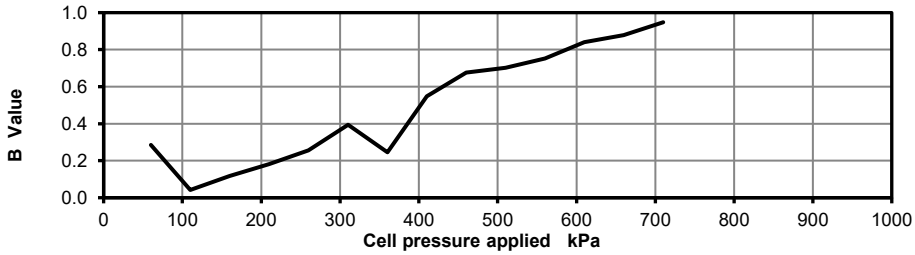
Specimen Details

Specimen Type /Preparation: REMOULDED using 2.5KG effort @ received MC

Size of material removed > 20 mm Proportion 0 %

				Initial	Final	
Bulk Density				1.64	1.74	Mg/m³
Water Content				14.5	25.8	%
Average Length	96.0	mm				
Average Diameter	103.3	mm				
Particle density	2.65	Mg/m³	Assumed			
Dry density				1.44	1.38	Mg/m³
Voids ratio				0.845	0.918	
Degree of saturation				45	75	%

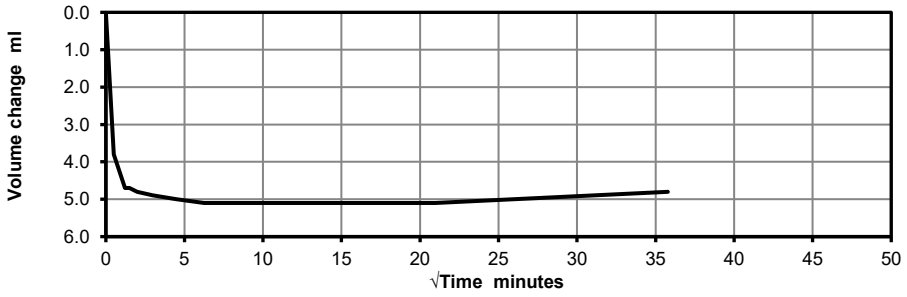
Saturation



Method: Increments of cell and back pressure

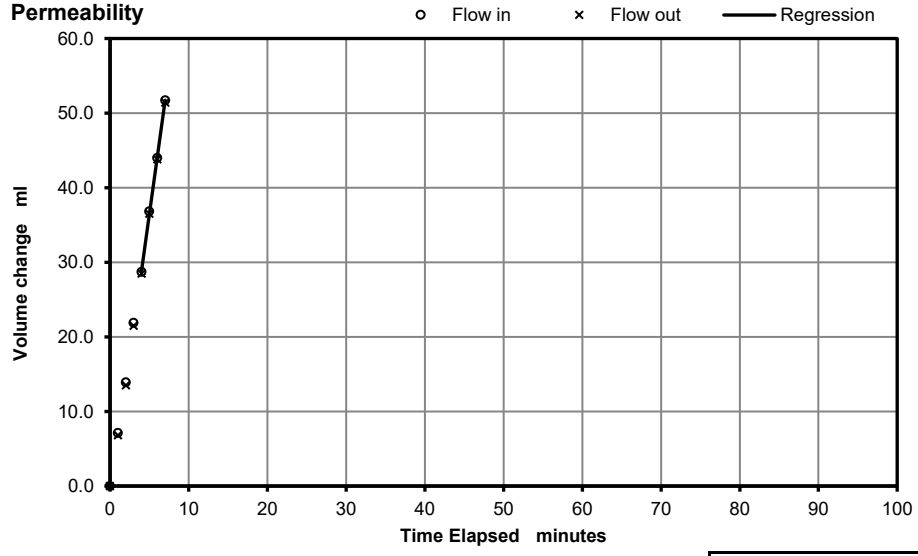
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	710	kPa
Final pore water pressure	698	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	750	kPa
Back pressure applied	700	kPa
Effective stress	50	kPa
Initial PWP	735	kPa
Final PWP	701	kPa
PWP dissipation	97	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	750	kPa
Top Pressure	705	kPa
Base Pressure	695	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	7.6	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.4 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

