



Hunterston Construction Yard Best Practicable Environmental Options Report



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1 INTRODUCTION

1.1 Scope of Report

Clydeport Operations Limited are required to undertake a Best Practicable Environmental Option (BPEO) assessment for the disposal/re-use of dredged material originating from Hunterston Construction Yard.

The purpose of the BPEO report is to review each of the available potential disposal options for the dredged materials. The options which are not considered to be practicable are rejected and the reasons for doing so are explained.

Those options which are practicable are examined in detail and assessed against the following considerations:

- Environmental;
- Strategic; and
- Cost.

The report then compares the practicable disposal options and draws a conclusion on the BPEO.

1.2 Report Usage

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1.3 Background to Application

The dredging works proposed are for the proposed capital dredging of an area adjacent to the existing Hunterston Construction Yard reducing the average dredge level from current levels to -12.0m below Chart Datum (CD).

Table 1-1: Proposed Dredge Site and Approximate Dredge Volumes

Site Name	Dredge Volume (m ³)
Dredge Area (Blue Line)	1,546,660

Dredging would be carried out potentially by a combination of Trailer Suction Hopper Dredger, Cutter Suction Dredger and Backhoe Dredger, or combination as appropriate.

The proposed dredge sites are outwith the Southannan Sands of Special Scientific Interest (SSSI).

Arch Henderson drawings are included in Appendix A detailing the proposed dredge area for both the EIA assessed dredge pocket (HMY-AHN-01-00-DR-C-003) and the actual proposed dredge pocket (HMY-AHN-01—DR-C-001). Accompanying sediment quality data is presented in Appendix C.

1.4 Action Levels – AL1 vs AL2

Two action levels are currently used to assess the suitability of sea-based disposal of dredged sediment material: Revised Action Level 1 (RAL1) and Revised Action Level 2 (RAL2).

Sediment with contaminant concentrations below RAL1 is generally considered to be below background levels for contamination and is suitable for disposal at sea.

For samples recording contaminant concentrations between RAL1 and RAL2, additional risk assessment may be required including further sampling and testing to fully identify pockets of contamination or implementation of bioassays to assess the materials suitability for sea disposal.

Material recording contaminant concentrations above RAL2 is generally considered to be unsuitable for disposal to sea. If the sea disposal route is to be pursued, further testing along the lines of bioassay accompanied by a robust justification for selecting sea disposal as the BPEO may be required. This would need to be supported further with additional information regarding any mitigation measures which could be put in place as part of these works. This would require further discussion and agreement with Marine Directorate.

2 SAMPLING LOCATIONS AND METHODOLOGY

2.1 Sample Locations and Collection

Sediment sampling was undertaken in March and April 2024 by Causeway Geotech Limited. A sonic drilling rig was used to recover cored sections for logging and sub-sampling. A total of 78 sediment samples were submitted for analysis, recovered from 26 boreholes.

Factual information, including sediment logs are included in Appendix B.

2.2 Proposed Sample Locations

Proposed sample locations are given in the table below

Table 2-1: Proposed Sample Stations

Location number	Type	National grid reference	
		Easting: m	Northing: m
1	BH	218255.0591	652988.517
2	BH	218299.36	653118.91
3	BH	218380.1	653304.3
4	BH	218471.92	653233.95
5	BH	218558.86	653294.14
6	BH	218655.17	653361.02
10	BH	218363.11	653424.06
12	BH	218433.12	653476.06
13	BH	218514.1173	653417.8501
14	BH	218242.08	653385.71
15	BH	218462.55	653576.38
16	BH	218140.72	653346.30
17	BH	218312.74	653466.69
18	BH	218187.00	653470.71

19	BH	218046.55	653477.39
20	BH	218304.71	653352.99
21	BH	217970.54	653348.89
22	BH	218038.01	653268.90
23	BH	218188.34	653185.79
24	BH	218175.69	653095.41
25	BH	218442.49	653379.75
26	BH	218191.01	653310.19
27	BH	218290.5	653243.3
29	BH	218542.81	653494.78
30	BH	218574.3245	653381.8516
GBS2-BH-SPT-11	BH	218385.3	653177.4

The sampling works were subject to some limited constraints which resulted in some minor micro-siting of locations due to the substrate/working condition requirements. There is not deemed to have been a significant alteration in the specific locations that were drilled. The following table details the actual locations drilled.

Table 2-2: Actual Sample Stations

Location number	Type	National grid reference	
		Easting: m	Northing: m
1	BH	218251	652997
2	BH	218299	653115
3	BH	218380	653305
4	BH	218475	653230
5	BH	218559	653295
6	BH	218651	653363

10	BH	218363	653424
12	BH	218434	653476
13	BH	218510	653421
14	BH	218239	653386
15	BH	218462	653577
16	BH	218139	653345
17	BH	218311	653469
18	BH	218189	653471
19	BH	218045	653478
20	BH	218306	653354
21	BH	217968	653345
22	BH	218037	653269
23	BH	218189	653184
24	BH	218178	653092
25	BH	218444	653382
26	BH	218194	653311
27	BH	218288	653244
29	BH	218542	653494
30	BH	218573	653382
GBS2-BH-SPT-11	BH	218387	653174

A sampling plan detailing the actual locations is provided in Appendix A.

2.3 Analysis Requirements

The laboratory analysis undertaken to inform the marine licence application was as follows:

- Metals- As, Cr, Cd, Cu, Hg, Ni, Pb, Zn

- Tributyl Tin
- PAHs - USEPA 16
- PCBs – ICES 7
- Total Hydrocarbon

In addition to the core analytical suite, Brominated fire retardants (PBDEs) and Booster Biocides i.e. organochlorine pesticides and assessment of radionuclide potential were requested by Marine Directorate and was undertaken for all 78 samples (note for radionuclide testing a composite sample of all three samples from each location was collected and tested so there was 26 composite sample results to assess the full core length at these locations) .

- Alpha –hexachlorocyclohexane
- Beta- hexachlorocyclohexane
- Gamma- hexachlorocyclohexane
- Dieldrin
- Hexachlorobenzene
- DDD
- DDE
- DDT
- Radionuclide assessment

3 RESULTS

All chemical analytical results were assessed against Revised Action Levels (RAL) criteria as adopted by Marine Scotland. The results are summarised below and within the Summary Tables provided in Appendix C.

Summary reports detailing exceedances in the Marine Scotland format have been submitted along with the supporting information for the application. Please note that there is a formatting issue in the sheet which incorrectly highlights samples with results in exceedance of RAL2. This is noted where samples have a “<” denoting less than the limit of detection. So while the sheet indicates there is a breach of RAL2, there are no RAL2 exceedances with samples being below detectable limits where a “<” is denoted unless otherwise specified.

Where contaminants have RALs as adopted by Marine Scotland, recorded exceedances above these criteria are summarised in Table 3-1.

All chemical data is reported and assessed on a dry weight basis.

Further consideration of these exceedances undertaken in Section 4.

Table 3-1: Exceedances of Revised Action Levels – Hunterston

Contaminant	No. of Exceedances (of 78 samples)	
	RAL 1	RAL 2
Arsenic	0	0
Cadmium	0	0
Copper	0	0
Chromium	0	0
Lead	0	0
Mercury	0	0
Nickel	0	0
Zinc	0	0
PAH (All Species Maximum)	12	-
PCBs	0	0
TBT	0	0
THC	3	-
DBT	0	0

3.1.1 Organochlorine Pesticides

Samples were tested for an organochlorine pesticide suite at the request of Marine Directorate. It is noted there is no RAL1 or RAL2 for these parameters. Of the samples tested the majority of results were noted to be less than the laboratory detection limit.

For the purposes of an initial screen of the results Ecotoxicological Assessment Criteria (EACs) were derived from values detailed in the Oskar Commissions Report of the Third OSPAR Workshop on Ecotoxicological Assessment Criteria (1996). This incorporates EACs in sediment for:

- Dieldrin: 0.5 to 5ug/kg
- DDE: 0.5 to 5ug/kg.

With respect to Dieldrin, 9 of the samples recorded concentrations above the laboratory detection limits. The highest value recorded was 1.49 ug/kg (BH04, 6.1). None of the other 6 samples recorded concentrations above 0.5ug/kg with the exception of BH10-1.8 which recorded a concentration of 0.85ug/kg.

Of the samples tested 12 recorded concentrations of DDE above the limit of detection. The maximum concentration recorded was 0.61ug/kg ((BH04, 6.1). The concentrations in the remaining samples did not exceed the 0.5ug/kg lower EAC threshold value with the exception of BH10-1.8 which recorded a concentration of 0.59ug/kg.

On the basis of the vast majority of samples not recording concentrations of organochlorine pesticides above the laboratory limit of detection, and on the basis of initial screening of results against applicable EAC values for specific parameters it is considered that there is not a significant risk associated with these contaminants within the sediment at Hunterston.

3.1.2 Brominated Flame Retardants (PBDEs)

Samples were tested for a PBDEs suite at the request of Marine Directorate. It is noted there is no RAL1 or RAL2 for these parameters. Of the samples tested the majority of results were noted to be less than the laboratory detection limit.

For the purposes of an initial screen of the results, values derived from the Oskar Commissions Background document for Canadian Federal Environmental Quality Guidelines (FEQGs) for Polybrominated Diphenyl Ethers (PBDEs) in sediment and biota were adopted as screening criteria. These values include:

- BDE28: 110ug/kg;
- BDE47: 97.5ug/kg;
- BDE66: 97.5ug/kg;
- BDE85: 1ug/kg;
- BDE99: 1ug/kg;
- BDE100: 1ug/kg;
- BDE153: 1,100ug/kg;
- BDE154: 1,100ug/kg;
- BDE183: 14,000ug/kg
- BDE209: 47.5ug/kg.

None of the samples recorded concentrations that exceeded the screening criteria. On this basis it is not considered that the sediments at Hunterston contain concentrations of PBDEs that would represent a significant risk to the environment during dredging or disposal.

3.1.3 Radionuclides

Composite samples from each location were tested for a radionuclide suite at the request of the Marine Directorate. It is noted there is no RAL1 or RAL2 for these parameters. Of the samples tested the majority of the resulted were less than the laboratory detection limit.

Under the London Convention (1972), only materials with de minimis levels of radioactivity may be considered for disposal to sea. For the purposes of this assessment the approach detailed in *IAEA*

Determining the suitability of materials for disposal at sea under the London Convention 1972: A radiological assessment procedure (2003) was adopted.

The Tables provided in Appendix E details the average (over all sample stations and depth ranges in cores) radionuclide results converted into radiation doses due to disposal. For the public assessment a mass conversion was carried out on the basis of disposal of 2.4 million tonnes of sediment per annum on a dry weight basis (i.e. assumes all material disposed of to one disposal ground within one year). As the majority of analytes were recorded as not exceeding the laboratory detection limit a 50% value of the limit of detection was adopted as the concentration for assessment.

The derived total doses to individual members of the crew and public were 2.06 $\mu\text{Sv}/\text{year}$ and 7.6 $\mu\text{Sv}/\text{year}$, respectively. The total collective dose was 0.031 manSv/year. The values for individual members of the crew and public, and the collective dose, were found to be below the de minimis criteria of 10 $\mu\text{Sv}/\text{year}$ (individual doses) and 1 manSv/year (collective dose), respectively.

On this basis there is not considered to be a significant risk from radiological concentrations in the sediment in relation to proposed dredging or disposal of the material at sea.

4 DISCUSSION OF AVAILABLE DISPOSAL OPTIONS

The BPEO process is geared towards identifying a preferred overall strategy from the perspective of the environment as a whole, as opposed to detailed optimisation of any one selected scheme. It is a structured and systematic process to identify and compare strategic options in a transparent manner. Alternatives are evaluated in terms of their projected implications for the environment together with consideration of practicability, social and economic issues as well as within a wider strategic context.

The key stages of a BPEO are:

- Identification of options;
- Screening of options;
- Selection of assessment criteria;
- Analysis and evaluation of criteria; and
- Evaluation of BPEO.

Further details on methodology are provided within each section.

4.1 Identification and Screening of Available Disposal Options

A number of options are available for disposal of dredged sediments. The options considered are provided in Table 4-1 along with justification for screening out those options which have not been taken forward for further consideration.

Table 4-1: Initial Best Practicable Available Options

Location	Options	Screening Assessment	Carry forward?
Harbour / Quayside	Leave in situ	Not an option due to the project maintenance dredge level requirements	No
	Infilling of an existing dry dock/harbour facility/development site (beneficial re-use)	The development itself incorporates the requirement of suitable material for infilling of the existing dry dock at Hunterston. Where material is geotechnically suitable for the infilling works (based on assessment of elements such as % of fine material within the sediment) and the dredging and reuse of the material meets the programme requirements for the construction phase then material will be reused.	Yes
	Beach Nourishment	Areas of the Firth of Clyde and North Ayrshire Coastline are designated sites (SSSI, LNR) and hold both national and international importance to nature conservation. Specific beach nourishment projects would require to be supported by Environmental Assessments as a minimum to inform how the project could affect the environment as a result of disturbance to the intertidal area, changes to the sediment levels, the variable composition and quality of the material and measures devised from the assessment outcomes to minimise impacts on the environment. The material to be dredged comprises a mixture of gravel, sand and silt. Fine sediments (i.e. silt) is not generally suitable for beach nourishment in the traditional sense.	No

Location	Options	Screening Assessment	Carry forward?
Land	Landfill Disposal	This is possible but it is unlikely that this option will offer long term solution due to lack of space at landfills. Landfill space is currently at a premium and does not offer a sustainable solution either financially or environmentally for the disposal of dredged arisings. Dredged material likely to require treatment first in a dewatering facility. Significant cost associated with set up of dewatering facility at the quayside plus transportation and additional costs associated with gaining the necessary planning and regulatory consents.	Yes
	Land Incineration	The dredged material consists of non-combustible material (silts, sands, gravels, shells) with a low combustible component and very high-water content. This makes it unsuitable for treatment/disposal by this route.	No
	Application to Agricultural Land	The dredged material would need to be treated to reduce salt concentrations to acceptable levels. Would require detailed chemical analysis and assessment as well as a Waste Management License Exemption. Would require special precautions during spreading in relation to the risk of odour and watercourses / aquifers. The availability of land for this option will be limited within a reasonable haulage distance of the dredge arisings. Large volumes each year are unlikely to be viable to dispose of in this manner and would potentially have a detrimental effect on existing terrestrial habitats.	No
	Recycling	Recycling of dredged material is theoretically possible, however, due to the varied lithology there would need to be either segregation during dredging works to minimise the entrainment of fine-grained material into the sands, or energy and water rich processing on land. This is not currently understood to be an established disposal and reuse route in the Firth of Clyde at present and is not likely to be something which could be established in the project timeframes due to the requirement for various permitting requirements including waste management licencing, discharge consents for process water as well as increased road transportation for delivery of waste material and collection of processed material.	No
Sea	Aquatic disposal direct to seabed.	Relatively low cost, minimal transportation requirements compared to all other options and potential for low environmental risk. The closest licensed disposal grounds are Birch Point (MA17) and Brodick (MA19), both are located approximately 15 km from the closest proposed dredge site. An alternative disposal site that could also be used for the disposal (either in combination with Birch Point/Brodick or as a substitute) is Cloch Point (MA21) which is located 25km to the north of the site.	Yes

4.2 Summary of Identified BPEO Options

Following review of the available options, two options were identified for further detailed BPEO assessment which are as follows:

- Beneficial Re-use - Infilling of Dry Dock/Site Platforming
- Landfill
- Sea Disposal

A brief summary of the necessary works or methodology for each option being taken forward for detailed BPEO assessment is provided below.

4.2.1 Beneficial Reuse - Infilling of Dry Dock/Site Platforming

The proposed construction methodology for the infilling of the dry dock will retain the existing bund that is in place that isolates the dock from the Firth of Clyde. Discussion with Marine Scotland and SEPA have confirmed that on this basis the infilling of the dry dock would be deemed a terrestrial activity in relation to licensing requirements (i.e. material placement within the dry dock would not require a Marine Construction Licence).

Dredged material is considered to be controlled waste for the purpose of transport, storage and disposal as per Section 34 (7) of the Environmental Protection Act 1990. Discussions with SEPA have indicated that reuse of dredge arisings for the dry dock infill/site platforming will require to be regulated by SEPA, with a Recovery Waste Management Licence being the likely most relevant applicable license for the works.

Attached in Appendix D is correspondence from SEPA in relation to testing considerations for material proposed to be reused at the site. As such, there is a requirement to assess the material for reuse from a geochemical perspective to ensure that it meets the requirements of the SEPA licensed activity

With respect to the beneficial reuse of the material the dredge arisings will require to meet specific geotechnical parameters to be deemed appropriate for reuse on the site. This will incorporate assessment of the physical quality of the material for engineering fill.

Finally, the reuse of the material will be dependent on project programme requirements. Currently the dredge activity is likely to occur towards the end of the construction programme, as such the material may not be available at the appropriate time in the construction phase to make its reuse a certainty.

At the time of writing the detailed assessment of the physical quality, extent and volume of suitable dredge material for reuse has not been completed. As noted above, the project programme as it currently stands also may result in the beneficial reuse not being possible.

On this basis the BPEO will progress on a conservative assumption that the material is not viable for the beneficial reuse based on either the physical quality or the programme implications. However, should the material be identified as geotechnically suitable and the project programme allow for beneficial reuse, then this will be the preferred option.

4.2.2 Landfill Disposal

Dredged material is considered to be controlled waste for the purpose of transport, storage and disposal as per Section 34 (7) of the Environmental Protection Act 1990. The Landfill (Scotland) Regulations 2003 require the classification and characterisation (i.e. inert, non-hazardous or hazardous) of the dredged material to be determined prior to landfill acceptance.

Disposal to landfill would require several stages in material handling operations:

- Dredging and transport to shore;
- Transfer to shore to a dewatering facility;
- Dewatering;
- Transfer of dewatered material to storage area for stockpiling;
- Loading of lorries and transport to landfill site; and
- Disposal at Landfill site.

Transport to the shore would require the identification of an available space to allow for dewatering. It is assumed for the purposes of the BPEO that the Construction Yard itself would not be suitable for the dewatering activity due to the ongoing construction elements on site. As such the dewatering activity may need to take place elsewhere on the Hunterston Parc site assuming there is available land to facilitate the activity. Two options are available for off-loading; namely grabbing the spoil from the barge or hopper or pumping directly ashore.

The dewatering facility would require being purpose built and capable of receiving large quantities of bulk material. Currently no facility exists for this activity. Settlement tanks, with the aid of sluices and rotational management, would allow solids to settle out and the water element drain off and return to the sea. Temporary mobilisation of bespoke mechanical dewatering equipment could also be utilised but at greater cost. The dewatered dredged sediment would then be removed from the facility and stockpiled for transfer via lorry to a suitably licensed landfill.

We understand that the type of vehicle most suitable for transporting the dewatered dredged material is either a rigid bodied tipper or an articulated tanker both with a 16 tonne load capacity. It is estimated that the dredge volume equates to c. (approximately 1,546,660m³) of material and approximately 154,666 return trips would typically be required to transport the dewatered dredged material to landfill.

The number of landfills within a viable distance of the Firth of Clyde is considered to be low. In addition, the available capacity of each site is limited by the amount of material it can receive per annum. Due to the proposed quantity of material to be dredged it is therefore unlikely that any landfill within viable distance of the site will have the capacity to receive the dredged material.

4.2.3 Sea disposal

This option handles material in a single stage namely transport to the disposal site. The existing closest licensed disposal sites are 15km south west of the site, Cloch Point could also be utilised for the disposal this is located 25km to the north of the site. They are located in naturally deep water with ease of access, have a large capacity and are anticipated to be active for the foreseeable future.

5 FURTHER CONSIDERATION OF REMAINING DISPOSAL OPTIONS

5.1 Detailed BPEO Assessment

Each of the identified options was assessed against the criteria detailed in Table 5-1 below.

Table 5-1: BPEO Detailed Assessment Criteria

Primary Criteria	Description and Attributes
Strategic	<ul style="list-style-type: none"> Operational aspects, including handling, transport etc. Availability of suitable sites/facilities General Public/local acceptability Legislative Implications Summary of the outcome of consultation with third parties
Environmental	<ul style="list-style-type: none"> Safety Implications Public Health Implications Pollution/ Contamination Implications General Ecological Implications Interference with other legitimate activities e.g. fishing Amenity/Aesthetic Implications
Costs	<ul style="list-style-type: none"> Operating costs e.g. labour, site operations, environmental monitoring Capital e.g. Transport, equipment hire

5.1.1 BPEO Strategic Assessment

Table 5-2 provides details of the strategic assessment for each option taken forward for the detailed BPEO assessment:

Table 5-2: BPEO Strategic Assessment

Criteria	Beneficial Reuse – Dry Dock Infill/Site Platforming	Landfill	Sea Disposal
<p>Operational Aspects (inc. handling and transport)</p>	<p>Assumed that dewatering would occur on the Construction yard, with the dry dock being the most likely location. Dewatering would be undertaken under a SEPA discharge consent incorporating appropriate plant to facilitate the removal/treatment of water to meet the consent requirements.</p> <p>Material would be subsequently moved on site and placed in final location to facilitate the development.</p>	<p>Would involve double handling of material through dewatering and transportation to landfill.</p> <p>As noted previously it is assumed that the dewatering activity would require to be undertaken outwith the Hunterston Construction yard, therefore a specific dewatering facility will require to developed elsewhere incorporating SEPA discharge consent.</p> <p>Would also increase the number of HGV's on the road network.</p>	<p>There would be no double handling of the dredged material. Transportation to the disposal site would be by dredger or barge(s) depending on methodology.</p>
<p>Availability of suitable sites/facilities</p>	<p>The project would incorporate installation of equipment to allow for dewatering likely to use the existing dry dock with material being pumped ashore.</p> <p>The geotechnical composition of the dewatered dredged material is still to be reviewed. As noted previously it is assumed at this stage that the material may not be suitable or may not be available at an adequate time during the programme.</p>	<p>The geotechnical composition of the dewatered dredged material is considered likely to be suitable for disposal via this route. However, there is typically a limit to the amount of waste that can be accepted both on a daily and annual basis at a landfill.</p>	<p>The marine disposal site has been designed to accommodate the quantities typically generated by dredging operations. The chemical analysis of the sediments from the proposed dredge sites would indicate that the material is likely to be acceptable for testing pending further risk assessment for contaminants present at levels between Action Level 1 and Action Level 2.</p>

Criteria	Beneficial Reuse – Dry Dock Infill/Site Platforming	Landfill	Sea Disposal
General Public /Local acceptability	<p>The overall project has had three Public Consultation Events associated with the Planning and Marine Licence Applications.</p> <p>The works will retain all material within the existing Hunterston Construction Yard. The activities are covered under the project EIAR and supporting documents.</p>	Increase traffic on haul routes therefore potential for increase in public complaints.	Traditionally accepted disposal route for dredged material and limited public impact.
Legislative Implications	<p>Beneficial re-use is the preferred option for dredge arisings.</p> <p>These works would require obtaining appropriate licence from SEPA.</p>	Contravenes the principles of minimising waste and long-term commitments by the government to reduce landfilling.	This is an accepted disposal route as long as a Marine Licence is obtained.

5.1.2 BPEO Environmental Assessment

Table 5-3 below details the environmental assessment for each option taken forward for detailed BPEO assessment.

Table 5-3: BPEO Environmental Assessment

Criteria	Beneficial Reuse – Dry Dock Infill/Site Platforming	Landfill	Sea Disposal
Safety Implications	Double handling of material increases the potential for accidents to occur. Work would be undertaken in accordance with H&S legislation.	Double handling of material increases the potential for accidents to occur. Work would be undertaken in accordance with H&S legislation.	Minimal handling of material required as it is directly placed at the disposal site. Work would be undertaken in accordance with H&S legislation.

Criteria	Beneficial Reuse – Dry Dock Infill/Site Platforming	Landfill	Sea Disposal
Public Health	<p>Measures will be required to limit human contact during transfer of material from dredger to dewatering facility.</p> <p>Reuse of material will incorporate assessment of risks to human health as part of the SEPA licensing requirements.</p>	<p>Measures will be required to limit human contact during transfer of material from dredger to dewatering facility and transportation to landfill.</p> <p>Security measures typically employed at licensed landfills which will minimise human contact once accepted and emplaced at site.</p>	<p>Low potential for human contact during dredging and disposal operations. Once deposited at disposal site pathways for human contact greatly reduced.</p>
Pollution/contamination	<p>Pumping ashore to dewatering facility and reuse will require energy.</p> <p>Reuse of material will incorporate assessment of risks to the environment as part of the SEPA licensing requirements.</p>	<p>Pumping ashore to dewatering facility and transportation to landfill will all require energy. Road transport increases the carbon footprint of this disposal option. Potential for spillages to occur. Suitability of material would need agreed with landfill manager.</p>	<p>Pollutant concentrations in dredged material to be disposed are limited to acceptable levels through regulatory licensing processes. Information with regards to the type of disposal site with regards to its effects on sediments has not been provided. Previous correspondence with Marine Scotland has previously concluded that disposal sites in Scotland are Dispersive.</p>
General Ecological Implications	<p>The EIAR for the development incorporates consideration of impact to ecology as a result of the proposed development.</p>	<p>Licensed landfill would be away from protected species and habitats with measures in place to prevent or minimise pollution of the surrounding environment.</p>	<p>Proposed to dispose at existing licensed facilities.</p>
Interference with other legitimate activities	<p>The EIAR incorporates consideration of cumulative impacts associated with the proposed development.</p>	<p>Potential for limited short term local impact to commercial and ferry operations in the area of the dredged material handling and road hauling principally related to noise and dust potential.</p>	<p>Disposal at the licensed sites has historically been used.</p>

Criteria	Beneficial Reuse – Dry Dock Infill/Site Platforming	Landfill	Sea Disposal
Amenity / Aesthetic Implications	<p>Odour release from dewatering facility.</p> <p>EIAR incorporates assessment of noise impact and supporting assessments on Construction Dust impacts.</p>	<p>Odour release from dewatering facility.</p> <p>Increase in traffic noise during transportation from dewatering facility to landfill facility.</p> <p>Potential for spillages on haul route.</p> <p>No significant additional visual / odour / noise effects as using existing landfill site.</p>	<p>Limited short term visual / odour / noise effects as dredged material is transported by dredger and disposed of below sea level.</p>

5.1.3 BPEO Cost Assessment

Costs were assessed for each of the options taken forward for detailed BPEO assessment. The BPEO assessment considered the typical costs associated with dredging, transportation to the disposal site, construction of treatment facilities (where applicable) and methods employed to protect the environment for each of the identified options. As costs are generally “Commercially Sensitive” the rates are based on experience within industry (as opposed to formal quotations).

For the purposes of comparing costs associated with each option a benchmark of 2,474,665 tonnes (approximately 1,546,660m³) of dredged material has been set.

The assumptions to calculate the costs are as follows:

- Dredging costs are estimated to be £3.21 per m³;
- Ship transportation costs from the dredged area to disposal / transfer site have been calculated based on £1.85 per tonne;
- Costs associated with construction and operation of a dewatering facility are estimated to be in the order of £1,000,000 or greater;
- Cost associated with transfer of dewatered material to lorry are based on a wheeled shovel (costing £47 per hour) operating 7 hours per day for 24 weeks (though minimum hire charges may make this cost significantly greater);
- Transportation costs from a dewatering facility to landfill are estimated to be £4.85 per tonne; and
- Landfill gate fees are estimated to be £30 per tonne for a non-hazardous landfill (Note: Maintenance dredgings are currently exempt from landfill tax as defined in SLfT3006 – Dredgings – Material removed from water, August 2018).

Table 5-4 provides details on the Cost assessment for each option taken forward for detailed BPEO assessment:

Table 5-4: BPEO Cost Analysis (based on 2,474,665 tonnes only)

Activity	Beneficial Reuse – Dry Dock Infill/Site Platforming (£)	Landfill Disposal (£)	Sea Disposal (£)
Dredging	7,943,674	7,943,674	7,943,674
Transport by vessel to disposal site		-	4,578,130
Dewatering Facility	1,000,000	1,000,000	-
Transfer of material to lorry		39,480	-
Transportation Cost		12,002,125	-
Landfill Gate Fee		74,239,950	-
Total Costs	8,943,674	94,325,229	12,521,804

Note: The above costs do not take into account the cost required to gain planning or licensing consents or potentially to purchase land (where applicable). They also do not take account of the influence volumes will have on costs (economies of scale).

5.2 BPEO Assessment Discussion

Disposal to landfill is considered to be the least suitable option for the dredged material. It contravenes the principles of minimising waste and reducing landfilling. Several stages in material handling operations would be required to dispose of the material by this route. The cost associated with setting up a suitable treatment facility to dewater the dredged material is significant. Transportation of material by road is also undesirable as a result of increased traffic and the potential for accidental spillages. Landfill capacity is also typically limited and potentially unable to accommodate the quantities of material typically generated by the dredging operations. Any surplus dredged material will therefore require to be disposed of via an alternative route.

Beneficial reuse of the material is identified as the preferred option. As previously noted this would be subject to confirmation that the material meets the engineering specification requirements for the proposed dock infilling and site platforming. In addition, the material would require to be available at an appropriate time during the project programme to ensure that the reuse can be undertaken.

Deposition of the dredged material at a licensed marine disposal site is traditionally acceptable. The licensed marine disposal site has been designed to allow easy access as well as being capable of accommodating the quantities of material typically generated by dredging activities. Material handling is limited to transportation thereby reducing the risk for pollution incidents occurring. Pollutant concentrations are also limited to acceptable levels through regulatory requirements. Should beneficial reuse of the material not be possible due to the material not meeting the specification of programme requirements, then disposal at a licensed facility will be the preferred disposal option.

6 FURTHER ASSESSMENT

As detailed in Section 3, on the basis of the exceedances of Action Level 1 and Action Level 2, further assessment to determine the suitability of the material for sea disposal is deemed a requirement.

The approach for this further assessment is outlined as follows:

- Provide an overview of the proposed dredge works and the identified disposal site including existing chemical monitoring data for the site where available; and
- Compare existing chemical data with other recognised sediment assessment criteria including those listed below. Summary tables are provided in Appendix C

Background Assessment Concentration (BAC) - BACs were developed by the OSPAR Commission (OSPAR) for testing whether concentrations are near background levels. Mean concentrations significantly below the BAC are said to be near background. However, it should be noted that river catchments have their own unique geochemical fingerprints and are also governed by the geology within the catchment, so in theory one set of background level values is not applicable to all situations;

Effects Range Low (ERL) - ERLs were developed by the United States Environmental Protection Agency (USEPA) for assessing the ecological significance of sediment concentrations. Concentrations below the ERL rarely cause adverse effects in marine organisms. Concentrations above the ERL will often cause adverse effects in some marine organisms;

Probable Effects Level (PEL) – PELs (Marine) have been adopted from the Canadian Environmental Quality Guidelines (http://www.ccme.ca/en/resources/canadian_environmental_quality_guidelines/). If a concentration is recorded above the PEL this is the probable effect range within which adverse effects frequently occur. The Threshold Effect levels (TELs) have been included in the summary table in Appendix C, but have not been used as part of the further assessment as they typically fall below the RAL1.

The following section contains a review of potential risks to the list of receptors identified in “Water Framework Directive Assessment: estuarine and coastal waters” (<https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters>). The conclusions drawn from the available information will provide a recommendation on proposed disposal routes.

6.1.1 Action Level 1

Exceedances of RAL1 can be summarised as follows:

- 12 samples recorded exceedances of PAHs.
- 3 samples recorded exceedances of THC.

6.1.2 Action Level 2

No exceedances of RAL2 were recorded in the sediment at the site.

6.1.3 ERL & PEL Review

Exceedances of the ERL and PEL (where one is available) is summarised in **Table 6-1**. Full summary tables are provided in Table B in Appendix C : Note any contaminant of concern with N/A indicates no corresponding ERL or PEL value currently available.

Table 6-1: Exceedances of ERL and PEL

Contaminant	No. of Exceedances (of 78 samples)	
	ERL	PEL
Cadmium	0	0
Copper	0	0
Chromium	0	0
Lead	0	0
Mercury	1	0
Zinc	0	0
PAH (All Species Maximum)	3	1
PCBs	N/A	0

6.2 Averages

Review of the averaged data for all the data has been undertaken i.e. considering the material as a single volume for disposal to reflect the likely potential that the material is dredged as part of one exercise. The concentrations of the various contaminants of concern are quite variable, the review of average data against the available adopted assessment criteria are as follows:

Table 6-2: Exceedances of ERL and PEL – Average Concentrations

Contaminant	Do Average Concentrations exceed?	
	ERL	PEL
Cadmium	No	No
Copper	No	No
Chromium	No	No
Lead	No	No
Mercury	No	No
Zinc	No	No
PAH (All Species Maximum)*	No	No
PCBs	No	No

*Note – where values are available for review.

6.3 Water Framework Directive Assessment

As outlined in the Water Framework Directive Assessment: estuarine and coastal waters guidance (Environment Agency, 2017), there are several key receptors which can be impacted upon including the following:

- Hydromorphology;
- Biology – habitats;
- Biology – fish;

- Water quality; and
- Protected areas

Each of these points are considered in **Table 6-3** below.

Table 6-3: Receptor Risk Assessment

Key Receptor ¹	Brief Summary of Potential Effects on Receptor	Further Consideration Required?	Comment
Hydromorphology (Source Area and Disposal Site)	Morphological conditions, for example depth variation, the seabed and intertidal zone structure tidal patterns, for example dominant currents, freshwater flow and wave exposure	Yes	<p>The EIAR incorporates assessment of the impact of the proposed dredge at the Hunterston Construction Yard. The assessment has not identified significant impact to the morphological conditions at the dredge site or in the surrounding area as a result of the proposed dredge. The EIAR is provided to support the application.</p> <p>The Birch Point and Brodick disposal sites are located within the Firth of Clyde Middle-Offshore area which is Classified as High for Hydromorphology and Morphology. The Cloch Point disposal site is located within the Firth of Clyde Inner - Dunoon and Wemyss Bay area which is Classified as Good and is not considered to be heavily Modified.</p> <p>The classification of the water bodies takes into account the presence of the disposal sites, so no further assessment is considered to be required.</p> <p>Birch Point and Brodick are identified as having a radius of 463m each whilst Cloch Point has a radius of 370m².</p> <p>Assuming that Cloch Point (as the smallest disposal area) was adopted solely for the disposal, on the basis of the total quantity of dredge material being evenly distributed across the dredge site this would result in a deposit of 3.6m thickness across the deposition area. The depth of water at this disposal ground is 50m.</p> <p>Assuming total disposal at Birch Point was carried as described above for Cloch Point a deposit of 2.3m across the deposition area. The depth of water at the disposal ground is 160m. It is considered that the disposal would therefore not result in a significant impact to the hydromorphology of the disposal grounds on the basis of one single location being used for the total disposal.</p>

¹ <https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters>

² www.gov.scot.xlsx (live.com)

Key Receptor ¹	Brief Summary of Potential Effects on Receptor	Further Consideration Required?	Comment
Biology - habitats	Included to assess potential impacts to sensitive/high value habitats.	Yes	<p>The EIAR incorporates assessment impact of the proposed development and dredge with respect to impact to biology including the existing priority marine features and SSSI in proximity to the site. The assessment has not identified significant potential for impact to the sensitive/high value habitats as a result of the proposed dredging works at the site. The EIAR is provided to support the application.</p> <p>The establishment of the Brodick, Birch Point and Cloch Point disposal sites will have taken the potential presence of sensitive/high value habitats into account. There are no statutory habitat designations in the immediate vicinity of the dredge or disposal sites. No further assessment is considered necessary.</p>
Biology – fish	Consideration of fish both within the estuary and also potential effects on migratory fish in transit through the estuary	No	<p>The Largs Channel (Fairlie Roads) (ID: 200026) and disposal site ‘Firth of Clyde Middle – Offshore’ (ID: 200310) are coastal water bodies that do not have a WFD classification for fish. The Firth of Clyde Inner - Dunoon and Wemyss Bay is classified as Good Potential/Status or pass for Coastal and Transitional Waters for fish.</p> <p>The proposed disposal site has been approved for use specifically for the purpose of dredged materials. Migratory fish may be present within the Firth of Clyde at certain times of year, but this will have been taken in account in the establishment of the Brodick, Birch Point and Cloch Point disposal sites.</p> <p>It is noted that under periods of exceptionally hot and dry weather the potential for oxygen related issues to arise i.e. oxygen depletion and it is proposed that dredging works will be avoided as far as practicable during such times.</p>

Key Receptor ¹	Brief Summary of Potential Effects on Receptor	Further Consideration Required?	Comment
Water Quality	Consideration must be given to water quality when contaminants are present in exceedance of CEFAS RAL1.	Yes	<p>The Largs Channel (Fairlie Roads) and disposal site 'Firth of Clyde Middle – Offshore' are coastal water bodies classified as "Pass" for specific pollutants. Both locations Pass p for "priority substances". The overall classification for overall status is "Good".</p> <p>The outer estuary and Firth of Clyde Inner - Dunoon and Wemyss Bay are classified as Good potential/status or pass for "specific pollutants".</p> <p>The Firth of Clyde Dunoon and Wemyss Bay is classified as "Good" Potential/Status or pass for Coastal and Transitional Waters</p> <p>Contaminants are noted to exceed CEFAS RAL1 within sediment samples. It is noted that there are no exceedances of RAL2. Average results do not exceed ERL or PEL. Potential effects are considered to be both local and temporary.</p>
Protected Areas	If your activity is within 2km of any WFD protected area, include each identified area in your impact assessment. <ul style="list-style-type: none"> • special areas of conservation (SAC) • special protection areas (SPA) • shellfish waters • bathing waters • nutrient sensitive areas 	Yes	<p>The proposed dredging and disposal sites are not located within 2 km of an SAC or SPA, marine protected area or Ramsar sites. The dredge area is located approximately 1.7km from the site. A dredge plume assessment has been carried out as part of the EIAR.</p> <p>The closest designation to the disposal sites is the South Arran Protected Area which is 4.6m to the south of the sites.</p> <p>The dredge site is within 1.4km of a shellfish waters protected area. The EIAR has incorporated coastal modelling to assess impact potential from the dredge plume. The EIAR is provided as a supporting document to the application.</p>

6.4 Potential Risk to Water Quality and Protected Areas

6.4.1 Water Quality

Neither coastal water body covering the dredge or disposal areas have a classification status for priority substances or specific pollutants. The classification status at both areas for general water quality is 'Good'.

Although concentrations of some contaminants of concern were recorded above the RAL1 within the sediment for disposal, it is considered that these levels will not contribute to an overall degradation of water quality at the disposal site. While any effects are considered to be both localised and temporary, the potential for dilution in the open waters beyond the disposal site is considerable.

The disposal sites are assumed to be dispersive in nature.

Additionally, when the sediment results are reviewed as an average to assess all of the dredged sediment as a single unit for disposal, then no exceedances of RAL1 are noted. When considering the averaged results for PAHs, RAL1, the BAC, ERL and PEL is exceeded for several species. Averaged concentrations also exceed RAL1 for TPH. The BAC is intended to be used to determine if concentrations are near to background concentrations, rather than qualify any potential environmental impact. It should also be noted that the BACs for PAH are generally lower than the Marine Scotland RAL1, therefore it is considered to be a very conservative assessment criterion. In addition, PAHs and hydrocarbons are hydrophobic with low aqueous solubility and will naturally remain associated with organic sediment fractions, rather than become dissolved within the water column. On this basis, the risks associated with impact to water quality from chemical contaminants in sediment are considered to be low, with the associated dilution potential providing further mitigation. There are no exceedances of RAL2 in any individual samples or averaged concentrations. The key risk to water quality is considered to be an increase in turbidity/suspended solids during the disposal activity (i.e. placement of sediment on receiving beach and potential subsequent dispersal by tides). Although this is likely to cause localised increase in suspended solids, it is considered that this will be both local and temporary in nature. The sediment material primarily comprises mostly of sand (60%) with silt forming 37% of the material.

Sand and gravel particles will generally fall out of suspension quickly with minimal lateral spread. Given that majority of the sediment to be disposed comprises sand, it is unlikely that there will be a prolonged significant increase in suspended solids/turbidity. Any silts and clays (in this case an average of 37% of material) will have the potential for dispersal due to longer times in suspension, however it is expected that the majority will quickly fall quickly to the seabed. It should be noted that both Brodick and Birch Point disposal sites are classified as having 'Good' water quality although being ongoingly utilised as a site for disposal. As a result, it is considered unlikely that this dredging campaign will result in a change in the classification status of coastal water bodies at both the dredge and disposal sites.

6.5 Potential Risk to Water Quality and Marine Life

The potential risks to water quality at the dredge site and disposal sites are further considered as all other receptors have been screened out of the assessment.

The coastal classification of this area of water in and around the disposal grounds is "good" in 2008 (SEPA) & 2015 as detailed on Scotland's Environment (<http://www.environment.scotland.gov.uk/>)

Although there are contaminants of concern above the RAL1 it is considered that these levels will not contribute to an overall degradation of water quality as the potential for dilution and attenuation in the Firth of Clyde is very considerable.

The key contaminants for impacting water quality are considered to be metals as these have the potential to dissolve/desorb from sorption sites, whereas the organic contaminants (e.g. PCBs and PAHs) have a greater affinity for the organic materials which they are bound to, and are more likely to remain strongly bound to the sediment, or if become dissolved, quickly adsorbed onto organic matter within the water column or sediments.

The key risk is considered to be an increase in turbidity/suspended solids during the dredging activity, although this is likely to cause localised degradation in water quality, it is considered that this will be a short term event and mitigation measures could be put in place if deemed necessary.

On this basis, the associated risk with degradation of water quality directly associated with the proposed disposal is considered to be Low i.e. unlikely to cause a significant adverse effect on the overall water quality.

7 CONCLUSIONS AND RECOMMENDATIONS

Peel Ports Group Ltd. has appointed EnviroCentre Ltd. to complete a Marine Licence application and BPEO assessment for dredging at Hunterston Construction Yard. This has been informed using sediment quality results from sampling undertaken in March and April 2024.

Beneficial reuse of the material as part of the terrestrial development is the best practicable environmental option subject to the material being geotechnically suitable for use and meeting the project programme with respect to material availability. This material reuse would be undertaken under SEPA Waste Management Licensing and as such the disposal activity would not require a Marine Scotland Disposal Licence.

At the time of writing a full assessment of the potential reuse viability of the material has not been completed. Where material is not available at the appropriate time for reuse or is considered geotechnically unsuitable the best practicable environmental option for the dredge arisings is disposal at sea.

For the purposes of the application a conservative assessment has been undertaken and it is assumed that none of the material will meet the requirements for beneficial reuse. This will however be assessed as the project design progresses and where possible material will be identified for beneficial reuse.

Results from analysis of sediment samples recorded various PAH species and THC in exceedance of RAL 1. However, assessment of key receptors identified from the Water Framework Directive assessment for estuarine and coastal waters concluded that there is a low risk of the sediments impacting upon the overall ecological or chemical status upon disposal.

Based on the multiple lines of evidence approach adopted to further assess the exceedances identified in the sediment assessment, the material as a whole is considered suitable for disposal at sea at either the Brodick (MA017), Birch Point (MA019) and Cloch Point (MA021) disposal sites (this is considered to be suitable on the basis of disposal at one site solely however the project could adopt disposal at multiple sites should this be considered desirable with respect the dredging programme for the works), within the Firth of Clyde. This option is considered to have no significant long-term impact on the marine environment, is readily accessible from the harbour and has been assessed as a suitable option.

REFERENCES

IAEA (2003). *Determining the suitability of materials for disposal at sea under the London Convention 1972: A radiological assessment procedure*

Marine Scotland (2017). *Pre-Dredge Sampling Guidance Version 2*: Scottish Government.

Marine Scotland (2015). *Guidance for Marine Licence Applicants Version 2*: Scottish Government.