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PERM

GQF-008-60 Issue 01 - Oct 22	**Determination of Permeability in a Triaxial Cell (Constant Head test)**			Job Ref	J331504
				Borehole/Pit No.	CP-202
Project Name	Marine GI - Ardersier Port			Sample No.	
Soil Description	Brown slightly gravelly silty SAND			Depth m	2.00
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Brown slightly gravelly silty SAND.			KeyLAB ID	TTLP2026010629
Test Method	BS1377 : Part 6 : 1990, clause 6			Date started	

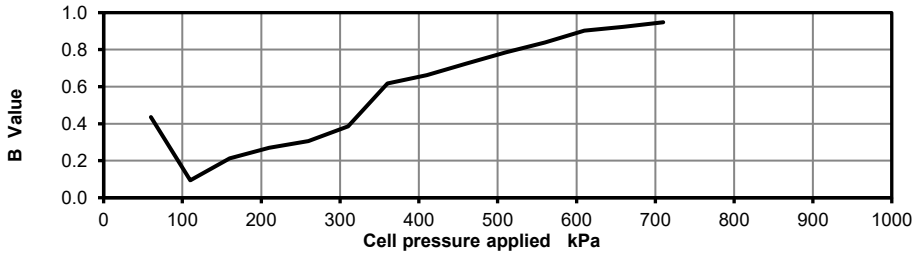
Specimen Details

Specimen Type /Preparation: REMOULDED Using 2.5KG effort @ received MC

Size of material removed > mm Proportion %

				Initial	Final	
Bulk Density				1.82	1.83	Mg/m³
Water Content				19.1	26.2	%
Average Length	96.0	mm		1.52	1.45	Mg/m³
Average Diameter	103.2	mm		0.738	0.832	
Particle density	2.65	Mg/m³	Assumed	69	83	%

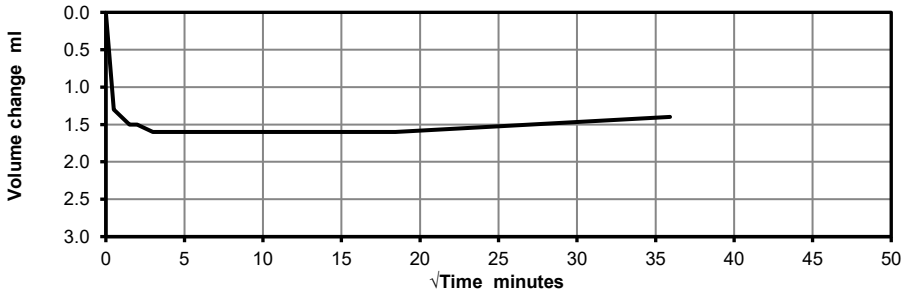
Saturation



Method: Increments of cell and back pressure

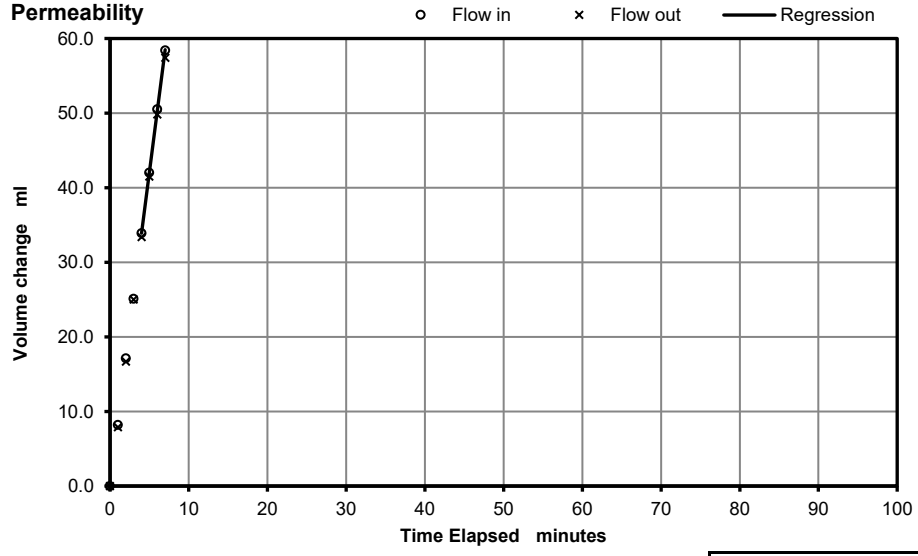
Cell pressure increments	50	kPa
Differential Pressure	10	kPa
Final Cell Pressure	710	kPa
Final pore water pressure	699	kPa
Final B Value	0.95	

Consolidation



Drainage Condition	From one end	
Cell pressure applied	750	kPa
Back pressure applied	700	kPa
Effective stress	50	kPa
Initial PWP	734	kPa
Final PWP	701	kPa
PWP dissipation	97	%

Permeability



Direction of Flow	Downwards	
Cell Pressure	750	kPa
Top Pressure	705	kPa
Base Pressure	695	kPa
Mean Effective Stress	50	kPa
Differential Pressure	10	kPa
Hydraulic gradient	10.6	
Mean rate of flow	8.2	ml/min
Temperature during test	19	°C

PERMEABILITY, *kv*
(at 20°C)

1.6 x 10^{-6} m/s

Remarks	H.G 10kPa
Date Printed	06/01/2026

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PERM

APPENDIX E

♣Solmek conditions of offer, notes on limitations & basis for contract (ref: version1/2026)

These conditions accompany our tender and supercede any previous conditions issued. Solmek will prepare a report solely for the use of the Client (the party invoiced) and its agent(s). No reliance should be placed on the contents of this report, in whole or in part by 3rd parties. The report, its content and format and associated data are copyright, and the property of Solmek. Photocopying of part or all of the contents, transfer or reproduction of any kind is forbidden without written permission from Solmek. A charge may be levied against such approval, the same to be made at the discretion of Solmek.

Solmek cannot be held liable and do not warrant, or otherwise guarantee the validity of information provided by third parties and subsequently used in our reports. Solmek are not responsible for the action negligent of otherwise of subcontractors or third parties.

Site investigation is a process of sampling. The scope and size of an investigation may be considered proportional to levels of confidence regarding the ground and groundwater conditions. The exploratory holes undertaken investigate only a small volume of the ground in relation to the overall size of the site, and can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions as encountered within each of the exploratory holes. There may be different ground conditions elsewhere on the site which have not been identified by this investigation and which therefore have not been taken into account in this report. Reports are generally subject to the comments of the local authority and Environment Agency. The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that mobile contamination, ground gas levels and groundwater levels may vary owing to seasonal, tidal and/or weather related effects. Solmek cannot be held liable for any unrecorded or unforeseen obstructions between exploratory boreholes and trial pits. This includes instances where previous structures on the site (buried man made structures) or the presence of boulder clay (cobbles and/or boulder obstructions) have been anticipated. All types of piling operations should make allowance for obstructions within the construction budget to accommodate this. Unrecorded ancient mining may occur anywhere where seams that have been worked and influence the rock and soil above. Dissolution cavities can occur where gypsum or chalk is present. Rotary drilling is the recommended technique to prove the integrity of the rock.

Where the scope of the investigation is limited via access to information, time constraints, equipment limitations, testing, interpretation or by the client or his agents budgetary constraints, elements not set out in the proposal and excluded from the report are deemed to be omitted from the scope of the investigation.

Desk studies are generally prepared in accordance with RICS guidelines. Environmental site investigations are generally undertaken as 'exploratory investigations' in accordance with the definitions provided in paragraph 5.4 of BS 10175:2011 in order to confirm the conceptual assumptions. You are advised to familiarize yourself with the typical scope of such an investigation. No pumping of water will be undertaken unless a licence or facilities/equipment have been arranged by others.

Where the type, number or/and depth of exploratory hole is specified by others, Solmek cannot and will not be responsible for any subsequent shortfall or inadequacy in data, and any consequent shortfall in interpretation of environmental and geotechnical aspects which may be required at a later date in order to facilitate the design of permanent or temporary works.

All information acquired by Solmek in the course of investigation is the property of Solmek, and, only also becomes the joint property of the Client only on the complete settlement of all invoices relating to the project. Solmek reserve the right to use the information in commercial tendering and marketing, unless the Client expressly wishes otherwise in writing. The quoted rates do not include VAT, and payment terms are 30 days from dispatch of invoice from our offices. Quotes are subject to a site visit.