Marine Scotland National Marine Plan Interactive Viewer -
<https://marinescotland.atkinsgeospatial.com/nmpi/>

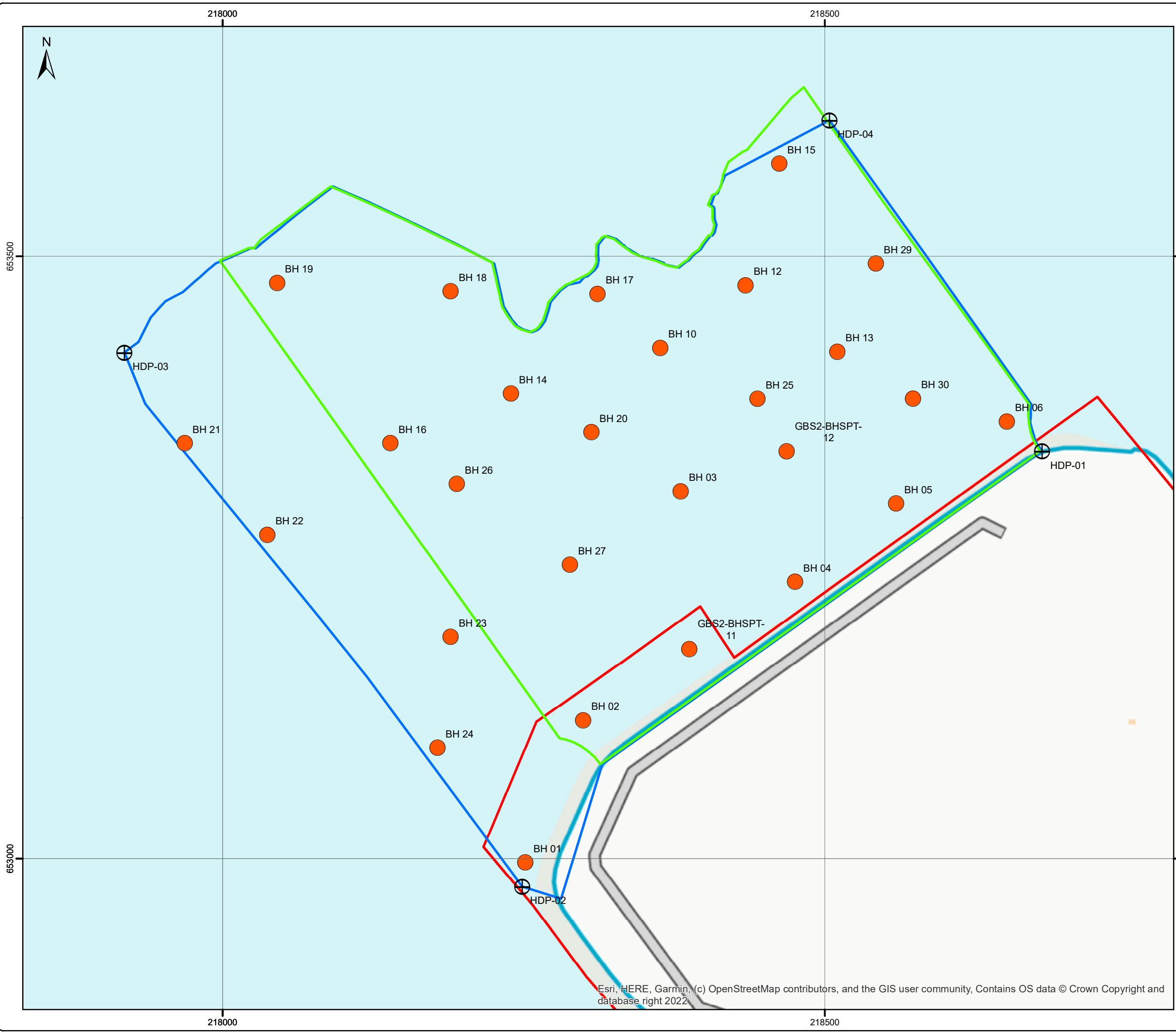
OSPAR/ICES (2004) *Workshop on the evaluation and update of background reference concentrations (B/RCs) and ecotoxicological assessment criteria (EACs) and how these assessment tools should be used in assessing contaminants in water, sediment and biota*

Ospar (2020) *Background document for Canadian Federal Environmental Quality Guidelines (FEQGs) for Polybrominated Diphenyl Ethers (PBDEs) in sediment and biota*

APPENDICES

APPENDICES

A FIGURES



Legend

- Site Boundary
- Updated Dredge Boundary 001
- Updated Dredge Boundary 003
- ⊕ Dredge Works Coordinates Points 003
- Marine Borehole Locations

Do not scale this map
Client
 Clydeport Operations Limited

Project
 Hunterston Construction Yard

Title
 Marine Borehole Locations

Status
 FINAL

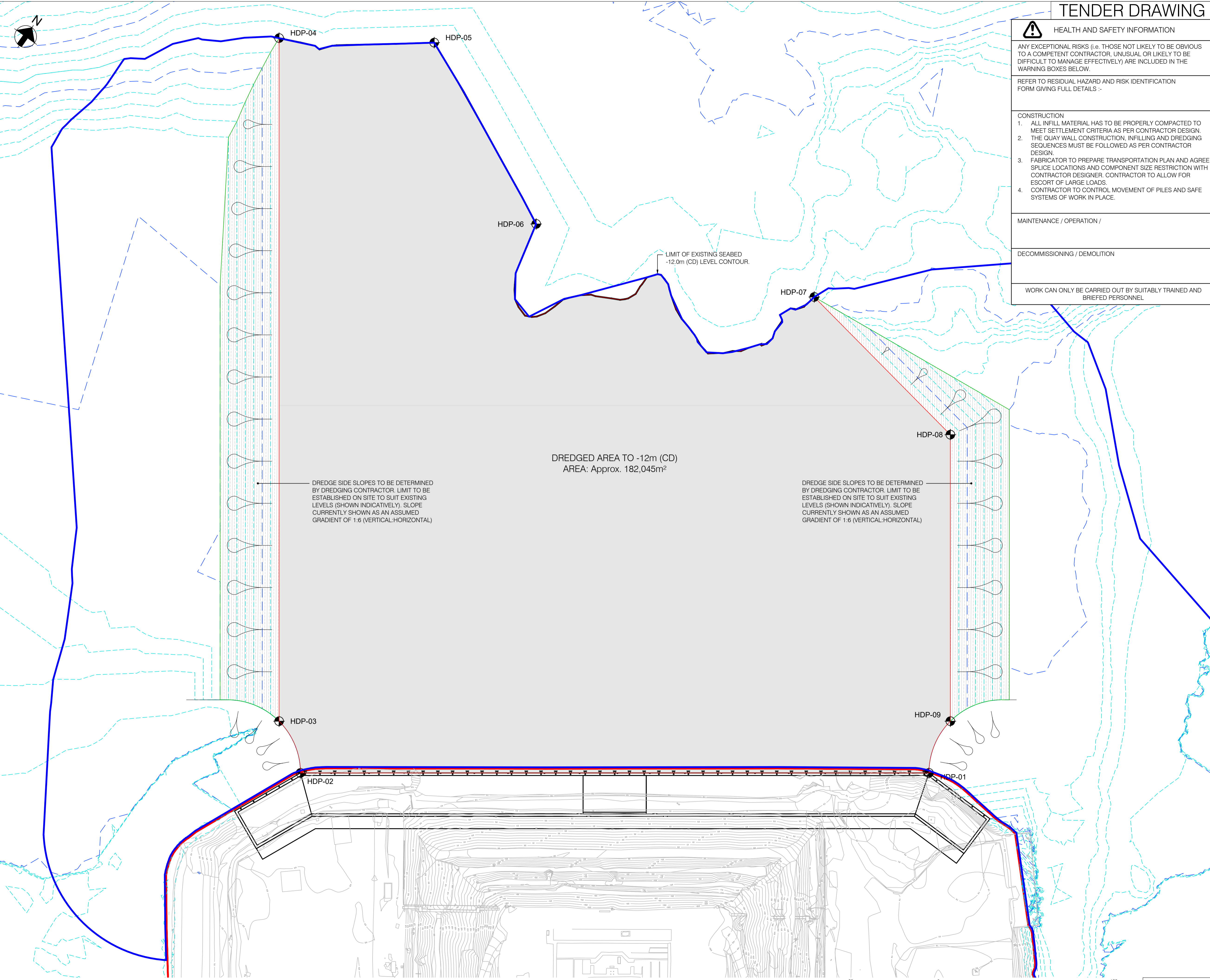
Drawing No. 176482-GIS018	Revision -	Date 06 May 2024
Drawn MMF	Checked GD	Approved GD

Scale
 1:3,000 @A3

Rev	Date	Amendment	Initials
-	-	-	-

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TENDER DRAWING

HEALTH AND SAFETY INFORMATION

ANY EXCEPTIONAL RISKS (i.e. THOSE NOT LIKELY TO BE OBVIOUS TO A COMPETENT CONTRACTOR, UNUSUAL OR LIKELY TO BE DIFFICULT TO MANAGE EFFECTIVELY) ARE INCLUDED IN THE WARNING BOXES BELOW.

REFER TO RESIDUAL HAZARD AND RISK IDENTIFICATION FORM GIVING FULL DETAILS :-

CONSTRUCTION

- ALL INFILL MATERIAL HAS TO BE PROPERLY COMPACTED TO MEET SETTLEMENT CRITERIA AS PER CONTRACTOR DESIGN. THE QUAY WALL CONSTRUCTION, INFILLING AND DREDGING SEQUENCES MUST BE FOLLOWED AS PER CONTRACTOR DESIGN.
- FABRICATOR TO PREPARE TRANSPORTATION PLAN AND AGREE SPLICE LOCATIONS AND COMPONENT SIZE RESTRICTION WITH CONTRACTOR DESIGNER. CONTRACTOR TO ALLOW FOR ESCORT OF LARGE LOADS.
- CONTRACTOR TO CONTROL MOVEMENT OF PILES AND SAFE SYSTEMS OF WORK IN PLACE.

MAINTENANCE / OPERATION /

DECOMMISSIONING / DEMOLITION

WORK CAN ONLY BE CARRIED OUT BY SUITABLY TRAINED AND BRIEFED PERSONNEL

- NOTES**
- ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
 - ALL LEVELS ARE RELATIVE TO CHART DATUM.
 - THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS AND SPECIALISTS DRAWINGS AND THE CONTRACT SPECIFICATION DOCUMENTS. THE CLIENT IS TO BE ADVISED OF ANY DISCREPANCIES ENCOUNTERED ON SITE DURING CONSTRUCTION WORKS.

LEGEND

- MARINE CONSENT BOUNDARY
- TERRESTRIAL PLANNING CONSENT BOUNDARY

MATERIAL DREDGE QUANTITIES

(Dredge to level -12.0m(CD) and side slopes)

PLAN AREA: 182,045m²
VOLUME: 1,162,035m³

Tide level in metres above Chart Datum (Millport)

MHWS	MHWN	MLWN	MLWS
3.40	2.70	1.00	0.40

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DREDGING WORKS COORDINATES

POINTS	EASTING	NORTHING
HDP-01	218680.284	653338.201
HDP-02	218315.303	653078.677
HDP-03	218281.499	653099.870
HDP-04	217999.435	653496.551
HDP-05	218091.437	653557.985
HDP-06	218225.504	653494.754
HDP-07	218417.126	653567.230
HDP-08	218553.041	653543.496
HDP-09	218671.367	653377.089

HDP-XX denotes setting out coordinate point shown on dredge plan. All coordinates relate to the OSGB 36 / British National Grid

DREDGE SIDE SLOPES TO BE DETERMINED BY DREDGING CONTRACTOR. LIMIT TO BE ESTABLISHED ON SITE TO SUIT EXISTING LEVELS (SHOWN INDICATIVELY). SLOPE CURRENTLY SHOWN AS AN ASSUMED GRADIENT OF 1:6 (VERTICAL:HORIZONTAL)

DREDGED AREA TO -12m (CD)
AREA: Approx. 182,045m²

DREDGE SIDE SLOPES TO BE DETERMINED BY DREDGING CONTRACTOR. LIMIT TO BE ESTABLISHED ON SITE TO SUIT EXISTING LEVELS (SHOWN INDICATIVELY). SLOPE CURRENTLY SHOWN AS AN ASSUMED GRADIENT OF 1:6 (VERTICAL:HORIZONTAL)

REV	DATE	REVISION DESCRIPTION	DRN	VER
P02	18.04.2024	ISSUED FOR FINAL COMMENTS	AH	MW
P01	28.02.24	ISSUED FOR INFORMATION	A.H.	M.W.

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Arch Henderson 1919

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Structural Engineers
Principal Designers
Architects
Geotechnical services
Environmental services

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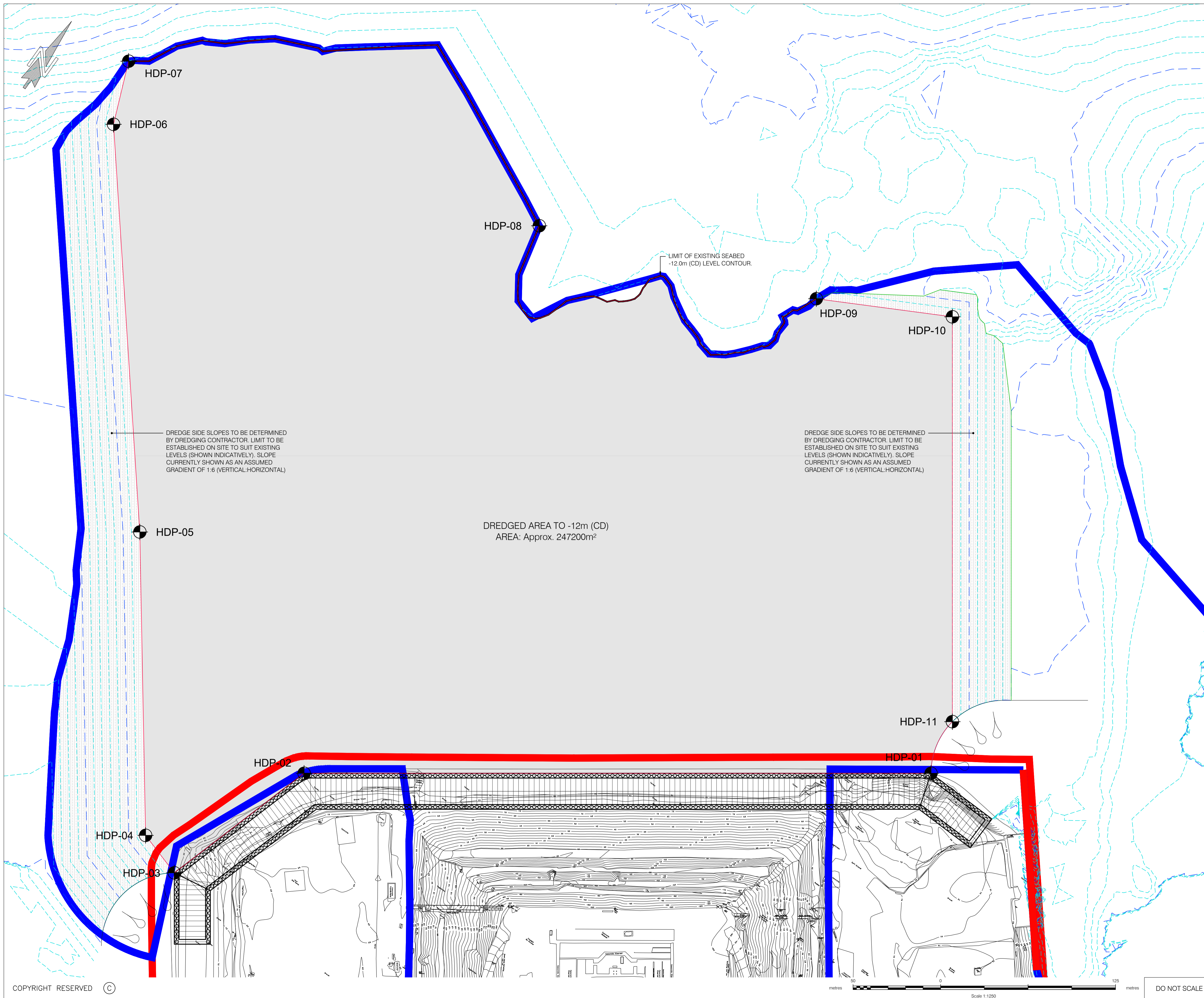
Offices in: Aberdeen, Dundee, Falkland Islands, Glasgow, Inverness, Lewick, Southampton, Stromness and Thurso

PROJECT :
CLYDEPORT OPERATIONS LTD
HUNTERSTON CONSTRUCTION YARD

TITLE :
450m QUAY WALL OPTION
DREDGE PLAN

DRAWN : AH	DATE : 27/02/24	VERIFIED : M.W.	APPROVED : K.M.
SCALE : (A1) 1:1250		DRAWING STATUS : S4	

DRAWING No: HMY-AHN-01-00-DR-C-0001 REV: P02



NOTES

1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE RELATIVE TO CHART DATUM.
3. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS AND SPECIALISTS DRAWINGS AND THE CONTRACT SPECIFICATION DOCUMENTS. THE CLIENT IS TO BE ADVISED OF ANY DISCREPANCIES ENCOUNTERED ON SITE DURING CONSTRUCTION WORKS.

MATERIAL DREDGE QUANTITIES...

(Dredge to level -12.0m(CD) and side slopes)
 PLAN AREA: 247,200m²
 VOLUME: 1,546,660m³

Tide level in metres above Chart Datum (Millport)			
MHWS	MHWN	MLWN	MLWS
3.40	2.70	1.00	0.40

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DREDGING WORKS COORDINATES

POINTS	EASTING	NORTHING
HDP-01	218680.284	653338.201
HDP-02	218315.205	653078.607
HDP-03	218280.882	652966.918
HDP-04	218248.634	652976.828
HDP-05	218119.690	653151.090
HDP-06	217935.584	653377.583
HDP-07	217918.245	653420.539
HDP-08	218225.504	653494.754
HDP-09	218417.043	653567.010
HDP-10	218503.756	653612.809
HDP-11	218671.367	653377.089

HDP-XX denotes setting out coordinate point shown on dredge plan. All coordinates relate to the OSGB 36 / British National Grid

DREDGE SIDE SLOPES TO BE DETERMINED BY DREDGING CONTRACTOR. LIMIT TO BE ESTABLISHED ON SITE TO SUIT EXISTING LEVELS (SHOWN INDICATIVELY). SLOPE CURRENTLY SHOWN AS AN ASSUMED GRADIENT OF 1:6 (VERTICAL:HORIZONTAL)

DREDGE SIDE SLOPES TO BE DETERMINED BY DREDGING CONTRACTOR. LIMIT TO BE ESTABLISHED ON SITE TO SUIT EXISTING LEVELS (SHOWN INDICATIVELY). SLOPE CURRENTLY SHOWN AS AN ASSUMED GRADIENT OF 1:6 (VERTICAL:HORIZONTAL)

DREDGED AREA TO -12m (CD)
 AREA: Approx. 247200m²

LIMIT OF EXISTING SEABED
 -12.0m (CD) LEVEL CONTOUR.

REV	DATE	REVISION DESCRIPTION	DRN	VER
P02	28.02.24	ISSUED FOR INFORMATION	A.H.	M.W.
P01	02.11.23	FIRST ISSUE	K.M.	M.W.

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PROJECT :
 CLYDEPORT OPERATIONS LTD
 HUNTERSTON CONSTRUCTION YARD

TITLE :
 DREDGING WORKS - Maximum Dredge Option
 GENERAL ARRANGEMENT PLAN

DRAWN : K.M.	DATE : 24/10/23	VERIFIED : MW	APPROVED : A.K.
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SCALE : (A1) 1:1250	DRAWING STATUS : S0
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DRAWING No : HMY-AHN-01-00-DR-C-0003	REV : P02
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B SEDIMENT LOGS



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 11.30 m	Start Date: 29/03/2024	Driller: AM/MJ	Sheet 1 of 2 Scale: 1:50
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	11.30	218251.61 E 652997.80 N	Elevation: -1.07 mCD	End Date: 30/03/2024	Logger: MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Medium dense to dense grey fine to medium SAND.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 0.80	B6									
0.80	D17		0.80	0.00						
0.80 - 2.30	B7									
0.80 - 1.25	SPT (S)	N=20 (1,3/3,4,6,7) Hammer SN = 1398								
2.30	D18		2.30	0.00						
2.30 - 3.80	B8									
2.30 - 2.75	SPT (S)	N=37 (2,3/6,8,10,13) Hammer SN = 1398								
3.80	D19		3.80	0.00	-4.87	3.80		Medium dense brown slightly silty fine to medium SAND.		
3.80 - 4.80	B9									
3.80 - 4.25	SPT (S)	N=14 (2,5/3,3,3,5) Hammer SN = 1398								
4.80 - 5.30	B10				-5.87	4.80		Stiff reddish brown slightly sandy silty CLAY. Sand is fine to medium.		
5.30	D20		5.30	0.00						
5.30 - 5.75	UT24	Ublow=20 67% Recovery								
5.30 - 6.80	B11									
5.50	ES2	Marine Scotland Sample								
6.80	D21		6.80	0.00						
6.80 - 8.30	B12									
6.80 - 7.25	SPT (S)	N=16 (3,6/4,5,3,4) Hammer SN = 1398								
8.30	D22		8.30	0.00	-9.37	8.30		Loose reddish brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is angular to subangular fine to medium of various lithologies.		
8.30 - 9.40	B13									
8.30 - 8.75	SPT (S)	N=6 (1,0/2,1,1,2) Hammer SN = 1398								

Water Strikes				Remarks							
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 6.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing							
Casing Details		Water Added		Core Barrel			Flush Type		Termination Reason		Last Updated
To (m)	Diam (mm)	From (m)	To (m)						Terminated at scheduled depth		02/04/2024
11.30	177										



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 11.30 m	Start Date: 29/03/2024	Driller: AM/MJ	Sheet 2 of 2 Scale: 1:50
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	11.30	218251.61 E 652997.80 N	Elevation: -1.07 mCD	End Date: 30/03/2024	Logger: MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill		
9.40 - 10.00	B14	50 (25 for 115mm/50 for 160mm) Hammer SN = 1398	9.80	0.00	-10.47	9.40		Very stiff reddish brown slightly sandy CLAY. Sand is fine to medium.		9.5		
9.80	D23										10.0	
9.80 - 10.07	SPT (S)											10.5
10.00 - 10.60	B15	Marine Scotland Sample				10.60		Brown and reddish brown slightly sandy slightly clayey angular to subangular fine to coarse GRAVEL of various lithologies. Sand is fine to coarse.		11.0		
10.60 - 11.30	B16											11.5
10.90	ES3											12.0
						11.30		End of Borehole at 11.30m		12.5		
										13.0		
										13.5		
										14.0		
										14.5		
										15.0		
										15.5		
										16.0		
										16.5		
										17.0		
										17.5		
										18.0		
										18.5		

Water Strikes				Remarks									
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 6.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing									
Casing Details		Water Added											
To (m)	Diam (mm)	From (m)	To (m)										
11.30	177			Core Barrel				Flush Type		Termination Reason		Last Updated	
										Terminated at scheduled depth		02/04/2024	





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 1 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	36.40	218299.51 E	45.40 m	30/03/2024	AM/KW	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	36.40	45.40	653115.79 N	Elevation: -1.16 mCD	End Date: 01/04/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.40	ES1	Marine Scotland Sample						Medium dense to dense grey slightly silty fine to coarse SAND.		
0.40	ES4	RAD Composite								
0.40	ES5	ENV Composite								
0.40 - 1.90	B6									
1.90 - 3.40	B7		1.90	0.00						
1.90 - 2.35	SPT (S)	N=11 (1,2/2,3,3,3) Hammer SN = 1398								
3.40	D36		3.40	0.00						
3.40 - 4.90	B8									
3.40 - 3.85	SPT (S)	N=35 (1,3/6,10,9,10) Hammer SN = 1398								
4.90	D37		4.90	0.00						
4.90 - 6.40	B9									
4.90 - 5.35	SPT (S)	N=26 (3,5/5,7,7,7) Hammer SN = 1398								
5.40	ES2	Marine Scotland Sample								
6.40	D38		6.40	0.00	-7.76	6.60				
6.40 - 6.85	SPT (S)	N=5 (3,4/2,1,1,1) Hammer SN = 1398			-7.96	6.80	Soft grey slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular fine to medium of various lithologies.			
6.60 - 6.80	B10						Loose reddish brown very clayey fine to medium SAND.			
6.80 - 7.90	B11									
7.90	D39		7.90	0.00						
7.90 - 9.40	B12									
7.90 - 8.35	SPT (S)	N=7 (3,2/3,2,1,1) Hammer SN = 1398								

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 7.10m All elevations and reduced levels given in Chart Datum			
				Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
36.40	177						
45.40	150						
Core Barrel	Flush Type	Termination Reason		Last Updated		AGS	
SK6L	Polymer	Terminated at scheduled depth		05/04/2024		AGS	



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 2 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	36.40	218299.51 E	45.40 m	30/03/2024	AM/KW	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	36.40	45.40	653115.79 N	Elevation: -1.16 mCD	End Date: 01/04/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
9.40	D40	N=7 (1,1/2,2,2,1) Hammer SN = 1398	9.40	0.00	-10.66	9.50		Loose to medium dense grey fine to medium SAND.		
9.40 - 9.85	SPT (S)									
9.50 - 10.90	B13									
10.80	ES3	Marine Scotland Sample	10.9	0.00	-13.56	12.40		Very dense dark reddish brown gravelly slightly clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of various lithologies.		
10.90	D41									
10.90 - 12.40	B14									
10.90 - 11.35	SPT (S)									
		N=10 (5,3/3,2,3,2) Hammer SN = 1398								
12.40	D42	50 (5,8/50 for 280mm) Hammer SN = 1398	12.4	0.00	-13.56	12.40		Very dense dark reddish brown gravelly slightly clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of various lithologies.		
12.40 - 13.90	B15									
12.40 - 12.83	SPT (S)									
13.90	D43	Ublow=120 100% Recovery	13.9	0.00	-16.56	15.40		Very stiff reddish brown slightly sandy silty CLAY. Sand is fine to coarse.		
13.90 - 14.35	UT60									
13.90 - 15.40	B16									
15.40	D44	50 (8,12/50 for 205mm) Hammer SN = 1398	15.4	0.00	-18.86	17.70		Very stiff reddish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to medium of various lithologies.		
15.40 - 16.50	B17									
15.40 - 15.76	SPT (S)									
16.50 - 17.70	B18									
16.90	D45	Ublow=112 100% Recovery	16.9	0.00	-18.86	17.70		Very stiff reddish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to medium of various lithologies.		
16.90 - 17.35	UT61									
17.70 - 18.40	B19									
18.40	D46									
18.40 - 19.90	B20									

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 7.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
36.40	177						
45.40	150						
Core Barrel	Flush Type	Termination Reason			Last Updated		
SK6L	Polymer	Terminated at scheduled depth			05/04/2024		



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 3 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	36.40	218299.51 E	45.40 m	30/03/2024	AM/KW	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	36.40	45.40	653115.79 N	Elevation: -1.16 mCD	End Date: 01/04/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
19.90	D47	50 (2,2/50 for 295mm) Hammer SN = 1398	19.9	0.00						
19.90 - 21.40	B21									
19.90 - 20.34	SPT (S)									
21.40	D48	Ublow=128 100% Recovery	21.4	0.00						
21.40 - 21.95	UT62									
21.70 - 23.00	B22				-22.86	21.70	Very stiff reddish brown slightly sandy CLAY. Sand is fine to medium.			
22.90	D49	50 (5,10/50 for 225mm) Hammer SN = 1398	22.9	0.00						
22.90 - 23.28	SPT (S)									
23.00 - 24.00	B23							Very stiff dark brown silty CLAY with rare pockets of angular to subangular fine to medium gravel of various lithologies.		
24.00 - 24.90	B24	Ublow=100 0% Recovery	24.4	0.00						
24.40	D50									
24.40 - 24.60	UT63									
24.90 - 25.75	B25				-26.06	24.90		Brown slightly clayey fine to coarse SAND.		
25.90	D51	50 (6,10/50 for 230mm) Hammer SN = 1398	25.9	0.00						
25.90 - 27.40	B26									
25.90 - 26.28	SPT (S)									
27.40	D52	Ublow=100 0% Recovery	27.4	0.00						
27.40 - 27.55	UT64									
27.40 - 28.90	B27									

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 7.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
36.40	177						
45.40	150						
				Core Barrel	Flush Type	Termination Reason	Last Updated
				SK6L	Polymer	Terminated at scheduled depth	05/04/2024





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 4 of 5
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	36.40	218299.51 E	45.40 m	30/03/2024	AM/KW	Scale: 1:50
Rotary Coring	Frastr CRS-XL140 Duo	36.40	45.40	653115.79 N	Elevation: -1.16 mCD	End Date: 01/04/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
28.90	D53	50 (6,9/50 for 225mm) Hammer SN = 1398	28.9	0.00	-31.16	30.00		Very stiff dark brown silty CLAY with low cobble content. Cobbles are subangular of sandstone.		
28.90 - 30.00	B28									
28.90 - 29.28	SPT (S)									
30.00 - 30.60	B29	50 (9,9/50 for 225mm) Hammer SN = 1398	30.4	0.00	-31.76	30.60		Very dense reddish brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is angular to subangular fine to medium of sandstone.		
30.40	D54									
30.40 - 30.78	SPT (S)									
30.60 - 32.10	B30	N=50 (9,9/8,12,12,18) Hammer SN = 1398	31.9	0.00	-33.26	32.10		Very stiff grey slightly sandy CLAY. Sand is fine to medium.		
31.90	D55									
31.90 - 32.35	SPT (S)									
32.10 - 33.30	B31	Ublow=140 100% Recovery	33.4	0.00	-34.46	33.30		Dark reddish brown very clayey fine to medium SAND.		
33.30 - 34.00	B32									
33.40	D56									
33.40 - 33.95	UT65	N=14 (5,5/4,4,3,3) Hammer SN = 1398	34.9	0.00	-35.16	34.00		Medium dense reddish brown gravelly slightly clayey fine to coarse SAND with low cobble content. Gravel is subangular to subrounded fine to coarse of various lithologies. Cobbles are subangular to subrounded of sandstone.		
34.00 - 34.90	B33									
34.90	D57									
34.90 - 35.90	B34	N=14 (5,5/4,4,3,3) Hammer SN = 1398	36.4	0.00	-37.06	35.90		Grey mottled reddish brown gravelly fine to coarse SAND. Gravel is subangular to subrounded of sandstone.		
34.90 - 35.35	SPT (S)									
35.90 - 36.40	B35									
36.40	D58	50 (25 for 75mm/50 for 0mm) Hammer SN = 1398	36.4	0.00	-37.56	36.40		Very dense brown very gravelly fine to medium SAND with low cobble content.. Gravel is rounded to subrounded fine to coarse of various lithologies. Cobbles are subrounded of various lithologies. (Low recovery: Probable fine material washed out during drilling)		
36.40 - 36.48	SPT (S)									
		TCR	SCR	RQD	FI					

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 7.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
36.40	177									
45.40	150									
				Core Barrel	Flush Type	Termination Reason			Last Updated	
				SK6L	Polymer	Terminated at scheduled depth			05/04/2024	



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 5 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	36.40	218299.51 E	45.40 m	30/03/2024	AM/KW	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	36.40	45.40	653115.79 N	Elevation: -1.16 mCD	End Date: 01/04/2024	Logger: LW/MS	DRAFT

Depth (m)	Samples / Field Records	TCR	SCR	RQD	FI	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
37.90	SPT(S) 50 (25 for 0mm/50 for 0mm) Hammer SN = 1398 D59								37.90		Weak very thinly to thinly bedded reddish brown medium grained poorly cemented SANDSTONE. Partially weathered: reduced strength, closer fracture spacing.		
37.90 - 37.90					NI	37.9	0.00	-39.06	37.90				
37.90		100	25	16	10						Discontinuities: 1. 20-45 degree joints, very closely spaced, undulating, rough, deconstructed to sand on joint surfaces. 2. 70-90 degree joints are 37.90-38.40m and 38.70-38.90m, undulating, rough.		
39.40		100	95	73				-40.56	39.40			Medium strong to strong very thinly bedded reddish brown medium grained well cemented SANDSTONE with rare light grey siltstone and quartz inclusions, up to 5mm. Partially weathered: slightly closer fracture spacing.	
40.90		100	98	98							Discontinuities: 1. 5-30 degree bedding fractures, medium spaced (35/315/750), planar, rough, clean.		
42.40	100	100	97	3									
43.90	100	97	91										
45.40								-46.56	45.40		End of Borehole at 45.40m		

Water Strikes				Chiselling Details			Remarks Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 7.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	From (m)	To (m)	Time (hh:mm)	
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
36.40	177						
45.40	150						
				Core Barrel	Flush Type	Termination Reason	Last Updated
				SK6L	Polymer	Terminated at scheduled depth	05/04/2024





Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH03

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 1 of 4
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	29.00	218380.96 E	35.00 m	17/03/2024	MJ/KW	Scale: 1:50
Rotary Coring	Frastr CRS-XL140 Duo	29.00	35.00	653305.73 N	Elevation: -8.29 mCD	End Date: 20/03/2024	Logger: MS/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.50	ES1	Marine Scotland Sample	0.50	0.00			XXXXXX	Very soft black organic SILT.		
0.50	ES4	RAD Composite					XXXXXX			
0.50	ES5	ENV Composite					XXXXXX			
0.50 - 0.90	B6				-9.19	0.90	XXXXXX			
0.50 - 0.95	SPT (S)	N=0 (0,0/0,0,0) Hammer SN = 1398					XXXXXX	Loose brownish grey slightly silty fine to medium SAND.		
0.90 - 2.00	B7						XXXXXX			
1.90	ES2	Marine Scotland Sample	2.00	0.00			XXXXXX			
2.00	D38						XXXXXX			
2.00 - 2.50	B8						XXXXXX			
2.00 - 2.45	SPT (S)	N=6 (1,2/1,2,1,2) Hammer SN = 1398			-10.79	2.50	XXXXXX	Dark reddish brown slightly gravelly clayey fine to coarse SAND. Gravel is subangular to subrounded fine to medium of various lithologies.		
2.50 - 3.00	B9						XXXXXX			
3.00 - 3.50	B10				-11.29	3.00	XXXXXX	Soft reddish brown CLAY.		
3.50	D39		3.50	0.00	-11.79	3.50	XXXXXX	Very soft grey slightly gravelly sandy clayey SILT. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of various lithologies.		
3.50 - 4.30	B11						XXXXXX			
3.50 - 3.95	SPT (S)	N=2 (0,1/0,0,1,1) Hammer SN = 1398					XXXXXX			
3.70	ES3	Marine Scotland Sample					XXXXXX			
4.30 - 5.00	B12				-12.59	4.30	XXXXXX	Soft reddish brown CLAY.		
5.00	D40		5.00	0.00	-13.29	5.00	XXXXXX	Firm grey slightly gravelly sandy clayey SILT. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of various lithologies.		
5.00 - 5.75	B13						XXXXXX			
5.00 - 5.45	SPT (S)	N=9 (0,0/1,2,3,3) Hammer SN = 1398					XXXXXX			
5.75 - 6.50	B14				-14.04	5.75	XXXXXX	Very loose reddish brown slightly gravelly fine to coarse SAND. Gravel is subangular to subrounded of various lithologies.		
6.50	D41		6.50	0.00			XXXXXX			
6.50 - 8.00	B15						XXXXXX			
6.50 - 6.95	SPT (S)	N=1 (1,0/1,0,0,0) Hammer SN = 1398					XXXXXX			
8.00	D42		8.00	0.00	-16.29	8.00	XXXXXX	Reddish brown slightly clayey fine to coarse SAND.		
8.00 - 8.45	UT58	Ublow=300 100% Recovery					XXXXXX			
8.00 - 9.50	B16						XXXXXX			

Water Strikes				Remarks									
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 14.50m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing									
Casing Details		Water Added		Core Barrel				Flush Type		Termination Reason		Last Updated	
To (m)	Diam (mm)	From (m)	To (m)	SK6L				Polymer		Terminated at scheduled depth		21/03/2024	
29.00	177												
35.00	150												





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	29.00	218380.96 E	35.00 m	17/03/2024	MJ/KW	
Rotary Coring	Fraste CRS-XL140 Duo	29.00	35.00	653305.73 N	Elevation: -8.29 mCD	End Date: 20/03/2024	Logger: MS/OG	

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
9.50	D43	50 (25 for 109mm/50 for 205mm) Hammer SN = 1398	9.50	0.00	-17.79	9.50		Very stiff reddish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to medium of various lithologies.		
9.50 - 11.00	B17									
9.50 - 9.81	SPT (S)									
11.00	D44	Ublow=276 100% Recovery	11.00	0.00				Very dense reddish brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of sandstone.		
11.00 - 11.45	UT59									
11.00 - 11.50	B18									
11.50 - 12.50	B19				-19.79	11.50				
12.50	D45	50 (7,10/50 for 232mm) Hammer SN = 1398	12.50	0.00						
12.50 - 14.00	B20									
12.50 - 12.88	SPT (S)									
14.00	D46	Ublow=232 100% Recovery	14.00	0.00						
14.00 - 14.45	UT60									
14.00 - 15.00	B21									
15.00 - 15.80	B22									
15.50	D47	50 (10,12/50 for 205mm) Hammer SN = 1398	15.50	0.00						
15.50 - 15.86	SPT (S)									
15.80 - 16.70	B23				-24.09	15.80	Very dense reddish brown slightly silty fine to coarse SAND.			
16.70 - 17.00	B24				-24.99	16.70	Very dense reddish brown fine to coarse SAND.			
17.00	D48	50 (10,15/50 for 150mm) Hammer SN = 1398	17.00	0.00						
17.00 - 17.40	B25									
17.00 - 17.30	SPT (S)									
17.40 - 18.30	B26				-25.69	17.40	Reddish brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is subangular to subrounded fine to medium of various lithologies.			
18.30 - 19.10	B27				-26.59	18.30	Reddish brown slightly silty fine to coarse SAND.			
18.50	D49	Ublow=316 100% Recovery	18.50	0.00						
18.50 - 18.95	UT61									

Water Strikes				Remarks							
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)								
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 14.50m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing							
Casing Details		Water Added									
To (m)	Diam (mm)	From (m)	To (m)								
29.00	177			Core Barrel		Flush Type		Termination Reason		Last Updated	
35.00	150			SK6L		Polymer		Terminated at scheduled depth		21/03/2024	





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 3 of 4
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	29.00	218380.96 E	35.00 m	17/03/2024	MJ/KW	Scale: 1:50
Rotary Coring	Frastr CRS-XL140 Duo	29.00	35.00	653305.73 N	Elevation: -8.29 mCD	End Date: 20/03/2024	Logger: MS/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
19.10 - 20.00	B28				-27.39	19.10	[Pattern]	Stiff brown slightly sandy CLAY with pockets of reddish brown fine to medium sand. Sand is fine to coarse.		
20.00	D50		20.0	0.00	-28.29	20.00	[Pattern]	Very stiff brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to medium of various lithologies.		
20.00 - 21.50	B29									
20.00 - 20.37	SPT (S)	50 (7,9/50 for 220mm) Hammer SN = 1398								
21.50	D51		21.5	0.00			[Pattern]	Ublow=186 100% Recovery		
21.50 - 21.95	UT62									
21.50 - 23.00	B30									
23.00	D52		23.0	0.00			[Pattern]	50 (5,9/50 for 245mm) Hammer SN = 1398		
23.00 - 24.35	B31									
23.00 - 23.40	SPT (S)									
24.35 - 25.25	B32		24.5	0.00	-32.64	24.35	[Pattern]	Very dense reddish brown slightly gravelly clayey fine to coarse SAND. Gravel is subangular to subrounded fine to medium of various lithologies.		
24.50	D53									
24.50 - 24.86	SPT (S)	50 (25 for 135mm/50 for 225mm) Hammer SN = 1398								
25.25 - 25.65	B33				-33.54	25.25	[Pattern]	Stiff reddish brown slightly sandy CLAY. Sand is fine to coarse.		
25.65 - 26.50	B34				-33.94	25.65	[Pattern]	Very dense reddish brown gravelly slightly silty fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of various lithologies.		
26.00	D54		26.0	0.00						
26.00 - 26.34	SPT (S)	50 (25 for 135mm/50 for 210mm) Hammer SN = 1398								
26.50 - 27.50	B35									
27.50	D55		27.5	0.00			[Pattern]	50 (25 for 125mm/50 for 227mm) Hammer SN = 1398		
27.50 - 28.60	B36									
27.50 - 27.85	SPT (S)									

Water Strikes				Remarks							
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)								
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 14.50m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing							
Casing Details		Water Added									
To (m)	Diam (mm)	From (m)	To (m)								
29.00	177			Core Barrel		Flush Type		Termination Reason		Last Updated	
35.00	150			SK6L		Polymer		Terminated at scheduled depth		21/03/2024	





Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH03

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 4 of 4
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	29.00	218380.96 E	35.00 m	17/03/2024	MJ/KW	Scale: 1:50
Rotary Coring	Frastr CRS-XL140 Duo	29.00	35.00	653305.73 N	Elevation: -8.29 mCD	End Date: 20/03/2024	Logger: MS/OG	DRAFT

Depth (m)	Sample / Tests	Field Records				Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
28.60 - 29.00	B37							-36.89	28.60		28.50-28.60m: Bed of stiff brown slightly sandy clay. Sand is fine to coarse.		
								-37.29	29.00		Weathered SANDSTONE/BRECCIA recovered as, reddish brown slightly sandy clayey subangular fine to coarse GRAVEL with low cobble content. (Recovered disturbed due to sonic drilling)		
		100	71	43							Medium strong reddish brown and light grey well cemented CONGLOMERATE with widely spaced, thin to medium beds of medium strong reddish brown coarse grained well cemented SANDSTONE. Partially weathered: slightly reduced strength, slightly closer fracture spacing, with brown discolouration.		
30.50								-39.09	30.80		Discontinuities: 1. 10-30 degree joints, medium spaced (90/300/420), undulating, rough, with brown staining on joint surfaces. 2. 85-90 degree joints, 29.90-30.50m, undulating, rough. with brown staining on joint surface.		
		100	100	91							29.50-29.60m: 100mm rounded clasts of siltstone. Strong reddish brown and grey coarse grained well cemented pebbly SANDSTONE interbedded with strong reddish brown medium grained well cemented SANDSTONE. Partially weathered: slightly closer fracture spacing, occasional brown and yellowish brown discolouration.		
32.00											Discontinuities: 1. 5-30 degree joints, medium spaced (80/525/740), planar, rough, with brown staining and occasional yellowish brown staining on joint surfaces.		
		100	100	82							32.00-32.20m: 70 degree incipient joint.		
33.50													
		100	100	78									
35.00								-43.29	35.00		End of Borehole at 35.00m		

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 14.50m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added		Core Barrel	Flush Type	Termination Reason	Last Updated
To (m)	Diam (mm)	From (m)	To (m)				
29.00	177			SK6L	Polymer	Terminated at scheduled depth	21/03/2024
35.00	150						



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 1 of 5
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	38.60	218475.93 E	45.50 m	02/04/2024	AM/KW	Scale: 1:50
Rotary Coring	Frastr CRS-XL140 Duo	38.60	45.50	653230.11 N	Elevation: 0.17 mCD	End Date: 03/04/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Light brown slightly gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to medium of various lithologies.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 1.10	B6									
1.10	D36	N=6 (1,1/2,1,1,2) Hammer SN = 1398	1.10	0.00	-0.94	1.10	NO RECOVERY: Probable unrecoverable very loose non-cohesive material flushed out by drilling process.			
1.10 - 1.55	SPT (S)									
2.60	D37	N=2 (1,0/1,0,1,0) Hammer SN = 1398	2.60	0.00						
2.60 - 3.05	SPT (S)									
4.10	D38	N=1 (1,0/0,1,0,0) Hammer SN = 1398	4.10	0.00	-3.94	4.10	Very loose brown slightly gravelly fine to coarse SAND with rare shell fragments. Gravel is subangular to subrounded fine to medium of various lithologies.			
4.10 - 5.60	B7									
4.10 - 4.55	SPT (S)									
5.60	D39	N=2 (1,0/1,0,0,1) Hammer SN = 1398	5.60	0.00						
5.60 - 7.10	B8									
5.60 - 6.05	SPT (S)									
6.10	ES2	Marine Scotland Sample								
7.10	D40	N=2 (1,1/0,1,0,1) Hammer SN = 1398	7.10	0.00	-6.94	7.10	Very loose to loose greyish brown slightly gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of various lithologies.			
7.10 - 8.60	B9									
7.10 - 7.55	SPT (S)									
8.60	D41	N=8 (1,2/1,2,3,2) Hammer SN = 1398	8.60	0.00						
8.60 - 9.90	B10									
8.60 - 9.05	SPT (S)									

Water Strikes				Remarks								
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)									
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 6.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing No Recovery 1.10-4.10m due to very loose granular material washed away during drilling								
Casing Details		Water Added		Core Barrel			Flush Type		Termination Reason		Last Updated	
To (m)	Diam (mm)	From (m)	To (m)									
38.60	177			SK6L			Polymer		Terminated at scheduled depth		05/04/2024	
45.50	150											



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 2 of 5
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	38.60	218475.93 E	45.50 m	02/04/2024	AM/KW	Scale: 1:50
Rotary Coring	Frastr CRS-XL140 Duo	38.60	45.50	653230.11 N	Elevation: 0.17 mCD	End Date: 03/04/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
9.90 - 11.60	B11	N=11 (2,3/3,3,2,3) Hammer SN = 1398	10.1	0.00	-9.74	9.90		Medium dense greyish brown silty fine to medium SAND.		
10.10	D42									
10.10 - 10.55	SPT (S)									
11.60	D43	N=0 (0,0/0,0,0,0) Hammer SN = 1398	11.6	0.00	-11.44	11.60		Very soft reddish brown very sandy CLAY. Sand is fine to medium.		
11.60 - 11.80	B12									
11.60 - 12.05	SPT (S)	Marine Scotland Sample	11.6	0.00	-11.64	11.80		Very loose brown very clayey fine to coarse SAND.		
11.80 - 12.55	B13									
12.20	ES3									
12.55 - 13.10	B14	50 (8,11/50 for 225mm) Hammer SN = 1398	13.1	0.00	-12.38	12.55		Very stiff brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of various lithologies.		
13.10	D44									
13.10 - 14.60	B15									
13.10 - 13.48	SPT (S)	Ublow=45 100% Recovery	14.6	0.00		14.60				
14.60 - 15.05	UT56									
14.60 - 16.10	B16									
16.10	D45	50 (10,10/50 for 170mm) Hammer SN = 1398	16.1	0.00		16.10				
16.10 - 17.60	B17									
16.10 - 16.42	SPT (S)									
17.60	D46	50 (9,9/50 for 195mm) Hammer SN = 1398	17.6	0.00		17.60				
17.60 - 19.10	B18									
17.60 - 17.94	SPT (S)									

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 6.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing No Recovery 1.10-4.10m due to very loose granular material washed away during drilling			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
38.60	177						
45.50	150						
Core Barrel	Flush Type	Termination Reason		Last Updated			
SK6L	Polymer	Terminated at scheduled depth		05/04/2024			



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 3 of 5
Sonic Drilling	Fraсте CRS-XL140 Duo	0.00	38.60	218475.93 E	45.50 m	02/04/2024	AM/KW	Scale: 1:50
Rotary Coring	Fraсте CRS-XL140 Duo	38.60	45.50	653230.11 N	Elevation: 0.17 mCD	End Date: 03/04/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
19.10 - 19.55 19.10 - 20.60	UT57 B19	Ublow=109 90% Recovery	19.2	0.00	-18.93	19.10		Reddish brown clayey fine to medium SAND.		
20.60 20.60 - 22.10 20.60 - 20.98	D47 B20 SPT (S)	50 (8,10/50 for 235mm) Hammer SN = 1398	20.6	0.00	-20.43	20.60		Very dense reddish brown gravelly slightly clayey fine to coarse SAND. Gravel is angular to subangular fine to medium of various lithologies.		
22.10 - 22.20 22.10 - 23.60	UT58 B21	Ublow=100 0% Recovery	22.1	0.00						
23.60 23.60 - 25.10 23.60 - 23.98	D48 B22 SPT (S)	50 (12,11/50 for 225mm) Hammer SN = 1398	23.6	0.00						
25.10 - 25.55 25.10 - 26.40	UT59 B23	Ublow=146 100% Recovery	25.1	0.00						
26.60 26.60 - 28.10 26.60 - 26.91	D49 B24 SPT (S)	50 (10,14/50 for 160mm) Hammer SN = 1398	26.6	0.00	-26.24	26.40		Very stiff brown and reddish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine of various lithologies.		