We have allowed for 1 mobilisation and normal working hours unless otherwise stated. The scope of the investigation may be reviewed following the desk study and/or fieldwork. The presence or otherwise of Japanese Knotweed or other invasive plants can be difficult to identify especially during winter months. If Japanese Knotweed or other invasive species are suspect, it should be confirmed by an ecologist. We have not allowed for acquiring services information, and cannot be responsible for damage to underground services or pipes not shown to us or not clearly shown on plans. Costs incurred will be passed on to you, and in commissioning Solmek you understand and accept that you/your agent have a contractual relationship with Solmek & you accept this. Our rates assume unobstructed, reasonably level and firm access to the exploratory positions and adequate clear working areas and headroom. We have priced on the basis that you or your client have the necessary permissions, wayleaves and approvals to access land. All boreholes and pits are backfilled with arisings except where gas monitoring pipes are installed with stopcock covers. Solmek are not responsible for any uneven surfaces as a result of siteworks and rutting and backfilled excavations may require re-levelling and/or making good by others after fieldwork is complete, and Solmek has not allowed for this. No price has been provided or requested for a return visit to remove pipework and covers. Hourly rates apply to consultancy only and do not include expenses unless otherwise shown. If warranties are required, legal costs incurred will be passed on to you assuming Solmek agree to complete such warranties, modified or otherwise and you understand and agree to pay all costs.

We reserve the right to pursue full payment of the invoice prior to release of any information including reports. We advise you/your client that we may elect to pursue our statutory rights under late payment legislation, and will apply 8% to the base rate for unreasonably late payments. Solmek are exempt from the CIS Scheme. Solmek offer to undertake work only in strict accordance with conditions covered by our current insurances, which are available for inspection. Solmek are not responsible for acts, negligent or otherwise of subcontractors and as a matter of policy cannot indemnify any other parties. Professional indemnity Insurance is limited to ten times the invoice net total except where stated otherwise by Solmek. Solmek give notice that consequential loss as a direct or indirect result of Solmek's activities or omission of the same are excluded.

SOLMEK NOTES ON CONTAMINATION GUIDANCE (REF: VERSION 1/2026)

UK BACKGROUND

Environmental Protection Act 1990: Part 2A Revised Statutory Guidance (April 2012)

This revised document explains how the Local Authority should decide if land, based on a legal interpretation, is contaminated. The document replaces the previous guidance given in Annex 3 of DEFRA Circular 01/2006, issued in accordance with section 78YA of the 1990 Environmental Protection Act.

The main objectives of the Part 2A regime are to *"identify and remove unacceptable risks to human health and the environment" and* to *"seek to ensure that contaminated land is made suitable for its current use".*

Part 2A uses a risk based approach to defining contaminated land whereby the "risk" is interpreted as *"the likelihood that harm, or pollution of water, will occur as a result of contaminants in, on or under the land"* and by *"the scale and seriousness of such harm or pollution if it did occur".*

For a relevant risk to exist a contaminant, pathway and receptor linkage must be present before the land can be considered to be contaminated. The document explains that *"for a risk to exist there must be contaminants present in, on or under the land in a form and quantity that poses a hazard, and one or more pathways by which they might significantly harm people, the environment, or property; or significantly pollute controlled waters."*

A conceptual model is used to develop and communicate the risks associated with a particular site.

To determine if land is contaminated the local authority use various categories from 1 to 4. Categories 1 and 2 include *"land which is capable of being determined as contaminated land on grounds of significant possibility of significant harm to human health."*

Categories 3 and 4 *"encompass land which is not capable of being determined on such grounds".*

PRELIMINARY CONCEPTUAL MODEL

Preliminary Conceptual Models are undertaken in accordance with CIRIA C552. The Preliminary Conceptual Model assesses the consequence and the likelihood of a risk being realised to provide a risk classification, using the tables detailed below.