Water Strikes				Remarks				
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)					
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 6.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing No Recovery 1.10-4.10m due to very loose granular material washed away during drilling				
Casing Details		Water Added						
To (m)	Diam (mm)	From (m)	To (m)					
38.60	177							
45.50	150							
Core Barrel		Flush Type		Termination Reason		Last Updated		
SK6L		Polymer		Terminated at scheduled depth		05/04/2024		





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 4 of 5
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	38.60	218475.93 E	45.50 m	02/04/2024	AM/KW	Scale: 1:50
Rotary Coring	Frastr CRS-XL140 Duo	38.60	45.50	653230.11 N	Elevation: 0.17 mCD	End Date: 03/04/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
28.10 - 28.55 28.10 - 29.60	UT60 B25	Ublow=100 55% Recovery	28.1	0.00						
29.60 29.60 - 30.40 29.60 - 30.01	D50 B26 SPT (S)	50 (8,8/50 for 260mm) Hammer SN = 1398	29.6	0.00	-29.44	29.60		Very dense brown and reddish brown slightly clayey fine to coarse SAND.		
30.40 - 31.10	B27				-30.24	30.40		Very stiff brown and reddish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to medium of various lithologies.		
31.10 31.10 - 32.60 31.10 - 31.45	D51 B28 SPT (S)	50 (8,10/50 for 200mm) Hammer SN = 1398	31.1	0.00						
32.60 32.60 - 34.10 32.60 - 32.93	D52 B29 SPT (S)	50 (9,9/50 for 180mm) Hammer SN = 1398	32.6	0.00						
34.10 34.10 - 35.60 34.10 - 34.45	D53 B30 SPT (S)	50 (10,14/50 for 200mm) Hammer SN = 1398	34.1	0.00						
35.60 35.60 - 36.20 35.60 - 35.85	D54 B31 SPT (S)	50 (25 for 110mm/50 for 140mm) Hammer SN = 1398	35.6	0.00						
36.20 - 37.35	B32				-36.03	36.20		Very dense brown slightly gravelly clayey fine to medium SAND. Gravel is angular to subrounded fine of various lithologies.		
37.10	D55		37.1	0.00						

Water Strikes				Remarks											
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 6.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing No Recovery 1.10-4.10m due to very loose granular material washed away during drilling											
Casing Details		Water Added													
To (m)	Diam (mm)	From (m)	To (m)												
38.60	177			<table border="1"> <tr> <th>Core Barrel</th> <th>Flush Type</th> <th>Termination Reason</th> <th>Last Updated</th> </tr> <tr> <td>SK6L</td> <td>Polymer</td> <td>Terminated at scheduled depth</td> <td>05/04/2024</td> </tr> </table>				Core Barrel	Flush Type	Termination Reason	Last Updated	SK6L	Polymer	Terminated at scheduled depth	05/04/2024
Core Barrel	Flush Type	Termination Reason	Last Updated												
SK6L	Polymer	Terminated at scheduled depth	05/04/2024												
45.50	150														





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 5 of 5
Sonic Drilling	Fraсте CRS-XL140 Duo	0.00	38.60	218475.93 E	45.50 m	02/04/2024	AM/KW	Scale: 1:50
Rotary Coring	Fraсте CRS-XL140 Duo	38.60	45.50	653230.11 N	Elevation: 0.17 mCD	End Date: 03/04/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records				Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
37.10 - 37.28	SPT (S)	50 (25 for 75mm/50 for 100mm) Hammer SN = 1398						-37.18	37.35		Reddish brown gravelly slightly clayey fine to medium SAND. Gravel is subangular to subrounded fine of various lithologies.		
37.35 - 37.70	B33							-37.53	37.70		Stiff brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of various lithologies.		
37.70 - 38.30	B34							-38.14	38.30		Reddish brown fine to medium SAND.		
38.30 - 38.60	B35							-38.44	38.60		Medium strong to strong reddish brown medium grained well cemented pebbly SANDSTONE. Partially weathered: slightly reduced strength, slightly closer fracture spacing, with some sandy clay infill.		
39.50		89	89	89						Discontinuities: 1. 15-35 degree joints, medium spaced (120/490/1000), undulating, rough, rare sandy clay deposits on joint surfaces, 2. 55-75 degree joints at 40.40-40.60m, 40.70-41.00m, 41.45-41.70m and 43.00-43.25m, undulating, rough, with rare sandy clay deposits on joint surfaces.			
41.00		100	91	87									
42.50		100	82	80	3								
44.00		100	93	93									
45.50		100	100	100			-45.34	45.50			End of Borehole at 45.50m		
		TCR	SCR	RQD	FI								

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 6.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing No Recovery 1.10-4.10m due to very loose granular material washed away during drilling			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
38.60	177						
45.50	150						
Core Barrel	Flush Type	Termination Reason		Last Updated		AGS	
SK6L	Polymer	Terminated at scheduled depth		05/04/2024		AGS	



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 1 of 5
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	34.90	218559.75 E	40.60 m	12/03/2024	MJ+MJ/AM	Scale: 1:50
Rotary Coring	Frastr CRS-XL140 Duo	34.90	40.60	653295.99 N	Elevation: 0.01 mCD	End Date: 14/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Very loose to loose light brown slightly gravelly silty fine to medium SAND and rare cobbles. Gravel is subangular to subrounded fine. Cobbles are angular or various lithologies.		
0.00	ES4	RAD Composit								
0.00	ES5	ENV Composite								
0.00 - 1.30	B6									
1.30 - 2.80	B7		1.30	0.00						
1.30 - 1.75	SPT (S)	N=2 (0,0/1,0,0,1) Hammer SN = 1398								
2.80 - 4.30	B8		2.80	0.00						
2.80 - 3.25	SPT (S)	N=7 (1,1/1,2,2,2) Hammer SN = 1398								
4.30 - 5.80	B9		4.30	0.00						
4.30 - 4.75	SPT (S)	N=3 (0,1/1,0,1,1) Hammer SN = 1398								
5.80 - 6.50	B10		5.80	0.00						
5.80 - 6.25	SPT (S)	N=4 (1,1/1,1,1,1) Hammer SN = 1398								
6.00	ES2	Marine Scotland Sample								
6.50 - 8.65	B11				-6.49	6.50		Loose to medium dense greyish brown silty fine to medium SAND.		
7.30	D34		7.30	0.00						
7.30 - 7.75	SPT (S)	N=10 (1,2/3,2,2,3) Hammer SN = 1398								
8.65 - 9.30	B12				-8.64	8.65		Very soft to soft greyish brown sandy silty CLAY. Sand is fie to medium.		
8.80 - 9.25	UT46	Ublow=13 100% Recovery	8.80	0.00						
9.30	D35				-9.29	9.30				

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 7.40m All elevations and reduced levels given in Chart Datum			
				Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
34.90	177						
40.60	150						
Core Barrel		Flush Type		Termination Reason		Last Updated	
SK6L		Polymer		Terminated at scheduled depth		15/03/2024	





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 2 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	34.90	218559.75 E	40.60 m	12/03/2024	MJ+MJ/AM	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	34.90	40.60	653295.99 N	Elevation: 0.01 mCD	End Date: 14/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
9.30 - 11.00	B13							Very soft light brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to subrounded fine to medium of various lithologies.		
10.30	D36		10.3	0.00						
10.30 - 10.75	SPT (S)	N=5 (0,0/1,1,1,2) Hammer SN = 1398								
11.00 - 12.40	B14				-10.99	11.00		Loose to medium dense reddish brown fine to medium SAND.		
11.80 - 12.25	UT47	Ublow=42 100% Recovery	11.8	0.00						
12.00	ES3	Marine Scotland Sample								
12.40 - 13.70	B15									
13.30	D37		13.3	0.00						
13.30 - 13.75	SPT (S)	N=10 (1,1/2,2,3,3) Hammer SN = 1398								
13.70 - 14.90	B16				-13.69	13.70		Reddish brown silty fine to medium SAND.		
14.80 - 15.25	UT48	Ublow=120 100% Recovery	14.8	0.00						
14.90 - 16.30	B17				-14.89	14.90		Dense to very dense reddish brown slightly gravelly occasionally clayey fine to coarse SAND with rare thin beds of sandy clayey gravel. Gravel is subangular to subrounded fine to medium of various lithologies.		
16.30	D38		16.3	0.00						
16.30 - 17.80	B18									
16.30 - 16.74	SPT (S)	50 (4,4/50 for 285mm) Hammer SN = 1398								
17.80 - 18.25	UT49	Ublow=172 100% Recovery	17.8	0.00						
17.80 - 19.30	B19									

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 7.40m All elevations and reduced levels given in Chart Datum			
				Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
34.90	177						
40.60	150						
Core Barrel		Flush Type		Termination Reason		Last Updated	
SK6L		Polymer		Terminated at scheduled depth		15/03/2024	





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 3 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	34.90	218559.75 E	40.60 m	12/03/2024	MJ+MJ/AM	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	34.90	40.60	653295.99 N	Elevation: 0.01 mCD	End Date: 14/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
19.30	D39	N=45 (4,6,7,15,17) Hammer SN = 1398	19.3	0.00						
19.30 - 20.80	B20									
19.30 - 19.75	SPT (S)									
20.80 - 21.25	UT50	Ublow=149 100% Recovery	20.8	0.00						
20.80 - 22.30	B21									
22.30	D40	N=38 (3,4/6,6,9,17) Hammer SN = 1398	22.3	0.00						
22.30 - 24.20	B22									
22.30 - 22.75	SPT (S)									
23.80 - 24.25	UT51	Ublow=179 100% Recovery	23.8	0.00						
24.20 - 25.30	B23									
25.30	D41	50 (6,7/50 for 290mm) Hammer SN = 1398	25.3	0.00						
25.30 - 26.80	B24									
25.30 - 25.74	SPT (S)									
26.80 - 27.25	UT52	Ublow=190 100% Recovery	26.8	0.00						
26.80 - 27.65	B25									
27.65 - 28.40	B26									

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 7.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
34.90	177			Core Barrel	Flush Type	Termination Reason	Last Updated			
40.60	150			SK6L	Polymer	Terminated at scheduled depth	15/03/2024			



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 4 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	34.90	218559.75 E	40.60 m	12/03/2024	MJ+MJ/AM	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	34.90	40.60	653295.99 N	Elevation: 0.01 mCD	End Date: 14/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
28.30	D42	50 (4,5/50 for 285mm) Hammer SN = 1398	28.3	0.00	-28.39	28.40	[Symbol]	Very dense brown silty fine to medium SAND.		
28.30 - 28.74	SPT (S)					28.90	[Symbol]	Firm to stiff brown mottled grey sandy CLAY. Sand is fine.		
28.40 - 28.90	B27	Ublow=100 100% Recovery	29.8	0.00	-28.89	29.80	[Symbol]			
28.90 - 30.10	B28					29.80 - 30.25	UT53	30.10 - 31.30	B29	
31.30	D43	N=46 (6,8/7,9,15,15) Hammer SN = 1398	31.3	0.00	-31.29	31.30	[Symbol]	Very stiff brown sandy CLAY. Sand is fine to medium		
31.30 - 31.90	B30					31.90	[Symbol]	Very stiff brown CLAY with occasional lenses of reddish grey fine sand.		
31.30 - 31.75	SPT (S)	N=43 (4,6/9,12,10,12) Hammer SN = 1398	32.8	0.00	-33.69	33.70	[Symbol]	Brown very gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse of various lithologies.		
31.90 - 33.70	B31					34.20	[Symbol]	Very stiff reddish brown mottled grey CLAY with pockets of grey fine to medium sand.		
32.80	D44	50 (5,8/50 for 265mm) Hammer SN = 1398	34.3	0.00	-34.19	34.30	[Symbol]	POSSIBLE WEATHERED BEDROCK; recovered as reddish brown mottled grey sandy angular to subangular fine to medium GRAVEL of sandstone with low cobble content. Sand is fine to coarse. Cobbles are subangular of sandstone.		
32.80 - 33.25	SPT (S)					34.30 - 34.72	B33	35.10	[Symbol]	SANDSTONE BEDROCK (Detailed description to follow)
33.70 - 34.20	B32									
34.30	D45									
34.30 - 34.90	B33									
34.30 - 34.72	SPT (S)									
36.10										

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 7.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added		Core Barrel	Flush Type	Termination Reason	Last Updated
To (m)	Diam (mm)	From (m)	To (m)				
34.90	177			SK6L	Polymer	Terminated at scheduled depth	15/03/2024
40.60	150						





Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH06

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 1 of 5
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	33.80	218651.43 E	39.80 m	09/03/2024	AM/MJ	Scale: 1:50
Rotary Coring	Frastr CRS-XL140 Duo	33.80	39.80	653363.70 N	Elevation: -0.13 mCD	End Date: 12/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00 - 0.45	SPT (S)	N=4 (1,1/1,1,1,1) Hammer SN = 1398	0.00	0.00				NO RECOVERY: Probably very loose to loose silty fine SAND washed away during drilling.		
0.80 - 1.25	SPT (S)	N=3 (0,0/1,1,0,1) Hammer SN = 1398	0.80	0.00						
2.30	D32	Marine Scotland Sample RAD Composite ENV Composite	2.30	0.00	-2.43	2.30		Loose brown silty fine to medium SAND.		
2.30	ES1									
2.30	ES4									
2.30	ES5									
2.30 - 3.80	B6									
2.30 - 2.75	SPT (S)	N=10 (1,1/2,2,3,3) Hammer SN = 1398								
3.80	D33	N=10 (1,2/2,2,3,3) Hammer SN = 1398	3.80	0.00	-3.93	3.80		Medium dense brown fine to coarse SAND.		
3.80 - 4.00	B7									
3.80 - 4.25	SPT (S)									
4.00 - 5.20	B8							Medium dense greyish black fine to coarse SAND.		
5.20 - 6.70	B9	N=19 (1,2/4,4,4,7) Hammer SN = 1398	5.30	0.00	-5.33	5.20		Medium dense reddish brown silty fine to medium SAND with occasional pockets of clay.		
5.30	D34									
5.30 - 5.75	SPT (S)									
5.94	ES2	Marine Scotland Sample						<u>5.20-5.30m: Bed of stiff reddish brown CLAY.</u>		
6.70 - 7.90	B10	Ublow=84 100% Recovery	6.80	0.00	-6.83	6.70		Soft to firm reddish brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of various lithologies.		
6.80	UT51									
7.90 - 9.05	B11							Dense brown gravelly silty fine to coarse SAND with low cobble content. Gravel is subangular to subrounded fine to coarse of various lithologies. Cobbles are subangular of sandstone.		
8.30	D35	50 (10,10/50 for 155mm) Hammer SN = 1398	8.30	0.00						
8.30 - 8.60	SPT (S)									
9.05 - 9.35	B12							Brown sandy clayey subangular to subrounded fine to coarse GRAVEL of various lithologies. Sand is fine to coarse.		

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 6.40m All elevations and reduced levels given in Chart Datum			
				Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
33.80	177						
39.80	150						
Core Barrel		Flush Type		Termination Reason		Last Updated	
SK6L		Polymer		Terminated at scheduled depth		13/03/2024	





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 2 of 5
Sonic Drilling	Fraсте CRS-XL140 Duo	0.00	33.80	218651.43 E	39.80 m	09/03/2024	AM/MJ	Scale: 1:50
Rotary Coring	Fraсте CRS-XL140 Duo	33.80	39.80	653363.70 N	Elevation: -0.13 mCD	End Date: 12/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
9.35 - 9.90	B13	N=43 (3,3/9,9,12,13) Hammer SN = 1398	9.80	0.00	-10.03	9.35		Brown slightly gravelly silty fine to coarse SAND with low cobble content. Gravel is subangular to subrounded fine to coarse of various lithologies. Cobbles are subangular of various lithologies.		
9.80	D36					9.90		Very stiff brown slightly gravelly very sandy CLAY with rare (100 -150mm) gravelly sand lenses. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of various lithologies..		
9.80 - 10.25	SPT (S)									
9.90 - 11.30	B14									
11.30	D37	50 (10,10/50 for 157mm) Hammer SN = 1398	11.3	0.00		11.3				
11.30 - 12.80	B15									
11.30 - 11.61	SPT (S)									
11.87	ES3	Marine Scotland Sample								
12.80	D38	N=50 (4,7/12,14,17,7) Hammer SN = 1398	12.8	0.00		12.8				
12.80 - 14.30	B16									
12.80 - 13.25	SPT (S)									
14.30	D39	N=41 (1,3/4,12,12,13) Hammer SN = 1398	14.3	0.00		14.3				
14.30 - 15.45	B17									
14.30 - 14.75	SPT (S)									
15.45 - 16.50	B18	N=59 (4,7/12,14,17,16) Hammer SN = 1398	15.8	0.00	-15.58	15.45		Very dense brown slightly silty fine to medium SAND.		
15.80	D40									
15.80 - 16.25	SPT (S)									
16.50 - 17.30	B19	50 (5,15/50 for 235mm) Hammer SN = 1398	17.3	0.00	-17.43	16.50		Firm brown sandy silty CLAY. Sand is fine to medium.		
17.20 - 17.70	D41									
17.30	D42									
17.30 - 18.80	B20					17.30		Very dense brown silty fine to medium SAND.		
17.30 - 17.68	SPT (S)									

Water Strikes				Remarks				
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)					
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 6.40m All elevations and reduced levels given in Chart Datum				
				Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing				
Casing Details		Water Added		Core Barrel	Flush Type	Termination Reason	Last Updated	
To (m)	Diam (mm)	From (m)	To (m)					
33.80	177							
39.80	150			SK6L	Polymer	Terminated at scheduled depth	13/03/2024	



Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH06

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 3 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	33.80	218651.43 E	39.80 m	09/03/2024	AM/MJ	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	33.80	39.80	653363.70 N	Elevation: -0.13 mCD	End Date: 12/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
18.80	D43	N=62 (5,16/15,16,16,15) Hammer SN = 1398	18.8	0.00		18.80				
18.80 - 20.30	B21									
18.80 - 19.25	SPT (S)									
20.30 - 20.50	D44	Ublow=24 50% Recovery	20.3	0.00		20.30		Firm brown slightly sandy CLAY. Sand is fine to medium. <i>20.06-20.10m: Sandstone cobble.</i>		
20.30 - 20.55	UT52									
20.30 - 22.10	B22									
21.80 - 22.25	SPT (C)	N=66 (10,15/16,17,17,16) Hammer SN = 1398	21.8	0.00		21.80				
22.10 - 22.90	B23									
22.90 - 24.40	B24	Ublow=52 50% Recovery	23.3	0.00		22.90		Very dense light brown fine to coarse SAND		
23.30 - 23.55	UT53									
24.40 - 26.30	B25									
24.80	D45	N=68 (7,15/17,17,18,16) Hammer SN = 1398	24.8	0.00		24.80		Very stiff brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of various lithologies.		
24.80 - 25.25	SPT (S)									
26.30	D46	N=73 (6,16/17,19,19,18) Hammer SN = 1398	26.3	0.00		26.30		Very dense reddish brown fine to medium SAND with occasional lenses (50-90mm) of very silty sand and clay.		
26.30 - 27.80	B26									
26.30 - 26.75	SPT (S)									
27.80	D47		27.8	0.00		27.80				
27.80 - 29.80	B27									

Water Strikes				Remarks				
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 6.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing				
Casing Details		Water Added		Core Barrel	Flush Type	Termination Reason	Last Updated	AGS
To (m)	Diam (mm)	From (m)	To (m)					
33.80	177			SK6L	Polymer	Terminated at scheduled depth	13/03/2024	



Project No.
23-1739

Project Name: Hunterston Marine Yard
Client: Peel Ports Limited
Client's Rep: Envirocentre

Borehole ID
BH06

Method	Plant Used	Top (m)	Base (m)	Coordinates
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	33.80	218651.43 E
Rotary Coring	Fraste CRS-XL140 Duo	33.80	39.80	653363.70 N

Final Depth: 39.80 m	Start Date: 09/03/2024	Driller: AM/MJ	Sheet 4 of 5 Scale: 1:50
Elevation: -0.13 mCD	End Date: 12/03/2024	Logger: LW/OG	

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill								
27.80 - 28.25	SPT (S)	N=60 (8,15/15,16,14,15) Hammer SN = 1398																
29.30	D48										N=57 (7,14/14,13,15,15) Hammer SN = 1398	29.3	0.00	29.80	Brown silty fine to medium SAND.			
29.30 - 29.75	SPT (S)																	
29.80 - 30.50	B28													-29.93				
30.50 - 31.90	B29																	
30.80	D49	100 (9,16/100 for 215mm) Hammer SN = 1398	30.8	0.00		30.50		Very dense reddish brown slightly gravelly fine to coarse SAND. Gravel is angular to subangular fine to medium of sandstone.										
30.80 - 31.16	SPT (S)																	
31.90 - 33.20	B30					-32.03		Very dense reddish brown gravelly fine to coarse SAND. Gravel is angular to subangular fine to medium of sandstone.										
32.30	D50	100 (25 for 135mm/100 for 180mm) Hammer SN = 1398	32.3	0.00		31.90												
32.30 - 32.62	SPT (S)																	
33.20 - 33.80	B31					-33.33		Extremely weak reddish brown SANDSTONE Deconstructed: recovered as reddish brown sandy very angular to angular fine to coarse GRAVEL.										
35.30		100	100	100	2	33.80		Strong reddish brown speckled white well cemented pebbly SANDSTONE with widely spaced medium beds of strong reddish brown fine grained well cemented SANDSTONE. Partially weathered.										
											Discontinuities: 1. 5-15 degree joints, medium spaced (210/565/620), planar, rough and smooth, clean.							
36.80		100	98	98	2	35.50		Strong light reddish brown speckled white well cemented CONGLOMERATE. Partially weathered: occasional brown clay infill.										
											Discontinuities: 1. 10 degree bedding fractures at 35.95m and 36.20m, planar, smooth, clean. 2. 60-65 degree joint at 35.85-35.80m, planar, rough, clean. 3. 75-85 degree joint at 36.60-36.80m, undulating, rough, clean.							
		TCR	SCR	RQD	FI			<i>37.10-37.25m: Incipient 65 degree joint.</i>										

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)							
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 6.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
33.80	177									
39.80	150									
Core Barrel		Flush Type	Termination Reason		Last Updated			AGS		
SK6L		Polymer	Terminated at scheduled depth		13/03/2024					



Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH06

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 5 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	33.80	218651.43 E	39.80 m	09/03/2024	AM/MJ	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	33.80	39.80	653363.70 N	Elevation: -0.13 mCD	End Date: 12/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Samples / Field Records	TCR	SCR	RQD	FI	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
38.30		100	90	88				-37.33	37.20	Strong thinly bedded reddish brown medium grained well cemented SANDSTONE with occasional pebbles. Partially weathered: slightly closer fracture spacing.		
					2					Discontinuities: 1. 20-25 degree joints at 38.80-38.90m and 39.20-39.30m, planar, smooth, clean. 2. 60 degree joint at 39.50-39.60m, undulating, rough, clean. <u>37.50-37.85m: Bed of medium strong reddish brown fine grained moderately cemented sandstone.</u>		
39.80		100	94	85				-39.93	39.80	End of Borehole at 39.80m		

Water Strikes				Chiselling Details			Remarks
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	From (m)	To (m)	Time (hh:mm)	
Casing Details		Water Added					Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 6.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing
To (m)	Diam (mm)	From (m)	To (m)				
33.80	177						
39.80	150						
				Core Barrel	Flush Type	Termination Reason	Last Updated
				SK6L	Polymer	Terminated at scheduled depth	13/03/2024





Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH10

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 4.50 m	Start Date: 14/03/2024	Driller: MJ	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	4.50	218363.77 E 653424.61 N	Elevation: -8.45 mCD	End Date: 14/03/2024	Logger: OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Grey mottled black silty fine to medium SAND with rare shell fragments. [organic odour]		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 1.50	B6									
1.50 - 3.00	B7									
1.80	ES2	Marine Scotland Sample								
3.00 - 4.50	B8				-11.24	2.80		Brown mottled dark grey fine to coarse SAND.		
3.50	ES3	Marine Scotland Sample			-11.94	3.50		Very soft light grey mottled brown very sandy silty CLAY. Sand is fine to medium.		
					-12.94	4.50		End of Borehole at 4.50m		

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 11.90m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
4.50	177			Core Barrel	Flush Type	Termination Reason	Last Updated			
						Terminated at scheduled depth	19/03/2024			



Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH12

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 3.00 m	Start Date: 14/03/2024	Driller: MJ	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraсте CRS-XL140 Duo	0.00	4.50	218434.56 E 653476.60 N	Elevation: -8.98 mCD	End Date: 15/03/2024	Logger: OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Grey silty fine to medium SAND. [Organic odour]		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 1.50	B6				-9.88	0.90		Light brown fine to coarse SAND, predominantly fine to medium.		
1.50	ES2	Marine Scotland Sample								
1.50 - 3.00	B7									
3.00	ES3	Marine Scotland Sample			-11.98	3.00		End of Borehole at 3.00m		

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 13.50m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
4.50	177			Core Barrel	Flush Type	Termination Reason	Last Updated			
						Terminated at scheduled depth	19/03/2024			



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 6.40 m	Start Date: 08/03/2024	Driller: AM	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraсте CRS-XL140 Duo	0.00	6.40	218510.05 E 653421.04 N	Elevation: -7.59 mCD	End Date: 08/03/2024	Logger: LW	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample			-7.69	0.10	XXXX	Very soft black sandy SILT. Sand is fine to medium.		
0.00	ES4	RAD Composite						Brownish grey fine to coarse SAND.		
0.00	ES5	ENV Composite								
0.00 - 0.40	SB6									
0.40 - 1.90	SB7									
1.90 - 3.40	SB8				-9.49	1.90	XXXX	Brownish grey slightly gravelly silty fine to medium SAND. Gravel is subangular to subrounded fine to coarse of various lithologies.		
2.40	ES2	Marine Scotland Sample								
					-10.39	2.80	XXXX	Stiff reddish brown slightly sandy CLAY. Sand is fine to coarse.		
3.40 - 4.90	SB9				-10.89	3.30	XXXX	Reddish brown slightly silty fine to medium SAND with occasional pockets of clay.		
4.80	ES3	Marine Scotland Sample								
4.90 - 6.40	SB10									
					-13.69	6.10	XXXX	Dark reddish brown slightly gravelly fine to medium SAND. Gravel is angular to subrounded fine to coarse of various lithologies.		
					-13.99	6.40		End of Borehole at 6.40m		

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 11.70m All elevations and reduced levels given in Chart Datum						
				Second attempted jacking location due to large boulder kicking casing off the vertical on first set-up Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added		Core Barrel			Flush Type	Termination Reason	Last Updated	
To (m)	Diam (mm)	From (m)	To (m)					Terminated at scheduled depth	11/03/2024	
6.40	177									



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 4.50 m	Start Date: 17/03/2024	Driller: AM	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraсте CRS-XL140 Duo	0.00	4.50	218239.75 E 653386.10 N	Elevation: -7.81 mCD	End Date: 17/03/2024	Logger: LW	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Brownish grey fine to medium SAND.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 1.50	B									
					-8.81	1.00		Brownish grey slightly silty fine to medium SAND.		
1.50 - 3.00	B									
					-9.31	1.50		Brownish grey fine to medium SAND with low cobble content. Cobbles are subangular to subrounded of various lithologies.		
2.10	ES2	Marine Scotland Sample								
3.00 - 4.50	B									
4.20	ES3	Marine Scotland Sample								
					-12.31	4.50		At 4.40m: 150 x 70mm subangular cobble. End of Borehole at 4.50m		

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 12.50m All elevations and reduced levels given in Chart Datum Second attempted jacking location due to large boulder kicking casing off the vertical on first set-up Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
4.50	177			Core Barrel	Flush Type	Termination Reason	Last Updated			
						Terminated at scheduled depth	19/03/2024			



Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH15

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 3.00 m	Start Date: 15/03/2024	Driller: MJ	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	3.00	218462.22 E 653577.41 N	Elevation: -9.20 mCD	End Date: 15/03/2024	Logger: OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Very soft grey very sandy silty CLAY with lenses of sand (20-30mm) throughout. Sand is fine to medium.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 1.50	B6									
1.40	ES2	Marine Scotland Sample			-10.60	1.40		Soft light brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium.		
1.50 - 3.00	B7									
					-11.30	2.10		Light brown slightly silty fine to medium SAND.		
2.80	ES3	Marine Scotland Sample			-12.20	3.00		End of Borehole at 3.00m		

Water Strikes				Remarks							
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 13.30m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing							
Casing Details		Water Added									
To (m)	Diam (mm)	From (m)	To (m)								
3.00	177			Core Barrel		Flush Type		Termination Reason		Last Updated	
								Terminated at scheduled depth		19/03/2024	





Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH16

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 1 of 1
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	9.00	218139.73 E 653345.29 N	9.00 m	16/03/2024	MJ	Scale: 1:50
					Elevation:	End Date:	Logger:	DRAFT
					-4.40 mCD	16/03/2024	OG	

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Grey becoming brown fine to coarse SAND with frequent shell fragments.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 1.50	B6									
1.50 - 3.00	B7									
					-6.90	2.50		Soft to firm brown slightly gravelly very sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium.		
3.00 - 4.50	B8									
					-7.70	3.30		Reddish brown fine to medium SAND.		
3.80	ES2	Marine Scotland Sample								
4.50 - 6.00	B9									
6.00 - 7.50	B10									
7.50 - 9.00	B11									
7.60	ES3	Marine Scotland Sample								
					-13.05	8.65		Soft brown sandy CLAY. Sand is fine to medium.		
					-13.40	9.00				
								End of Borehole at 9.00m		

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 9.00m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
9.00	177						
				Core Barrel	Flush Type	Termination Reason	Last Updated
						Terminated at scheduled depth	19/03/2024





Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH17

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 3.70 m	Start Date: 15/03/2024	Driller: AM	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraсте CRS-XL140 Duo	0.00	3.70	218311.93 E 653469.02 N	Elevation: -10.12 mCD	End Date: 15/03/2024	Logger: LW	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Brownish grey slightly silty fine to medium SAND.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 0.70	B6									
0.70 - 2.20	B7									
0.90	ES2	Marine Scotland Sample			-11.02	0.90		Brownish grey fine to coarse SAND.		
1.90	ES3	Marine Scotland Sample								
2.20 - 3.70	B8									
					-13.82	3.70		End of Borehole at 3.70m		

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 15.50m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
3.70	177									
				Core Barrel	Flush Type	Termination Reason		Last Updated		
						Terminated at scheduled depth		19/03/2024		



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 3.00 m	Start Date: 15/03/2024	Driller: AM	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	3.00	218189.09 E 653471.97 N	Elevation: -13.21 mCD	End Date: 15/03/2024	Logger: OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample					XXXXX	Grey SILT.		
0.00	ES4	RAD Composite					XXXXX			
0.00	ES5	ENV Composite					XXXXX			
0.00 - 1.50	B6						XXXXX			0.5
0.60	ES2	Marine Scotland Sample			-14.21	1.00	XXXXX			1.0
1.20	ES3	Marine Scotland Sample						Reddish brown fine to coarse SAND.		1.5
1.50 - 3.00	B7									2.0
										2.5
										3.0
					-16.21	3.00		End of Borehole at 3.00m		3.5
										4.0
										4.5
										5.0
										5.5
										6.0
										6.5
										7.0
										7.5
										8.0
										8.5
										9.0

Water Strikes				Remarks									
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 17.80m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing									
Casing Details		Water Added											
To (m)	Diam (mm)	From (m)	To (m)										
3.00	177			Core Barrel				Flush Type		Termination Reason		Last Updated	
										Terminated at scheduled depth		19/03/2024	





Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH19

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 3.00 m	Start Date: 16/03/2024	Driller: MJ	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	3.00	218045.52 E 653478.25 N	Elevation: -9.81 mCD	End Date: 16/03/2024	Logger: OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Light brown fine to coarse SAND with occasional shell fragments.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 1.50	B6									
1.10	ES2	Marine Scotland Sample								
1.50 - 3.00	B7									
2.10	ES3	Marine Scotland Sample								
					-12.81	3.00		End of Borehole at 3.00m		

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 13.30m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
3.00	177			Core Barrel			Flush Type	Termination Reason	Last Updated	
								Terminated at scheduled depth	19/03/2024	



Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH20

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 4.50 m	Start Date: 17/03/2024	Driller: MJ	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	4.50	218306.23 E 653354.94 N	Elevation: -8.62 mCD	End Date: 17/03/2024	Logger: OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Grey slightly gravelly silty fine to coarse SAND with frequent shell fragments. Gravel is angular to rounded fine to coarse of various lithologies.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 1.50	B6									
1.50 - 3.00	B7	Marine Scotland Sample			-10.12	1.50		Grey slightly clayey fine to coarse SAND with occasional (20-40mm) lenses of clay and occasional shell fragments.		
1.70	ES2									
3.00 - 4.50	B8									
3.30	ES3	Marine Scotland Sample								
					-12.92	4.30		Soft grey mottled brown CLAY.		
					-13.12	4.50		End of Borehole at 4.50m		

Water Strikes				Remarks							
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 13.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing							
Casing Details		Water Added									
To (m)	Diam (mm)	From (m)	To (m)								
4.50	177			Core Barrel	Flush Type	Termination Reason	Last Updated				
						Terminated at scheduled depth	19/03/2024				



Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH21

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 3.00 m	Start Date: 16/03/2024	Driller: AM	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraсте CRS-XL140 Duo	0.00	3.00	217966.79 E 653346.67 N	Elevation: -6.60 mCD	End Date: 16/03/2024	Logger: LW	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample					[Dotted Pattern]	Greyish brown fine to medium SAND.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 1.50	B6									
1.50	ES2	Marine Scotland Sample								
1.50 - 3.00	B7									
3.00	ES3	Marine Scotland Sample			-9.60	3.00		End of Borehole at 3.00m		

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 11.70m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
3.00	177			Core Barrel	Flush Type	Termination Reason	Last Updated			
						Terminated at scheduled depth	19/03/2024			



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 6.00 m	Start Date: 30/03/2024	Driller: AM	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	6.00	217968.06 E 653345.84 N	Elevation: -6.38 mCD	End Date: 30/03/2024	Logger: MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Reddish brown slightly silty fine to medium SAND with frequent shell fragments.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 1.50	B6									
1.50 - 3.00	B7				-7.38	1.00		Reddish brown slightly gravelly slightly silty fine to coarse SAND. Gravel is angular fine to medium of various lithologies.		
2.80	ES2	Marine Scotland Sample								
3.00 - 4.50	B8									
4.50 - 6.00	B9									
5.60	ES3	Marine Scotland Sample								
					-12.38	6.00		End of Borehole at 6.00m		

Water Strikes				Remarks							
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 11.50m All elevations and reduced levels given in Chart Datum Re-drill at BH21 due to insufficient depth of sampling during initial visit Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing							
Casing Details		Water Added									
To (m)	Diam (mm)	From (m)	To (m)								
6.00	177			Core Barrel		Flush Type		Termination Reason		Last Updated	
								Terminated at scheduled depth		02/04/2024	





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 9.00 m	Start Date: 16/03/2024	Driller: MJ	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	9.00	218037.76 E 653269.30 N	Elevation: -4.41 mCD	End Date: 16/03/2024	Logger: OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Orangish brown gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of various lithologies.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 1.50	B6									
1.50 - 3.00	B7									
3.00 - 4.50	B8									
3.80	ES2	Marine Scotland Sample								
4.50 - 6.00	B9									
6.00 - 7.50	B10									
7.50	ES3	Marine Scotland Sample			-11.81	7.40		Soft to firm reddish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of various lithologies.		
7.50 - 9.00	B11									
					-13.41	9.00		End of Borehole at 9.00m		

Water Strikes				Remarks							
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 9.00m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing							
Casing Details		Water Added									
To (m)	Diam (mm)	From (m)	To (m)								
9.00	177			Core Barrel			Flush Type		Termination Reason		Last Updated
									Terminated at scheduled depth		19/03/2024





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 1 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	31.90	218189.09 E	39.40 m	27/03/2024	MJ/AM	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	31.90	39.40	653184.43 N	Elevation: -4.11 mCD	End Date: 29/03/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.40	ES1	Marine Scotland Sample						Very loose reddish brown slightly silty fine to coarse SAND.		
0.40	ES4	RAD Composite								
0.40	ES5	ENV Composite								
0.40 - 1.90	B6									
1.90	D32		1.90	0.00				LOW RECOVERY: Very loose to medium dense reddish brown clayey fine to medium SAND.		
1.90 - 3.40	B7									
1.90 - 2.35	SPT (S)	N=2 (0,1,0,1,1,0) Hammer SN = 1398								
3.40	D33		3.40	0.00	-7.51	3.40		Very loose to loose reddish brown slightly silty fine to medium SAND.		
3.40 - 4.90	B8									
3.40 - 3.85	SPT (S)	N=15 (1,4/3,4,4,4) Hammer SN = 1398								
4.00	ES2	Marine Scotland Sample						Stiff brown slightly sandy CLAY. Sand is fine to medium		
4.90	D34		4.90	0.00						
4.90 - 5.80	B9									
4.90 - 5.35	SPT (S)	N=3 (1,0/1,1,0,1) Hammer SN = 1398								
5.80 - 6.40	B10				-9.91	5.80				
6.40 - 7.90	B11		6.40	0.00						
6.40 - 6.85	SPT (S)	N=3 (1,1,0/1,1,1) Hammer SN = 1398								
7.90	D35		7.90	0.00						
7.90	ES3	Marine Scotland Sample								
7.90 - 9.20	B12									
7.90 - 8.35	SPT (S)	N=6 (1,2/1,2,2,1) Hammer SN = 1398								
9.20 - 9.40	B13				-13.31	9.20				

Water Strikes				Remarks							
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)								
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 10.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing							
Casing Details		Water Added									
To (m)	Diam (mm)	From (m)	To (m)								
31.90	177			Core Barrel		Flush Type		Termination Reason		Last Updated	
39.40	150			SK6L		Polymer		Terminated at scheduled depth		02/04/2024	





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 2 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	31.90	218189.09 E	39.40 m	27/03/2024	MJ/AM	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	31.90	39.40	653184.43 N	Elevation: -4.11 mCD	End Date: 29/03/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
9.40	D36	Ublow=100 75% Recovery	9.40	0.00	-13.51	9.40		Medium dense to dense reddish brown slightly silty fine to coarse SAND.		
9.40 - 10.90	B14									
9.40 - 9.85	UT51									
10.90	D37	N=49 (7,13,18,12,10,9) Hammer SN = 1398	10.90	0.00						
10.90 - 12.40	B15									
10.90 - 11.35	SPT (S)									
12.40	D38	N=10 (3,2/1,1,3,5) Hammer SN = 1398	12.40	0.00						
12.40 - 13.90	B16									
12.40 - 12.85	SPT (S)									
13.90	D39	N=37 (4,4/5,7,11,14) Hammer SN = 1398	13.90	0.00						
13.90 - 15.40	B17									
13.90 - 14.35	SPT (S)									
15.40	D40	N=36 (4,6/7,7,9,13) Hammer SN = 1398	15.40	0.00						
15.40 - 16.90	B18									
15.40 - 15.85	SPT (S)									
16.90	D41	N=37 (5,6/7,8,10,12) Hammer SN = 1398	16.90	0.00	-21.01	16.90		Dense reddish brown slightly silty fine to coarse SAND.		
16.90 - 18.40	B19									
16.90 - 17.35	SPT (S)									
18.40	D42		18.40	0.00						
18.40 - 19.90	B20									

Water Strikes				Remarks							
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)								
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 10.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing							
Casing Details		Water Added									
To (m)	Diam (mm)	From (m)	To (m)								
31.90	177			Core Barrel		Flush Type		Termination Reason		Last Updated	
39.40	150			SK6L		Polymer		Terminated at scheduled depth		02/04/2024	





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 3 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	31.90	218189.09 E	39.40 m	27/03/2024	MJ/AM	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	31.90	39.40	653184.43 N	Elevation: -4.11 mCD	End Date: 29/03/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
18.40 - 18.85	SPT (S)	N=35 (5,7/6,9,9,11) Hammer SN = 1398								
19.90	D43		19.9	0.00						
19.90 - 21.40	B21									
19.90 - 20.35	SPT (S)	N=33 (6,6/6,8,10,9) Hammer SN = 1398								
21.40	D44		21.4	0.00						
21.40 - 22.90	B22									
21.40 - 21.85	SPT (S)	N=35 (4,5/6,9,9,11) Hammer SN = 1398								
22.90	D45		22.9	0.00						
22.90 - 24.00	B23									
22.90 - 23.35	SPT (S)	N=44 (5,7/9,10,12,13) Hammer SN = 1398								
24.00 - 24.90	B24				-28.11	24.00		Very dense brown and reddish brown slightly silty fine to coarse SAND.		
24.40	D46		24.4	0.00						
24.40 - 24.84	SPT (S)	50 (8,10/50 for 285mm) Hammer SN = 1398								
24.90 - 25.90	B25									
25.90	D47		25.9	0.00						
25.90 - 27.00	B26									
25.90 - 26.32	SPT (S)	50 (9,11/50 for 270mm) Hammer SN = 1398								
27.00 - 28.00	B27				-31.11	27.00		Very dense brown clayey fine to medium SAND.		
27.40	D48		27.4	0.00						
27.40 - 27.80	SPT (S)	50 (9,14/50 for 245mm) Hammer SN = 1398								

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 10.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
31.90	177			Core Barrel	Flush Type	Termination Reason	Last Updated
39.40	150			SK6L	Polymer	Terminated at scheduled depth	02/04/2024





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 4 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	31.90	218189.09 E	39.40 m	27/03/2024	MJ/AM	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	31.90	39.40	653184.43 N	Elevation: -4.11 mCD	End Date: 29/03/2024	Logger: LW/MS	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
28.00 - 28.90	B28									
28.90	D49	N=37 (5,8/9,8,10) Hammer SN = 1398	28.9	0.00	-33.01	28.90		Very stiff brown CLAY.		
28.90 - 30.40	B29									
28.90 - 29.35	SPT (S)									
30.40	D50	50 (10,15/50 for 245mm) Hammer SN = 1398	30.4	0.00						
30.40 - 31.30	B30									
30.40 - 30.80	SPT (S)									
31.30 - 31.90	B31				-35.41	31.30		Weathered SANDSTONE recovered as, reddish brown sandy clayey angular to subangular fine to coarse GRAVEL. (Disturbed due to sonic drilling)		
				0	-36.01	31.90		Extremely weak reddish brown fine grained poorly cemented SANDSTONE. Partially weathered: highly reduced strength, with grey discoloration.		
		100 60 60		2	-36.41	32.30		No discernible discontinuity sets. Medium strong reddish brown and light grey coarse grained well cemented pebbly SANDSTONE. Partially weathered: slightly reduced strength, with grey discoloration.		
33.40					-37.51	33.40		Discontinuities: 1. 5-15 degree joints at 32.50m and 33.25m, undulating, rough, with soft clay deposits on joint surfaces. Medium strong reddish brown and light grey well cemented CONGLOMERATE. Partially weathered: slightly reduced strength, slightly closer fracture spacing.		
		100 100 100						Discontinuities: 1. 5-20 degree joints, widely spaced (170/900/1620), planar, rough, clean.		
34.90				1						
		100 95 77								
36.40										
		87 80 80								
		TCR SCR RQD FI								

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 10.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
31.90	177						
39.40	150						
Core Barrel		Flush Type		Termination Reason		Last Updated	
SK6L		Polymer		Terminated at scheduled depth		02/04/2024	





Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH23

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 5 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	31.90	218189.09 E	39.40 m	27/03/2024	MJ/AM	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	31.90	39.40	653184.43 N	Elevation: -4.11 mCD	End Date: 29/03/2024	Logger: LW/MS	DRAFT

Depth (m)	Samples / Field Records	TCR	SCR	RQD	FI	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
37.90								-42.01	37.90		Medium strong reddish brown medium grained well cemented SANDSTONE. Partially weathered: slightly reduced strength, slightly closer fracture spacing, with occasional grey discoloration.		
		100	95	90	3						Discontinuities: 1. 5-20 degree joints, medium spaced (40/375/750), planar, rough, with gravel infill between joint surfaces.		
39.40								-43.51	39.40		End of Borehole at 39.40m		

Water Strikes				Chiselling Details			Remarks
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	From (m)	To (m)	Time (hh:mm)	
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
31.90	177						
39.40	150						
				Core Barrel	Flush Type	Termination Reason	Last Updated
				SK6L	Polymer	Terminated at scheduled depth	02/04/2024





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 10.50 m	Start Date: 30/03/2024	Driller: AM	Sheet 1 of 2 Scale: 1:50
Sonic Drilling	Fraсте CRS-XL140 Duo	0.00	10.50	218178.24 E 653092.15 N	Elevation: -2.58 mCD	End Date: 30/03/2024	Logger: LW	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Black slightly silty fine to medium SAND.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 1.50	B6									
					-3.58	1.00		Grey silty fine to medium SAND.		
1.50 - 3.00	B7									
3.00 - 4.50	B8				-5.48	2.90		Brown very clayey fine SAND.		
4.50 - 6.00	B9									
4.70	ES2	Marine Scotland Sample						4.30-4.50m: Pocket of medium grained SAND		
6.00 - 7.50	B10				-7.98	5.40		Reddish brown fine to medium SAND.		
7.50 - 9.00	B11									
					-10.48	7.90		Reddish brown slightly gravelly clayey fine to medium SAND. Gravel is subangular to subrounded of various lithologies.		
9.00 - 10.50	B12				-11.08	8.50		Very stiff reddish brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular of various lithologies.		

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 7.80m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
10.50	177			Core Barrel	Flush Type	Termination Reason	Last Updated			
						Terminated at scheduled depth	02/04/2024			



Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH24

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 10.50 m	Start Date: 30/03/2024	Driller: AM	Sheet 2 of 2 Scale: 1:50
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	10.50	218178.24 E 653092.15 N	Elevation: -2.58 mCD	End Date: 30/03/2024	Logger: LW	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
9.40	ES3	Marine Scotland Sample			-13.08	10.50		End of Borehole at 10.50m		

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 7.80m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
10.50	177			Core Barrel	Flush Type	Termination Reason	Last Updated			
						Terminated at scheduled depth	02/04/2024			



Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH25

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 4.50 m	Start Date: 14/03/2024	Driller: AM	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	4.50	218444.24 E 653382.56 N	Elevation: -7.90 mCD	End Date: 14/03/2024	Logger: LW	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Brownish black slightly silty fine to medium SAND.		
0.00	ES2	RAD Composite			-8.15	0.25		Brown slightly silty fine to medium SAND.		
0.00	ES3	ENV Composite								
0.00 - 1.50	B6									
1.50 - 3.00	B7									
2.10	ES4	Marine Scotland Sample								
3.00 - 4.50	B8									
4.10	ES5	Marine Scotland Sample			-11.60	3.70		Firm brown sandy SILT. Sand is fine to medium.		
					-12.40	4.50		End of Borehole at 4.50m		

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 13.30m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
4.50	177			Core Barrel	Flush Type	Termination Reason	Last Updated			
						Terminated at scheduled depth	19/03/2024			



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 7.50 m	Start Date: 17/03/2024	Driller: AM	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	7.50	218194.47 E 653311.81 N	Elevation: -5.84 mCD	End Date: 17/03/2024	Logger: LW	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Brownish grey fine to coarse SAND.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
1.50 - 3.00	B6									
3.00 - 4.50	B7	Marine Scotland Sample			-8.84	3.00		Reddish brown slightly gravelly fine to coarse SAND with occasional shell fragments. Gravel is subangular to subrounded fine to medium.		
3.10	ES2									
4.50 - 6.00	B8				-10.34	4.50		Very stiff brownish grey sandy CLAY. Sand is fine to medium.		
6.00 - 7.50	B9	Marine Scotland Sample			-11.74	5.90		Reddish brown fine to coarse SAND.		
6.20	ES3									
					-13.34	7.50		End of Borehole at 7.50m		

Water Strikes				Remarks						
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 10.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing						
Casing Details		Water Added								
To (m)	Diam (mm)	From (m)	To (m)							
7.50	177									
				Core Barrel	Flush Type	Termination Reason		Last Updated		
						Terminated at scheduled depth		19/03/2024		



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 1 of 5
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	37.50	218288.83 E	43.50 m	20/03/2024	KW/MJ	Scale: 1:50
Rotary Coring	Frastr CRS-XL140 Duo	37.50	43.50	653244.04 N	Elevation: -5.52 mCD	End Date: 24/03/2024	Logger: MS/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Very loose black and brown slightly silty fine to medium SAND with rare shell fragments. [Organic Odour]		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 0.90	B6									
0.90 - 2.20	B7		0.90	0.00				Very loose brown and reddish brown slightly silty fine to coarse SAND with rare shell fragments.		
0.90 - 1.35	SPT (S)	N=1 (0,0/1,0,0,0) Hammer SN = 1398								
2.20 - 3.00	B8				-7.72	2.20				
2.40 - 2.85	SPT (S)	N=2 (0,0/0,1,1,0) Hammer SN = 1398	2.40	0.00						
3.00 - 3.90	B9				-8.52	3.00		Loose reddish brown slightly silty fine to medium SAND.		
3.30	ES2	Marine Scotland Sample								
3.90	D38		3.90	0.00				Medium dense to dense reddish brown slightly silty fine to medium SAND.		
3.90 - 5.40	B10									
3.90 - 4.35	SPT (S)	N=6 (1,1/0,1,2,3) Hammer SN = 1398								
5.40	D39		5.40	0.00	-10.92	5.40				
5.40 - 6.90	B11									
5.40 - 5.85	SPT (S)	N=21 (2,4/5,5,4,7) Hammer SN = 1398								
6.50	ES3	Marine Scotland Sample						Dense reddish brown slightly clayey fine to medium SAND.		
6.90	D40		6.90	0.00						
6.90 - 7.80	B12									
6.90 - 7.34	SPT (S)	50 (4,6/50 for 285mm) Hammer SN = 1398								
7.80 - 8.40	B13									
8.40	D41		8.40	0.00	-13.92	8.40				
8.40 - 9.90	B14									
8.40 - 8.85	SPT (S)	N=35 (0,2/5,6,10,14) Hammer SN = 1398								

Water Strikes				Remarks				
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)					
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 12.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) No SPT completed at 20.40m due to blowing sands between 18.90-23.40m Composite sample for radiological testing Composite sample for environmental testing				
Casing Details		Water Added						
To (m)	Diam (mm)	From (m)	To (m)					
37.50	177							
43.50	150							
Core Barrel		Flush Type		Termination Reason		Last Updated		
SK6L		Polymer		Terminated at scheduled depth		27/03/2024		





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 2 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	37.50	218288.83 E	43.50 m	20/03/2024	KW/MJ	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	37.50	43.50	653244.04 N	Elevation: -5.52 mCD	End Date: 24/03/2024	Logger: MS/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
9.90	D42		9.90	0.00						
9.90 - 11.60	B15									
9.90 - 10.31	SPT (S)	50 (6,7/50 for 263mm) Hammer SN = 1398								
11.40	D43		11.4	0.00						
11.40 - 11.67	UT58	Ublow=117 60% Recovery			-17.12	11.60				
11.60 - 12.80	B16							Very stiff brown slightly sandy silty CLAY. Sand is fine to medium.		
12.80 - 13.50	B17		12.9	0.00						
12.90	D44									
12.90 - 13.30	SPT (S)	50 (7,10/50 for 245mm) Hammer SN = 1398								
13.50 - 13.70	B18				-19.02	13.50		Reddish brown slightly silty fine to coarse SAND.		
13.70 - 14.40	B19				-19.22	13.70		Medium dense to dense reddish brown mottled grey fine to coarse SAND.		
14.40	D45		14.4	0.00						
14.40 - 15.90	B20									
14.40 - 14.70	SPT (S)	50 (9,14/50 for 150mm) Hammer SN = 1398								
15.90	D46		15.9	0.00						
15.90 - 17.40	B21									
15.90 - 16.26	SPT (S)	50 (3,7/50 for 210mm) Hammer SN = 1398								
17.40	D47		17.4	0.00						
17.40 - 18.90	B22									
17.40 - 17.85	SPT (S)	N=19 (1,2/3,4,6,6) Hammer SN = 1398								

Water Strikes				Remarks									
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 12.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) No SPT completed at 20.40m due to blowing sands between 18.90-23.40m Composite sample for radiological testing Composite sample for environmental testing									
Casing Details		Water Added		Core Barrel				Flush Type		Termination Reason		Last Updated	
To (m)	Diam (mm)	From (m)	To (m)	SK6L				Polymer		Terminated at scheduled depth		27/03/2024	
37.50	177												
43.50	150												



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 3 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	37.50	218288.83 E	43.50 m	20/03/2024	KW/MJ	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	37.50	43.50	653244.04 N	Elevation: -5.52 mCD	End Date: 24/03/2024	Logger: MS/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
18.90	D48	N=44 (2,4/5,12,13,14) Hammer SN = 1398	18.9	0.00	-24.42	18.90	[Pattern]	Medium dense to dense grey slightly silty fine to medium SAND. [BLOWING]	[Scale]	[Scale]
18.90 - 20.40	B23									
18.90 - 19.35	SPT (S)									
20.40 - 21.90	B24	N=36 (4,5/5,9,10,12) Hammer SN = 1398	21.9	0.00	-28.92	23.40	[Pattern]	Dense to very dense reddish brown fine to coarse SAND. <i>23.40-24.00m: No Recovery</i>	[Scale]	[Scale]
21.90	D49									
21.90 - 23.40	B25									
21.90 - 22.35	SPT (S)	N=49 (6,8/7,10,14,18) Hammer SN = 1398	23.4	0.00	-28.92	23.40	[Pattern]	Dense to very dense reddish brown fine to coarse SAND. <i>23.40-24.00m: No Recovery</i>	[Scale]	[Scale]
23.40	D50									
23.40 - 25.50	B26									
23.40 - 23.85	SPT (S)	50 (5,6/50 for 290mm) Hammer SN = 1398	25.5	0.00	-28.92	25.50	[Pattern]	Dense to very dense reddish brown fine to coarse SAND. <i>23.40-24.00m: No Recovery</i>	[Scale]	[Scale]
25.50	D51									
25.50 - 27.00	B27									
25.50 - 25.94	SPT (S)	50 (7,7/50 for 245mm) Hammer SN = 1398	27.0	0.00	-28.92	27.00	[Pattern]	Dense to very dense reddish brown fine to coarse SAND. <i>23.40-24.00m: No Recovery</i>	[Scale]	[Scale]
27.00	D52									
27.00 - 28.50	B28									
27.00 - 27.40	SPT (S)									

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 12.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) No SPT completed at 20.40m due to blowing sands between 18.90-23.40m Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
37.50	177						
43.50	150						
Core Barrel	Flush Type	Termination Reason		Last Updated		AGS	
SK6L	Polymer	Terminated at scheduled depth		27/03/2024		AGS	



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 4 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	37.50	218288.83 E	43.50 m	20/03/2024	KW/MJ	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	37.50	43.50	653244.04 N	Elevation: -5.52 mCD	End Date: 24/03/2024	Logger: MS/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
28.50 - 28.95 28.50 - 29.80	UT59 B29	Ublow=153 100% Recovery	28.5	0.00	-34.02	28.50	[Symbol]	Very stiff brown slightly sandy CLAY. Sand is fine to medium.		
29.80 - 31.50 30.00 30.00 - 30.31	B30 D53 SPT (S)	50 (6,10/50 for 160mm) Hammer SN = 1398	30.0	0.00	-35.32	29.80	[Symbol]	Very stiff brown slightly silty CLAY.		
31.50 31.50 - 33.00 31.50 - 31.81	D54 B31 SPT (S)	50 (7,11/50 for 157mm) Hammer SN = 1398	31.5	0.00			[Symbol]			
33.00 33.00 - 34.00 33.00 - 33.30	D55 B32 SPT (S)	50 (10,15/50 for 145mm) Hammer SN = 1398	33.0	0.00			[Symbol]			
34.00 - 35.00 34.50 34.50 - 34.92 35.00 - 36.00	B33 D56 SPT (S) B34	50 (8,9/50 for 265mm) Hammer SN = 1398	34.5	0.00	-39.52	34.00	[Symbol]	Very dense brown very gravelly slightly clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of various lithologies.		
36.00 36.00 - 36.90 36.00 - 36.38	D57 B35 SPT (S)	50 (7,10/50 for 225mm) Hammer SN = 1398	36.0	0.00	-41.52	36.00	[Symbol]	Very dense brown mottled grey fine to coarse SAND.		
36.90 - 37.20 37.20 - 37.50	B36 B37				-42.42 -42.72	36.90 37.20	[Symbol]	Brown very gravelly slightly clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of various lithologies.		

Water Strikes				Remarks									
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 12.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) No SPT completed at 20.40m due to blowing sands between 18.90-23.40m Composite sample for radiological testing Composite sample for environmental testing									
Casing Details		Water Added		Core Barrel				Flush Type		Termination Reason		Last Updated	
To (m)	Diam (mm)	From (m)	To (m)	SK6L				Polymer		Terminated at scheduled depth		27/03/2024	
37.50	177												
43.50	150												



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 5 of 5 Scale: 1:50
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	37.50	218288.83 E	43.50 m	20/03/2024	KW/MJ	
Rotary Coring	Fraste CRS-XL140 Duo	37.50	43.50	653244.04 N	Elevation: -5.52 mCD	End Date: 24/03/2024	Logger: MS/OG	DRAFT

Depth (m)	Sample / Tests	Field Records				Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill															
39.00		100	100	89				-43.02	37.50 Weathered SANDSTONE recovered as, reddish brown slightly sandy clayey angular to subangular fine to coarse GRAVEL with low cobble content. (Recovered disturbed due to sonic drilling) Medium strong reddish brown coarse grained well cemented pebbly SANDSTONE. Partially weathered: slightly reduced strength, slightly closer fracture spacing, with occasional dark orangish brown discolouration. Discontinuities: 1. 30-55 degree bedding fractures, widely spaced (210/730/840), planar, rough, clean. <u>38.45-38.65m: Bed of conglomerate with clasts from 2-42mm.</u>																		
								40.50	100				100	100				42.60 <u>42.50-42.60m: Bed of conglomerate with clasts from 1-39mm.</u> Medium strong thickly laminated reddish brown fine grained well cemented SANDSTONE. Partially weathered: slightly reduced strength. No discontinuities present. <u>42.65-43.10m: Stepped, sub-vertical quartz vein.</u>									
																				42.00	97	97	97				43.50 End of Borehole at 43.50m
		TCR	SCR	RQD	FI																							

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 12.40m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) No SPT completed at 20.40m due to blowing sands between 18.90-23.40m Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added		Core Barrel SK6L Flush Type Polymer Termination Reason Terminated at scheduled depth Last Updated 27/03/2024			
To (m)	Diam (mm)	From (m)	To (m)				
37.50	177						
43.50	150						





Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH29

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 6.80 m	Start Date: 08/03/2024	Driller: KW	Sheet 1 of 1 Scale: 1:50
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	6.80	218542.31 E 653494.45 N	Elevation: -6.41 mCD	End Date: 09/03/2024	Logger: OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1	Marine Scotland Sample						Light brown fine to medium SAND.		
0.00	ES4	RAD Composite								
0.00	ES5	ENV Composite								
0.00 - 0.80	SB6									
0.80 - 2.30	SB7									
					-8.16	1.75		Brown silty fine to medium SAND with occasional shell fragments.		
2.30 - 3.80	SB8				-8.61	2.20		Very soft brown sandy CLAY. Sand is fine to medium.		
2.79	ES2	Marine Scotland Sample								
					-9.61	3.20		Very soft brown CLAY.		
3.80 - 5.30	SB9				-10.21	3.80		Brown fine to medium SAND.		
					-11.01	4.60		Very soft brown slightly sandy CLAY. Sand is fine to medium.		
5.30 - 6.80	SB10				-11.71	5.30		Brown silty fine to medium SAND.		
5.59	ES3	Marine Scotland Sample								
					-12.21	5.80		Soft to firm slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to medium of mixed lithologies.		
					-13.21	6.80		End of Borehole at 6.80m		

Water Strikes				Remarks							
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 11.60m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing							
Casing Details		Water Added									
To (m)	Diam (mm)	From (m)	To (m)								
6.80	177										
				Core Barrel	Flush Type	Termination Reason		Last Updated			
						Terminated at scheduled depth		11/03/2024			



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 1 of 5
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	33.90	218573.89 E	37.20 m	07/03/2024	AM/KW	Scale: 1:50
Rotary Coring	Frastr CRS-XL140 Duo	33.90	37.20	653382.49 N	Elevation: -4.28 mCD	End Date: 08/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.00	ES1							Medium dense to dense reddish brown fine to medium SAND.		
0.00	ES4									
0.00	ES5									
0.00 - 0.90	B6									
0.90 - 2.40	B7									
2.40	D31		2.40	0.00						
2.40 - 3.90	B8									
2.40 - 2.85	SPT (S)	N=47 (7,8,10,12,17) Hammer SN = 1398								
3.86	ES2		3.90	0.00				3.70-3.75m: Bed of light red sandy angular fine to coarse GRAVEL of various lithologies. Sand is fine to coarse.		
3.90	D32									
3.90 - 4.65	B9									
3.90 - 4.35	SPT (S)	N=16 (5,4,4,4,4) Hammer SN = 1398								
4.65 - 5.30	B10				-8.93	4.65		Very soft brown sandy CLAY. Sand is fine to medium.		
5.30 - 6.40	B11		5.40	0.00	-9.58	5.30		Medium dense brown slightly gravelly clayey fine to medium SAND. Gravel is subangular fine of various lithologies.		
5.40	D33									
5.40 - 5.85	SPT (S)	N=18 (3,3/4,4,4,6) Hammer SN = 1398								
6.40 - 7.65	B12				-10.68	6.40		Stiff reddish brown very sandy CLAY. Sand is fine to medium.		
6.90	D34		6.90	0.00				6.70-6.80m: Shell fragments		
6.90 - 7.35	SPT (S)	N=30 (4,6/7,8,7,8) Hammer SN = 1398								
7.65 - 8.70	B13				-11.93	7.65		Medium dense brown silty fine to medium SAND.		
7.72	ES3									
8.40	D35		8.40	0.00						
8.40 - 8.85	SPT (S)	N=13 (2,5/4,4,3,2) Hammer SN = 1398			-12.98	8.70		Stiff to very stiff brown slightly sandy slightly gravelly CLAY with low cobble content. Sand is fine to coarse. Gravel is subangular fine to coarse of various lithologies. Cobbles are subangular of various lithologies.		
8.70 - 9.90	B14									

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 9.70m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
33.90	177						
37.20	150						
Core Barrel		Flush Type		Termination Reason		Last Updated	
SK6L		Polymer		Terminated at scheduled depth		11/03/2024	





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 2 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	33.90	218573.89 E	37.20 m	07/03/2024	AM/KW	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	33.90	37.20	653382.49 N	Elevation: -4.28 mCD	End Date: 08/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
9.90 - 10.35 9.90 - 11.40	UT49 B15	Ublow=197 100% Recovery	9.90	0.00						
11.40 11.40 - 12.90 11.40 - 11.83	D36 B16 SPT (S)	50 (15,9/50 for 282mm) Hammer SN = 1398	11.4	0.00						
12.90 - 14.40 12.90 - 13.21	B17 SPT (S)	50 (7,16/50 for 162mm) Hammer SN = 1398	12.9	0.00						
14.40 14.40 - 15.90 14.40 - 14.78	D37 B18 SPT (S)	50 (9,11/50 for 225mm) Hammer SN = 1398	14.4	0.00						
15.90 15.90 - 16.35	D38 SPT (S)	N=36 (3,4/6,9,10,11) Hammer SN = 1398	15.9	0.00						
17.40 17.40 - 17.85	D39 SPT (S)	N=33 (3,5/7,8,8,10) Hammer SN = 1398	17.4	0.00						
18.00 - 18.15 18.15 - 19.80	B19 B20				-22.28 -22.43	18.00 18.15	× × ×	Firm brown slightly sandy SILT. Sand is fine. Very stiff brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular fine to coarse of various lithologies.		

Water Strikes				Remarks	
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)		
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 9.70m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing	
Casing Details		Water Added			
To (m)	Diam (mm)	From (m)	To (m)		
33.90	177				
37.20	150				
Core Barrel	Flush Type	Termination Reason		Last Updated	
SK6L	Polymer	Terminated at scheduled depth		11/03/2024	



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 3 of 5
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	33.90	218573.89 E	37.20 m	07/03/2024	AM/KW	Scale: 1:50
Rotary Coring	Frastr CRS-XL140 Duo	33.90	37.20	653382.49 N	Elevation: -4.28 mCD	End Date: 08/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
18.90	D40	N=42 (5,5/8,11,11,12) Hammer SN = 1398	18.9	0.00		18.90				
18.90 - 19.35	SPT (S)									
19.80 - 21.40	B21	N=41 (3,6/9,12,8,12) Hammer SN = 1398	20.4	0.00		19.80		Very stiff brown slightly sandy slightly gravelly CLAY with low cobble content. Sand is fine to medium. Gravel is subangular fine to coarse of various lithologies. Cobbles are subangular of various lithologies. <i>19.80-19.82m: Thin bed of very clayey SAND</i>		
20.40	D41									
20.40 - 20.85	SPT (S)	N=34 (4,4/6,7,9,12) Hammer SN = 1398	21.9	0.00		21.40		Very stiff brown slightly sandy CLAY with frequent pockets of clayey silty fine sand. Sand is fine to medium.		
21.40 - 22.30	B22									
21.90	D42	N=28 (3,4/5,6,6,11) Hammer SN = 1398	23.4	0.00		22.30		Medium dense brown slightly silty fine SAND with occasional pockets of sandy clay.		
21.90 - 22.35	SPT (S)									
22.30 - 24.60	B23	N=41 (3,3/5,8,12,16) Hammer SN = 1398	24.9	0.00		24.60		Firm brown CLAY with frequent laminations of fine to medium red sand.		
23.40	D43									
23.40 - 23.85	SPT (S)	N=41 (3,3/5,8,12,16) Hammer SN = 1398	24.9	0.00		24.90		Dense brown slightly silty fine SAND.		
24.60 - 24.90	B24									
24.90	D44	Ublow=87 100% Recovery	26.4	0.00		26.40		Stiff to very stiff brown slightly sandy CLAY. Sand is fine to medium.		
24.90 - 26.40	B25									
24.90 - 25.35	SPT (S)	Ublow=87 100% Recovery	27.9	0.00		26.40				
26.40 - 27.10	UT50									
26.40 - 28.20	B26	Ublow=87 100% Recovery	27.9	0.00		26.40				
27.90	D45									

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 9.70m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added		Core Barrel	Flush Type	Termination Reason	Last Updated
To (m)	Diam (mm)	From (m)	To (m)				
33.90	177			SK6L	Polymer	Terminated at scheduled depth	11/03/2024
37.20	150						



Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH30

Client's Rep: Envirocentre

Sheet 4 of 5
Scale: 1:50

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	33.90	218573.89 E	37.20 m	07/03/2024	AM/KW	
Rotary Coring	Fraste CRS-XL140 Duo	33.90	37.20	653382.49 N	Elevation: -4.28 mCD	End Date: 08/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
27.90 - 28.28	SPT (S)	50 (5,6/50 for 230mm) Hammer SN = 1398			-32.48	28.20	[Symbol]	Very stiff brown clayey SILT with occasional (100-180mm) clay lenses.		
28.20 - 29.80	B27									
29.40	D46	50 (10,12/50 for 195mm) Hammer SN = 1398	29.4	0.00	-34.08	29.80	[Symbol]	Very dense brown gravelly silty fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of various lithologies.		
29.40 - 29.74	SPT (S)									
29.80 - 30.90	B28									
30.90	D47	50 (25 for 100mm/50 for 70mm) Hammer SN = 1398	30.9	0.00	-35.18	30.90	[Symbol]	Very stiff reddish brown slightly sandy slightly gravelly CLAY with medium cobble content. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse various lithologies. Cobbles are subrounded of sandstone.		
30.90 - 32.60	B29									
30.90 - 31.07	SPT (S)									
32.40	D48	50 (25 for 65mm/50 for 70mm) Hammer SN = 1398	32.4	0.00	-36.88	32.60	[Symbol]	Weathered SANDSTONE/BRECCIA recovered as, reddish brown sandy slightly clayey angular to subangular fine to coarse GRAVEL with low cobble content. (Recovered disturbed due to sonic drilling)		
32.40 - 32.53	SPT (S)									
32.60 - 33.90	B30									
34.20					-38.18	33.90	[Symbol]	Medium strong reddish brown and light grey well cemented BRECCIA with angular to subangular fine to coarse gravel sized clasts of various lithologies. Partially weathered weathered: slightly reduced strength. No discernible discontinuity sets. Medium strong reddish brown coarse grained well cemented pebbly SANDSTONE. Partially weathered: slightly reduced strength, slightly closer fracture spacing, with rare brown discolouration.		
35.70					-39.98	35.00	[Symbol]	Discontinuities: 1. 20-40 degree joints, medium spaced (200/235/270), undulating, rough, with faint brown staining on joint surfaces. 2. 80-85 degree joint at 35.05-35.30m, undulating, rough, with brown staining on joint surface. Medium strong medium bedded reddish brown and light grey well cemented BRECCIA with angular to subangular fine to coarse gravel sized clasts of various lithologies. Partially weathered: slightly reduced strength.		
					-40.98	36.70	[Symbol]	No discernible discontinuity sets. Medium strong reddish brown medium grained well cemented		

Water Strikes				Remarks	
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)		
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 9.70m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing	
Casing Details		Water Added			
To (m)	Diam (mm)	From (m)	To (m)		
33.90	177				
37.20	150				
Core Barrel	Flush Type	Termination Reason		Last Updated	
SK6L	Polymer	Terminated at scheduled depth		11/03/2024	



Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

BH30

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 5 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	33.90	218573.89 E	37.20 m	07/03/2024	AM/KW	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	33.90	37.20	653382.49 N	Elevation: -4.28 mCD	End Date: 08/03/2024	Logger: LW/OG	DRAFT

Depth (m)	Samples / Field Records	TCR	SCR	RQD	FI	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
37.20								-41.48	37.20		pebbly SANDSTONE. Partially weathered: slightly reduced strength, with faint brown discolouration. Discontinuities: 1. 25-30 degree joint at 37.00m, planar, rough, with patchy and faint brown staining on joint surface. End of Borehole at 37.20m		

Water Strikes				Chiselling Details			Remarks
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	From (m)	To (m)	Time (hh:mm)	
Casing Details		Water Added					Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 9.70m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing
To (m)	Diam (mm)	From (m)	To (m)				
33.90	177						
37.20	150						
				Core Barrel	Flush Type	Termination Reason	Last Updated
				SK6L	Polymer	Terminated at scheduled depth	11/03/2024





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 1 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	21.90	218387.30 E	41.90 m	04/04/2024	AM/KW	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	21.90	41.90	653174.10 N	Elevation: -0.39 mCD	End Date: 08/04/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
0.90	D23		0.90	0.00				Medium dense greyish brown gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to medium of various lithologies.		
0.90	ES1	Marine Scotland Sample								
0.90	ES4	RAD Composite								
0.90	ES5	ENV Composite								
0.90 - 2.40	B6									
0.90 - 1.35	SPT (S)	N=11 (2,2/3,3,2,3) Hammer SN = 1398								
2.40	D24		2.40	0.00				Medium dense greyish brown slightly gravelly medium to coarse SAND with frequent shell fragments. Gravel is subangular to subrounded fine of various lithologies.		
2.40 - 3.90	B7									
2.40 - 2.85	SPT (S)	N=10 (2,1/2,2,3,3) Hammer SN = 1398								
3.90	D25		3.90	0.00	-4.29	3.90		Medium dense greyish brown silty fine to medium SAND.		
3.90 - 4.40	B8									
3.90 - 4.35	SPT (S)	N=18 (2,3/4,4,5,5) Hammer SN = 1398			-4.79	4.40				
4.40 - 5.40	B9									
5.40	D26		5.40	0.00				Medium dense greyish brown silty fine to medium SAND.		
5.40 - 6.90	B10									
5.40 - 5.85	SPT (S)	N=20 (2,3/4,5,5,6) Hammer SN = 1398								
5.80	ES2	Marine Scotland Sample								
6.90	D27		6.90	0.00						
6.90 - 8.40	B11									
6.90 - 7.35	SPT (S)	N=19 (3,3/4,5,5,5) Hammer SN = 1398								
8.40	D28		8.40	0.00						
8.40 - 9.70	B12									
8.40 - 8.85	SPT (S)	N=12 (2,3/3,2,3,4) Hammer SN = 1398								

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 8.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
21.90	177						
41.90	150						
Core Barrel		Flush Type		Termination Reason		Last Updated	
SK6L		Polymer		Terminated on Client's instruction		10/04/2024	





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 2 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	21.90	218387.30 E	41.90 m	04/04/2024	AM/KW	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	21.90	41.90	653174.10 N	Elevation: -0.39 mCD	End Date: 08/04/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
9.70 - 10.60	B13	N=0 (0,0/0,0,0,0) Hammer SN = 1398	9.90	0.00	-10.09	9.70		Very loose grey gravelly clayey fine to coarse SAND with frequent shell fragments. Gravel is subangular to subrounded fine to medium of various lithologies.		
9.90	D29									
9.90 - 10.35	SPT (S)									
10.60 - 11.40	B14	Ublow=4 100% Recovery Marine Scotland Sample	11.4	0.00	-10.99	10.60		Soft reddish brown slightly sandy CLAY with occasional pockets of fine sand. Sand is fine to medium.		
11.40 - 11.85	UT45									
11.40 - 12.90	B15									
11.60	ES3									
12.90	D30	N=1 (1,1/0,0,0,1) Hammer SN = 1398	12.9	0.00	-13.29	12.90		Very loose brownish grey silty fine to medium SAND.		
12.90 - 14.40	B16									
12.90 - 13.35	SPT (S)									
14.40 - 14.85	UT46	Ublow=68 100% Recovery	14.4	0.00	-14.79	14.40		Medium dense brownish grey very silty fine to medium SAND.		
14.40 - 15.90	B17									
15.90	D31	N=18 (3,3/4,4,5,5) Hammer SN = 1398	15.9	0.00	-17.79	15.90		Very soft reddish brown slightly sandy CLAY. Sand is fine to coarse.		
15.90 - 17.40	B18									
15.90 - 16.35	SPT (S)									
17.40	D32	N=0 (0,0/0,0,0,0) Hammer SN = 1398	17.4	0.00	-17.79	17.40		Very soft reddish brown slightly sandy CLAY. Sand is fine to coarse.		
17.40 - 18.90	B19									
17.40 - 17.85	SPT (S)									

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 8.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added		Core Barrel	Flush Type	Termination Reason	Last Updated
To (m)	Diam (mm)	From (m)	To (m)				
21.90	177			SK6L	Polymer	Terminated on Client's instruction	10/04/2024
41.90	150						





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 3 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	21.90	218387.30 E	41.90 m	04/04/2024	AM/KW	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	21.90	41.90	653174.10 N	Elevation: -0.39 mCD	End Date: 08/04/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
18.90	D33	N=46 (6,9,9,10,12,15) Hammer SN = 1398	18.9	0.00	-19.29	18.90		Very stiff reddish brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of various lithologies.		
18.90 - 20.40	B20									
18.90 - 19.35	SPT (S)									
20.40	D34	N=50 (7,8/10,10,15,15) Hammer SN = 1398	20.4	0.00				Reddish brown BOULDER of sandstone recovered as angular coarse gravel and angular cobbles.		
20.40 - 21.10	B21									
20.40 - 20.85	SPT (S)									
21.10 - 21.90	B22				-21.49	21.10				
21.90 - 21.90	SPT (S)	50 (25 for 0mm/50 for 0mm) Hammer SN = 1398	21.9	0.00				Very stiff brownish grey slight gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of various lithologies.		
22.60		64	0	0						
22.60	SPT(S) 50 (7,8/50 for 170mm) Hammer SN = 1398 D35	73	0	0						
24.10			24.1	0.00						
24.10 - 24.46	SPT(S) 50 (7,10/50 for 215mm) Hammer SN = 1398 D36	80	0	0						
24.10										
25.60			25.6	0.00						
25.60 - 25.96	SPT(S) 50 (8,12/50 for 210mm) Hammer SN = 1398 D37	83	0	0						
25.60										
27.10			27.1	0.00						
27.10 - 27.46	SPT(S) 50 (8,15/50 for 215mm) Hammer SN = 1398 D38	80	0	0						
27.10										
		TCR	SCR	RQD	FI					

Water Strikes				Remarks											
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 8.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing											
Casing Details		Water Added		Core Barrel SK6L				Flush Type Polymer		Termination Reason Terminated on Client's instruction		Last Updated 10/04/2024			
To (m)	Diam (mm)	From (m)	To (m)												
21.90	177														
41.90	150														



Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth: 41.90 m	Start Date: 04/04/2024	Driller: AM/KW	Sheet 5 of 5 Scale: 1:50
Sonic Drilling	Frastr CRS-XL140 Duo	0.00	21.90	218387.30 E	Elevation: -0.39 mCD	End Date: 08/04/2024	Logger: LW/OG	DRAFT
Rotary Coring	Frastr CRS-XL140 Duo	21.90	41.90	653174.10 N				

Depth (m)	Samples / Field Records	TCR	SCR	RQD	FI	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
37.60								-37.79	37.40	[Pattern]	Medium strong thinly bedded reddish brown fine grained well cemented SANDSTONE. Partially weathered: slightly reduced strength, slightly closer fracture spacing, with brown discoloration.		
		100	87	48						[Pattern]	Discontinuities: 1. 10-20 degree joints, widely spaced (500/900/1400), planar and undulating, rough, with patchy brown staining on joint surfaces. 2. 50-60 degree joints at 39.00-39.25m and 40.00-40.15m, planar, rough, with brown staining on joint surfaces. <i>37.80-38.50m: Incipient 60-90 degree joints.</i>		
39.10										[Pattern]			
		100	100	77	2					[Pattern]			
40.60										[Pattern]			
		72	60	37						[Pattern]			
41.90						AZCL		-42.29	41.90	[Pattern]	41.60-41.90m: AZCL, core scrubbed during drilling		
										[Pattern]	End of Borehole at 41.90m		

Water Strikes				Chiselling Details			Remarks Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 8.10m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	From (m)	To (m)	Time (hh:mm)	
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
21.90	177						
41.90	150						
				Core Barrel	Flush Type	Termination Reason	Last Updated
				SK6L	Polymer	Terminated on Client's instruction	10/04/2024





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 1 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	31.00	218468.94 E	37.80 m	12/04/2024	AM/MJ	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	31.00	37.80	653338.77 N	Elevation: -6.91 mCD	End Date: 14/04/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
								NO RECOVERY: Probably very loose to loose silty fine SAND washed away during drilling.		
1.00	ES1	Marine Scotland Sample	1.00	0.00	-7.91	1.00				
1.00	ES4	RAD Composite						Very loose grey silty fine to medium SAND with rare shell fragments.		
1.00	ES5	ENV Composite								
1.00 - 1.50	B6	N=1 (0,1/0,0,1,0) Hammer SN = 1398				1.50				
1.00 - 1.45	SPT (S)				-8.41			Grey slightly clayey fine to medium SAND.		
1.50 - 2.35	B7									
2.35 - 3.90	B8	Marine Scotland Sample N=3 (1,1/0,1,1,1) Hammer SN = 1398	2.50	0.00	-9.26	2.35		Very soft brown silty CLAY.		
2.50	D40									
2.50	ES2									
2.50 - 2.95	SPT (S)									
3.90 - 4.10	B9	N=6 (1,1/2,2,1,1) Hammer SN = 1398	4.00	0.00	-10.81	3.90		Loose brown silty fine to medium SAND.		
4.00	D41									
4.00 - 4.45	SPT (S)				-11.01	4.10		Soft brown very sandy silty CLAY. Sand is fine.		
4.10 - 5.40	B10									
5.00	ES3	Marine Scotland Sample								
5.40 - 5.50	B11	N=19 (2,3/5,5,4,5) Hammer SN = 1398	5.50	0.00	-12.31	5.40		Brown slightly gravelly fine to medium sand. Gravel is subangular to subrounded fine of sandstone.		
5.50	D42				-12.41	5.50				
5.50 - 5.90	B12							Medium dense brown slightly gravelly silty fine to coarse SAND.		
5.50 - 5.95	SPT (S)				-12.81	5.90		Gravel is subangular to subrounded fine to medium of sandstone.		
5.90 - 7.00	B13							Very stiff brown sandy CLAY. Sand is fine to coarse.		
7.00	D43		7.00	0.00						
7.00 - 8.50	B14	50 (7,12/50 for 230mm) Hammer SN = 1398								
7.00 - 7.38	SPT (S)									
8.50	D44		8.50	0.00						
8.50 - 9.60	B15	50 (25 for 140mm/50 for 215mm) Hammer SN = 1398								
8.50 - 8.86	SPT (S)									

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 14.00m All elevations and reduced levels given in Chart Datum			
				Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
31.00	177						
37.80	150						
				Core Barrel	Flush Type	Termination Reason	Last Updated
				SK6L		Terminated at scheduled depth	15/04/2024





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	31.00	218468.94 E	37.80 m	12/04/2024	AM/MJ	
Rotary Coring	Fraste CRS-XL140 Duo	31.00	37.80	653338.77 N	Elevation: -6.91 mCD	End Date: 14/04/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
9.60 - 9.75	B16				-16.51	9.60		Brown fine to coarse SAND.		
9.75 - 11.50	B17				-16.66	9.75				
10.00	D45	50 (25 for 125mm/50 for 200mm) Hammer SN = 1398	10.00	0.00				Very stiff brown slightly gravelly very sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded of various lithologies.		
10.00 - 10.32	SPT (S)									
11.50 - 12.95	B18	Ublow=100 75% Recovery 50 (25 for 105mm/50 for 190mm) Hammer SN = 1398			-19.86	12.95		Very dense brown slightly gravelly silty fine to coarse SAND. Gravel is subangular to subrounded fine to medium of various lithologies.		
12.95 - 13.60	B19									
13.00	D46									
13.00 - 13.35	UT57									
13.00 - 13.30	SPT (S)	50 (7,10/50 for 150mm) Hammer SN = 1398			-20.51	13.60		Very stiff brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of various lithologies.		
13.60 - 14.50	B20									
14.50	D47	50 (25 for 135mm/50 for 180mm) Hammer SN = 1398			-21.41	14.50		Very stiff light brown very sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subrounded fine to medium of various lithologies.		
14.50 - 15.90	B21									
14.50 - 14.82	SPT (S)									
15.90 - 16.00	B22									
16.00	D48	50 (7,10/50 for 150mm) Hammer SN = 1398			-22.81	15.90		Very stiff brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to subrounded fine to medium of various lithologies.		
16.00 - 17.50	B23									
16.00 - 16.30	SPT (S)									
16.00 - 16.30	SPT (S)									
17.50	D49	Ublow=100 0% Recovery 50 (25 for 60mm/50 for 85mm) Hammer SN = 1398			-22.91	16.00		Very stiff brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of various lithologies.		
17.50 - 17.55	UT58									
17.50 - 18.40	B24									
17.50 - 17.64	SPT (S)									
18.40 - 19.00	B25				-25.31	18.40		Very stiff brown CLAY.		