CONSEQUENCE OF RISK BEING REALISED (Based on C552 CIRIA, 2001)

Classification	Definition	Example
Severe	Short-term (acute) risk to human health, the environment, an element of the development or other aspect with is likely to result in *significant harm*, damage or both.	High concentrations of cyanide on the surface of an informal recreational area. Major spills of contaminants from site into controlled water. High concentrations of explosive gas in the subsurface environment that have a clear unobstructed pathway into buildings.
Moderate	Chronic damage to human health, a plausible chance that an event will occur, although the timeline is not immediate to be in the short-term.	Appreciable concentration of contamination that over the longer-term will cause significant harm i.e. high lead concentration in topsoil. Shallow mine workings that are potentially unstable but may remain in a satisfactory or stable conditions for a number of years.
Mild	Low level pollution of non-sensitive water, a feasible hazardous scenario although the timeline of such occurring can probably be considered in 10's of years.	The effect of high sulphate concentrations on structural concrete. Pollution of non-classified groundwater.
Minor	Harm, although not necessarily significant to human health, or with respect to other aspects of the development, which are considered implausible in terms of occurrence, or will have little consequential impact.	The presence of contaminants at such low concentrations that protective equipment is required during site works. Any damage to structures is minimal and will not be structural in characteristics.

PROBABILITY OF RISK BEING REALISED (C552 CIRIA, 2001)

Classification	Definition
High Likelihood	There is a viable pollutant linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence that the receptor has been harmed or polluted.
Likely	There is a viable pollutant linkage and all elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a viable pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely	There is a viable pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

RISK CLASSIFICATION MATRIX (C552 CIRIA, 2001)

Risk = Probability x Consequence		Consequence			
		Severe	Moderate	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Moderate/low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

HUMAN RECEPTORS

Human exposure to contaminants present in soils can occur via several pathways. Direct exposure pathways include dermal absorption after contact with contaminated ground, inhalation of soil or dust, inhalation of volatised compounds, and inadvertent soil ingestion (or deliberate soil ingestion in the case of some children). Other indirect pathways include human ingestion of plants grown in contaminated soil or contaminated ground or surface water. Contaminants associated with wind blown dust can affect humans on surrounding sites.

VEGETATION

Plants can be affected by soil contamination in a number of ways resulting in growth inhibition, nutrient deficiencies and yellowing of leaves. Contaminants are taken up by plants through the roots and through foliage. Contaminants identified as being highly phytotoxic include boron, cadmium, copper, lead, nickel, and zinc.

To establish if the levels of contaminants present on a site may pose a risk to vegetation the results of the contamination testing are compared to a series of threshold values published in 'Code of Good Agricultural Practice for the Protection of Soil'.

GROUNDWATER AND SURFACE WATER RECEPTORS

The principal pathway by which soil contamination may reach the water environment is through a slow seepage or leaching to groundwater or surface water. The potential for contaminants to migrate along such pathways is dependent on the chemical and physical characteristics of the contaminants and the local hydrogeology. Surface watercourses may also accumulate contamination as contaminated sediments are deposited within the water body.

Where the site investigated overlies major/principal aquifers (and in some cases minor/secondary aquifers depending on certain conditions), groundwater Source Protection Zones and areas in close proximity to groundwater abstractions, contamination test results have been compared with the Water Supply (Water Quality) Regulations 1989 and The Water Supply (Water Quality) Regulations 2000.

Should a surface water receptor, such as a fresh water environment (river, canal, stream, lake etc), or marine environment be considered sensitive in relation to a site, then test results are compared with DEFRA & SEPA Environmental Quality Standards (2004). Many of the Environmental Quality Standards are hardness ($CaCO_3$) depended. Where no hardness values are available, Solmek assume conservative values (of between 0 and 50mg/l).

In the absence of vulnerable ground and surface water environments, Solmek may compare any test results with the Environment Agency Leachate Quality Threshold Values.

DETAILED QUANTITATIVE RISK ASSESSMENT (DQRA)

In line with Environment Agency's guidance document Environment Agency *Land Contamination Risk Management*, which replaced the now-withdrawn *Contaminated Land Report 11 – Model Procedures for the Management of Land Contamination (2004)*, a DQRA for groundwater/human health may be required following a Phase 2 investigation and before the preparation of a Phase 3 Remediation Strategy. For human health DQRA, a site specific assessment criteria is undertaken using CLEA Software Version 1.06. For groundwater DQRA, the Environment Agency Remedial Targets Worksheet Version 3.1 is used.