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)				
				Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 14.00m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
31.00	177						
37.80	150						
Core Barrel		Flush Type		Termination Reason		Last Updated	
SK6L				Terminated at scheduled depth		15/04/2024	





Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 3 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	31.00	218468.94 E	37.80 m	12/04/2024	AM/MJ	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	31.00	37.80	653338.77 N	Elevation: -6.91 mCD	End Date: 14/04/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill		
19.00	D50	50 (25 for 65mm/50 for 125mm) Hammer SN = 1398	19.0	0.00	-25.91	19.00						
19.00 - 19.45	B26									Very dense brown slightly gravelly silty fine to coarse SAND. Gravel is subangular to subrounded fine to medium of various lithologies.		
19.00 - 19.19	SPT (S)											
19.45 - 19.60	B27	50 (25 for 85mm/50 for 170mm) Hammer SN = 1398	20.5	0.00	-26.36	19.45						
19.60 - 20.00	B28									Very stiff brown sandy CLAY. Sand is fine to coarse.		
20.00 - 21.00	B29											
20.50	D51	50 (25 for 125mm/50 for 235mm) Hammer SN = 1398	22.0	0.00	-26.51	19.60						
20.50 - 20.76	SPT (S)											
21.00 - 22.30	B30											
22.00	D52	50 (25 for 105mm/50 for 225mm) Hammer SN = 1398	23.5	0.00	-26.91	20.00						
22.00 - 22.30	SPT (S)											
22.30 - 23.50	B31											
23.50	D53	50 (25 for 115mm/50 for 230mm) Hammer SN = 1398	25.0	0.00	-29.21	22.30						
23.50 - 24.20	B32											
23.50 - 23.86	SPT (S)											
24.20 - 25.00	B33											
25.00	D54	50 (25 for 125mm/50 for 235mm) Hammer SN = 1398	26.5	0.00	-30.41	23.50						
25.00 - 25.90	B34											
25.00 - 25.33	SPT (S)											
25.90 - 27.00	B35											
26.50	D55	50 (25 for 105mm/50 for 225mm) Hammer SN = 1398	27.0	0.00	-31.11	24.20						
26.50 - 26.84	SPT (S)											
27.00 - 28.00	B36											

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 14.00m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added		Core Barrel	Flush Type	Termination Reason	Last Updated
To (m)	Diam (mm)	From (m)	To (m)	SK6L		Terminated at scheduled depth	15/04/2024
31.00	177						
37.80	150						





Project No.
23-1739

Project Name: Hunterston Marine Yard

Client: Peel Ports Limited

Client's Rep: Envirocentre

Borehole ID
GBS2-BH-SPT-12

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 4 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	31.00	218468.94 E	37.80 m	12/04/2024	AM/MJ	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	31.00	37.80	653338.77 N	Elevation: -6.91 mCD	End Date: 14/04/2024	Logger: LW/OG	DRAFT

Depth (m)	Sample / Tests	Field Records	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill												
28.00	D56	50 (25 for 105mm/50 for 228mm) Hammer SN = 1398	28.0	0.00	-34.91	28.00		Stiff to very stiff brown slightly gravelly sandy CLAY . Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of various lithologies. 28.90-29.00m: Sandstone cobble														
28.00 - 29.50	B37																					
28.00 - 28.33	SPT (S)																					
29.50 - 30.65	B38	50 (25 for 5mm/50 for 5mm) Hammer SN = 1398	29.5	0.00		29.50		Very stiff brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of various lithologies predominantly sandstone.														
29.50 - 29.51	SPT (S)																					
30.65 - 31.10	B39	<table border="1"> <tr><td>100</td><td>65</td><td>65</td></tr> <tr><td>100</td><td>100</td><td>100</td></tr> <tr><td>100</td><td>100</td><td>100</td></tr> <tr><td>100</td><td>95</td><td>95</td></tr> </table>	100	65	65	100	100	100	100	100	100	100	95	95				30.65		Medium strong reddish brown and light grey well cemented BRECCIA with angular to subangular fine to coarse gravel sized clasts of various lithologies. Partially weathered: slightly reduced strength. (Detailed description to follow)		
100	65		65																			
100	100		100																			
100	100		100																			
100	95	95																				
31.80																						
33.30																						
34.80																						
36.30						36.30																
			TCR	SCR	RQD	FI																

Water Strikes				Remarks			
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 14.00m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing			
Casing Details		Water Added					
To (m)	Diam (mm)	From (m)	To (m)				
31.00	177						
37.80	150						
Core Barrel		Flush Type		Termination Reason		Last Updated	
SK6L				Terminated at scheduled depth		15/04/2024	





Project No.
23-1739

Project Name: Hunterston Marine Yard

Borehole ID

Client: Peel Ports Limited

GBS2-BH-SPT-12

Client's Rep: Envirocentre

Method	Plant Used	Top (m)	Base (m)	Coordinates	Final Depth:	Start Date:	Driller:	Sheet 5 of 5
Sonic Drilling	Fraste CRS-XL140 Duo	0.00	31.00	218468.94 E	37.80 m	12/04/2024	AM/MJ	Scale: 1:50
Rotary Coring	Fraste CRS-XL140 Duo	31.00	37.80	653338.77 N	Elevation: -6.91 mCD	End Date: 14/04/2024	Logger: LW/OG	DRAFT

Depth (m)	Samples / Field Records	TCR	SCR	RQD	FI	Casing Depth (m)	Water Depth (m)	Level mCD	Depth (m)	Legend	Description	Water	Backfill
37.80								-44.71	37.80		End of Borehole at 37.80m		

Water Strikes				Chiselling Details			Remarks
Struck at (m)	Casing to (m)	Time (min)	Rose to (m)	From (m)	To (m)	Time (hh:mm)	
Casing Details		Water Added					Overwater borehole drilled from the Causeway Giant 1 Deck to bed = 14.00m All elevations and reduced levels given in Chart Datum Marine Scotland Sampling location (3 samples taken) Composite sample for radiological testing Composite sample for environmental testing
To (m)	Diam (mm)	From (m)	To (m)				
31.00	177						
37.80	150						
				Core Barrel	Flush Type	Termination Reason	Last Updated
				SK6L		Terminated at scheduled depth	15/04/2024



C ANALYTICAL RESULTS

Summary Table B

River Clyde Average Concentrations

All units in mg/kg

Source	AL1	AL2	BAC CSEMP	<ERL CSEMP	PEL Canada	Dredge Average	Exceed AL1?	Exceed AL2?	Exceed BAC?	Exceed ERL ?	Exceed PEL?
Arsenic	20	70	25	-	41.6	3.0	No	No	No	No	No
Cadmium	0.4	4	0.31	1.2	4.2	0.1	No	No	No	No	No
Chromium	50	370	81	81	160	12.1	No	No	No	No	No
Copper	30	300	27	34	108	8.5	No	No	No	No	No
Mercury	0.25	1.5	0.07	0.15	0.7	0.0	No	No	No	No	No
Nickel	30	150	36	-	-	13.0	No	No	No	No	No
Lead	50	400	38	47	112	5.3	No	No	No	No	No
Zinc	130	600	122	150	271	33.2	No	No	No	No	No
					-						
Napthalene	0.1	-	0.08	0.16	0.319	0.0	No	N/A	No	No	No
Acenaphthylene	0.1	-	-	-	0.128	0.0	No	N/A	N/A	No	No
Acenaphthene	0.1	-	-	-	0.0889	0.0	No	N/A	N/A	No	No
Fluorene	0.1	-	-	-	0.144	0.0	No	N/A	N/A	No	No
Phenanthrene	0.1	-	0.032	0.24	0.544	0.1	Yes	N/A	Yes	No	No
Anthracene	0.1	-	0.05	0.085	0.245	0.0	No	N/A	No	No	No
Fluoranthene	0.1	-	0.039	0.6	1.494	0.0	No	N/A	No	No	No
Pyrene	0.1	-	0.024	0.665	1.398	0.0	No	N/A	Yes	No	No
Benzo(a)anthracene	0.1	-	0.016	0.261	0.693	0.0	No	N/A	No	No	No
Chrysene	0.1	-	0.02	0.384	0.846	0.0	No	N/A	No	No	No
Benzo(b)fluoranthene	0.1	-	-	-	-	0.0	No	N/A	N/A	No	No
Benzo(k)fluoranthene	0.1	-	-	-	-	0.0	No	N/A	N/A	No	No
Benzo(a)pyrene	0.1	-	0.03	0.384	0.763	0.0	No	N/A	No	No	No
Indeno(1,2,3cd)pyrene	0.1	-	0.103	0.24	-	0.0	No	N/A	No	No	No
Benzo(ghi)perylene	0.1	-	0.08	0.085	-	0.0	No	N/A	No	No	No
Dibenzo(a,h)anthracene	0.01	-	-	-	0.135	0.0	No	N/A	N/A	No	No
TPH	100	-	-	-	-	28.3	No	N/A	N/A	No	No
PCBs	0.02	0.18	-	-	0.189	0.0	No	No	N/A	No	No
TBT	0.1	0.5	-	-	-	0.0	No	No	N/A	No	No

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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 MAR02247

Issue Version: 1

Customer: Causeway Geotech Ltd, 8 Drumahiskey Rd, Bendooragh, Balnamore, Ballymoney, BT53 7QL

Customer Reference: 23-1739 - Hunterston Marine Yard GI

Date Sampled: 07-20-Mar-24

Date Samples Received: 28-Mar-24

Test Report Date: 29-Apr-24

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

<Redacted>

Authorised by: Jane Colbourne

Position: Customer Service Specialist



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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH03 (ES1) 0.50m	MAR02247.001	Sediment	22.5	77.5	0.00	67.10	32.90	2.67
BH03 (ES2) 1.90m	MAR02247.002	Sediment	14.1	85.9	0.00	51.38	48.62	2.67
BH03 (ES3) 3.70m	MAR02247.003	Sediment	17.5	82.5	0.00	7.23	92.77	2.72
BH05 (ES1) 0.00m	MAR02247.004	Sediment	17.5	82.5	1.25	89.89	8.87	2.67
BH05 (ES2) 6.00m	MAR02247.005	Sediment	13.6	86.4	10.05	50.33	39.61	2.70
BH05 (ES3) 12.00m	MAR02247.006	Sediment	22.0	78.0	0.93	8.94	90.13	2.72
BH06 (ES1) 2.30m	MAR02247.007	Sediment	20.8	79.2	1.03	83.54	15.43	2.66
BH06 (ES2) 5.94m	MAR02247.008	Sediment	18.3	81.7	0.00	31.79	68.21	2.72
BH06 (ES3) 11.87m	MAR02247.009	Sediment	8.60	91.4	18.30	22.62	59.08	2.69
BH10 (ES1) 0.00m	MAR02247.010	Sediment	24.3	75.7	0.00	77.43	22.57	2.66
BH10 (ES2) 1.80m	MAR02247.011	Sediment	23.9	76.1	0.00	60.28	39.72	2.68
BH10 (ES3) 3.50m	MAR02247.012	Sediment	19.5	80.5	4.55	58.26	37.19	2.68
BH12 (ES1) 0.00m	MAR02247.013	Sediment	22.7	77.3	0.00	76.07	23.93	2.67
BH12 (ES2) 1.50m	MAR02247.014	Sediment	18.5	81.5	0.00	94.29	5.71	2.66
BH12 (ES3) 3.00m	MAR02247.015	Sediment	17.9	82.1	0.00	96.88	3.12	2.67
BH13A (ES1) 0.00m	MAR02247.016	Sediment	26.1	73.9	0.00	73.60	26.40	2.67
BH13A (ES2) 2.40m	MAR02247.017	Sediment	18.7	81.3	5.03	26.39	68.58	2.70
BH13A (ES3) 4.80m	MAR02247.018	Sediment	21.0	79.0	0.00	33.26	66.74	2.74
BH14 (ES1) 0.00m	MAR02247.019	Sediment	23.9	76.1	0.00	85.20	14.80	2.68
BH14 (ES2) 2.10m	MAR02247.020	Sediment	19.2	80.8	0.00	89.00	11.00	2.67
BH14 (ES3) 4.20m	MAR02247.021	Sediment	23.4	76.6	0.00	63.24	36.76	2.67
BH15 (ES1) 0.00m	MAR02247.022	Sediment	15.9	84.1	1.17	44.77	54.06	2.69
BH15 (ES2) 1.40m	MAR02247.023	Sediment	15.5	84.5	0.78	26.00	73.22	2.69
BH15 (ES3) 2.80m	MAR02247.024	Sediment	19.2	80.8	0.00	50.45	49.55	2.73
BH16 (ES1) 0.00m	MAR02247.025	Sediment	25.0	75.0	4.30	69.92	25.78	2.65
BH16 (ES2) 3.80m	MAR02247.026	Sediment	24.9	75.1	0.00	23.30	76.70	2.73
BH16 (ES3) 7.60m	MAR02247.027	Sediment	14.9	85.1	0.00	65.84	34.16	2.68
BH17 (ES1) 0.00m	MAR02247.028	Sediment	26.0	74.0	0.34	88.95	10.70	2.66
BH17 (ES2) 0.90m	MAR02247.029	Sediment	18.0	82.0	0.62	66.56	32.82	2.66
BH17 (ES3) 1.90m	MAR02247.030	Sediment	23.5	76.5	0.00	71.16	28.84	2.67
BH18 (ES1) 0.00m	MAR02247.031	Sediment	21.3	78.7	0.34	76.49	23.17	2.67
BH18 (ES2) 0.60m	MAR02247.032	Sediment	14.1	85.9	0.00	60.36	39.64	2.67

MAR02247

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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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH18 (ES3) 1.20m	MAR02247.033	Sediment	21.4	78.6	0.00	87.86	12.14	2.67
BH19 (ES1) 0.00m	MAR02247.034	Sediment	23.3	76.7	0.00	88.63	11.37	2.67
BH19 (ES2) 1.10m	MAR02247.035	Sediment	21.7	78.3	0.19	65.44	34.37	2.68
BH19 (ES3) 2.10m	MAR02247.036	Sediment	17.8	82.2	1.82	73.81	24.37	2.67
BH20 (ES1) 0.00m	MAR02247.037	Sediment	34.9	65.1	0.11	59.28	40.61	2.66
BH20 (ES2) 1.70m	MAR02247.038	Sediment	16.3	83.7	0.63	52.12	47.24	2.67
BH20 (ES3) 3.30m	MAR02247.039	Sediment	24.3	75.7	0.34	60.93	38.73	2.69
BH21 (ES1) 0.00m	MAR02247.040	Sediment	24.7	75.3	0.29	91.54	8.17	2.66
BH21 (ES3) 3.00m	MAR02247.041	Sediment	18.7	81.3	0.28	69.53	30.18	2.66
BH22 (ES1) 0.00m	MAR02247.042	Sediment	23.8	76.2	0.47	65.16	34.37	2.67
BH22 (ES2) 3.80m	MAR02247.043	Sediment	21.3	78.7	6.19	64.37	29.44	2.69
BH22 (ES3) 7.50m	MAR02247.044	Sediment	10.4	89.6	23.88	21.48	54.64	2.71
BH25 (ES1) 0.00m	MAR02247.045	Sediment	23.1	76.9	0.43	73.61	25.96	2.67
BH25 (ES2) 2.10m	MAR02247.046	Sediment	16.7	83.3	0.00	46.55	53.45	2.69
BH25 (ES3) 4.10m	MAR02247.047	Sediment	17.7	82.3	6.82	38.67	54.51	2.71
BH26 (ES1) 0.00m	MAR02247.048	Sediment	28.7	71.3	1.00	75.91	23.09	2.66
BH26 (ES2) 3.10m	MAR02247.049	Sediment	14.3	85.7	12.79	42.10	45.12	2.68
BH26 (ES3) 6.20m	MAR02247.050	Sediment	18.7	81.3	0.00	81.80	18.20	2.68
BH27 (ES1) 0.00m	MAR02247.051	Sediment	23.0	77.0	6.98	66.80	26.22	2.68
BH27 (ES2) 3.30m	MAR02247.052	Sediment	15.7	84.3	0.27	68.77	30.96	2.67
BH27 (ES3) 6.50m	MAR02247.053	Sediment	13.0	87.0	1.51	50.74	47.75	2.70
BH29 (ES1) 0.00m	MAR02247.054	Sediment	14.5	85.5	0.15	66.25	33.60	2.67
BH29 (ES2) 2.79m	MAR02247.055	Sediment	16.1	83.9	3.38	31.26	65.36	2.68
BH29 (ES3) 5.59m	MAR02247.056	Sediment	17.9	82.1	3.41	48.05	48.54	2.69
BH30 (ES1) 0.00m	MAR02247.057	Sediment	18.9	81.1	0.03	89.95	10.02	2.67
BH30 (ES2) 3.86m	MAR02247.058	Sediment	17.2	82.8	0.06	57.55	42.39	2.68
BH30 (ES3) 7.72m	MAR02247.059	Sediment	17.4	82.6	0.00	34.15	65.85	2.75
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

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

Units	% M/M
Method No	WSLM59*
Limit of Detection	0.02
Accreditation	UKAS

Client Reference:	SOCOTEC Ref:	Matrix	TOC
BH03 (ES1) 0.50m	MAR02247.001	Sediment	0.44
BH03 (ES2) 1.90m	MAR02247.002	Sediment	0.38
BH03 (ES3) 3.70m	MAR02247.003	Sediment	0.37
BH05 (ES1) 0.00m	MAR02247.004	Sediment	0.21
BH05 (ES2) 6.00m	MAR02247.005	Sediment	0.17
BH05 (ES3) 12.00m	MAR02247.006	Sediment	0.18
BH06 (ES1) 2.30m	MAR02247.007	Sediment	0.19
BH06 (ES2) 5.94m	MAR02247.008	Sediment	0.18
BH06 (ES3) 11.87m	MAR02247.009	Sediment	0.16
BH10 (ES1) 0.00m	MAR02247.010	Sediment	0.58
BH10 (ES2) 1.80m	MAR02247.011	Sediment	0.56
BH10 (ES3) 3.50m	MAR02247.012	Sediment	0.25
BH12 (ES1) 0.00m	MAR02247.013	Sediment	0.62
BH12 (ES2) 1.50m	MAR02247.014	Sediment	0.09
BH12 (ES3) 3.00m	MAR02247.015	Sediment	0.13
BH13A (ES1) 0.00m	MAR02247.016	Sediment	0.48
BH13A (ES2) 2.40m	MAR02247.017	Sediment	0.46
BH13A (ES3) 4.80m	MAR02247.018	Sediment	0.14
BH14 (ES1) 0.00m	MAR02247.019	Sediment	0.11
BH14 (ES2) 2.10m	MAR02247.020	Sediment	0.14
BH14 (ES3) 4.20m	MAR02247.021	Sediment	0.16
BH15 (ES1) 0.00m	MAR02247.022	Sediment	0.30
BH15 (ES2) 1.40m	MAR02247.023	Sediment	0.47
BH15 (ES3) 2.80m	MAR02247.024	Sediment	0.15
BH16 (ES1) 0.00m	MAR02247.025	Sediment	0.14
BH16 (ES2) 3.80m	MAR02247.026	Sediment	0.19
BH16 (ES3) 7.60m	MAR02247.027	Sediment	0.11
BH17 (ES1) 0.00m	MAR02247.028	Sediment	0.31
BH17 (ES2) 0.90m	MAR02247.029	Sediment	0.13
BH17 (ES3) 1.90m	MAR02247.030	Sediment	0.25
BH18 (ES1) 0.00m	MAR02247.031	Sediment	0.48
BH18 (ES2) 0.60m	MAR02247.032	Sediment	0.16

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

Units	% M/M
Method No	WSLM59*
Limit of Detection	0.02
Accreditation	UKAS

Client Reference:	SOCOTEC Ref:	Matrix	TOC
BH18 (ES3) 1.20m	MAR02247.033	Sediment	0.27
BH19 (ES1) 0.00m	MAR02247.034	Sediment	0.13
BH19 (ES2) 1.10m	MAR02247.035	Sediment	0.10
BH19 (ES3) 2.10m	MAR02247.036	Sediment	0.10
BH20 (ES1) 0.00m	MAR02247.037	Sediment	0.24
BH20 (ES2) 1.70m	MAR02247.038	Sediment	0.30
BH20 (ES3) 3.30m	MAR02247.039	Sediment	0.21
BH21 (ES1) 0.00m	MAR02247.040	Sediment	0.10
BH21 (ES3) 3.00m	MAR02247.041	Sediment	0.11
BH22 (ES1) 0.00m	MAR02247.042	Sediment	0.10
BH22 (ES2) 3.80m	MAR02247.043	Sediment	0.11
BH22 (ES3) 7.50m	MAR02247.044	Sediment	0.14
BH25 (ES1) 0.00m	MAR02247.045	Sediment	1.17
BH25 (ES2) 2.10m	MAR02247.046	Sediment	0.33
BH25 (ES3) 4.10m	MAR02247.047	Sediment	0.39
BH26 (ES1) 0.00m	MAR02247.048	Sediment	0.21
BH26 (ES2) 3.10m	MAR02247.049	Sediment	0.24
BH26 (ES3) 6.20m	MAR02247.050	Sediment	0.07
BH27 (ES1) 0.00m	MAR02247.051	Sediment	0.06
BH27 (ES2) 3.30m	MAR02247.052	Sediment	0.77
BH27 (ES3) 6.50m	MAR02247.053	Sediment	0.48
BH29 (ES1) 0.00m	MAR02247.054	Sediment	0.11
BH29 (ES2) 2.79m	MAR02247.055	Sediment	0.31
BH29 (ES3) 5.59m	MAR02247.056	Sediment	0.13
BH30 (ES1) 0.00m	MAR02247.057	Sediment	0.16
BH30 (ES2) 3.86m	MAR02247.058	Sediment	0.11
BH30 (ES3) 7.72m	MAR02247.059	Sediment	0.13
Reference Material (% Recovery)			101
QC Blank			<0.02

* See Report Notes

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH03 (ES1) 0.50m	MAR02247.001	Sediment	4.2	0.12	16.8	8.2	0.03	16.9	7.1	32.4
BH03 (ES2) 1.90m	MAR02247.002	Sediment	7.2	0.13	17.2	8.4	0.01	18.4	6.1	33.0
BH03 (ES3) 3.70m	MAR02247.003	Sediment	8.2	0.12	20.2	9.9	0.01	21.5	7.2	40.3
BH05 (ES1) 0.00m	MAR02247.004	Sediment	1.4	0.07	8.8	3.8	<0.01	9.5	2.7	27.7
BH05 (ES2) 6.00m	MAR02247.005	Sediment	2.7	0.08	10.9	5.3	0.06	9.3	2.9	18.4
BH05 (ES3) 12.00m	MAR02247.006	Sediment	3.7	0.12	15.6	15.5	<0.01	19.5	6.5	44.4
BH06 (ES1) 2.30m	MAR02247.007	Sediment	2.0	0.06	7.1	5.5	0.02	7.6	3.2	18.3
BH06 (ES2) 5.94m	MAR02247.008	Sediment	4.9	0.15	20.7	19.8	0.01	25.5	7.2	55.8
BH06 (ES3) 11.87m	MAR02247.009	Sediment	1.2	0.05	4.9	4.2	<0.01	6.0	1.9	14.9
BH10 (ES1) 0.00m	MAR02247.010	Sediment	3.9	0.13	21.3	6.4	0.03	20.6	11.2	45.1
BH10 (ES2) 1.80m	MAR02247.011	Sediment	4.9	0.13	25.1	8.7	0.04	27.8	13.6	77.0
BH10 (ES3) 3.50m	MAR02247.012	Sediment	3.6	0.07	13.9	5.5	<0.01	13.8	5.2	27.5
BH12 (ES1) 0.00m	MAR02247.013	Sediment	4.9	0.12	24.7	7.7	0.04	26.0	13.2	75.5
BH12 (ES2) 1.50m	MAR02247.014	Sediment	1.5	<0.04	6.6	2.6	0.01	5.9	2.2	18.8
BH12 (ES3) 3.00m	MAR02247.015	Sediment	1.4	0.07	6.4	2.8	<0.01	5.4	2.5	22.4
BH13A (ES1) 0.00m	MAR02247.016	Sediment	3.1	0.09	17.0	4.7	0.03	16.2	7.5	46.4
BH13A (ES2) 2.40m	MAR02247.017	Sediment	9.7	0.16	23.1	9.8	0.01	25.2	8.6	51.1
BH13A (ES3) 4.80m	MAR02247.018	Sediment	3.7	0.09	12.9	15.7	<0.01	16.8	5.7	51.5
BH14 (ES1) 0.00m	MAR02247.019	Sediment	2.1	<0.04	5.6	1.9	<0.01	5.3	2.4	19.4
BH14 (ES2) 2.10m	MAR02247.020	Sediment	1.2	<0.04	5.5	2.9	<0.01	5.9	2.3	19.9
BH14 (ES3) 4.20m	MAR02247.021	Sediment	2.4	<0.04	7.9	3.7	0.02	7.8	2.7	14.6
BH15 (ES1) 0.00m	MAR02247.022	Sediment	2.9	<0.04	12.3	5.3	0.02	12.3	4.8	23.7
BH15 (ES2) 1.40m	MAR02247.023	Sediment	5.0	0.08	21.8	10.1	0.02	23.7	8.1	48.9
BH15 (ES3) 2.80m	MAR02247.024	Sediment	2.7	0.06	15.0	16.0	0.01	19.0	6.2	45.8
BH16 (ES1) 0.00m	MAR02247.025	Sediment	1.8	<0.04	7.4	3.6	0.01	5.4	4.9	17.7
BH16 (ES2) 3.80m	MAR02247.026	Sediment	3.3	0.05	16.1	16.1	0.01	19.2	6.4	41.5
BH16 (ES3) 7.60m	MAR02247.027	Sediment	2.8	<0.04	7.2	11.8	0.02	10.1	4.4	23.3
BH17 (ES1) 0.00m	MAR02247.028	Sediment	1.7	<0.04	9.4	3.9	0.04	9.1	4.7	22.1
BH17 (ES2) 0.90m	MAR02247.029	Sediment	1.4	<0.04	6.3	3.2	0.01	6.5	1.7	14.8
BH17 (ES3) 1.90m	MAR02247.030	Sediment	1.8	0.05	8.5	2.8	<0.01	8.0	2.7	27.8
BH18 (ES1) 0.00m	MAR02247.031	Sediment	3.4	0.08	16.2	5.2	0.04	14.7	9.5	42.4
BH18 (ES2) 0.60m	MAR02247.032	Sediment	2.3	0.05	8.1	9.2	<0.01	9.2	4.2	39.1

MAR02247

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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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH18 (ES3) 1.20m	MAR02247.033	Sediment	2.4	0.04	8.3	4.3	<0.01	7.4	3.9	28.3
BH19 (ES1) 0.00m	MAR02247.034	Sediment	2.4	<0.04	8.2	2.4	<0.01	4.8	6.8	40.5
BH19 (ES2) 1.10m	MAR02247.035	Sediment	1.8	<0.04	5.8	1.8	<0.01	4.0	1.6	21.5
BH19 (ES3) 2.10m	MAR02247.036	Sediment	1.3	<0.04	7.2	3.0	<0.01	4.8	1.7	16.8
BH20 (ES1) 0.00m	MAR02247.037	Sediment	4.3	0.05	13.3	4.7	<0.01	13.1	4.1	32.5
BH20 (ES2) 1.70m	MAR02247.038	Sediment	5.1	0.06	15.0	5.5	<0.01	15.2	5.0	34.3
BH20 (ES3) 3.30m	MAR02247.039	Sediment	2.9	0.04	14.5	7.7	0.03	14.8	4.9	34.4
BH21 (ES1) 0.00m	MAR02247.040	Sediment	1.3	<0.04	7.8	3.8	0.02	5.8	8.1	18.6
BH21 (ES3) 3.00m	MAR02247.041	Sediment	1.0	<0.04	11.8	3.2	0.01	5.5	1.9	14.0
BH22 (ES1) 0.00m	MAR02247.042	Sediment	1.2	<0.04	10.1	12.3	0.03	10.8	4.5	24.6
BH22 (ES2) 3.80m	MAR02247.043	Sediment	3.2	0.05	8.2	16.5	0.07	12.3	5.2	44.3
BH22 (ES3) 7.50m	MAR02247.044	Sediment	2.6	0.08	12.7	10.3	0.04	15.7	5.4	36.4
BH25 (ES1) 0.00m	MAR02247.045	Sediment	4.8	0.14	34.0	9.8	0.08	27.9	15.0	65.1
BH25 (ES2) 2.10m	MAR02247.046	Sediment	4.0	0.04	14.3	6.3	0.02	15.7	5.6	29.9
BH25 (ES3) 4.10m	MAR02247.047	Sediment	3.9	0.07	16.2	8.0	0.01	17.5	6.1	34.4
BH26 (ES1) 0.00m	MAR02247.048	Sediment	2.1	<0.04	10.2	3.7	0.02	8.7	5.4	25.7
BH26 (ES2) 3.10m	MAR02247.049	Sediment	3.3	0.24	7.5	7.6	0.01	9.6	3.8	27.7
BH26 (ES3) 6.20m	MAR02247.050	Sediment	2.1	<0.04	4.5	6.9	0.03	6.7	2.8	18.8
BH27 (ES1) 0.00m	MAR02247.051	Sediment	1.9	<0.04	5.2	7.1	0.02	8.4	2.7	18.1
BH27 (ES2) 3.30m	MAR02247.052	Sediment	4.4	0.09	21.6	7.7	0.07	21.5	12.8	47.7
BH27 (ES3) 6.50m	MAR02247.053	Sediment	3.0	0.07	13.8	5.6	0.04	14.4	7.6	38.8
BH29 (ES1) 0.00m	MAR02247.054	Sediment	2.8	<0.04	6.5	10.2	0.01	9.9	3.8	30.2
BH29 (ES2) 2.79m	MAR02247.055	Sediment	3.9	0.06	17.0	8.2	0.02	18.9	6.5	37.0
BH29 (ES3) 5.59m	MAR02247.056	Sediment	3.1	<0.04	10.5	13.0	0.02	13.5	5.1	35.0
BH30 (ES1) 0.00m	MAR02247.057	Sediment	1.8	<0.04	8.1	4.2	0.02	7.8	3.2	35.0
BH30 (ES2) 3.86m	MAR02247.058	Sediment	2.2	<0.04	7.7	4.0	0.12	7.7	2.6	24.3
BH30 (ES3) 7.72m	MAR02247.059	Sediment	3.4	0.08	13.8	16.8	0.2	18.6	5.9	42.9
Certified Reference Material SETOC 768 (% Recovery)			105	104	108	106	106	109	106	110
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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

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)
BH03 (ES1) 0.50m	MAR02247.001	Sediment	<5	<5
BH03 (ES2) 1.90m	MAR02247.002	Sediment	<1	<1
BH03 (ES3) 3.70m	MAR02247.003	Sediment	<1	<1
BH05 (ES1) 0.00m	MAR02247.004	Sediment	<1	<1
BH05 (ES2) 6.00m	MAR02247.005	Sediment	<1	<1
BH05 (ES3) 12.00m	MAR02247.006	Sediment	<5	<5
BH06 (ES1) 2.30m	MAR02247.007	Sediment	<1	<1
BH06 (ES2) 5.94m	MAR02247.008	Sediment	<1	<1
BH06 (ES3) 11.87m	MAR02247.009	Sediment	<1	<1
BH10 (ES1) 0.00m	MAR02247.010	Sediment	<5	<5
BH10 (ES2) 1.80m	MAR02247.011	Sediment	<5	<5
BH10 (ES3) 3.50m	MAR02247.012	Sediment	<1	<1
BH12 (ES1) 0.00m	MAR02247.013	Sediment	<1	<1
Certified Reference Material BCR-646 (% Recovery)			64	71
QC Blank			<1	<1

* See Report Notes

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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)
BH12 (ES2) 1.50m	MAR02247.014	Sediment	<1	<1
BH12 (ES3) 3.00m	MAR02247.015	Sediment	<1	<1
BH13A (ES1) 0.00m	MAR02247.016	Sediment	<5	<5
BH13A (ES2) 2.40m	MAR02247.017	Sediment	<1	<1
BH13A (ES3) 4.80m	MAR02247.018	Sediment	<5	<5
BH14 (ES1) 0.00m	MAR02247.019	Sediment	<1	<1
BH14 (ES2) 2.10m	MAR02247.020	Sediment	<1	<1
BH14 (ES3) 4.20m	MAR02247.021	Sediment	<1	<1
BH15 (ES1) 0.00m	MAR02247.022	Sediment	<1	<1
BH15 (ES2) 1.40m	MAR02247.023	Sediment	<1	<1
BH15 (ES3) 2.80m	MAR02247.024	Sediment	<1	<1
BH16 (ES1) 0.00m	MAR02247.025	Sediment	<1	<1
BH16 (ES2) 3.80m	MAR02247.026	Sediment	<5	<5
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<1	<1
BH17 (ES1) 0.00m	MAR02247.028	Sediment	<5	<5
BH17 (ES2) 0.90m	MAR02247.029	Sediment	<1	<1
BH17 (ES3) 1.90m	MAR02247.030	Sediment	<1	<1
BH18 (ES1) 0.00m	MAR02247.031	Sediment	<1	<1
BH18 (ES2) 0.60m	MAR02247.032	Sediment	<1	<1
Certified Reference Material BCR-646 (% Recovery)			64	71
QC Blank			<1	<1

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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)
BH18 (ES3) 1.20m	MAR02247.033	Sediment	<1	<1
BH19 (ES1) 0.00m	MAR02247.034	Sediment	<1	<1
BH19 (ES2) 1.10m	MAR02247.035	Sediment	<1	<1
BH19 (ES3) 2.10m	MAR02247.036	Sediment	<1	<1
BH20 (ES1) 0.00m	MAR02247.037	Sediment	<1	<1
BH20 (ES2) 1.70m	MAR02247.038	Sediment	<5	<5
BH20 (ES3) 3.30m	MAR02247.039	Sediment	<5	<5
BH21 (ES1) 0.00m	MAR02247.040	Sediment	<5	<5
BH21 (ES3) 3.00m	MAR02247.041	Sediment	<1	<1
BH22 (ES1) 0.00m	MAR02247.042	Sediment	<1	<1
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<5	<5
BH22 (ES3) 7.50m	MAR02247.044	Sediment	<5	<5
BH25 (ES1) 0.00m	MAR02247.045	Sediment	<1	<1
BH25 (ES2) 2.10m	MAR02247.046	Sediment	<1	<1
BH25 (ES3) 4.10m	MAR02247.047	Sediment	<1	<1
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<5	<5
BH26 (ES2) 3.10m	MAR02247.049	Sediment	<1	<1
BH26 (ES3) 6.20m	MAR02247.050	Sediment	<1	<1
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<5	<5
Certified Reference Material BCR-646 (% Recovery)			63	72
QC Blank			<1	<1

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

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)
BH27 (ES2) 3.30m	MAR02247.052	Sediment	<1	<1
BH27 (ES3) 6.50m	MAR02247.053	Sediment	<1	<1
BH29 (ES1) 0.00m	MAR02247.054	Sediment	<1	<1
BH29 (ES2) 2.79m	MAR02247.055	Sediment	<5	<5
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<1	<1
BH30 (ES1) 0.00m	MAR02247.057	Sediment	<1	<1
BH30 (ES2) 3.86m	MAR02247.058	Sediment	<1	<1
BH30 (ES3) 7.72m	MAR02247.059	Sediment	<1	<1
Certified Reference Material BCR-646 (% Recovery)			67	76
QC Blank			<1	<1

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH03 (ES1) 0.50m	MAR02247.001	Sediment	<1	<1	1.91	9.00	10.5	8.76
BH03 (ES2) 1.90m	MAR02247.002	Sediment	1.74	<1	1.99	5.05	6.75	7.25
BH03 (ES3) 3.70m	MAR02247.003	Sediment	2.32	<1	4.28	13.5	16.9	16.8
BH05 (ES1) 0.00m	MAR02247.004	Sediment	<1	<1	<1	3.16	4.62	3.56
BH05 (ES2) 6.00m	MAR02247.005	Sediment	<1	<1	<1	1.90	2.79	3.60
BH05 (ES3) 12.00m	MAR02247.006	Sediment	<1	<1	<1	1.69	2.37	4.73
BH06 (ES1) 2.30m	MAR02247.007	Sediment	<5	<5	<5	9.39	10.1	7.57
BH06 (ES2) 5.94m	MAR02247.008	Sediment	<1	<1	<1	<1	<1	<1
BH06 (ES3) 11.87m	MAR02247.009	Sediment	<1	<1	<1	<1	<1	2.02
Certified Reference Material NIST 1941b (% Recovery)			102	120	71	60	57	82
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 available.
 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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH03 (ES1) 0.50m	MAR02247.001	Sediment	6.38	8.46	7.93	7.70	11.0	11.6
BH03 (ES2) 1.90m	MAR02247.002	Sediment	8.43	15.8	3.83	25.0	28.2	32.7
BH03 (ES3) 3.70m	MAR02247.003	Sediment	14.2	22.0	11.5	26.4	30.3	37.0
BH05 (ES1) 0.00m	MAR02247.004	Sediment	2.91	3.27	4.17	2.53	3.50	4.06
BH05 (ES2) 6.00m	MAR02247.005	Sediment	3.35	6.60	1.40	11.3	12.7	14.7
BH05 (ES3) 12.00m	MAR02247.006	Sediment	3.96	6.35	1.62	8.24	8.02	11.5
BH06 (ES1) 2.30m	MAR02247.007	Sediment	<5	7.48	8.43	11.9	15.3	16.1
BH06 (ES2) 5.94m	MAR02247.008	Sediment	<1	<1	<1	1.73	<1	1.78
BH06 (ES3) 11.87m	MAR02247.009	Sediment	1.78	3.09	<1	2.31	2.17	2.52
Certified Reference Material NIST 1941b (% Recovery)			69	77	75	74	75	114
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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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	N*	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	C3N	CHRYSENE*	DBENZAH	FLUORANT	FLUORENE	INDPYR
BH03 (ES1) 0.50m	MAR02247.001	Sediment	13.9	9.05	1.34	15.0	1.32	5.96
BH03 (ES2) 1.90m	MAR02247.002	Sediment	34.8	7.47	1.22	6.31	4.48	4.12
BH03 (ES3) 3.70m	MAR02247.003	Sediment	41.9	16.10	2.87	20.4	4.85	8.91
BH05 (ES1) 0.00m	MAR02247.004	Sediment	4.15	3.99	<1	6.04	<1	2.65
BH05 (ES2) 6.00m	MAR02247.005	Sediment	18.3	3.14	<1	2.51	2.15	1.55
BH05 (ES3) 12.00m	MAR02247.006	Sediment	10.9	3.24	<1	3.69	1.56	1.72
BH06 (ES1) 2.30m	MAR02247.007	Sediment	15.8	10.1	<5	19.0	<5	5.05
BH06 (ES2) 5.94m	MAR02247.008	Sediment	1.69	<1	<1	<1	<1	<1
BH06 (ES3) 11.87m	MAR02247.009	Sediment	2.42	1.45	<1	1.16	<1	<1
Certified Reference Material NIST 1941b (% Recovery)			109	79	105	81	60	70
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 available.
 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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH03 (ES1) 0.50m	MAR02247.001	Sediment	2.20	3.30	6.01	16.4	7370
BH03 (ES2) 1.90m	MAR02247.002	Sediment	5.65	8.46	17.2	9.54	7680
BH03 (ES3) 3.70m	MAR02247.003	Sediment	5.52	9.92	20.8	24.2	23200
BH05 (ES1) 0.00m	MAR02247.004	Sediment	<1	<1	3.43	5.70	12500
BH05 (ES2) 6.00m	MAR02247.005	Sediment	2.78	2.94	7.28	3.75	2820
BH05 (ES3) 12.00m	MAR02247.006	Sediment	1.74	1.80	6.07	3.70	23400
BH06 (ES1) 2.30m	MAR02247.007	Sediment	<5	<5	13.6	19.6	80200
BH06 (ES2) 5.94m	MAR02247.008	Sediment	<1	<1	<1	<1	3310
BH06 (ES3) 11.87m	MAR02247.009	Sediment	<1	1.34	1.49	1.88	1750
Certified Reference Material NIST 1941b (% Recovery)			63	44	83	70	92-
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
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 *See report notes

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	N*
Client Reference:	SOCOTEC Ref:	Matrix	ACENAPTH	ACENAPHY	ANTHRACN	BAA	BAP	BBF
BH10 (ES1) 0.00m	MAR02247.010	Sediment	<5	<5	16.7	32.7	39.1	33.0
BH10 (ES2) 1.80m	MAR02247.011	Sediment	15.9	<5	36.7	119	117	90.2
BH10 (ES3) 3.50m	MAR02247.012	Sediment	2.63	1.79	7.68	20.8	26.3	20.3
BH12 (ES1) 0.00m	MAR02247.013	Sediment	37.4	9.91	51.4	132	156	115
BH12 (ES2) 1.50m	MAR02247.014	Sediment	<1	<1	<1	3.13	3.07	2.11
BH12 (ES3) 3.00m	MAR02247.015	Sediment	<1	<1	<1	<1	<1	<1
BH13A (ES1) 0.00m	MAR02247.016	Sediment	8.39	6.74	30.3	91.4	88.6	71.2
BH13A (ES2) 2.40m	MAR02247.017	Sediment	<1	<1	2.12	7.16	9.66	11.9
BH13A (ES3) 4.80m	MAR02247.018	Sediment	<1	<1	<1	<1	<1	<1
BH14 (ES1) 0.00m	MAR02247.019	Sediment	<1	<1	<1	2.50	2.52	2.77
BH14 (ES2) 2.10m	MAR02247.020	Sediment	3.32	<1	1.48	3.68	4.01	3.04
BH14 (ES3) 4.20m	MAR02247.021	Sediment	<1	<1	<1	1.35	1.91	2.00
BH15 (ES1) 0.00m	MAR02247.022	Sediment	<1	<1	<1	3.56	5.16	5.86
BH15 (ES2) 1.40m	MAR02247.023	Sediment	1.33	<1	1.52	4.44	6.70	7.65
BH15 (ES3) 2.80m	MAR02247.024	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material NIST 1941b (% Recovery)			91	117	66	58	54	75
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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 *See report notes

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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH10 (ES1) 0.00m	MAR02247.010	Sediment	28.5	30.1	44.2	43.4	67.1	73.0
BH10 (ES2) 1.80m	MAR02247.011	Sediment	74.8	71.0	114	84.3	135	111
BH10 (ES3) 3.50m	MAR02247.012	Sediment	18.3	22.9	22.0	23.5	35.2	33.0
BH12 (ES1) 0.00m	MAR02247.013	Sediment	96.3	105	131	110	178	148
BH12 (ES2) 1.50m	MAR02247.014	Sediment	1.98	2.15	2.70	2.68	3.97	3.86
BH12 (ES3) 3.00m	MAR02247.015	Sediment	<1	<1	<1	2.98	2.73	3.23
BH13A (ES1) 0.00m	MAR02247.016	Sediment	57.6	61.7	80.8	56.0	105	76.3
BH13A (ES2) 2.40m	MAR02247.017	Sediment	13.1	22.2	7.88	32.2	33.4	46.6
BH13A (ES3) 4.80m	MAR02247.018	Sediment	<1	<1	<1	1.98	1.90	2.61
BH14 (ES1) 0.00m	MAR02247.019	Sediment	2.64	2.67	2.58	3.69	5.67	7.64
BH14 (ES2) 2.10m	MAR02247.020	Sediment	3.33	4.57	3.62	5.31	7.54	8.26
BH14 (ES3) 4.20m	MAR02247.021	Sediment	2.13	3.19	1.13	6.73	6.64	9.06
BH15 (ES1) 0.00m	MAR02247.022	Sediment	6.77	11.0	3.56	16.0	19.7	22.5
BH15 (ES2) 1.40m	MAR02247.023	Sediment	8.97	14.9	4.85	22.2	22.9	29.7
BH15 (ES3) 2.80m	MAR02247.024	Sediment	<1	<1	<1	2.17	1.66	2.59
Certified Reference Material NIST 1941b (% Recovery)			71	62	76	73	88	111
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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 *See report notes

MAR02247
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Certificate of Analysis



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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH10 (ES1) 0.00m	MAR02247.010	Sediment	78.8	39.8	<5	67.8	8.76	22.9
BH10 (ES2) 1.80m	MAR02247.011	Sediment	127	149	11.1	249	16.2	57.0
BH10 (ES3) 3.50m	MAR02247.012	Sediment	43.6	22.7	2.92	40.2	4.20	14.8
BH12 (ES1) 0.00m	MAR02247.013	Sediment	200	145	17.6	271	34.4	84.8
BH12 (ES2) 1.50m	MAR02247.014	Sediment	3.97	3.31	<1	5.59	<1	1.56
BH12 (ES3) 3.00m	MAR02247.015	Sediment	2.78	<1	<1	1.23	<1	<1
BH13A (ES1) 0.00m	MAR02247.016	Sediment	111	105	10.4	176	12.3	50.8
BH13A (ES2) 2.40m	MAR02247.017	Sediment	50.8	11.8	1.93	11.2	5.92	5.23
BH13A (ES3) 4.80m	MAR02247.018	Sediment	2.99	<1	<1	<1	<1	<1
BH14 (ES1) 0.00m	MAR02247.019	Sediment	8.09	2.84	<1	4.79	<1	1.83
BH14 (ES2) 2.10m	MAR02247.020	Sediment	10.1	4.37	<1	7.19	1.14	2.17
BH14 (ES3) 4.20m	MAR02247.021	Sediment	10.4	1.91	<1	1.89	<1	<1
BH15 (ES1) 0.00m	MAR02247.022	Sediment	24.4	5.82	<1	4.68	2.64	2.62
BH15 (ES2) 1.40m	MAR02247.023	Sediment	34.6	7.17	1.21	6.05	3.67	3.67
BH15 (ES3) 2.80m	MAR02247.024	Sediment	2.55	<1	<1	<1	<1	<1
Certified Reference Material NIST 1941b (% Recovery)			110	86	98	78	51	57
QC Blank			<1	<1	<1	<1	<1	<1

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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

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
BH10 (ES1) 0.00m	MAR02247.010	Sediment	15.6	8.84	47.6	75.9	32600
BH10 (ES2) 1.80m	MAR02247.011	Sediment	29.1	25.8	118	273	71600
BH10 (ES3) 3.50m	MAR02247.012	Sediment	5.77	7.46	25.8	45.5	22000
BH12 (ES1) 0.00m	MAR02247.013	Sediment	35.7	33.1	205	279	77300
BH12 (ES2) 1.50m	MAR02247.014	Sediment	<1	<1	3.46	5.56	5220
BH12 (ES3) 3.00m	MAR02247.015	Sediment	<1	<1	1.64	1.58	2620
BH13A (ES1) 0.00m	MAR02247.016	Sediment	19.0	21.2	84.2	171	43000
BH13A (ES2) 2.40m	MAR02247.017	Sediment	5.26	6.63	23.4	15.3	34700
BH13A (ES3) 4.80m	MAR02247.018	Sediment	<1	<1	1.57	<1	8820
BH14 (ES1) 0.00m	MAR02247.019	Sediment	<1	<1	3.67	5.32	10700
BH14 (ES2) 2.10m	MAR02247.020	Sediment	1.84	1.82	5.78	8.15	16900
BH14 (ES3) 4.20m	MAR02247.021	Sediment	1.69	1.87	4.18	2.80	15700
BH15 (ES1) 0.00m	MAR02247.022	Sediment	2.90	7.40	12.0	6.17	6250
BH15 (ES2) 1.40m	MAR02247.023	Sediment	3.95	12.4	15.9	8.43	7230
BH15 (ES3) 2.80m	MAR02247.024	Sediment	<1	<1	1.48	<1	898
Certified Reference Material NIST 1941b (% Recovery)			55	51	77	69	98~
QC Blank			<1	<1	<1	<1	<100

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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH16 (ES1) 0.00m	MAR02247.025	Sediment	<1	<1	<1	2.51	3.94	4.19
BH16 (ES2) 3.80m	MAR02247.026	Sediment	1.79	<1	<1	<1	<1	<1
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<1	<1	<1	<1	<1	<1
BH17 (ES1) 0.00m	MAR02247.028	Sediment	8.19	6.40	26.7	67.7	84.7	62.2
BH17 (ES2) 0.90m	MAR02247.029	Sediment	<1	<1	1.40	3.19	3.28	3.83
BH17 (ES3) 1.90m	MAR02247.030	Sediment	3.31	<1	8.87	21.6	24.5	20.1
BH18 (ES1) 0.00m	MAR02247.031	Sediment	5.77	4.29	17.4	54.7	61.4	48.7
BH18 (ES2) 0.60m	MAR02247.032	Sediment	<1	<1	<1	<1	<1	<1
BH18 (ES3) 1.20m	MAR02247.033	Sediment	<1	<1	<1	<1	<1	<1
BH19 (ES1) 0.00m	MAR02247.034	Sediment	<1	<1	<1	2.00	3.19	2.73
BH19 (ES2) 1.10m	MAR02247.035	Sediment	<1	<1	<1	<1	<1	<1
BH19 (ES3) 2.10m	MAR02247.036	Sediment	<1	<1	<1	<1	1.25	1.32
BH20 (ES1) 0.00m	MAR02247.037	Sediment	3.66	<1	2.73	5.65	6.34	7.00
BH20 (ES2) 1.70m	MAR02247.038	Sediment	1.99	<1	2.06	4.79	6.40	8.13
BH20 (ES3) 3.30m	MAR02247.039	Sediment	<1	<1	1.74	6.08	7.74	7.40
Certified Reference Material NIST 1941b (% Recovery)			73	113	66	66	66	81
QC Blank			<1	<1	<1	<1	<1	<1

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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH16 (ES1) 0.00m	MAR02247.025	Sediment	3.16	3.67	3.20	3.25	3.72	5.99
BH16 (ES2) 3.80m	MAR02247.026	Sediment	<1	<1	<1	1.67	<1	1.73
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<1	<1	<1	<1	<1	<1
BH17 (ES1) 0.00m	MAR02247.028	Sediment	51.3	59.1	68.4	42.6	77.2	67.2
BH17 (ES2) 0.90m	MAR02247.029	Sediment	4.73	7.54	3.18	12.4	15.8	19.5
BH17 (ES3) 1.90m	MAR02247.030	Sediment	17.5	24.1	19.8	32.5	53.0	84.7
BH18 (ES1) 0.00m	MAR02247.031	Sediment	37.6	43.7	50.2	35.5	65.0	61.0
BH18 (ES2) 0.60m	MAR02247.032	Sediment	<1	<1	<1	1.48	<1	1.67
BH18 (ES3) 1.20m	MAR02247.033	Sediment	<1	<1	<1	1.64	4.21	4.57
BH19 (ES1) 0.00m	MAR02247.034	Sediment	2.81	3.75	3.30	3.83	3.21	5.23
BH19 (ES2) 1.10m	MAR02247.035	Sediment	<1	<1	<1	1.30	<1	1.93
BH19 (ES3) 2.10m	MAR02247.036	Sediment	1.33	1.71	1.48	<1	<1	1.93
BH20 (ES1) 0.00m	MAR02247.037	Sediment	7.63	11.8	4.24	16.8	29.9	31.7
BH20 (ES2) 1.70m	MAR02247.038	Sediment	8.13	12.8	4.85	22.5	26.2	36.0
BH20 (ES3) 3.30m	MAR02247.039	Sediment	5.44	6.23	5.74	5.42	8.90	10.8
Certified Reference Material NIST 1941b (% Recovery)			78	76	94	78	80	114
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH16 (ES1) 0.00m	MAR02247.025	Sediment	4.62	2.91	<1	4.55	<1	2.90
BH16 (ES2) 3.80m	MAR02247.026	Sediment	1.38	<1	<1	<1	<1	<1
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<1	<1	<1	<1	<1	<1
BH17 (ES1) 0.00m	MAR02247.028	Sediment	84.4	73.0	9.74	132	12.2	47.8
BH17 (ES2) 0.90m	MAR02247.029	Sediment	20.1	4.45	<1	4.71	1.88	2.13
BH17 (ES3) 1.90m	MAR02247.030	Sediment	72.2	24.1	2.90	36.1	5.9	12.8
BH18 (ES1) 0.00m	MAR02247.031	Sediment	63.2	55.9	7.63	103	8.9	36.4
BH18 (ES2) 0.60m	MAR02247.032	Sediment	1.38	<1	<1	<1	<1	<1
BH18 (ES3) 1.20m	MAR02247.033	Sediment	5.96	1.35	<1	1.48	<1	<1
BH19 (ES1) 0.00m	MAR02247.034	Sediment	4.77	2.36	<1	3.32	<1	3.10
BH19 (ES2) 1.10m	MAR02247.035	Sediment	1.33	<1	<1	<1	<1	<1
BH19 (ES3) 2.10m	MAR02247.036	Sediment	<1	<1	<1	<1	<1	1.27
BH20 (ES1) 0.00m	MAR02247.037	Sediment	38.0	7.31	<1	8.45	3.19	3.06
BH20 (ES2) 1.70m	MAR02247.038	Sediment	32.4	7.52	<1	6.75	3.65	3.18
BH20 (ES3) 3.30m	MAR02247.039	Sediment	9.68	7.08	<1	11.5	<1	4.35
Certified Reference Material NIST 1941b (% Recovery)			113	87	97	77	56	69
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

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
BH16 (ES1) 0.00m	MAR02247.025	Sediment	<1	<1	2.58	4.97	9580
BH16 (ES2) 3.80m	MAR02247.026	Sediment	<1	<1	<1	<1	827
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<1	<1	<1	<1	529
BH17 (ES1) 0.00m	MAR02247.028	Sediment	15.3	18.5	79.9	133	137000
BH17 (ES2) 0.90m	MAR02247.029	Sediment	3.15	3.27	9.34	5.96	11700
BH17 (ES3) 1.90m	MAR02247.030	Sediment	11.2	12.0	31.2	41.5	137000
BH18 (ES1) 0.00m	MAR02247.031	Sediment	13.2	13.8	48.3	103	33100
BH18 (ES2) 0.60m	MAR02247.032	Sediment	<1	<1	<1	<1	1840
BH18 (ES3) 1.20m	MAR02247.033	Sediment	<1	1.41	2.04	1.80	2860
BH19 (ES1) 0.00m	MAR02247.034	Sediment	<1	<1	2.51	4.12	13700
BH19 (ES2) 1.10m	MAR02247.035	Sediment	<1	<1	<1	<1	1810
BH19 (ES3) 2.10m	MAR02247.036	Sediment	<1	<1	<1	1.40	13300
BH20 (ES1) 0.00m	MAR02247.037	Sediment	4.22	5.05	14.6	10.0	7940
BH20 (ES2) 1.70m	MAR02247.038	Sediment	6.11	7.96	15.6	8.71	9530
BH20 (ES3) 3.30m	MAR02247.039	Sediment	2.06	2.56	5.58	12.2	10500
Certified Reference Material NIST 1941b (% Recovery)			61	55	76	70	93~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
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Test Report ID MAR02247
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 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	ACENAPTH	ACENAPHY	ANTHRACN	BAA	BAP	BBF
BH21 (ES1) 0.00m	MAR02247.040	Sediment	<1	<1	1.73	4.03	6.74	6.03
BH21 (ES3) 3.00m	MAR02247.041	Sediment	<1	<1	<1	<1	<1	<1
BH22 (ES1) 0.00m	MAR02247.042	Sediment	<1	<1	<1	3.19	2.82	2.92
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<1	<1	<1	<1	<1	<1
BH22 (ES3) 7.50m	MAR02247.044	Sediment	<1	<1	<1	<1	<1	1.34
BH25 (ES1) 0.00m	MAR02247.045	Sediment	20.2	6.86	36.7	95.8	113	88.3
BH25 (ES2) 2.10m	MAR02247.046	Sediment	2.76	1.31	4.55	15.3	18.4	15.5
BH25 (ES3) 4.10m	MAR02247.047	Sediment	<1	<1	<1	<1	<1	<1
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<1	<1	<1	<1	<1	<1
BH26 (ES2) 3.10m	MAR02247.049	Sediment	58.3	18.7	128	323	357	272
BH26 (ES3) 6.20m	MAR02247.050	Sediment	2.75	2.89	12.1	25.5	27.9	19.9
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<1	<1	<1	<1	<1	<1
BH27 (ES2) 3.30m	MAR02247.052	Sediment	2.94	<1	3.58	10.2	14.5	14.2
BH27 (ES3) 6.50m	MAR02247.053	Sediment	1.62	<1	2.07	4.64	6.43	7.32
BH29 (ES1) 0.00m	MAR02247.054	Sediment	1.53	<1	2.26	5.49	6.68	7.37
BH29 (ES2) 2.79m	MAR02247.055	Sediment	1.67	<1	2.02	5.86	8.55	9.52
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<1	<1	<1	<1	<1	<1
BH30 (ES1) 0.00m	MAR02247.057	Sediment	<1	<1	2.59	6.15	7.07	4.83
BH30 (ES2) 3.86m	MAR02247.058	Sediment	<1	<1	<1	2.04	2.65	2.18
BH30 (ES3) 7.72m	MAR02247.059	Sediment	<1	<1	<1	<1	<1	<1
Certified Reference Material NIST 1941b (% Recovery)			66	114	66	67	66	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 available.
 As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
 *See report notes

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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH21 (ES1) 0.00m	MAR02247.040	Sediment	4.88	7.23	5.33	3.17	5.58	4.76
BH21 (ES3) 3.00m	MAR02247.041	Sediment	<1	<1	<1	2.33	1.67	3.11
BH22 (ES1) 0.00m	MAR02247.042	Sediment	2.64	3.01	3.42	2.16	4.69	3.82
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<1	<1	<1	<1	<1	<1
BH22 (ES3) 7.50m	MAR02247.044	Sediment	<1	1.29	<1	1.83	1.66	2.23
BH25 (ES1) 0.00m	MAR02247.045	Sediment	74.1	92.3	89.9	75.4	114	101
BH25 (ES2) 2.10m	MAR02247.046	Sediment	12.0	14.9	15.5	13.0	19.5	21.0
BH25 (ES3) 4.10m	MAR02247.047	Sediment	<1	<1	<1	2.03	1.79	2.90
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<1	<1	<1	<1	<1	<1
BH26 (ES2) 3.10m	MAR02247.049	Sediment	202	220	273	143	358	168
BH26 (ES3) 6.20m	MAR02247.050	Sediment	15.5	17.0	21.9	10.6	27.6	17.2
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<1	<1	<1	<1	<1	<1
BH27 (ES2) 3.30m	MAR02247.052	Sediment	18.0	34.2	9.21	45.0	47.4	59.4
BH27 (ES3) 6.50m	MAR02247.053	Sediment	8.07	13.9	3.40	24.3	24.9	30.6
BH29 (ES1) 0.00m	MAR02247.054	Sediment	7.57	12.4	4.51	17.3	22.9	25.2
BH29 (ES2) 2.79m	MAR02247.055	Sediment	12.2	19.6	5.39	27.8	31.0	36.1
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<1	<1	<1	<1	<1	1.32
BH30 (ES1) 0.00m	MAR02247.057	Sediment	5.15	6.01	5.08	6.93	13.8	14.5
BH30 (ES2) 3.86m	MAR02247.058	Sediment	2.20	2.07	1.97	3.75	3.77	4.97
BH30 (ES3) 7.72m	MAR02247.059	Sediment	<1	<1	<1	1.60	<1	1.55
Certified Reference Material NIST 1941b (% Recovery)			81	83	88	76	80	111
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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 *See report notes

Certificate of Analysis



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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	N*	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	C3N	CHRYSENE*	DBENZAH	FLUORANT	FLUORENE	INDPYR
BH21 (ES1) 0.00m	MAR02247.040	Sediment	4.96	4.29	<1	6.87	<1	5.73
BH21 (ES3) 3.00m	MAR02247.041	Sediment	2.50	<1	<1	<1	<1	<1
BH22 (ES1) 0.00m	MAR02247.042	Sediment	3.41	4.68	<1	5.76	<1	2.12
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<1	<1	<1	<1	<1	<1
BH22 (ES3) 7.50m	MAR02247.044	Sediment	1.90	<1	<1	1.32	<1	<1
BH25 (ES1) 0.00m	MAR02247.045	Sediment	122	102	14.5	184	19.6	66.8
BH25 (ES2) 2.10m	MAR02247.046	Sediment	22.0	15.3	2.63	25.20	3.37	11.9
BH25 (ES3) 4.10m	MAR02247.047	Sediment	2.52	<1	<1	<1	<1	<1
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<1	<1	<1	<1	<1	<1
BH26 (ES2) 3.10m	MAR02247.049	Sediment	227	333	47.0	709	60.6	216
BH26 (ES3) 6.20m	MAR02247.050	Sediment	24.1	25.8	2.63	47.2	4.13	14.3
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<1	<1	<1	<1	<1	<1
BH27 (ES2) 3.30m	MAR02247.052	Sediment	63.6	14.4	2.85	13.5	7.86	9.21
BH27 (ES3) 6.50m	MAR02247.053	Sediment	37.2	6.66	1.34	5.98	3.63	3.50
BH29 (ES1) 0.00m	MAR02247.054	Sediment	29.3	7.33	<1	8.14	2.94	3.63
BH29 (ES2) 2.79m	MAR02247.055	Sediment	37.8	9.85	1.72	7.82	5.13	4.82
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<1	<1	<1	<1	<1	<1
BH30 (ES1) 0.00m	MAR02247.057	Sediment	14.9	7.30	<1	11.6	1.37	3.38
BH30 (ES2) 3.86m	MAR02247.058	Sediment	5.35	2.47	<1	3.17	<1	1.29
BH30 (ES3) 7.72m	MAR02247.059	Sediment	1.40	<1	<1	<1	<1	<1
Certified Reference Material NIST 1941b (% Recovery)			121	88	92	78	57	76
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH21 (ES1) 0.00m	MAR02247.040	Sediment	1.93	1.37	4.35	8.32	33400
BH21 (ES3) 3.00m	MAR02247.041	Sediment	<1	<1	1.28	<1	1240
BH22 (ES1) 0.00m	MAR02247.042	Sediment	1.44	<1	2.48	5.72	13200
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<1	<1	<1	<1	1690
BH22 (ES3) 7.50m	MAR02247.044	Sediment	<1	<1	1.34	1.16	5710
BH25 (ES1) 0.00m	MAR02247.045	Sediment	33.9	29.9	114	190	65100
BH25 (ES2) 2.10m	MAR02247.046	Sediment	4.52	4.65	17.0	25.5	63400
BH25 (ES3) 4.10m	MAR02247.047	Sediment	<1	<1	1.33	<1	70500
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<1	<1	<1	<1	1000
BH26 (ES2) 3.10m	MAR02247.049	Sediment	55.6	77.8	465	677	86400
BH26 (ES3) 6.20m	MAR02247.050	Sediment	4.40	6.16	25.6	46.4	12300
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<1	<1	<1	<1	1630
BH27 (ES2) 3.30m	MAR02247.052	Sediment	8.18	19.9	30.9	21.0	13400
BH27 (ES3) 6.50m	MAR02247.053	Sediment	5.24	8.65	14.1	8.74	7740
BH29 (ES1) 0.00m	MAR02247.054	Sediment	4.06	4.69	14.5	10.2	13400
BH29 (ES2) 2.79m	MAR02247.055	Sediment	5.86	17.4	19.9	12.7	9250
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<1	<1	<1	<1	741
BH30 (ES1) 0.00m	MAR02247.057	Sediment	2.45	1.99	8.66	12.5	14100
BH30 (ES2) 3.86m	MAR02247.058	Sediment	1.46	<1	2.83	3.83	11200
BH30 (ES3) 7.72m	MAR02247.059	Sediment	<1	<1	<1	<1	593
Certified Reference Material NIST 1941b (% Recovery)			62	55	76	70	96~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
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 *See report notes

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB28	PCB52	PCB101	PCB118	PCB138	PCB153
BH03 (ES1) 0.50m	MAR02247.001	Sediment	<0.08	<0.08	<0.08	<0.08	0.10	0.08
BH03 (ES2) 1.90m	MAR02247.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH03 (ES3) 3.70m	MAR02247.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH05 (ES1) 0.00m	MAR02247.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH05 (ES2) 6.00m	MAR02247.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH05 (ES3) 12.00m	MAR02247.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH06 (ES1) 2.30m	MAR02247.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH06 (ES2) 5.94m	MAR02247.008	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH06 (ES3) 11.87m	MAR02247.009	Sediment	<0.08	<0.08	<0.08	0.13	0.18	0.12
BH10 (ES1) 0.00m	MAR02247.010	Sediment	<0.08	<0.08	0.09	0.13	<0.08	0.10
BH10 (ES2) 1.80m	MAR02247.011	Sediment	0.29	0.30	0.43	0.63	0.54	0.56
BH10 (ES3) 3.50m	MAR02247.012	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			73	88	89	102	104	87
QC Blank			<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



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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB18	PCB105	PCB110	PCB128	PCB141	PCB149
BH03 (ES1) 0.50m	MAR02247.001	Sediment	<0.08	<0.08	0.08	<0.08	<0.08	<0.08
BH03 (ES2) 1.90m	MAR02247.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH03 (ES3) 3.70m	MAR02247.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH05 (ES1) 0.00m	MAR02247.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH05 (ES2) 6.00m	MAR02247.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH05 (ES3) 12.00m	MAR02247.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH06 (ES1) 2.30m	MAR02247.007	Sediment	0.08	<0.08	<0.08	<0.08	<0.08	0.20
BH06 (ES2) 5.94m	MAR02247.008	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH06 (ES3) 11.87m	MAR02247.009	Sediment	<0.08	0.15	0.15	0.25	0.12	0.13
BH10 (ES1) 0.00m	MAR02247.010	Sediment	<0.08	<0.08	0.10	<0.08	<0.08	<0.08
BH10 (ES2) 1.80m	MAR02247.011	Sediment	0.09	0.37	0.51	0.49	0.37	0.55
BH10 (ES3) 3.50m	MAR02247.012	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			81	83	102	89	105~	96
QC Blank			<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



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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB151	PCB156	PCB158	PCB170	PCB180	PCB183
BH03 (ES1) 0.50m	MAR02247.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH03 (ES2) 1.90m	MAR02247.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH03 (ES3) 3.70m	MAR02247.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH05 (ES1) 0.00m	MAR02247.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH05 (ES2) 6.00m	MAR02247.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH05 (ES3) 12.00m	MAR02247.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH06 (ES1) 2.30m	MAR02247.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH06 (ES2) 5.94m	MAR02247.008	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH06 (ES3) 11.87m	MAR02247.009	Sediment	0.15	0.31	0.17	0.15	0.21	0.22
BH10 (ES1) 0.00m	MAR02247.010	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH10 (ES2) 1.80m	MAR02247.011	Sediment	0.45	0.40	0.41	0.35	0.40	0.35
BH10 (ES3) 3.50m	MAR02247.012	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			108~	98	97	86	92	76
QC Blank			<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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	PCB187	PCB194	PCB31	PCB44	PCB47	PCB49	PCB66
BH03 (ES1) 0.50m	MAR02247.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH03 (ES2) 1.90m	MAR02247.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH03 (ES3) 3.70m	MAR02247.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH05 (ES1) 0.00m	MAR02247.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH05 (ES2) 6.00m	MAR02247.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH05 (ES3) 12.00m	MAR02247.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH06 (ES1) 2.30m	MAR02247.007	Sediment	<0.08	<0.08	0.09	<0.08	0.24	<0.08	<0.08
BH06 (ES2) 5.94m	MAR02247.008	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH06 (ES3) 11.87m	MAR02247.009	Sediment	0.19	0.19	<0.08	<0.08	<0.08	<0.08	0.10
BH10 (ES1) 0.00m	MAR02247.010	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH10 (ES2) 1.80m	MAR02247.011	Sediment	0.42	0.36	0.27	0.37	0.29	0.30	0.53
BH10 (ES3) 3.50m	MAR02247.012	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			102	104	92	88	104~	94	98
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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

Units	µg/Kg (Dry Weight)
Method No	ASC/SOP/302
Limit of Detection	0.56
Accreditation	UKAS

Client Reference:	SOCOTEC Ref:	Matrix	ICES7
BH03 (ES1) 0.50m	MAR02247.001	Sediment	<0.56
BH03 (ES2) 1.90m	MAR02247.002	Sediment	<0.56
BH03 (ES3) 3.70m	MAR02247.003	Sediment	<0.56
BH05 (ES1) 0.00m	MAR02247.004	Sediment	<0.56
BH05 (ES2) 6.00m	MAR02247.005	Sediment	<0.56
BH05 (ES3) 12.00m	MAR02247.006	Sediment	<0.56
BH06 (ES1) 2.30m	MAR02247.007	Sediment	<0.56
BH06 (ES2) 5.94m	MAR02247.008	Sediment	<0.56
BH06 (ES3) 11.87m	MAR02247.009	Sediment	<0.56
BH10 (ES1) 0.00m	MAR02247.010	Sediment	<0.56
BH10 (ES2) 1.80m	MAR02247.011	Sediment	3.16
BH10 (ES3) 3.50m	MAR02247.012	Sediment	<0.56
Certified Reference Material NIST 1941b (% Recovery)			103
QC Blank			<0.08

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB28	PCB52	PCB101	PCB118	PCB138	PCB153
BH12 (ES1) 0.00m	MAR02247.013	Sediment	<0.08	<0.08	<0.08	0.11	0.09	<0.08
BH12 (ES2) 1.50m	MAR02247.014	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH12 (ES3) 3.00m	MAR02247.015	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH13A (ES1) 0.00m	MAR02247.016	Sediment	<0.08	<0.08	0.09	<0.08	<0.08	<0.08
BH13A (ES2) 2.40m	MAR02247.017	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH13A (ES3) 4.80m	MAR02247.018	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH14 (ES1) 0.00m	MAR02247.019	Sediment	<0.08	0.17	0.29	0.26	0.21	0.20
BH14 (ES2) 2.10m	MAR02247.020	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH14 (ES3) 4.20m	MAR02247.021	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			84	87	88	101	107	100
QC Blank			<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 MAR02247
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 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB18	PCB105	PCB110	PCB128	PCB141	PCB149
BH12 (ES1) 0.00m	MAR02247.013	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH12 (ES2) 1.50m	MAR02247.014	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH12 (ES3) 3.00m	MAR02247.015	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH13A (ES1) 0.00m	MAR02247.016	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH13A (ES2) 2.40m	MAR02247.017	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH13A (ES3) 4.80m	MAR02247.018	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH14 (ES1) 0.00m	MAR02247.019	Sediment	<0.08	0.08	0.29	<0.08	<0.08	0.23
BH14 (ES2) 2.10m	MAR02247.020	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH14 (ES3) 4.20m	MAR02247.021	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			83	86	105	119	107~	101
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

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 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB151	PCB156	PCB158	PCB170	PCB180	PCB183
BH12 (ES1) 0.00m	MAR02247.013	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH12 (ES2) 1.50m	MAR02247.014	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH12 (ES3) 3.00m	MAR02247.015	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH13A (ES1) 0.00m	MAR02247.016	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH13A (ES2) 2.40m	MAR02247.017	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH13A (ES3) 4.80m	MAR02247.018	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH14 (ES1) 0.00m	MAR02247.019	Sediment	0.09	<0.08	<0.08	0.12	0.19	<0.08
BH14 (ES2) 2.10m	MAR02247.020	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH14 (ES3) 4.20m	MAR02247.021	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			110~	92	88	97	99	59
QC Blank			<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	PCB187	PCB194	PCB31	PCB44	PCB47	PCB49	PCB66
BH12 (ES1) 0.00m	MAR02247.013	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH12 (ES2) 1.50m	MAR02247.014	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH12 (ES3) 3.00m	MAR02247.015	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH13A (ES1) 0.00m	MAR02247.016	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH13A (ES2) 2.40m	MAR02247.017	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH13A (ES3) 4.80m	MAR02247.018	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH14 (ES1) 0.00m	MAR02247.019	Sediment	<0.08	<0.08	<0.08	0.12	<0.08	0.14	0.24
BH14 (ES2) 2.10m	MAR02247.020	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH14 (ES3) 4.20m	MAR02247.021	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			103	92	103	89	105~	92	100
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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

Units	µg/Kg (Dry Weight)
Method No	ASC/SOP/302
Limit of Detection	0.7
Accreditation	UKAS

Client Reference:	SOCOTEC Ref:	Matrix	ICES7
BH12 (ES1) 0.00m	MAR02247.013	Sediment	<0.56
BH12 (ES2) 1.50m	MAR02247.014	Sediment	<0.56
BH12 (ES3) 3.00m	MAR02247.015	Sediment	<0.56
BH13A (ES1) 0.00m	MAR02247.016	Sediment	<0.56
BH13A (ES2) 2.40m	MAR02247.017	Sediment	<0.56
BH13A (ES3) 4.80m	MAR02247.018	Sediment	<0.56
BH14 (ES1) 0.00m	MAR02247.019	Sediment	1.36
BH14 (ES2) 2.10m	MAR02247.020	Sediment	<0.56
BH14 (ES3) 4.20m	MAR02247.021	Sediment	<0.56
Certified Reference Material NIST 1941b (% Recovery)			104
QC Blank			<0.56

For full analyte name see method summaries
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Test Report ID MAR02247
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 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB28	PCB52	PCB101	PCB118	PCB138	PCB153
BH15 (ES1) 0.00m	MAR02247.022	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH15 (ES2) 1.40m	MAR02247.023	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH15 (ES3) 2.80m	MAR02247.024	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH16 (ES1) 0.00m	MAR02247.025	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH16 (ES2) 3.80m	MAR02247.026	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH17 (ES1) 0.00m	MAR02247.028	Sediment	<0.08	<0.08	0.17	0.21	0.26	0.26
BH17 (ES2) 0.90m	MAR02247.029	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH17 (ES3) 1.90m	MAR02247.030	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH18 (ES1) 0.00m	MAR02247.031	Sediment	<0.08	<0.08	<0.08	<0.08	0.10	0.08
BH18 (ES2) 0.60m	MAR02247.032	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH18 (ES3) 1.20m	MAR02247.033	Sediment	<0.08	<0.08	0.14	0.16	0.29	0.24
BH19 (ES1) 0.00m	MAR02247.034	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			79	84	95	103	94	95
QC Blank			<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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB18	PCB105	PCB110	PCB128	PCB141	PCB149
BH15 (ES1) 0.00m	MAR02247.022	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH15 (ES2) 1.40m	MAR02247.023	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH15 (ES3) 2.80m	MAR02247.024	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH16 (ES1) 0.00m	MAR02247.025	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH16 (ES2) 3.80m	MAR02247.026	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH17 (ES1) 0.00m	MAR02247.028	Sediment	<0.08	0.22	0.21	0.22	0.22	0.20
BH17 (ES2) 0.90m	MAR02247.029	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH17 (ES3) 1.90m	MAR02247.030	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH18 (ES1) 0.00m	MAR02247.031	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH18 (ES2) 0.60m	MAR02247.032	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH18 (ES3) 1.20m	MAR02247.033	Sediment	<0.08	<0.08	0.16	0.09	<0.08	0.20
BH19 (ES1) 0.00m	MAR02247.034	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			83	86	102	92	102~	99
QC Blank			<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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB151	PCB156	PCB158	PCB170	PCB180	PCB183
BH15 (ES1) 0.00m	MAR02247.022	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH15 (ES2) 1.40m	MAR02247.023	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH15 (ES3) 2.80m	MAR02247.024	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH16 (ES1) 0.00m	MAR02247.025	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH16 (ES2) 3.80m	MAR02247.026	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH17 (ES1) 0.00m	MAR02247.028	Sediment	0.14	0.28	0.16	0.23	0.24	0.26
BH17 (ES2) 0.90m	MAR02247.029	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH17 (ES3) 1.90m	MAR02247.030	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH18 (ES1) 0.00m	MAR02247.031	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH18 (ES2) 0.60m	MAR02247.032	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH18 (ES3) 1.20m	MAR02247.033	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH19 (ES1) 0.00m	MAR02247.034	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			112~	97	86	101	103	70
QC Blank			<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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	PCB187	PCB194	PCB31	PCB44	PCB47	PCB49	PCB66
BH15 (ES1) 0.00m	MAR02247.022	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH15 (ES2) 1.40m	MAR02247.023	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH15 (ES3) 2.80m	MAR02247.024	Sediment	<0.08	<0.08	<0.08	<0.08	0.18	<0.08	<0.08
BH16 (ES1) 0.00m	MAR02247.025	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH16 (ES2) 3.80m	MAR02247.026	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH17 (ES1) 0.00m	MAR02247.028	Sediment	0.15	0.27	<0.08	<0.08	<0.08	<0.08	0.18
BH17 (ES2) 0.90m	MAR02247.029	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH17 (ES3) 1.90m	MAR02247.030	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH18 (ES1) 0.00m	MAR02247.031	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH18 (ES2) 0.60m	MAR02247.032	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH18 (ES3) 1.20m	MAR02247.033	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH19 (ES1) 0.00m	MAR02247.034	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			107	98	97	87	98~	94	99
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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

Units	µg/Kg (Dry Weight)
Method No	ASC/SOP/302
Limit of Detection	0.7
Accreditation	UKAS

Client Reference:	SOCOTEC Ref:	Matrix	ICES7
BH15 (ES1) 0.00m	MAR02247.022	Sediment	<0.56
BH15 (ES2) 1.40m	MAR02247.023	Sediment	<0.56
BH15 (ES3) 2.80m	MAR02247.024	Sediment	<0.56
BH16 (ES1) 0.00m	MAR02247.025	Sediment	<0.56
BH16 (ES2) 3.80m	MAR02247.026	Sediment	<0.56
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<0.56
BH17 (ES1) 0.00m	MAR02247.028	Sediment	1.27
BH17 (ES2) 0.90m	MAR02247.029	Sediment	<0.56
BH17 (ES3) 1.90m	MAR02247.030	Sediment	<0.56
BH18 (ES1) 0.00m	MAR02247.031	Sediment	<0.56
BH18 (ES2) 0.60m	MAR02247.032	Sediment	<0.56
BH18 (ES3) 1.20m	MAR02247.033	Sediment	0.92
BH19 (ES1) 0.00m	MAR02247.034	Sediment	<0.56
Certified Reference Material NIST 1941b (% Recovery)			104
QC Blank			<0.56

For full analyte name see method summaries
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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB28	PCB52	PCB101	PCB118	PCB138	PCB153
BH19 (ES2) 1.10m	MAR02247.035	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH19 (ES3) 2.10m	MAR02247.036	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH20 (ES1) 0.00m	MAR02247.037	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH20 (ES2) 1.70m	MAR02247.038	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH20 (ES3) 3.30m	MAR02247.039	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH21 (ES1) 0.00m	MAR02247.040	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH21 (ES3) 3.00m	MAR02247.041	Sediment	0.26	0.31	0.55	0.54	0.60	0.45
BH22 (ES1) 0.00m	MAR02247.042	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH22 (ES3) 7.50m	MAR02247.044	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH25 (ES1) 0.00m	MAR02247.045	Sediment	0.11	0.11	0.18	0.24	0.22	0.28
BH25 (ES2) 2.10m	MAR02247.046	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH25 (ES3) 4.10m	MAR02247.047	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH26 (ES2) 3.10m	MAR02247.049	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH26 (ES3) 6.20m	MAR02247.050	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH27 (ES2) 3.30m	MAR02247.052	Sediment	0.11	<0.08	0.13	0.17	0.15	0.15
Certified Reference Material NIST 1941b (% Recovery)			77	87	91	103	92	99
QC Blank			<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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB18	PCB105	PCB110	PCB128	PCB141	PCB149
BH19 (ES2) 1.10m	MAR02247.035	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH19 (ES3) 2.10m	MAR02247.036	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH20 (ES1) 0.00m	MAR02247.037	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH20 (ES2) 1.70m	MAR02247.038	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH20 (ES3) 3.30m	MAR02247.039	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH21 (ES1) 0.00m	MAR02247.040	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH21 (ES3) 3.00m	MAR02247.041	Sediment	0.10	0.51	0.61	0.41	0.43	0.60
BH22 (ES1) 0.00m	MAR02247.042	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH22 (ES3) 7.50m	MAR02247.044	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH25 (ES1) 0.00m	MAR02247.045	Sediment	<0.08	<0.08	0.17	0.12	0.10	0.21
BH25 (ES2) 2.10m	MAR02247.046	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH25 (ES3) 4.10m	MAR02247.047	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH26 (ES2) 3.10m	MAR02247.049	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH26 (ES3) 6.20m	MAR02247.050	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH27 (ES2) 3.30m	MAR02247.052	Sediment	<0.08	<0.08	0.10	<0.08	<0.08	0.17
Certified Reference Material NIST 1941b (% Recovery)			82	97	102	98	102~	104
QC Blank			<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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB151	PCB156	PCB158	PCB170	PCB180	PCB183
BH19 (ES2) 1.10m	MAR02247.035	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH19 (ES3) 2.10m	MAR02247.036	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH20 (ES1) 0.00m	MAR02247.037	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH20 (ES2) 1.70m	MAR02247.038	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH20 (ES3) 3.30m	MAR02247.039	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH21 (ES1) 0.00m	MAR02247.040	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH21 (ES3) 3.00m	MAR02247.041	Sediment	0.62	0.67	0.47	0.50	0.50	0.50
BH22 (ES1) 0.00m	MAR02247.042	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH22 (ES3) 7.50m	MAR02247.044	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH25 (ES1) 0.00m	MAR02247.045	Sediment	<0.08	<0.08	<0.08	0.12	0.12	<0.08
BH25 (ES2) 2.10m	MAR02247.046	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH25 (ES3) 4.10m	MAR02247.047	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH26 (ES2) 3.10m	MAR02247.049	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH26 (ES3) 6.20m	MAR02247.050	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH27 (ES2) 3.30m	MAR02247.052	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			106~	83	83	92	96	71
QC Blank			<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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	PCB187	PCB194	PCB31	PCB44	PCB47	PCB49	PCB66
BH19 (ES2) 1.10m	MAR02247.035	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH19 (ES3) 2.10m	MAR02247.036	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH20 (ES1) 0.00m	MAR02247.037	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH20 (ES2) 1.70m	MAR02247.038	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH20 (ES3) 3.30m	MAR02247.039	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH21 (ES1) 0.00m	MAR02247.040	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH21 (ES3) 3.00m	MAR02247.041	Sediment	0.60	0.55	0.24	0.47	0.37	0.32	0.59
BH22 (ES1) 0.00m	MAR02247.042	Sediment	<0.08	<0.08	<0.08	<0.08	0.21	<0.08	<0.08
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH22 (ES3) 7.50m	MAR02247.044	Sediment	<0.08	<0.08	<0.08	<0.08	0.28	<0.08	<0.08
BH25 (ES1) 0.00m	MAR02247.045	Sediment	0.12	<0.08	0.11	<0.08	<0.08	<0.08	0.14
BH25 (ES2) 2.10m	MAR02247.046	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH25 (ES3) 4.10m	MAR02247.047	Sediment	<0.08	<0.08	<0.08	<0.08	0.15	<0.08	<0.08
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH26 (ES2) 3.10m	MAR02247.049	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH26 (ES3) 6.20m	MAR02247.050	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH27 (ES2) 3.30m	MAR02247.052	Sediment	0.09	<0.08	<0.08	<0.08	<0.08	<0.08	0.12
Certified Reference Material NIST 1941b (% Recovery)			98	104	91	93	105~	98	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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

Units	µg/Kg (Dry Weight)
Method No	ASC/SOP/302
Limit of Detection	0.7
Accreditation	UKAS

Client Reference:	SOCOTEC Ref:	Matrix	ICES7
BH19 (ES2) 1.10m	MAR02247.035	Sediment	<0.56
BH19 (ES3) 2.10m	MAR02247.036	Sediment	<0.56
BH20 (ES1) 0.00m	MAR02247.037	Sediment	<0.56
BH20 (ES2) 1.70m	MAR02247.038	Sediment	<0.56
BH20 (ES3) 3.30m	MAR02247.039	Sediment	<0.56
BH21 (ES1) 0.00m	MAR02247.040	Sediment	<0.56
BH21 (ES3) 3.00m	MAR02247.041	Sediment	3.22
BH22 (ES1) 0.00m	MAR02247.042	Sediment	<0.56
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<0.56
BH22 (ES3) 7.50m	MAR02247.044	Sediment	<0.56
BH25 (ES1) 0.00m	MAR02247.045	Sediment	1.26
BH25 (ES2) 2.10m	MAR02247.046	Sediment	<0.56
BH25 (ES3) 4.10m	MAR02247.047	Sediment	<0.56
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<0.56
BH26 (ES2) 3.10m	MAR02247.049	Sediment	<0.56
BH26 (ES3) 6.20m	MAR02247.050	Sediment	<0.56
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<0.56
BH27 (ES2) 3.30m	MAR02247.052	Sediment	<0.56
Certified Reference Material NIST 1941b (% Recovery)			103
QC Blank			<0.56

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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB28	PCB52	PCB101	PCB118	PCB138	PCB153
BH27 (ES3) 6.50m	MAR02247.053	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH29 (ES1) 0.00m	MAR02247.054	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH29 (ES2) 2.79m	MAR02247.055	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<0.08	<0.08	<0.08	0.10	<0.08	<0.08
BH30 (ES1) 0.00m	MAR02247.057	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH30 (ES2) 3.86m	MAR02247.058	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH30 (ES3) 7.72m	MAR02247.059	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			83	101	90	95	103	93
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB18	PCB105	PCB110	PCB128	PCB141	PCB149
BH27 (ES3) 6.50m	MAR02247.053	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH29 (ES1) 0.00m	MAR02247.054	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH29 (ES2) 2.79m	MAR02247.055	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<0.08	<0.08	0.09	<0.08	<0.08	<0.08
BH30 (ES1) 0.00m	MAR02247.057	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH30 (ES2) 3.86m	MAR02247.058	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH30 (ES3) 7.72m	MAR02247.059	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			95	74	100	88	98~	98
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

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 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB151	PCB156	PCB158	PCB170	PCB180	PCB183
BH27 (ES3) 6.50m	MAR02247.053	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH29 (ES1) 0.00m	MAR02247.054	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH29 (ES2) 2.79m	MAR02247.055	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH30 (ES1) 0.00m	MAR02247.057	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH30 (ES2) 3.86m	MAR02247.058	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH30 (ES3) 7.72m	MAR02247.059	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			98~	85	93	97	96	80
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

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 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	PCB187	PCB194	PCB31	PCB44	PCB47	PCB49	PCB66
BH27 (ES3) 6.50m	MAR02247.053	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH29 (ES1) 0.00m	MAR02247.054	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH29 (ES2) 2.79m	MAR02247.055	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH30 (ES1) 0.00m	MAR02247.057	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH30 (ES2) 3.86m	MAR02247.058	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH30 (ES3) 7.72m	MAR02247.059	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			84	106	106	99	98~	106	98
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

Units	µg/Kg (Dry Weight)
Method No	ASC/SOP/302
Limit of Detection	0.7
Accreditation	UKAS

Client Reference:	SOCOTEC Ref:	Matrix	ICES7
BH27 (ES3) 6.50m	MAR02247.053	Sediment	<0.56
BH29 (ES1) 0.00m	MAR02247.054	Sediment	<0.56
BH29 (ES2) 2.79m	MAR02247.055	Sediment	<0.56
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<0.56
BH30 (ES1) 0.00m	MAR02247.057	Sediment	<0.56
BH30 (ES2) 3.86m	MAR02247.058	Sediment	<0.56
BH30 (ES3) 7.72m	MAR02247.059	Sediment	<0.56
Certified Reference Material NIST 1941b (% Recovery)			103
QC Blank			<0.1

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH03 (ES1) 0.50m	MAR02247.001	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	<0.1	0.40
BH03 (ES2) 1.90m	MAR02247.002	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH03 (ES3) 3.70m	MAR02247.003	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH05 (ES1) 0.00m	MAR02247.004	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH05 (ES2) 6.00m	MAR02247.005	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH05 (ES3) 12.00m	MAR02247.006	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH06 (ES1) 2.30m	MAR02247.007	Sediment	<0.1	0.12	0.36	<0.1	<0.1	<0.1	0.67	<0.1
BH06 (ES2) 5.94m	MAR02247.008	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH06 (ES3) 11.87m	MAR02247.009	Sediment	<0.1	<0.1	<0.1	0.16	<0.1	0.11	0.39	0.36
BH10 (ES1) 0.00m	MAR02247.010	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	0.17	<0.1	0.31
BH10 (ES2) 1.80m	MAR02247.011	Sediment	<0.1	0.30	0.15	0.85	<0.1	0.59	0.51	1.37
BH10 (ES3) 3.50m	MAR02247.012	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material NIST 1941b (% Recovery)			90~	91~	89~	89~	103	84	63	77
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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH12 (ES1) 0.00m	MAR02247.013	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	0.24	<0.1	0.38
BH12 (ES2) 1.50m	MAR02247.014	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH12 (ES3) 3.00m	MAR02247.015	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH13A (ES1) 0.00m	MAR02247.016	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	<0.1	0.16
BH13A (ES2) 2.40m	MAR02247.017	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH13A (ES3) 4.80m	MAR02247.018	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH14 (ES1) 0.00m	MAR02247.019	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH14 (ES2) 2.10m	MAR02247.020	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH14 (ES3) 4.20m	MAR02247.021	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material NIST 1941b (% Recovery)			89~	99~	90~	102~	120	81	58	92
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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH15 (ES1) 0.00m	MAR02247.022	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15 (ES2) 1.40m	MAR02247.023	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15 (ES3) 2.80m	MAR02247.024	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH16 (ES1) 0.00m	MAR02247.025	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH16 (ES2) 3.80m	MAR02247.026	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH17 (ES1) 0.00m	MAR02247.028	Sediment	<0.1	0.12	<0.1	0.12	<0.1	0.27	0.24	0.55
BH17 (ES2) 0.90m	MAR02247.029	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH17 (ES3) 1.90m	MAR02247.030	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH18 (ES1) 0.00m	MAR02247.031	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.26
BH18 (ES2) 0.60m	MAR02247.032	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH18 (ES3) 1.20m	MAR02247.033	Sediment	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	<0.1	0.12
BH19 (ES1) 0.00m	MAR02247.034	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material NIST 1941b (% Recovery)			98~	91~	94~	102~	123	98	77	102
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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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)	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
BH19 (ES2) 1.10m	MAR02247.035	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH19 (ES3) 2.10m	MAR02247.036	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH20 (ES1) 0.00m	MAR02247.037	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH20 (ES2) 1.70m	MAR02247.038	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH20 (ES3) 3.30m	MAR02247.039	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH21 (ES1) 0.00m	MAR02247.040	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH21 (ES3) 3.00m	MAR02247.041	Sediment	0.10	0.32	0.14	0.62	<0.1	0.45	0.31	0.79
BH22 (ES1) 0.00m	MAR02247.042	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH22 (ES3) 7.50m	MAR02247.044	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH25 (ES1) 0.00m	MAR02247.045	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	0.33	<0.1	0.93
BH25 (ES2) 2.10m	MAR02247.046	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.12	<0.1
BH25 (ES3) 4.10m	MAR02247.047	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH26 (ES2) 3.10m	MAR02247.049	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH26 (ES3) 6.20m	MAR02247.050	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27 (ES2) 3.30m	MAR02247.052	Sediment	<0.1	<0.1	<0.1	0.41	<0.1	0.36	<0.1	0.60
Certified Reference Material NIST 1941b (% Recovery)			91~	70~	72~	93~	116	85	81	90
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 available.