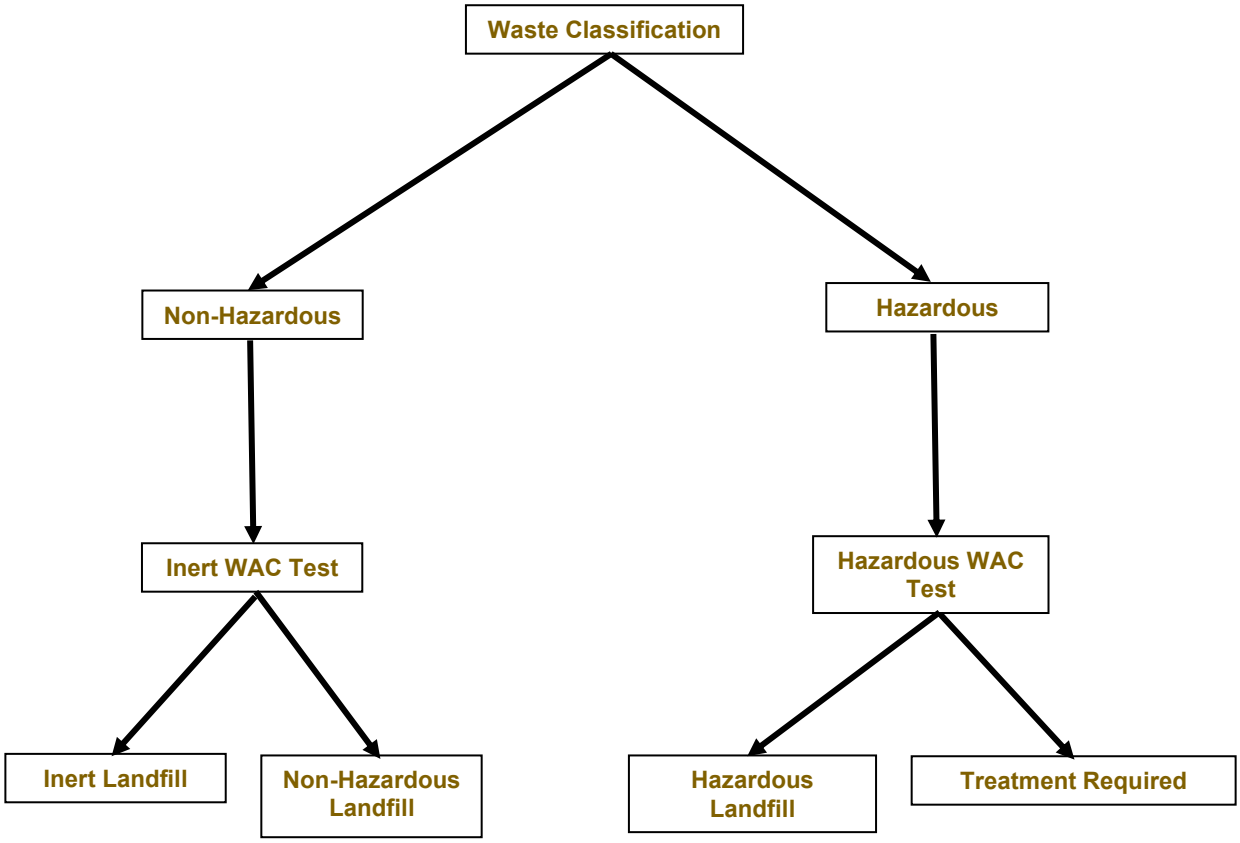
WASTE CLASSIFICATION AND WASTE ACCEPTANCE CRITERIA

During the site strip and construction activities, material may be required to be removed from site. Any such material would require classification, in line with Environment Agency Technical Guidance *Waste Classification: Guidance on the classification and assessment of waste (2015)*. This would classify the material as either Non-Hazardous or Hazardous Waste.

Once the material has been classified, determining the suitable landfill for disposal is governed by landfill directive Waste Acceptance Criteria (WAC) testing, with landfills categorized as Inert Waste, Stable Non-Reactive Hazardous Waste and Hazardous Waste. The WAC testing relates to materials that are to be exported from a site/development to landfill, and do not directly relate to human health specifically. The testing results are generally presented as certificates which can be used by site owners/contractors etc, which should be presented to the accepting waste facility or waste contractor.

If waste classification and/or WAC testing are not undertaken, material taken off site may be subject to WAC testing by the appropriate waste disposal company. The decision on whether or not to accept waste, or whether further testing is required, is at the discretion of the waste disposal company.

The below flow chart provides further information on the waste classification process.



CONSTRUCTION MATERIALS

Materials at risk from possible soil contaminants include inorganic matrices such as cement and concrete and also organic material such as plastics and rubbers. Acid ground conditions and high levels of sulphates can accelerate the corrosion of building materials. Where pH and soluble sulphate analysis has been undertaken, Solmek compare the test results with the guidelines presented within BRE Special Digest 1, 2005 (3rd Edition) 'Concrete in Aggressive Ground'. Plastics and rubbers are generally used for piping and service ducts and are potentially attacked by a range of chemicals, most of which are organic, particularly petroleum based substances. Drinking water supplies can be tainted by substances that can penetrate piping and water companies enforce stringent threshold values.

The levels of potential contaminants should be compared to thresholds supplied in the UK Water Industry Research (UKWIR) publication "Guidance for the selection of Water Supply Pipes to be used in Brownfield Sites" (January 2011). A Brownfield Site is defined in the document as "Land or premises that have not previously been used or developed that may be vacant or derelict". It should be noted that Brownfield sites may not be contaminated. The guidance does not apply to Greenfield Sites however water companies may have their own assessment criteria which should be checked by the developer. The table below outlines the pipe material selection threshold concentrations.

	Pipe Material (Threshold concentrations in mg/kg)					
Parameter group	**PE**	**PVC**	**Barrier pipe (PE-AL-PE)**	**Wrapped Steel**	**Wrapped Ductile Iron**	**Copper**
Extended VOC suite by purge and trap or head space and GC-MS with TIC	0.5	0.125	Pass	Pass	Pass	Pass
+ BTEX + MTBE	0.1	0.03	Pass	Pass	Pass	Pass
SVOCs TIC by purge and trap or head space and GC-MS with TIC (aliphatic and aromatic C5-C10)	2	1.4	Pass	Pass	Pass	Pass
+ Phenols	2	0.4	Pass	Pass	Pass	Pass
+ Cresols and chlorinated phenols	2	0.04	Pass	Pass	Pass	Pass
Mineral oil C11-C20	10	Pass	Pass	Pass	Pass	Pass
Mineral oil C21-C40	500	Pass	Pass	Pass	Pass	Pass
Corrosive (Conductivity, Redox and pH)	Pass	Pass	Pass	Corrosive if pH <7 and conductivity >400µS/cm	Corrosive if pH <5, Eh not neutral and conductivity >400µS/cm	Corrosive if pH <5 or >8 and Eh positive
Specific suite identified as relevant following site investigation						
Ethers	0.5	1	Pass	Pass	Pass	Pass
Nitrobenzene	0.5	0.4	Pass	Pass	Pass	Pass
Ketones	0.5	0.02	Pass	Pass	Pass	Pass
Aldehydes	0.5	0.02	Pass	Pass	Pass	Pass
Amines	Fail	Pass	Pass	Pass	Pass	Pass

REQUIREMENTS OF PARTIES WITHIN THE DEVELOPMENT PROCESS

Interested parties involved in the development process may use the data in different ways and there may be varying views and interpretation of the factual data. Local Authority staff may have a view on contamination and human health and the wider environment. The Environment Agency are concerned principally with the protection of Controlled waters. Building insurers, funders and purchasers may be primarily concerned with issues of potential commercial blight. Purchasers are also not always fully informed, and perceptions on issues associated with risk can affect the decision to purchase. Developers and construction organisations will focus on financial aspects of dealing with the contamination in the context of the development and construction programme.

RISKS & LIABILITIES FROM CONTAMINATION

In simple terms, risks associated with contamination may be considered in terms of 1) statutory risks and 2) development related risks. If contamination is severe or forms a potential hazard based on its potential to affect groundwater, surface water or human health, a statutory risk may be present, and as such, if the risk is not reduced, criminal proceedings may be instigated by a government body or local authority.

If the contamination is less severe or not considered to be mobile, it may be considered a commercial liability which could, in theory remain untreated, but which may at a later date affect the value of the property, or, with changing legislation, become a statutory risk. Commercial liabilities could give rise to civil proceedings by third parties if there are grounds for action.

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