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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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH27 (ES3) 6.50m	MAR02247.053	Sediment	<0.1	<0.1	<0.1	0.27	<0.1	0.13	<0.1	0.24
BH29 (ES1) 0.00m	MAR02247.054	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH29 (ES2) 2.79m	MAR02247.055	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH30 (ES1) 0.00m	MAR02247.057	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH30 (ES2) 3.86m	MAR02247.058	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH30 (ES3) 7.72m	MAR02247.059	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material NIST 1941b (% Recovery)			94~	104~	98~	94~	104	78	70	62
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 available.

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/308	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	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PBDE 17	PBDE 28	PBDE 47	PBDE 66	PBDE 100	PBDE 99	PBDE 85
BH03 (ES1) 0.50m	MAR02247.001	Sediment	<0.05	<0.05	0.06	<0.05	<0.05	0.13	<0.05
BH03 (ES2) 1.90m	MAR02247.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH03 (ES3) 3.70m	MAR02247.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH05 (ES1) 0.00m	MAR02247.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH05 (ES2) 6.00m	MAR02247.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH05 (ES3) 12.00m	MAR02247.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH06 (ES1) 2.30m	MAR02247.007	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH06 (ES2) 5.94m	MAR02247.008	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH06 (ES3) 11.87m	MAR02247.009	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH10 (ES1) 0.00m	MAR02247.010	Sediment	<0.05	<0.05	0.07	<0.05	<0.05	0.11	<0.05
BH10 (ES2) 1.80m	MAR02247.011	Sediment	<0.05	<0.05	0.19	0.06	<0.05	0.37	<0.05
BH10 (ES3) 3.50m	MAR02247.012	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH12 (ES1) 0.00m	MAR02247.013	Sediment	<0.05	<0.05	0.10	<0.05	<0.05	0.18	<0.05
BH12 (ES2) 1.50m	MAR02247.014	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH12 (ES3) 3.00m	MAR02247.015	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH13A (ES1) 0.00m	MAR02247.016	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05
BH13A (ES2) 2.40m	MAR02247.017	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH13A (ES3) 4.80m	MAR02247.018	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			109~	101	96	87~	122	106	87~
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PBDE 154	PBDE 153	PBDE 138	PBDE 183	PBDE 209
BH03 (ES1) 0.50m	MAR02247.001	Sediment	<0.05	<0.05	<0.05	<0.05	14.0
BH03 (ES2) 1.90m	MAR02247.002	Sediment	<0.05	<0.05	<0.05	<0.05	0.13
BH03 (ES3) 3.70m	MAR02247.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.1
BH05 (ES1) 0.00m	MAR02247.004	Sediment	<0.05	<0.05	<0.05	<0.05	0.11
BH05 (ES2) 6.00m	MAR02247.005	Sediment	<0.05	<0.05	<0.05	<0.05	0.16
BH05 (ES3) 12.00m	MAR02247.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.1
BH06 (ES1) 2.30m	MAR02247.007	Sediment	<0.05	<0.05	<0.05	<0.05	0.17
BH06 (ES2) 5.94m	MAR02247.008	Sediment	<0.05	<0.05	<0.05	<0.05	0.12
BH06 (ES3) 11.87m	MAR02247.009	Sediment	<0.05	<0.05	<0.05	<0.05	<0.1
BH10 (ES1) 0.00m	MAR02247.010	Sediment	<0.05	<0.05	<0.05	<0.05	1.82
BH10 (ES2) 1.80m	MAR02247.011	Sediment	<0.05	0.06	<0.05	<0.05	1.73
BH10 (ES3) 3.50m	MAR02247.012	Sediment	<0.05	<0.05	<0.05	<0.05	0.25
BH12 (ES1) 0.00m	MAR02247.013	Sediment	<0.05	<0.05	<0.05	<0.05	1.52
BH12 (ES2) 1.50m	MAR02247.014	Sediment	<0.05	<0.05	<0.05	<0.05	0.16
BH12 (ES3) 3.00m	MAR02247.015	Sediment	<0.05	<0.05	<0.05	<0.05	0.24
BH13A (ES1) 0.00m	MAR02247.016	Sediment	<0.05	<0.05	<0.05	<0.05	1.76
BH13A (ES2) 2.40m	MAR02247.017	Sediment	<0.05	<0.05	<0.05	<0.05	1.12
BH13A (ES3) 4.80m	MAR02247.018	Sediment	<0.05	<0.05	<0.05	<0.05	<0.1
Certified Reference Material Quasimeme SED56 (% Recovery)			74~	124	82~	81	74
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.1

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/308	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	0.05
		Accreditation	UKAS	N*	N*	N*	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PBDE 17	PBDE 28	PBDE 47	PBDE 66	PBDE 100	PBDE 99	PBDE 85
BH14 (ES1) 0.00m	MAR02247.019	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH14 (ES2) 2.10m	MAR02247.020	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH14 (ES3) 4.20m	MAR02247.021	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH15 (ES1) 0.00m	MAR02247.022	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH15 (ES2) 1.40m	MAR02247.023	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH15 (ES3) 2.80m	MAR02247.024	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH16 (ES1) 0.00m	MAR02247.025	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH16 (ES2) 3.80m	MAR02247.026	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			82~	81	70	69~	99	75	65~
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.1
		Accreditation	N*	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PBDE 154	PBDE 153	PBDE 138	PBDE 183	PBDE 209
BH14 (ES1) 0.00m	MAR02247.019	Sediment	<0.05	<0.05	<0.05	<0.05	0.39
BH14 (ES2) 2.10m	MAR02247.020	Sediment	<0.05	<0.05	<0.05	<0.05	0.47
BH14 (ES3) 4.20m	MAR02247.021	Sediment	<0.05	<0.05	<0.05	<0.05	0.39
BH15 (ES1) 0.00m	MAR02247.022	Sediment	<0.05	<0.05	<0.05	<0.05	0.49
BH15 (ES2) 1.40m	MAR02247.023	Sediment	<0.05	<0.05	<0.05	<0.05	0.39
BH15 (ES3) 2.80m	MAR02247.024	Sediment	<0.05	<0.05	<0.05	<0.05	0.84
BH16 (ES1) 0.00m	MAR02247.025	Sediment	<0.05	<0.05	<0.05	<0.05	0.51
BH16 (ES2) 3.80m	MAR02247.026	Sediment	<0.05	<0.05	<0.05	<0.05	0.51
BH16 (ES3) 7.60m	MAR02247.027	Sediment	<0.05	<0.05	<0.05	<0.05	0.31
Certified Reference Material Quasimeme SED56 (% Recovery)			64~	84	73~	72	51
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.1

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/308	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	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PBDE 17	PBDE 28	PBDE 47	PBDE 66	PBDE 100	PBDE 99	PBDE 85
BH17 (ES1) 0.00m	MAR02247.028	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH17 (ES2) 0.90m	MAR02247.029	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH17 (ES3) 1.90m	MAR02247.030	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH18 (ES1) 0.00m	MAR02247.031	Sediment	<0.05	<0.05	0.12	<0.05	<0.05	0.17	<0.05
BH18 (ES2) 0.60m	MAR02247.032	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH18 (ES3) 1.20m	MAR02247.033	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH19 (ES1) 0.00m	MAR02247.034	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH19 (ES2) 1.10m	MAR02247.035	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH19 (ES3) 2.10m	MAR02247.036	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH20 (ES1) 0.00m	MAR02247.037	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH20 (ES2) 1.70m	MAR02247.038	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH20 (ES3) 3.30m	MAR02247.039	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH21 (ES1) 0.00m	MAR02247.040	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH21 (ES3) 3.00m	MAR02247.041	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH22 (ES1) 0.00m	MAR02247.042	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH22 (ES3) 7.50m	MAR02247.044	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH25 (ES1) 0.00m	MAR02247.045	Sediment	<0.05	<0.05	0.24	0.08	<0.05	0.37	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			113~	108	114	106~	126	107	103~
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PBDE 154	PBDE 153	PBDE 138	PBDE 183	PBDE 209
BH17 (ES1) 0.00m	MAR02247.028	Sediment	<0.05	<0.05	<0.05	<0.05	1.11
BH17 (ES2) 0.90m	MAR02247.029	Sediment	<0.05	<0.05	<0.05	<0.05	0.56
BH17 (ES3) 1.90m	MAR02247.030	Sediment	<0.05	<0.05	<0.05	<0.05	0.39
BH18 (ES1) 0.00m	MAR02247.031	Sediment	<0.05	<0.05	<0.05	<0.05	2.37
BH18 (ES2) 0.60m	MAR02247.032	Sediment	<0.05	<0.05	<0.05	<0.05	0.28
BH18 (ES3) 1.20m	MAR02247.033	Sediment	<0.05	<0.05	<0.05	<0.05	0.20
BH19 (ES1) 0.00m	MAR02247.034	Sediment	<0.05	<0.05	<0.05	<0.05	0.36
BH19 (ES2) 1.10m	MAR02247.035	Sediment	<0.05	<0.05	<0.05	<0.05	0.24
BH19 (ES3) 2.10m	MAR02247.036	Sediment	<0.05	<0.05	<0.05	<0.05	<0.2
BH20 (ES1) 0.00m	MAR02247.037	Sediment	<0.05	<0.05	<0.05	<0.05	0.30
BH20 (ES2) 1.70m	MAR02247.038	Sediment	<0.05	<0.05	<0.05	<0.05	0.25
BH20 (ES3) 3.30m	MAR02247.039	Sediment	<0.05	<0.05	<0.05	<0.05	0.32
BH21 (ES1) 0.00m	MAR02247.040	Sediment	<0.05	<0.05	<0.05	<0.05	<0.2
BH21 (ES3) 3.00m	MAR02247.041	Sediment	<0.05	<0.05	<0.05	<0.05	<0.2
BH22 (ES1) 0.00m	MAR02247.042	Sediment	<0.05	<0.05	<0.05	<0.05	<0.2
BH22 (ES2) 3.80m	MAR02247.043	Sediment	<0.05	<0.05	<0.05	<0.05	<0.2
BH22 (ES3) 7.50m	MAR02247.044	Sediment	<0.05	<0.05	<0.05	<0.05	<0.2
BH25 (ES1) 0.00m	MAR02247.045	Sediment	<0.05	0.08	<0.05	<0.05	3.31
Certified Reference Material Quasimeme SED56 (% Recovery)			95~	128	104~	88	92
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.2*

* 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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/308	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	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PBDE 17	PBDE 28	PBDE 47	PBDE 66	PBDE 100	PBDE 99	PBDE 85
BH25 (ES2) 2.10m	MAR02247.046	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH25 (ES3) 4.10m	MAR02247.047	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH26 (ES2) 3.10m	MAR02247.049	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH26 (ES3) 6.20m	MAR02247.050	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH27 (ES2) 3.30m	MAR02247.052	Sediment	<0.05	<0.05	0.11	<0.05	<0.05	0.15	<0.05
BH27 (ES3) 6.50m	MAR02247.053	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	0.02	<0.05
BH29 (ES1) 0.00m	MAR02247.054	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			126~	108	135	107~	169	144	97~
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PBDE 154	PBDE 153	PBDE 138	PBDE 183	PBDE 209
BH25 (ES2) 2.10m	MAR02247.046	Sediment	<0.05	<0.05	<0.05	<0.05	0.29
BH25 (ES3) 4.10m	MAR02247.047	Sediment	<0.05	<0.05	<0.05	<0.05	0.39
BH26 (ES1) 0.00m	MAR02247.048	Sediment	<0.05	<0.05	<0.05	<0.05	1.40
BH26 (ES2) 3.10m	MAR02247.049	Sediment	<0.05	<0.05	<0.05	<0.05	0.19
BH26 (ES3) 6.20m	MAR02247.050	Sediment	<0.05	<0.05	<0.05	<0.05	7.77
BH27 (ES1) 0.00m	MAR02247.051	Sediment	<0.05	<0.05	<0.05	<0.05	0.30
BH27 (ES2) 3.30m	MAR02247.052	Sediment	<0.05	<0.05	<0.05	<0.05	1.92
BH27 (ES3) 6.50m	MAR02247.053	Sediment	<0.05	<0.05	<0.05	<0.05	0.33
BH29 (ES1) 0.00m	MAR02247.054	Sediment	<0.05	<0.05	<0.05	<0.05	0.42
Certified Reference Material Quasimeme SED56 (% Recovery)			97~	135	105~	104	81
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.1

* See Report Notes

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/308	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	0.05
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PBDE 17	PBDE 28	PBDE 47	PBDE 66	PBDE 100	PBDE 99	PBDE 85
BH29 (ES2) 2.79m	MAR02247.055	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH30 (ES1) 0.00m	MAR02247.057	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH30 (ES2) 3.86m	MAR02247.058	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH30 (ES3) 7.72m	MAR02247.059	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			108~	112	119	100~	135	108	93~
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PBDE 154	PBDE 153	PBDE 138	PBDE 183	PBDE 209
BH29 (ES2) 2.79m	MAR02247.055	Sediment	<0.05	<0.05	<0.05	<0.05	<0.3
BH29 (ES3) 5.59m	MAR02247.056	Sediment	<0.05	<0.05	<0.05	<0.05	0.54
BH30 (ES1) 0.00m	MAR02247.057	Sediment	<0.05	<0.05	<0.05	<0.05	0.37
BH30 (ES2) 3.86m	MAR02247.058	Sediment	<0.05	<0.05	<0.05	<0.05	<0.3
BH30 (ES3) 7.72m	MAR02247.059	Sediment	<0.05	<0.05	<0.05	<0.05	0.36
Certified Reference Material Quasimeme SED56 (% Recovery)			89~	116	96~	99	96
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.3*

* See Report Notes

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Test Report ID MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02247.001-059	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02247.001-059	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02247.001-059	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02247.001-059	Analysis was conducted by an approved subcontracted laboratory.
SUB_03*	MAR02247.001-059	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/301	MAR02247.001, .006, .010-011, .016, .018, .026, .028, .038-40, .043-44, .048, .051, .055	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	MAR02247.007, .010-011	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	MAR02247.001-009	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 (FLUORENE) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02247.010-024	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 (BBF) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02247.040-059	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 (ACENAPTH, FLUORENE) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02247.001-059	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	MAR02247.001-059	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. It is believed Triphenylene is 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	MAR02247.019-027	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 (PBDE 28, 47, 66, 154) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02247.028-045, .055-059	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.

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Test Report ID MAR02247

Issue Version 1

Customer Reference 23-1739 - Hunterston Marine Yard GI

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 MAR02247
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

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-Hexachlorocyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorocyclohexane
BAA	Benzo[a]anthracene	DBENZA	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorocyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HC	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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Test Report ID MAR02253

Issue Version: 1

Customer: Causeway Geotech Ltd, 8 Drumahiskey Rd, Bendooragh, Balnamore, Ballymoney, BT53 7QL

Customer Reference: 23-1739 - Hunterston Marine Yard GI - Radiological Testing

Date Sampled: 07-18-Mar-24

Date Samples Received: 03-Apr-24

Test Report Date: 03-May-24

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

<Redacted>

Authorised by: Jane Colbourne

Position: Customer Service Specialist



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Test Report ID MAR02253
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI - Radiological Testing

		Units	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Gross Alpha as Pu-242	Gross Beta as Cs-137	Be-7	K-40	Co-60	I-125	I-129
BH03 (ES4) 0.50m - COMPOSITE	MAR02253.001	Sediment	400 ± 160	890 ± 200	<16	418 ± 44	<1.7	<43	<19
BH05 (ES4) 0.00m - COMPOSITE	MAR02253.002	Sediment	340 ± 130	690 ± 170	<13	419 ± 39	<1.1	<31	<13
BH06 (ES4) 2.30m - COMPOSITE	MAR02253.003	Sediment	360 ± 140	730 ± 170	<16	437 ± 47	<1.5	<37	<15
BH10 (ES4) 0.00m - COMPOSITE	MAR02253.004	Sediment	210 ± 120	590 ± 150	<16	327 ± 38	<1.7	<25	<11
BH12 (ES4) 0.00m - COMPOSITE	MAR02253.005	Sediment	<200	660 ± 160	<16	295 ± 34	<1.4	<40	<18
BH13A (ES4) 0.00m - COMPOSITE	MAR02253.006	Sediment	310 ± 130	870 ± 200	<14	527 ± 47	<1.1	<33	<13
BH14 (ES4) 0.00m - COMPOSITE	MAR02253.007	Sediment	<160	420 ± 130	<12	247 ± 30	<1.2	<33	<14
BH15 (ES4) 0.00m - COMPOSITE	MAR02253.008	Sediment	550 ± 180	1010 ± 230	<17	546 ± 59	<2.0	<26	<12
BH16 (ES4) 0.00m - COMPOSITE	MAR02253.009	Sediment	<210	620 ± 150	<16	317 ± 35	<1.5	<42	<18
BH17 (ES4) 0.00m - COMPOSITE	MAR02253.010	Sediment	<170	440 ± 120	<9.8	297 ± 31	<0.86	<26	<11
BH18 (ES4) 0.00m - COMPOSITE	MAR02253.011	Sediment	<200	500 ± 130	<13	303 ± 35	<1.2	<33	<14
BH19 (ES4) 0.00m - COMPOSITE	MAR02253.012	Sediment	<140	410 ± 120	<13	184 ± 29	<1.5	<21	<9.6
BH20 (ES4) 0.00m - COMPOSITE	MAR02253.013	Sediment	310 ± 150	800 ± 190	<18	395 ± 45	<1.8	<43	<19
BH21 (ES4) 0.00m - COMPOSITE	MAR02253.014	Sediment	<150	320 ± 110	<9.8	223 ± 23	<0.78	<25	<11
BH22 (ES4) 0.00m - COMPOSITE	MAR02253.015	Sediment	270 ± 130	590 ± 160	<13	290 ± 33	<1.3	<34	<14
BH25 (ES4) 0.00m - COMPOSITE	MAR02253.016	Sediment	290 ± 150	770 ± 180	<17	466 ± 50	<1.9	<25	<11
BH26 (ES4) 0.00m - COMPOSITE	MAR02253.017	Sediment	210 ± 120	430 ± 120	<15	239 ± 31	<1.4	<40	<17
BH27 (ES4) 0.00m - COMPOSITE	MAR02253.018	Sediment	210 ± 140	680 ± 170	<14	312 ± 34	<1.3	<25	<12
BH29 (ES4) 0.00m - COMPOSITE	MAR02253.019	Sediment	250 ± 120	560 ± 140	<15	347 ± 39	<1.3	<37	<14
BH30 (ES4) 0.00m - COMPOSITE	MAR02253.020	Sediment	370 ± 160	800 ± 180	<18	376 ± 44	<1.8	<27	<12

* See report notes

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Test Report ID MAR02253
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI - Radiological T

		Units	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Ddcot*	SOCOTEC Ddcot*	SOCOTEC Ddcot*	SOCOTEC Ddcot*	SOCOTEC Ddcot*	SOCOTEC Ddcot*	SOCOTEC Ddcot*
		Accreditation	UKAS	UKAS	UKAS	N	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Cs-134	Cs-137	Tl-208	Pb-210	Bi-212	Pb-212	Bi-214
BH03 (ES4) 0.50m - COMPOSITE	MAR02253.001	Sediment	<1.6	7.7 ± 1.5	5.8 ± 1.4	<29	<19	15.4 ± 2.4	13.7 ± 3.0
BH05 (ES4) 0.00m - COMPOSITE	MAR02253.002	Sediment	<1.1	9.7 ± 1.3	6.6 ± 1.1	<19	24.3 ± 9.3	21.0 ± 2.5	16.0 ± 2.3
BH06 (ES4) 2.30m - COMPOSITE	MAR02253.003	Sediment	<1.5	15.2 ± 1.9	5.7 ± 1.2	<24	<17	21.7 ± 2.6	14.3 ± 2.5
BH10 (ES4) 0.00m - COMPOSITE	MAR02253.004	Sediment	<1.6	30.3 ± 3.0	4.5 ± 1.2	<18	<17	12.4 ± 1.8	13.0 ± 2.6
BH12 (ES4) 0.00m - COMPOSITE	MAR02253.005	Sediment	<1.3	14.4 ± 1.9	4.1 ± 1.1	<26	<16	9.3 ± 1.9	9.8 ± 2.4
BH13A (ES4) 0.00m - COMPOSITE	MAR02253.006	Sediment	<1.2	4.3 ± 1.1	7.4 ± 1.2	<20	28.6 ± 9.8	23.6 ± 2.6	17.3 ± 2.3
BH14 (ES4) 0.00m - COMPOSITE	MAR02253.007	Sediment	<1.2	11.4 ± 1.6	2.35 ± 0.84	<20	<14	7.9 ± 1.6	8.3 ± 1.9
BH15 (ES4) 0.00m - COMPOSITE	MAR02253.008	Sediment	<1.9	10.7 ± 1.7	8.9 ± 1.7	<20	<23	29.1 ± 3.1	19.9 ± 3.5
BH16 (ES4) 0.00m - COMPOSITE	MAR02253.009	Sediment	<1.6	10.4 ± 1.6	5.9 ± 1.2	<28	<18	16.3 ± 2.4	10.7 ± 2.5
BH17 (ES4) 0.00m - COMPOSITE	MAR02253.010	Sediment	<0.90	13.5 ± 1.5	2.51 ± 0.67	<16	<11	8.7 ± 1.4	7.2 ± 1.6
BH18 (ES4) 0.00m - COMPOSITE	MAR02253.011	Sediment	<1.3	8.2 ± 1.3	4.10 ± 0.97	<22	<15	12.3 ± 1.8	10.5 ± 2.1
BH19 (ES4) 0.00m - COMPOSITE	MAR02253.012	Sediment	<1.4	8.4 ± 1.4	<1.3	<16	<15	4.9 ± 1.3	<2.6
BH20 (ES4) 0.00m - COMPOSITE	MAR02253.013	Sediment	<1.8	9.1 ± 1.6	6.0 ± 1.4	<29	<21	16.3 ± 2.4	12.2 ± 2.9
BH21 (ES4) 0.00m - COMPOSITE	MAR02253.014	Sediment	<0.85	8.1 ± 1.1	2.19 ± 0.68	<15	<10	6.0 ± 1.2	5.0 ± 1.4
BH22 (ES4) 0.00m - COMPOSITE	MAR02253.015	Sediment	<1.3	9.1 ± 1.4	4.8 ± 1.0	<22	<15	15.5 ± 1.9	12.1 ± 2.3
BH25 (ES4) 0.00m - COMPOSITE	MAR02253.016	Sediment	<1.8	5.6 ± 1.4	5.8 ± 1.4	<19	<21	17.7 ± 2.2	16.9 ± 3.0
BH26 (ES4) 0.00m - COMPOSITE	MAR02253.017	Sediment	<1.5	7.3 ± 1.4	4.4 ± 1.2	<27	<18	13.4 ± 2.2	10.2 ± 2.4
BH27 (ES4) 0.00m - COMPOSITE	MAR02253.018	Sediment	<1.2	39.2 ± 3.6	4.9 ± 1.1	<19	<14	15.7 ± 2.1	12.9 ± 2.2
BH29 (ES4) 0.00m - COMPOSITE	MAR02253.019	Sediment	<1.4	7.2 ± 1.2	4.2 ± 1.0	<22	<15	15.1 ± 2.1	11.5 ± 2.4
BH30 (ES4) 0.00m - COMPOSITE	MAR02253.020	Sediment	<1.8	5.5 ± 1.3	7.5 ± 1.4	<19	<20	20.3 ± 2.5	17.3 ± 3.1

* 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 MAR02253
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI - Radiological T

		Units	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	N	UKAS	N	N	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Pb-214	Ra-224	Ra-226 *	Ac-228	Ra-228 *	Th-228 *	Pa-234m
BH03 (ES4) 0.50m - COMPOSITE	MAR02253.001	Sediment	14.6 ± 2.6	<41	<28	20.7 ± 3.9	20.7 ± 3.9	<41	<180
BH05 (ES4) 0.00m - COMPOSITE	MAR02253.002	Sediment	16.4 ± 2.0	<27	<20	20.8 ± 3.1	20.8 ± 3.1	<27	<110
BH06 (ES4) 2.30m - COMPOSITE	MAR02253.003	Sediment	17.2 ± 2.2	<20	<21	21.0 ± 3.6	21.0 ± 3.6	<20	<150
BH10 (ES4) 0.00m - COMPOSITE	MAR02253.004	Sediment	12.8 ± 1.9	<18	<19	12.0 ± 3.4	12.0 ± 3.4	<18	<160
BH12 (ES4) 0.00m - COMPOSITE	MAR02253.005	Sediment	10.6 ± 2.4	<34	<25	15.1 ± 3.7	15.1 ± 3.7	<34	<150
BH13A (ES4) 0.00m - COMPOSITE	MAR02253.006	Sediment	19.4 ± 2.2	<28	<21	23.3 ± 3.3	23.3 ± 3.3	<28	<120
BH14 (ES4) 0.00m - COMPOSITE	MAR02253.007	Sediment	9.0 ± 1.7	<24	<18	<4.9	<4.9	<24	<120
BH15 (ES4) 0.00m - COMPOSITE	MAR02253.008	Sediment	22.1 ± 2.7	<22	<22	29.5 ± 4.7	29.5 ± 4.7	<22	<210
BH16 (ES4) 0.00m - COMPOSITE	MAR02253.009	Sediment	12.2 ± 2.2	<39	<26	19.0 ± 4.8	19.0 ± 4.8	<39	<180
BH17 (ES4) 0.00m - COMPOSITE	MAR02253.010	Sediment	8.4 ± 1.4	<20	<17	9.4 ± 2.2	9.4 ± 2.2	<20	<91
BH18 (ES4) 0.00m - COMPOSITE	MAR02253.011	Sediment	11.5 ± 1.9	<25	<18	12.1 ± 3.0	12.1 ± 3.0	<25	<130
BH19 (ES4) 0.00m - COMPOSITE	MAR02253.012	Sediment	6.1 ± 1.5	<20	<17	<5.7	<5.7	<20	<140
BH20 (ES4) 0.00m - COMPOSITE	MAR02253.013	Sediment	13.9 ± 2.4	<41	<29	17.1 ± 4.1	17.1 ± 4.1	<41	<190
BH21 (ES4) 0.00m - COMPOSITE	MAR02253.014	Sediment	6.3 ± 1.2	<20	<16	7.0 ± 2.5	7.0 ± 2.5	<20	<86
BH22 (ES4) 0.00m - COMPOSITE	MAR02253.015	Sediment	14.6 ± 1.9	<18	<18	15.0 ± 3.3	15.0 ± 3.3	<18	<130
BH25 (ES4) 0.00m - COMPOSITE	MAR02253.016	Sediment	17.4 ± 2.3	<20	<20	20.5 ± 3.9	20.5 ± 3.9	<20	<190
BH26 (ES4) 0.00m - COMPOSITE	MAR02253.017	Sediment	10.6 ± 2.4	<36	<25	13.9 ± 3.4	13.9 ± 3.4	<36	<170
BH27 (ES4) 0.00m - COMPOSITE	MAR02253.018	Sediment	13.8 ± 1.9	<17	<18	15.6 ± 2.9	15.6 ± 2.9	<17	<120
BH29 (ES4) 0.00m - COMPOSITE	MAR02253.019	Sediment	14.3 ± 2.0	<26	<19	13.5 ± 3.3	13.5 ± 3.3	<26	<140
BH30 (ES4) 0.00m - COMPOSITE	MAR02253.020	Sediment	19.7 ± 2.5	<28	<20	20.7 ± 4.1	20.7 ± 4.1	<28	<180

* 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 MAR02253
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI - Radiological T

		Units	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Th-234	U-235	Am-241
BH03 (ES4) 0.50m - COMPOSITE	MAR02253.001	Sediment	<19	<5.8	<2.2
BH05 (ES4) 0.00m - COMPOSITE	MAR02253.002	Sediment	<19	<5.2	<1.8
BH06 (ES4) 2.30m - COMPOSITE	MAR02253.003	Sediment	<22	<5.3	<2.5
BH10 (ES4) 0.00m - COMPOSITE	MAR02253.004	Sediment	<19	<4.4	<2.0
BH12 (ES4) 0.00m - COMPOSITE	MAR02253.005	Sediment	<27	<5.6	<1.8
BH13A (ES4) 0.00m - COMPOSITE	MAR02253.006	Sediment	<20	<5.3	<2.0
BH14 (ES4) 0.00m - COMPOSITE	MAR02253.007	Sediment	<18	<4.4	<2.6
BH15 (ES4) 0.00m - COMPOSITE	MAR02253.008	Sediment	<22	<5.3	<1.6
BH16 (ES4) 0.00m - COMPOSITE	MAR02253.009	Sediment	<28	<6.1	<1.9
BH17 (ES4) 0.00m - COMPOSITE	MAR02253.010	Sediment	<16	<4.2	<1.5
BH18 (ES4) 0.00m - COMPOSITE	MAR02253.011	Sediment	<19	<4.7	<2.8
BH19 (ES4) 0.00m - COMPOSITE	MAR02253.012	Sediment	<16	<3.8	<1.5
BH20 (ES4) 0.00m - COMPOSITE	MAR02253.013	Sediment	<30	<6.4	<2.0
BH21 (ES4) 0.00m - COMPOSITE	MAR02253.014	Sediment	<15	<4.0	<1.8
BH22 (ES4) 0.00m - COMPOSITE	MAR02253.015	Sediment	<20	<4.7	<2.5
BH25 (ES4) 0.00m - COMPOSITE	MAR02253.016	Sediment	<20	<4.8	<1.9
BH26 (ES4) 0.00m - COMPOSITE	MAR02253.017	Sediment	<27	<5.8	<2.0
BH27 (ES4) 0.00m - COMPOSITE	MAR02253.018	Sediment	<19	<4.4	<1.9
BH29 (ES4) 0.00m - COMPOSITE	MAR02253.019	Sediment	<20	<4.9	<2.0
BH30 (ES4) 0.00m - COMPOSITE	MAR02253.020	Sediment	<20	<4.8	<1.9

* See report notes

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Test Report ID MAR02253
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI - Radiological Testing

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
SOCOTEC Didcot*	MAR02253.001-020	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SOCOTEC Didcot*	MAR02253.001-020	Analyses and/or samples marked with an asterisk are not covered under UKAS schedule 1252.
SOCOTEC Didcot*	MAR02253.001-020	Results are presented as Bq/kg of dried and homogenised sample and are decay corrected to the sampling date.
SOCOTEC Didcot*	MAR02253.001-020	For results below the Limit of Detection, the LoD is rounded up to 2 significant figures. Results above the LoD are reported with expanded (2σ) uncertainties based on a total uncertainty budget. Uncertainties are rounded to 2 significant figures; results are rounded to the same precision.
SOCOTEC Didcot*	MAR02253.001-020	Detector calibrations are based upon homogeneous standard solutions. For quantification purposes the sample is assumed to be homogeneous.
SOCOTEC Didcot*	MAR02253.001-020	226Ra has only one gamma ray at 186 keV and the major gamma ray from 235U also occurs at 186 keV. 235U can be measured by the lower abundance gamma ray at 144 keV and if a positive result for 235U is reported, the 226Ra result will be unreliable and overestimated. However even if 235U is below the LoD there may still be a contribution to the 226Ra from 235U and the 226Ra result may be unreliable and overestimated. If an accurate result for 226Ra is required, this is better obtained by radiochemical analysis.
SOCOTEC Didcot*	MAR02253.001-020	228Ra and 228Th are derived from their daughter radionuclides (228Ac and 224Ra, respectively), assuming secular equilibrium.

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 MAR02253
Issue Version 1
Customer Reference 23-1739 - Hunterston Marine Yard GI - Radiological Testing

Method	Sample and Fraction Size	Method Summary
NORM	Air dried	High resolution gamma ray spectrometry
Gross Alpha/Beta	Air dried	Proportional Counting

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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 MAR02270

Issue Version: 1

Customer: Causeway Geotech Ltd, 8 Drumahiskey Rd, Bendooragh, Balnamore, Ballymoney, BT53 7QL

Customer Reference: 23-1739 - Hunterston Marine Yard GI

Date Sampled: 28-Mar-04-Apr-24

Date Samples Received: 12-Apr-24

Test Report Date: 13-May-24

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

<Redacted>

Authorised by: Jane Colbourne

Position: Customer Service Specialist



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Test Report ID MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH01 (ES1) 0.40m	MAR02270.001	Sediment	16.1	83.9	0.00	87.03	12.97	2.67
BH01 (ES2) 4.00m	MAR02270.002	Sediment	15.5	84.5	2.00	37.77	60.22	2.74
BH01 (ES3) 7.90m	MAR02270.003	Sediment	8.76	91.2	10.79	34.59	54.61	2.67
BH02 (ES1) 0.40m	MAR02270.004	Sediment	17.2	82.8	0.00	89.72	10.28	2.66
BH02 (ES2) 5.40m	MAR02270.005	Sediment	15.9	84.1	0.00	74.46	25.54	2.67
BH02 (ES3) 10.80m	MAR02270.006	Sediment	20.4	79.6	0.40	81.74	17.85	2.69
BH04 (ES1) 0.00m	MAR02270.007	Sediment	15.9	84.1	0.00	91.64	8.36	2.66
BH04 (ES2) 6.10m	MAR02270.008	Sediment	18.7	81.3	6.59	88.76	4.64	2.67
BH04 (ES3) 12.20m	MAR02270.009	Sediment	12.1	87.9	17.55	30.72	51.73	2.73
BH21A (ES3) 5.60m	MAR02270.010	Sediment	21.8	78.2	2.51	89.77	7.72	2.65
BH23 (ES1) 0.40m	MAR02270.011	Sediment	23.4	76.6	0.00	94.85	5.15	2.66
BH23 (ES2) 4.00m	MAR02270.012	Sediment	19.5	80.5	0.00	28.62	71.38	2.75
BH23 (ES3) 7.90m	MAR02270.013	Sediment	12.9	87.1	1.27	55.81	42.92	2.68
BH24 (ES1) 0.00m	MAR02270.014	Sediment	24.9	75.1	0.28	95.50	4.22	2.65
BH24 (ES2) 4.70m	MAR02270.015	Sediment	19.6	80.4	0.24	16.25	83.51	2.71
BH24 (ES3) 9.40m	MAR02270.016	Sediment	8.93	91.1	17.70	19.10	63.20	2.74
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	21.4	78.6	0.21	92.15	7.64	2.67
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	16.5	83.5	0.18	83.67	16.15	2.67
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	21.5	78.5	2.37	12.81	84.82	2.74
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

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Test Report ID MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

Units	% M/M
Method No	WSLM59*
Limit of Detection	0.02
Accreditation	UKAS

Client Reference:	SOCOTEC Ref:	Matrix	TOC
BH01 (ES1) 0.40m	MAR02270.001	Sediment	0.33
BH01 (ES2) 4.00m	MAR02270.002	Sediment	0.11
BH01 (ES3) 7.90m	MAR02270.003	Sediment	0.11
BH02 (ES1) 0.40m	MAR02270.004	Sediment	0.14
BH02 (ES2) 5.40m	MAR02270.005	Sediment	0.16
BH02 (ES3) 10.80m	MAR02270.006	Sediment	0.06
BH04 (ES1) 0.00m	MAR02270.007	Sediment	0.10
BH04 (ES2) 6.10m	MAR02270.008	Sediment	0.04
BH04 (ES3) 12.20m	MAR02270.009	Sediment	0.11
BH21A (ES3) 5.60m	MAR02270.010	Sediment	0.09
BH23 (ES1) 0.40m	MAR02270.011	Sediment	0.07
BH23 (ES2) 4.00m	MAR02270.012	Sediment	0.11
BH23 (ES3) 7.90m	MAR02270.013	Sediment	0.10
BH24 (ES1) 0.00m	MAR02270.014	Sediment	0.12
BH24 (ES2) 4.70m	MAR02270.015	Sediment	0.11
BH24 (ES3) 9.40m	MAR02270.016	Sediment	0.13
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	0.16
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	0.14
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	0.12
Reference Material (% Recovery)			100
QC Blank			<0.02

* See Report Notes

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Test Report ID MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH01 (ES1) 0.40m	MAR02270.001	Sediment	2.6	<0.04	7.8	6.2	0.06	7.5	4.7	24.6
BH01 (ES2) 4.00m	MAR02270.002	Sediment	3.2	0.05	13.4	16.4	0.03	17.5	6.3	42.3
BH01 (ES3) 7.90m	MAR02270.003	Sediment	2.1	<0.04	16.1	14.8	0.03	15.7	5.5	34.0
BH02 (ES1) 0.40m	MAR02270.004	Sediment	2.0	<0.04	9.1	5.1	0.02	9.3	2.4	16.4
BH02 (ES2) 5.40m	MAR02270.005	Sediment	3.7	<0.04	12.1	6.3	0.02	12.6	4.7	24.2
BH02 (ES3) 10.80m	MAR02270.006	Sediment	2.0	<0.04	5.2	15.1	0.03	8.6	7.1	20.4
BH04 (ES1) 0.00m	MAR02270.007	Sediment	1.2	<0.04	6.3	2.6	0.06	5.2	2.7	15.2
BH04 (ES2) 6.10m	MAR02270.008	Sediment	1.2	0.06	7.4	7.8	0.06	10.6	2.7	30.4
BH04 (ES3) 12.20m	MAR02270.009	Sediment	2.9	0.05	12.7	10.6	0.04	14.6	4.5	56.9
BH21A (ES3) 5.60m	MAR02270.010	Sediment	2.0	<0.04	6.1	2.6	0.03	5.7	2.7	17.0
BH23 (ES1) 0.40m	MAR02270.011	Sediment	1.6	<0.04	5.2	10.2	0.03	5.1	1.6	16.0
BH23 (ES2) 4.00m	MAR02270.012	Sediment	3.7	0.05	17.0	21.0	0.03	21.5	6.6	52.6
BH23 (ES3) 7.90m	MAR02270.013	Sediment	3.8	<0.04	11.6	17.2	0.03	15.3	8.2	37.9
BH24 (ES1) 0.00m	MAR02270.014	Sediment	1.8	<0.04	7.7	10.1	0.08	6.3	5.2	21.4
BH24 (ES2) 4.70m	MAR02270.015	Sediment	4.5	0.10	18.3	22.4	0.06	23.5	7.3	56.2
BH24 (ES3) 9.40m	MAR02270.016	Sediment	4.0	0.23	18.9	21.6	0.05	22.9	6.7	52.0
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	1.8	<0.04	6.7	7.1	0.06	6.4	2.4	29.4
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	2.8	<0.04	10.4	6.7	0.03	9.4	2.7	20.5
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	5.6	0.10	21.3	25.2	0.07	27.6	8.0	62.6
Certified Reference Material SETOC 768 (% Recovery)			99	102	103	117	103	101	101	103
QC Blank			<0.5	<0.04	<0.5	<0.5	<0.01	<0.5	<0.5	<2

* See Report Notes

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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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)
BH01 (ES1) 0.40m	MAR02270.001	Sediment	<1	<1
BH01 (ES2) 4.00m	MAR02270.002	Sediment	<1	<1
BH01 (ES3) 7.90m	MAR02270.003	Sediment	<1	<1
BH02 (ES1) 0.40m	MAR02270.004	Sediment	<1	<1
BH02 (ES2) 5.40m	MAR02270.005	Sediment	<1	<1
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<1	<1
BH04 (ES1) 0.00m	MAR02270.007	Sediment	<1	<1
BH04 (ES2) 6.10m	MAR02270.008	Sediment	<1	<1
BH04 (ES3) 12.20m	MAR02270.009	Sediment	<1	<1
BH21A (ES3) 5.60m	MAR02270.010	Sediment	<1	<1
BH23 (ES1) 0.40m	MAR02270.011	Sediment	<1	<1
BH23 (ES2) 4.00m	MAR02270.012	Sediment	<5	<5
BH23 (ES3) 7.90m	MAR02270.013	Sediment	<1	<1
BH24 (ES1) 0.00m	MAR02270.014	Sediment	<5	<5
BH24 (ES2) 4.70m	MAR02270.015	Sediment	<5	<5
BH24 (ES3) 9.40m	MAR02270.016	Sediment	<5	<5
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	<5	<5
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	<5	<5
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	<5	<5
Certified Reference Material BCR-646 (% Recovery)			123	105
QC Blank			<1	<1

* See Report Notes

MAR02270
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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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH01 (ES1) 0.40m	MAR02270.001	Sediment	<1	<1	<1	<1	<1	<1
BH01 (ES2) 4.00m	MAR02270.002	Sediment	<1	<1	<1	<1	<1	<1
BH01 (ES3) 7.90m	MAR02270.003	Sediment	<1	<1	<1	<1	<1	2.30
BH02 (ES1) 0.40m	MAR02270.004	Sediment	1.29	<1	1.49	2.92	3.29	2.82
BH02 (ES2) 5.40m	MAR02270.005	Sediment	<1	<1	1.43	3.18	4.76	5.00
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<1	<1	<1	<1	<1	<1
BH04 (ES1) 0.00m	MAR02270.007	Sediment	<1	<1	1.53	4.62	5.50	4.72
BH04 (ES2) 6.10m	MAR02270.008	Sediment	<1	<1	<1	<1	<1	<1
BH04 (ES3) 12.20m	MAR02270.009	Sediment	<1	<1	<1	<1	<1	1.99
BH21A (ES3) 5.60m	MAR02270.010	Sediment	<1	<1	<1	<1	1.44	1.58
BH23 (ES1) 0.40m	MAR02270.011	Sediment	<1	<1	<1	<1	<1	1.24
BH23 (ES2) 4.00m	MAR02270.012	Sediment	<1	<1	<1	<1	<1	1.40
BH23 (ES3) 7.90m	MAR02270.013	Sediment	<1	<1	<1	<1	1.40	2.28
BH24 (ES1) 0.00m	MAR02270.014	Sediment	5.27	2.04	9.12	24.4	27.2	22.3
BH24 (ES2) 4.70m	MAR02270.015	Sediment	<1	<1	<1	1.85	2.38	4.30
Certified Reference Material NIST 1941b (% Recovery)			96	106	66	64	60	84
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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 *See report notes

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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	BENZGHP	BKF*	C1N	C1PHEN	C2N
BH01 (ES1) 0.40m	MAR02270.001	Sediment	<1	1.23	<1	6.11	3.40	3.86
BH01 (ES2) 4.00m	MAR02270.002	Sediment	<1	1.60	<1	1.92	1.81	1.97
BH01 (ES3) 7.90m	MAR02270.003	Sediment	1.68	2.40	1.10	2.31	2.32	2.10
BH02 (ES1) 0.40m	MAR02270.004	Sediment	3.42	4.87	2.38	7.56	14.5	12.1
BH02 (ES2) 5.40m	MAR02270.005	Sediment	5.46	9.29	2.18	15.0	20.4	21.1
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<1	<1	<1	<1	<1	4.86
BH04 (ES1) 0.00m	MAR02270.007	Sediment	3.46	3.73	5.03	4.32	6.23	5.22
BH04 (ES2) 6.10m	MAR02270.008	Sediment	<1	<1	<1	1.68	<1	<1
BH04 (ES3) 12.20m	MAR02270.009	Sediment	1.87	2.77	<1	2.69	3.00	3.16
BH21A (ES3) 5.60m	MAR02270.010	Sediment	1.50	2.44	<1	6.14	5.18	6.98
BH23 (ES1) 0.40m	MAR02270.011	Sediment	1.13	1.40	<1	3.52	2.96	8.55
BH23 (ES2) 4.00m	MAR02270.012	Sediment	1.24	1.84	<1	2.97	2.68	4.25
BH23 (ES3) 7.90m	MAR02270.013	Sediment	2.23	3.57	1.01	5.07	4.64	6.82
BH24 (ES1) 0.00m	MAR02270.014	Sediment	16.8	18.1	25.2	13.1	19.7	18.9
BH24 (ES2) 4.70m	MAR02270.015	Sediment	3.75	6.36	2.34	9.68	8.20	11.7
Certified Reference Material NIST 1941b (% Recovery)			75	76	88	75	84	109
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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 *See report notes

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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	N*	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	C3N	CHRYSENE*	DBENZAH	FLUORANT	FLUORENE	INDPYR
BH01 (ES1) 0.40m	MAR02270.001	Sediment	3.95	1.39	<1	1.86	<1	<1
BH01 (ES2) 4.00m	MAR02270.002	Sediment	2.15	<1	<1	<1	<1	<1
BH01 (ES3) 7.90m	MAR02270.003	Sediment	2.27	1.65	<1	2.24	<1	<1
BH02 (ES1) 0.40m	MAR02270.004	Sediment	15.3	3.66	<1	4.44	1.31	1.58
BH02 (ES2) 5.40m	MAR02270.005	Sediment	28.5	4.98	<1	4.39	2.61	2.30
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<1	<1	<1	<1	<1	<1
BH04 (ES1) 0.00m	MAR02270.007	Sediment	5.80	5.52	<1	8.37	<1	2.93
BH04 (ES2) 6.10m	MAR02270.008	Sediment	<1	<1	<1	1.28	<1	<1
BH04 (ES3) 12.20m	MAR02270.009	Sediment	3.22	1.69	<1	2.30	<1	<1
BH21A (ES3) 5.60m	MAR02270.010	Sediment	6.86	1.42	<1	<1	<1	<1
BH23 (ES1) 0.40m	MAR02270.011	Sediment	3.64	<1	<1	1.65	<1	<1
BH23 (ES2) 4.00m	MAR02270.012	Sediment	3.31	<1	<1	1.30	<1	<1
BH23 (ES3) 7.90m	MAR02270.013	Sediment	5.74	2.10	<1	2.17	<1	<1
BH24 (ES1) 0.00m	MAR02270.014	Sediment	21.0	26.1	2.30	48.7	5.59	16.0
BH24 (ES2) 4.70m	MAR02270.015	Sediment	12.6	3.37	<1	3.88	1.76	1.73
Certified Reference Material NIST 1941b (% Recovery)			121	85	118	79	51	70
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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 *See report notes

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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH01 (ES1) 0.40m	MAR02270.001	Sediment	2.29	<1	3.66	2.05	5970
BH01 (ES2) 4.00m	MAR02270.002	Sediment	<1	<1	1.44	<1	1910
BH01 (ES3) 7.90m	MAR02270.003	Sediment	1.18	<1	2.52	1.84	1060
BH02 (ES1) 0.40m	MAR02270.004	Sediment	1.93	2.23	8.90	5.93	5240
BH02 (ES2) 5.40m	MAR02270.005	Sediment	3.05	5.51	11.0	6.23	7260
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<1	<1	<1	<1	452
BH04 (ES1) 0.00m	MAR02270.007	Sediment	1.88	<1	6.10	8.24	3230
BH04 (ES2) 6.10m	MAR02270.008	Sediment	<1	<1	<1	1.35	2670
BH04 (ES3) 12.20m	MAR02270.009	Sediment	<1	1.63	1.93	2.70	2430
BH21A (ES3) 5.60m	MAR02270.010	Sediment	2.07	<1	2.49	1.65	1880
BH23 (ES1) 0.40m	MAR02270.011	Sediment	<1	<1	2.25	1.90	12000
BH23 (ES2) 4.00m	MAR02270.012	Sediment	<1	<1	2.36	1.52	8360
BH23 (ES3) 7.90m	MAR02270.013	Sediment	<1	1.32	3.54	2.71	4660
BH24 (ES1) 0.00m	MAR02270.014	Sediment	5.54	6.98	30.1	48.2	73900
BH24 (ES2) 4.70m	MAR02270.015	Sediment	1.95	2.18	6.25	4.34	5980
Certified Reference Material NIST 1941b (% Recovery)			60	58	78	68	93~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
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Certificate of Analysis



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Test Report ID MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH24 (ES3) 9.40m	MAR02270.016	Sediment	<1	<1	<1	<1	1.42	2.74
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	6.05	1.84	11.8	34.2	40.8	30.3
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	<1	<1	1.36	2.89	3.74	3.59
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	<1	<1	<1	1.51	2.21	3.63
Certified Reference Material NIST 1941b (% Recovery)			96	115	66	66	66	82
QC Blank			<1	<1	<1	<1	<1	<1

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Test Report ID MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH24 (ES3) 9.40m	MAR02270.016	Sediment	2.65	4.55	1.21	4.94	5.05	5.00
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	24.3	26.9	30.2	16.6	38.0	27.7
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	4.20	7.56	1.86	13.2	16.3	16.0
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	3.15	5.53	<1	8.42	7.28	8.26
Certified Reference Material NIST 1941b (% Recovery)			77	71	82	77	83	112
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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Test Report ID MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	N*	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	C3N	CHRYSENE*	DBENZAH	FLUORANT	FLUORENE	INDPYR
BH24 (ES3) 9.40m	MAR02270.016	Sediment	5.26	2.23	<1	2.91	<1	1.24
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	33.2	36.3	5.02	66.2	6.41	22.5
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	21.2	4.42	<1	3.62	2.04	1.94
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	9.48	2.72	<1	3.00	<1	1.45
Certified Reference Material NIST 1941b (% Recovery)			117	88	109	79	56	72
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
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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)
		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
BH24 (ES3) 9.40m	MAR02270.016	Sediment	1.68	2.28	4.79	3.07	4740
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	9.33	9.92	43.8	66.6	687000
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	4.53	2.28	9.79	4.94	18300
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	1.96	2.04	5.60	3.61	29100
Certified Reference Material NIST 1941b (% Recovery)			59	59	77	69	101~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
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 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB28	PCB52	PCB101	PCB118	PCB138	PCB153
BH01 (ES1) 0.40m	MAR02270.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH01 (ES2) 4.00m	MAR02270.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH01 (ES3) 7.90m	MAR02270.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH02 (ES1) 0.40m	MAR02270.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH02 (ES2) 5.40m	MAR02270.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			82	105	102	118	90	105
QC Blank			<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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB18	PCB105	PCB110	PCB128	PCB141	PCB149
BH01 (ES1) 0.40m	MAR02270.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH01 (ES2) 4.00m	MAR02270.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH01 (ES3) 7.90m	MAR02270.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH02 (ES1) 0.40m	MAR02270.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH02 (ES2) 5.40m	MAR02270.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			97	104	117	100	125~	100
QC Blank			<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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB151	PCB156	PCB158	PCB170	PCB180	PCB183
BH01 (ES1) 0.40m	MAR02270.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH01 (ES2) 4.00m	MAR02270.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH01 (ES3) 7.90m	MAR02270.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH02 (ES1) 0.40m	MAR02270.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH02 (ES2) 5.40m	MAR02270.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			117~	83	99	103	100	81
QC Blank			<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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	PCB187	PCB194	PCB31	PCB44	PCB47	PCB49	PCB66
BH01 (ES1) 0.40m	MAR02270.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH01 (ES2) 4.00m	MAR02270.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH01 (ES3) 7.90m	MAR02270.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH02 (ES1) 0.40m	MAR02270.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH02 (ES2) 5.40m	MAR02270.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			102	97	102	99	108~	109	108
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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 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	0.56	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	ICES7	AHCH	BHCH	GHCH	DIELDRIN	HCB	DDE
BH01 (ES1) 0.40m	MAR02270.001	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH01 (ES2) 4.00m	MAR02270.002	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH01 (ES3) 7.90m	MAR02270.003	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02 (ES1) 0.40m	MAR02270.004	Sediment	<0.56	<0.1	<0.1	<0.1	0.12	<0.1	<0.1
BH02 (ES2) 5.40m	MAR02270.005	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material NIST 1941b (% Recovery)			100	97~	96~	99~	112~	136	109
QC Blank			<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
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 Customer Reference 23-1739 - Hunterston Marine Yard GI

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1
		Accreditation	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	DDT	DDD
BH01 (ES1) 0.40m	MAR02270.001	Sediment	<0.1	<0.1
BH01 (ES2) 4.00m	MAR02270.002	Sediment	<0.1	<0.1
BH01 (ES3) 7.90m	MAR02270.003	Sediment	<0.1	<0.1
BH02 (ES1) 0.40m	MAR02270.004	Sediment	<0.1	<0.1
BH02 (ES2) 5.40m	MAR02270.005	Sediment	<0.1	<0.1
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<0.1	<0.1
Certified Reference Material NIST 1941b (% Recovery)			139	100
QC Blank			<0.1	<0.1

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 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB28	PCB52	PCB101	PCB118	PCB138	PCB153
BH04 (ES1) 0.00m	MAR02270.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH04 (ES2) 6.10m	MAR02270.008*	Sediment	0.48	0.57	0.84	1.05	0.75	0.82
BH04 (ES3) 12.20m	MAR02270.009	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			75	95	100	121	98	94
QC Blank			<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)
		Method No	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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB18	PCB105	PCB110	PCB128	PCB141	PCB149
BH04 (ES1) 0.00m	MAR02270.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH04 (ES2) 6.10m	MAR02270.008*	Sediment	0.21	0.90	0.96	0.63	0.68	1.01
BH04 (ES3) 12.20m	MAR02270.009	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			88	89	119	90	109~	92
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

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 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB151	PCB156	PCB158	PCB170	PCB180	PCB183
BH04 (ES1) 0.00m	MAR02270.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH04 (ES2) 6.10m	MAR02270.008*	Sediment	0.89	0.89	0.86	0.86	0.77	0.73
BH04 (ES3) 12.20m	MAR02270.009	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			116~	100	84	93	98	92
QC Blank			<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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	PCB187	PCB194	PCB31	PCB44	PCB47	PCB49	PCB66
BH04 (ES1) 0.00m	MAR02270.007	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH04 (ES2) 6.10m	MAR02270.008*	Sediment	0.68	0.68	0.45	0.76	0.61	0.59	0.99
BH04 (ES3) 12.20m	MAR02270.009	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			104	90	98	102	113~	102	100
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	0.56	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	ICES7	AHCH	BHCH	GHCH	DIELDRIN	HCB	DDE
BH04 (ES1) 0.00m	MAR02270.007	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04 (ES2) 6.10m	MAR02270.008*	Sediment	5.27	0.23	0.57	0.20	1.49	0.13	0.61
BH04 (ES3) 12.20m	MAR02270.009	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material NIST 1941b (% Recovery)			115	108~	83~	82~	121~	130	96
QC Blank			<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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 Customer Reference 23-1739 - Hunterston Marine Yard GI

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1
		Accreditation	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	DDT	DDD
BH04 (ES1) 0.00m	MAR02270.007	Sediment	<0.1	<0.1
BH04 (ES2) 6.10m	MAR02270.008*	Sediment	0.97	1.09
BH04 (ES3) 12.20m	MAR02270.009	Sediment	<0.1	<0.1
Certified Reference Material NIST 1941b (% Recovery)			149	101
QC Blank			<0.1	<0.1

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 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB28	PCB52	PCB101	PCB118	PCB138	PCB153
BH21A (ES3) 5.60m	MAR02270.010	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH23 (ES1) 0.40m	MAR02270.011	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH23 (ES2) 4.00m	MAR02270.012	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH23 (ES3) 7.90m	MAR02270.013	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH24 (ES1) 0.00m	MAR02270.014	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH24 (ES2) 4.70m	MAR02270.015	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH24 (ES3) 9.40m	MAR02270.016	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			83	99	99	104	106	95
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries

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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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB18	PCB105	PCB110	PCB128	PCB141	PCB149
BH21A (ES3) 5.60m	MAR02270.010	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH23 (ES1) 0.40m	MAR02270.011	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH23 (ES2) 4.00m	MAR02270.012	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH23 (ES3) 7.90m	MAR02270.013	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH24 (ES1) 0.00m	MAR02270.014	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH24 (ES2) 4.70m	MAR02270.015	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH24 (ES3) 9.40m	MAR02270.016	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			91	98	104	108	127~	100
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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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/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
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	PCB151	PCB156	PCB158	PCB170	PCB180	PCB183
BH21A (ES3) 5.60m	MAR02270.010	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH23 (ES1) 0.40m	MAR02270.011	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH23 (ES2) 4.00m	MAR02270.012	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH23 (ES3) 7.90m	MAR02270.013	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH24 (ES1) 0.00m	MAR02270.014	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH24 (ES2) 4.70m	MAR02270.015	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH24 (ES3) 9.40m	MAR02270.016	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			122~	100	83	97	98	77
QC Blank			<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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	PCB187	PCB194	PCB31	PCB44	PCB47	PCB49	PCB66
BH21A (ES3) 5.60m	MAR02270.010	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH23 (ES1) 0.40m	MAR02270.011	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH23 (ES2) 4.00m	MAR02270.012	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH23 (ES3) 7.90m	MAR02270.013	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH24 (ES1) 0.00m	MAR02270.014	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH24 (ES2) 4.70m	MAR02270.015	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BH24 (ES3) 9.40m	MAR02270.016	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Certified Reference Material NIST 1941b (% Recovery)			102	100	105	101	107~	104	98
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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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	0.56	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	ICES7	AHCH	BHCH	GHCH	DIELDRIN	HCB	DDE
BH21A (ES3) 5.60m	MAR02270.010	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH23 (ES1) 0.40m	MAR02270.011	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH23 (ES2) 4.00m	MAR02270.012	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH23 (ES3) 7.90m	MAR02270.013	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH24 (ES1) 0.00m	MAR02270.014	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH24 (ES2) 4.70m	MAR02270.015	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH24 (ES3) 9.40m	MAR02270.016	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Certified Reference Material NIST 1941b (% Recovery)			98	106~	66~	68~	135~	154	109
QC Blank			<0.56	<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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1
		Accreditation	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	DDT	DDD
BH21A (ES3) 5.60m	MAR02270.010	Sediment	<0.1	<0.1
BH23 (ES1) 0.40m	MAR02270.011	Sediment	0.20	<0.1
BH23 (ES2) 4.00m	MAR02270.012	Sediment	<0.1	<0.1
BH23 (ES3) 7.90m	MAR02270.013	Sediment	<0.1	<0.1
BH24 (ES1) 0.00m	MAR02270.014	Sediment	<0.1	<0.1
BH24 (ES2) 4.70m	MAR02270.015	Sediment	<0.1	<0.1
BH24 (ES3) 9.40m	MAR02270.016	Sediment	<0.1	<0.1
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	0.17	<0.1
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	0.37	<0.1
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	0.48	<0.1
Certified Reference Material NIST 1941b (% Recovery)			116	79
QC Blank			<0.1	<0.1

For full analyte name see method summaries

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Test Report ID MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH01 (ES1) 0.40m	MAR02270.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH01 (ES2) 4.00m	MAR02270.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH01 (ES3) 7.90m	MAR02270.003	Sediment	<0.05	<0.05	0.06	<0.05	<0.05	<0.05
BH02 (ES1) 0.40m	MAR02270.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH02 (ES2) 5.40m	MAR02270.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH04 (ES1) 0.00m	MAR02270.007	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH04 (ES2) 6.10m	MAR02270.008	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH04 (ES3) 12.20m	MAR02270.009	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH21A (ES3) 5.60m	MAR02270.010	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH23 (ES1) 0.40m	MAR02270.011	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH23 (ES2) 4.00m	MAR02270.012	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH23 (ES3) 7.90m	MAR02270.013	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH24 (ES1) 0.00m	MAR02270.014	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH24 (ES2) 4.70m	MAR02270.015	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH24 (ES3) 9.40m	MAR02270.016	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Certified Reference Material Quasimeme SED56 (% Recovery)			115~	99	100	85~	108	87
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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Test Report ID MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		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
BH01 (ES1) 0.40m	MAR02270.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH01 (ES2) 4.00m	MAR02270.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH01 (ES3) 7.90m	MAR02270.003	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	0.36
BH02 (ES1) 0.40m	MAR02270.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH02 (ES2) 5.40m	MAR02270.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH02 (ES3) 10.80m	MAR02270.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH04 (ES1) 0.00m	MAR02270.007	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH04 (ES2) 6.10m	MAR02270.008	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH04 (ES3) 12.20m	MAR02270.009	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH21A (ES3) 5.60m	MAR02270.010	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH23 (ES1) 0.40m	MAR02270.011	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH23 (ES2) 4.00m	MAR02270.012	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH23 (ES3) 7.90m	MAR02270.013	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH24 (ES1) 0.00m	MAR02270.014	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH24 (ES2) 4.70m	MAR02270.015	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
BH24 (ES3) 9.40m	MAR02270.016	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
GBS2-BH-SPT-11 (ES1) 0.90m	MAR02270.017	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
GBS2-BH-SPT-11 (ES2) 5.80m	MAR02270.018	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
GBS2-BH-SPT-11 (ES3) 11.60m	MAR02270.019	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
Certified Reference Material Quasimeme SED56 (% Recovery)			84~	79~	79~	83~	98	71
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.2*

* See Report Notes

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Test Report ID MAR02270

Issue Version 1

Customer Reference 23-1739 - Hunterston Marine Yard GI

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02270.001-019	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02270.001-019	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02270.001-019	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02270.001-019	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/301	MAR02270.012, 014-019	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	MAR02270.008	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 (PCB118, 110, 156, 158, 170, 180, 194). These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02270.001-019	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 (Fluorene) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02270.001-019	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	MAR02270.001-019	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. It is believed Triphenylene is 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	MAR02270.001-019	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 MAR02270
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

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 sieved 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 sieved to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and sieved to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and sieved 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-Hexachlorocyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorocyclohexane
BAA	Benzo[a]anthracene	DBENZA	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorocyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HC	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



Test Report ID MAR02253

Issue Version: 1

Customer: Causeway Geotech Ltd, 8 Drumahiskey Rd, Bendooragh, Balnamore, Ballymoney, BT53 7QL

Customer Reference: 23-1739 - Hunterston Marine Yard GI - Radiological Testing

Date Sampled: 07-18-Mar-24

Date Samples Received: 03-Apr-24

Test Report Date: 03-May-24

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

<Redacted>

Authorised by: Jane Colbourne

Position: Customer Service Specialist



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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 MAR02253
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI - Radiological Testing

		Units	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Gross Alpha as Pu-242	Gross Beta as Cs-137	Be-7	K-40	Co-60	I-125	I-129
BH03 (ES4) 0.50m - COMPOSITE	MAR02253.001	Sediment	400 ± 160	890 ± 200	<16	418 ± 44	<1.7	<43	<19
BH05 (ES4) 0.00m - COMPOSITE	MAR02253.002	Sediment	340 ± 130	690 ± 170	<13	419 ± 39	<1.1	<31	<13
BH06 (ES4) 2.30m - COMPOSITE	MAR02253.003	Sediment	360 ± 140	730 ± 170	<16	437 ± 47	<1.5	<37	<15
BH10 (ES4) 0.00m - COMPOSITE	MAR02253.004	Sediment	210 ± 120	590 ± 150	<16	327 ± 38	<1.7	<25	<11
BH12 (ES4) 0.00m - COMPOSITE	MAR02253.005	Sediment	<200	660 ± 160	<16	295 ± 34	<1.4	<40	<18
BH13A (ES4) 0.00m - COMPOSITE	MAR02253.006	Sediment	310 ± 130	870 ± 200	<14	527 ± 47	<1.1	<33	<13
BH14 (ES4) 0.00m - COMPOSITE	MAR02253.007	Sediment	<160	420 ± 130	<12	247 ± 30	<1.2	<33	<14
BH15 (ES4) 0.00m - COMPOSITE	MAR02253.008	Sediment	550 ± 180	1010 ± 230	<17	546 ± 59	<2.0	<26	<12
BH16 (ES4) 0.00m - COMPOSITE	MAR02253.009	Sediment	<210	620 ± 150	<16	317 ± 35	<1.5	<42	<18
BH17 (ES4) 0.00m - COMPOSITE	MAR02253.010	Sediment	<170	440 ± 120	<9.8	297 ± 31	<0.86	<26	<11
BH18 (ES4) 0.00m - COMPOSITE	MAR02253.011	Sediment	<200	500 ± 130	<13	303 ± 35	<1.2	<33	<14
BH19 (ES4) 0.00m - COMPOSITE	MAR02253.012	Sediment	<140	410 ± 120	<13	184 ± 29	<1.5	<21	<9.6
BH20 (ES4) 0.00m - COMPOSITE	MAR02253.013	Sediment	310 ± 150	800 ± 190	<18	395 ± 45	<1.8	<43	<19
BH21 (ES4) 0.00m - COMPOSITE	MAR02253.014	Sediment	<150	320 ± 110	<9.8	223 ± 23	<0.78	<25	<11
BH22 (ES4) 0.00m - COMPOSITE	MAR02253.015	Sediment	270 ± 130	590 ± 160	<13	290 ± 33	<1.3	<34	<14
BH25 (ES4) 0.00m - COMPOSITE	MAR02253.016	Sediment	290 ± 150	770 ± 180	<17	466 ± 50	<1.9	<25	<11
BH26 (ES4) 0.00m - COMPOSITE	MAR02253.017	Sediment	210 ± 120	430 ± 120	<15	239 ± 31	<1.4	<40	<17
BH27 (ES4) 0.00m - COMPOSITE	MAR02253.018	Sediment	210 ± 140	680 ± 170	<14	312 ± 34	<1.3	<25	<12
BH29 (ES4) 0.00m - COMPOSITE	MAR02253.019	Sediment	250 ± 120	560 ± 140	<15	347 ± 39	<1.3	<37	<14
BH30 (ES4) 0.00m - COMPOSITE	MAR02253.020	Sediment	370 ± 160	800 ± 180	<18	376 ± 44	<1.8	<27	<12

* 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 MAR02253
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI - Radiological T

		Units	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Ddcot*	SOCOTEC Ddcot*	SOCOTEC Ddcot*	SOCOTEC Ddcot*	SOCOTEC Ddcot*	SOCOTEC Ddcot*	SOCOTEC Ddcot*
		Accreditation	UKAS	UKAS	UKAS	N	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Cs-134	Cs-137	Tl-208	Pb-210	Bi-212	Pb-212	Bi-214
BH03 (ES4) 0.50m - COMPOSITE	MAR02253.001	Sediment	<1.6	7.7 ± 1.5	5.8 ± 1.4	<29	<19	15.4 ± 2.4	13.7 ± 3.0
BH05 (ES4) 0.00m - COMPOSITE	MAR02253.002	Sediment	<1.1	9.7 ± 1.3	6.6 ± 1.1	<19	24.3 ± 9.3	21.0 ± 2.5	16.0 ± 2.3
BH06 (ES4) 2.30m - COMPOSITE	MAR02253.003	Sediment	<1.5	15.2 ± 1.9	5.7 ± 1.2	<24	<17	21.7 ± 2.6	14.3 ± 2.5
BH10 (ES4) 0.00m - COMPOSITE	MAR02253.004	Sediment	<1.6	30.3 ± 3.0	4.5 ± 1.2	<18	<17	12.4 ± 1.8	13.0 ± 2.6
BH12 (ES4) 0.00m - COMPOSITE	MAR02253.005	Sediment	<1.3	14.4 ± 1.9	4.1 ± 1.1	<26	<16	9.3 ± 1.9	9.8 ± 2.4
BH13A (ES4) 0.00m - COMPOSITE	MAR02253.006	Sediment	<1.2	4.3 ± 1.1	7.4 ± 1.2	<20	28.6 ± 9.8	23.6 ± 2.6	17.3 ± 2.3
BH14 (ES4) 0.00m - COMPOSITE	MAR02253.007	Sediment	<1.2	11.4 ± 1.6	2.35 ± 0.84	<20	<14	7.9 ± 1.6	8.3 ± 1.9
BH15 (ES4) 0.00m - COMPOSITE	MAR02253.008	Sediment	<1.9	10.7 ± 1.7	8.9 ± 1.7	<20	<23	29.1 ± 3.1	19.9 ± 3.5
BH16 (ES4) 0.00m - COMPOSITE	MAR02253.009	Sediment	<1.6	10.4 ± 1.6	5.9 ± 1.2	<28	<18	16.3 ± 2.4	10.7 ± 2.5
BH17 (ES4) 0.00m - COMPOSITE	MAR02253.010	Sediment	<0.90	13.5 ± 1.5	2.51 ± 0.67	<16	<11	8.7 ± 1.4	7.2 ± 1.6
BH18 (ES4) 0.00m - COMPOSITE	MAR02253.011	Sediment	<1.3	8.2 ± 1.3	4.10 ± 0.97	<22	<15	12.3 ± 1.8	10.5 ± 2.1
BH19 (ES4) 0.00m - COMPOSITE	MAR02253.012	Sediment	<1.4	8.4 ± 1.4	<1.3	<16	<15	4.9 ± 1.3	<2.6
BH20 (ES4) 0.00m - COMPOSITE	MAR02253.013	Sediment	<1.8	9.1 ± 1.6	6.0 ± 1.4	<29	<21	16.3 ± 2.4	12.2 ± 2.9
BH21 (ES4) 0.00m - COMPOSITE	MAR02253.014	Sediment	<0.85	8.1 ± 1.1	2.19 ± 0.68	<15	<10	6.0 ± 1.2	5.0 ± 1.4
BH22 (ES4) 0.00m - COMPOSITE	MAR02253.015	Sediment	<1.3	9.1 ± 1.4	4.8 ± 1.0	<22	<15	15.5 ± 1.9	12.1 ± 2.3
BH25 (ES4) 0.00m - COMPOSITE	MAR02253.016	Sediment	<1.8	5.6 ± 1.4	5.8 ± 1.4	<19	<21	17.7 ± 2.2	16.9 ± 3.0
BH26 (ES4) 0.00m - COMPOSITE	MAR02253.017	Sediment	<1.5	7.3 ± 1.4	4.4 ± 1.2	<27	<18	13.4 ± 2.2	10.2 ± 2.4
BH27 (ES4) 0.00m - COMPOSITE	MAR02253.018	Sediment	<1.2	39.2 ± 3.6	4.9 ± 1.1	<19	<14	15.7 ± 2.1	12.9 ± 2.2
BH29 (ES4) 0.00m - COMPOSITE	MAR02253.019	Sediment	<1.4	7.2 ± 1.2	4.2 ± 1.0	<22	<15	15.1 ± 2.1	11.5 ± 2.4
BH30 (ES4) 0.00m - COMPOSITE	MAR02253.020	Sediment	<1.8	5.5 ± 1.3	7.5 ± 1.4	<19	<20	20.3 ± 2.5	17.3 ± 3.1

* 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 MAR02253
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI - Radiological T

		Units	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	N	UKAS	N	N	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Pb-214	Ra-224	Ra-226 *	Ac-228	Ra-228 *	Th-228 *	Pa-234m
BH03 (ES4) 0.50m - COMPOSITE	MAR02253.001	Sediment	14.6 ± 2.6	<41	<28	20.7 ± 3.9	20.7 ± 3.9	<41	<180
BH05 (ES4) 0.00m - COMPOSITE	MAR02253.002	Sediment	16.4 ± 2.0	<27	<20	20.8 ± 3.1	20.8 ± 3.1	<27	<110
BH06 (ES4) 2.30m - COMPOSITE	MAR02253.003	Sediment	17.2 ± 2.2	<20	<21	21.0 ± 3.6	21.0 ± 3.6	<20	<150
BH10 (ES4) 0.00m - COMPOSITE	MAR02253.004	Sediment	12.8 ± 1.9	<18	<19	12.0 ± 3.4	12.0 ± 3.4	<18	<160
BH12 (ES4) 0.00m - COMPOSITE	MAR02253.005	Sediment	10.6 ± 2.4	<34	<25	15.1 ± 3.7	15.1 ± 3.7	<34	<150
BH13A (ES4) 0.00m - COMPOSITE	MAR02253.006	Sediment	19.4 ± 2.2	<28	<21	23.3 ± 3.3	23.3 ± 3.3	<28	<120
BH14 (ES4) 0.00m - COMPOSITE	MAR02253.007	Sediment	9.0 ± 1.7	<24	<18	<4.9	<4.9	<24	<120
BH15 (ES4) 0.00m - COMPOSITE	MAR02253.008	Sediment	22.1 ± 2.7	<22	<22	29.5 ± 4.7	29.5 ± 4.7	<22	<210
BH16 (ES4) 0.00m - COMPOSITE	MAR02253.009	Sediment	12.2 ± 2.2	<39	<26	19.0 ± 4.8	19.0 ± 4.8	<39	<180
BH17 (ES4) 0.00m - COMPOSITE	MAR02253.010	Sediment	8.4 ± 1.4	<20	<17	9.4 ± 2.2	9.4 ± 2.2	<20	<91
BH18 (ES4) 0.00m - COMPOSITE	MAR02253.011	Sediment	11.5 ± 1.9	<25	<18	12.1 ± 3.0	12.1 ± 3.0	<25	<130
BH19 (ES4) 0.00m - COMPOSITE	MAR02253.012	Sediment	6.1 ± 1.5	<20	<17	<5.7	<5.7	<20	<140
BH20 (ES4) 0.00m - COMPOSITE	MAR02253.013	Sediment	13.9 ± 2.4	<41	<29	17.1 ± 4.1	17.1 ± 4.1	<41	<190
BH21 (ES4) 0.00m - COMPOSITE	MAR02253.014	Sediment	6.3 ± 1.2	<20	<16	7.0 ± 2.5	7.0 ± 2.5	<20	<86
BH22 (ES4) 0.00m - COMPOSITE	MAR02253.015	Sediment	14.6 ± 1.9	<18	<18	15.0 ± 3.3	15.0 ± 3.3	<18	<130
BH25 (ES4) 0.00m - COMPOSITE	MAR02253.016	Sediment	17.4 ± 2.3	<20	<20	20.5 ± 3.9	20.5 ± 3.9	<20	<190
BH26 (ES4) 0.00m - COMPOSITE	MAR02253.017	Sediment	10.6 ± 2.4	<36	<25	13.9 ± 3.4	13.9 ± 3.4	<36	<170
BH27 (ES4) 0.00m - COMPOSITE	MAR02253.018	Sediment	13.8 ± 1.9	<17	<18	15.6 ± 2.9	15.6 ± 2.9	<17	<120
BH29 (ES4) 0.00m - COMPOSITE	MAR02253.019	Sediment	14.3 ± 2.0	<26	<19	13.5 ± 3.3	13.5 ± 3.3	<26	<140
BH30 (ES4) 0.00m - COMPOSITE	MAR02253.020	Sediment	19.7 ± 2.5	<28	<20	20.7 ± 4.1	20.7 ± 4.1	<28	<180

* 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 MAR02253
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI - Radiological T

		Units	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Th-234	U-235	Am-241
BH03 (ES4) 0.50m - COMPOSITE	MAR02253.001	Sediment	<19	<5.8	<2.2
BH05 (ES4) 0.00m - COMPOSITE	MAR02253.002	Sediment	<19	<5.2	<1.8
BH06 (ES4) 2.30m - COMPOSITE	MAR02253.003	Sediment	<22	<5.3	<2.5
BH10 (ES4) 0.00m - COMPOSITE	MAR02253.004	Sediment	<19	<4.4	<2.0
BH12 (ES4) 0.00m - COMPOSITE	MAR02253.005	Sediment	<27	<5.6	<1.8
BH13A (ES4) 0.00m - COMPOSITE	MAR02253.006	Sediment	<20	<5.3	<2.0
BH14 (ES4) 0.00m - COMPOSITE	MAR02253.007	Sediment	<18	<4.4	<2.6
BH15 (ES4) 0.00m - COMPOSITE	MAR02253.008	Sediment	<22	<5.3	<1.6
BH16 (ES4) 0.00m - COMPOSITE	MAR02253.009	Sediment	<28	<6.1	<1.9
BH17 (ES4) 0.00m - COMPOSITE	MAR02253.010	Sediment	<16	<4.2	<1.5
BH18 (ES4) 0.00m - COMPOSITE	MAR02253.011	Sediment	<19	<4.7	<2.8
BH19 (ES4) 0.00m - COMPOSITE	MAR02253.012	Sediment	<16	<3.8	<1.5
BH20 (ES4) 0.00m - COMPOSITE	MAR02253.013	Sediment	<30	<6.4	<2.0
BH21 (ES4) 0.00m - COMPOSITE	MAR02253.014	Sediment	<15	<4.0	<1.8
BH22 (ES4) 0.00m - COMPOSITE	MAR02253.015	Sediment	<20	<4.7	<2.5
BH25 (ES4) 0.00m - COMPOSITE	MAR02253.016	Sediment	<20	<4.8	<1.9
BH26 (ES4) 0.00m - COMPOSITE	MAR02253.017	Sediment	<27	<5.8	<2.0
BH27 (ES4) 0.00m - COMPOSITE	MAR02253.018	Sediment	<19	<4.4	<1.9
BH29 (ES4) 0.00m - COMPOSITE	MAR02253.019	Sediment	<20	<4.9	<2.0
BH30 (ES4) 0.00m - COMPOSITE	MAR02253.020	Sediment	<20	<4.8	<1.9

* See report notes

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Test Report ID MAR02253
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI - Radiological Testing

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
SOCOTEC Didcot*	MAR02253.001-020	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SOCOTEC Didcot*	MAR02253.001-020	Analyses and/or samples marked with an asterisk are not covered under UKAS schedule 1252.
SOCOTEC Didcot*	MAR02253.001-020	Results are presented as Bq/kg of dried and homogenised sample and are decay corrected to the sampling date.
SOCOTEC Didcot*	MAR02253.001-020	For results below the Limit of Detection, the LoD is rounded up to 2 significant figures. Results above the LoD are reported with expanded (2σ) uncertainties based on a total uncertainty budget. Uncertainties are rounded to 2 significant figures; results are rounded to the same precision.
SOCOTEC Didcot*	MAR02253.001-020	Detector calibrations are based upon homogeneous standard solutions. For quantification purposes the sample is assumed to be homogeneous.
SOCOTEC Didcot*	MAR02253.001-020	226Ra has only one gamma ray at 186 keV and the major gamma ray from 235U also occurs at 186 keV. 235U can be measured by the lower abundance gamma ray at 144 keV and if a positive result for 235U is reported, the 226Ra result will be unreliable and overestimated. However even if 235U is below the LoD there may still be a contribution to the 226Ra from 235U and the 226Ra result may be unreliable and overestimated. If an accurate result for 226Ra is required, this is better obtained by radiochemical analysis.
SOCOTEC Didcot*	MAR02253.001-020	228Ra and 228Th are derived from their daughter radionuclides (228Ac and 224Ra, respectively), assuming secular equilibrium.

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 MAR02253
Issue Version 1
Customer Reference 23-1739 - Hunterston Marine Yard GI - Radiological Testing

Method	Sample and Fraction Size	Method Summary
NORM	Air dried	High resolution gamma ray spectrometry
Gross Alpha/Beta	Air dried	Proportional Counting

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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 MAR02274

Issue Version: 1

Customer: Causeway Geotech Ltd, 8 Drumahiskey Rd, Bendooragh, Balnamore, Ballymoney, BT53 7QL

Customer Reference: 23-1739 - Hunterston Marine Yard GI

Date Sampled: 28-Mar-04-Apr-24

Date Samples Received: 17-Apr-24

Test Report Date: 08-May-24

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

<Redacted>

Authorised by: Jane Colbourne

Position: Customer Service Specialist



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Test Report ID MAR02274
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		Units	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Gross Alpha as Pu-242	Gross Beta as Cs-137	Be-7	K-40	Co-60	I-125	I-129
BH01 (ES4) 0.40m - COMPOSITE	MAR02274.001	Sediment	630 ± 180	710 ± 170	<15	361 ± 35	<1.7	<26	<14
BH02 (ES4) 0.40m - COMPOSITE	MAR02274.002	Sediment	360 ± 150	480 ± 130	<7.9	283 ± 25	<0.88	<14	<7.7
BH04 (ES4) 0.00m - COMPOSITE	MAR02274.003	Sediment	330 ± 140	680 ± 160	<9.5	351 ± 33	<1.3	<16	<8.7
BH23 (ES4) 0.00m - COMPOSITE	MAR02274.004	Sediment	390 ± 160	600 ± 150	<9.7	308 ± 31	<1.3	<18	<9.0
BH24 (ES4) 0.00m - COMPOSITE	MAR02274.005	Sediment	500 ± 160	1160 ± 250	<16	656 ± 60	<2.3	<17	<9.3
GBS2-BH-SPT-11 (ES4) 0.90m - COMPOSITE	MAR02274.006	Sediment	450 ± 160	870 ± 190	<8.8	467 ± 37	<0.98	<15	<8.5

* 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 MAR02274
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		Units	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	UKAS	N	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Cs-134	Cs-137	Tl-208	Pb-210	Bi-212	Pb-212	Bi-214
BH01 (ES4) 0.40m - COMPOSITE	MAR02274.001	Sediment	<1.7	<1.6	5.8 ± 1.3	<35	<20	16.4 ± 2.2	29.7 ± 3.3
BH02 (ES4) 0.40m - COMPOSITE	MAR02274.002	Sediment	<0.93	2.34 ± 0.67	4.25 ± 0.77	<19	<12	13.1 ± 1.8	14.2 ± 1.9
BH04 (ES4) 0.00m - COMPOSITE	MAR02274.003	Sediment	<1.3	2.56 ± 0.82	4.18 ± 0.92	<24	<14	12.0 ± 1.6	16.2 ± 2.6
BH23 (ES4) 0.00m - COMPOSITE	MAR02274.004	Sediment	<1.2	<0.99	4.73 ± 0.99	<24	<14	14.1 ± 1.7	13.2 ± 2.3
BH24 (ES4) 0.00m - COMPOSITE	MAR02274.005	Sediment	<2.0	<1.7	10.8 ± 1.8	<22	49 ± 18	29.0 ± 2.9	19.2 ± 3.7
GBS2-BH-SPT-11 (ES4) 0.90m - COMPOSITE	MAR02274.006	Sediment	<1.1	1.91 ± 0.68	5.74 ± 0.88	<20	<13	17.7 ± 2.0	14.4 ± 1.9

* 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 MAR02274
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		Units	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	N	UKAS	N	N	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Pb-214	Ra-224	Ra-226 *	Ac-228	Ra-228 *	Th-228 *	Pa-234m
BH01 (ES4) 0.40m - COMPOSITE	MAR02274.001	Sediment	34.9 ± 3.2	<42	<28	16.7 ± 4.0	16.7 ± 4.0	<42	<190
BH02 (ES4) 0.40m - COMPOSITE	MAR02274.002	Sediment	15.4 ± 1.7	<22	<17	13.1 ± 2.3	13.1 ± 2.3	<22	<98
BH04 (ES4) 0.00m - COMPOSITE	MAR02274.003	Sediment	18.0 ± 1.8	<17	<17	14.2 ± 3.0	14.2 ± 3.0	<17	<120
BH23 (ES4) 0.00m - COMPOSITE	MAR02274.004	Sediment	13.5 ± 1.6	<17	<17	14.8 ± 3.0	14.8 ± 3.0	<17	<140
BH24 (ES4) 0.00m - COMPOSITE	MAR02274.005	Sediment	23.2 ± 2.6	<22	<23	31.0 ± 5.0	31.0 ± 5.0	<22	<220
GBS2-BH-SPT-11 (ES4) 0.90m - COMPOSITE	MAR02274.006	Sediment	15.8 ± 1.7	<25	<18	18.9 ± 2.7	18.9 ± 2.7	<25	<110

* See report notes

MAR02274
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Test Report ID MAR02274
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		Units	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Th-234	U-235	Am-241
BH01 (ES4) 0.40m - COMPOSITE	MAR02274.001	Sediment	<40	<6.3	<3.6
BH02 (ES4) 0.40m - COMPOSITE	MAR02274.002	Sediment	<21	<4.1	<2.1
BH04 (ES4) 0.00m - COMPOSITE	MAR02274.003	Sediment	<25	<4.3	<2.4
BH23 (ES4) 0.00m - COMPOSITE	MAR02274.004	Sediment	<24	<4.3	<2.3
BH24 (ES4) 0.00m - COMPOSITE	MAR02274.005	Sediment	<26	<5.3	<2.4
GBS2-BH-SPT-11 (ES4) 0.90m - COMPOSITE	MAR02274.006	Sediment	<23	<4.6	<2.2

* 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 MAR02274
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
SOCOTEC Didcot*	MAR02274.001-006	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SOCOTEC Didcot*	MAR02274.001-006	Analyses and/or samples marked with an asterisk are not covered under UKAS schedule 1252.
SOCOTEC Didcot*	MAR02274.001-006	Results are presented as Bq/kg of dried and homogenised sample and are decay corrected to the sampling date.
SOCOTEC Didcot*	MAR02274.001-006	For results below the Limit of Detection, the LoD is rounded up to 2 significant figures. Results above the LoD are reported with expanded (2σ) uncertainties based on a total uncertainty budget. Uncertainties are rounded to 2 significant figures; results are rounded to the same precision.
SOCOTEC Didcot*	MAR02274.001-006	The gross alpha and beta activity are relative activities and the reported result might depend on the time between sampling, preparation and analysis due to decay and ingrowth processes and semi-secular equilibrium of natural and/or artificial radio-nuclides present in the sample.
SOCOTEC Didcot*	MAR02274.001-006	Detector calibrations are based upon homogeneous standard solutions. For quantification purposes the sample is assumed to be homogeneous.
SOCOTEC Didcot*	MAR02274.001-006	226Ra has only one gamma ray at 186 keV and the major gamma ray from 235U also occurs at 186 keV. 235U can be measured by the lower abundance gamma ray at 144 keV and if a positive result for 235U is reported, the 226Ra result will be unreliable and overestimated. However even if 235U is below the LoD there may still be a contribution to the 226Ra from 235U and the 226Ra result may be unreliable and overestimated. If an accurate result for 226Ra is required, this is better obtained by radiochemical analysis.
SOCOTEC Didcot*	MAR02274.001-006	228Ra and 228Th are derived from their daughter radionuclides (228Ac and 224Ra, respectively), assuming secular equilibrium.

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

MAR02274

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Test Report ID MAR02274
Issue Version 1
Customer Reference 23-1739 - Hunterston Marine Yard GI

Method	Sample and Fraction Size	Method Summary
NORM	Air dried	High resolution gamma ray spectrometry
Gross Alpha/Beta	Air dried	Proportional Counting

MAR02274

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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 MAR02275

Issue Version: 1

Customer: Causeway Geotech Ltd, 8 Drumahiskey Rd, Bendooragh, Balnamore, Ballymoney, BT53 7QL

Customer Reference: 23-1739 - Hunterston Marine Yard GI

Date Sampled: 13-Apr-24

Date Samples Received: 17-Apr-24

Test Report Date: 08-May-24

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

<Redacted>

Authorised by: Jane Colbourne

Position: Customer Service Specialist



1252

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Test Report ID MAR02275
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		Units	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Gross Alpha as Pu-242	Gross Beta as Cs-137	Be-7	K-40	Co-60	I-125	I-129
GBS2-BH-SPT-12 (ES4) 1.00m - COMPOSITE	MAR02275.001	Sediment	370 ± 140	920 ± 210	<9.7	496 ± 49	<1.5	<18	<12

* See report notes

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Test Report ID MAR02275
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		Units	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	UKAS	N	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Cs-134	Cs-137	Tl-208	Pb-210	Bi-212	Pb-212	Bi-214
GBS2-BH-SPT-12 (ES4) 1.00m - COMPOSITE	MAR02275.001	Sediment	<1.5	3.17 ± 0.98	6.9 ± 1.2	<28	<17	21.5 ± 2.2	16.3 ± 2.9

* See report notes

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 MAR02275
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		Units	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	N	UKAS	N	N	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Pb-214	Ra-224	Ra-226 *	Ac-228	Ra-228 *	Th-228 *	Pa-234m
GBS2-BH-SPT-12 (ES4) 1.00m - COMPOSITE	MAR02275.001	Sediment	18.4 ± 2.1	<20	<21	20.4 ± 3.5	20.4 ± 3.5	<20	<160

* See report notes

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Test Report ID MAR02275
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

		Units	Bq/kg	Bq/kg	Bq/kg
		Method No	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*
		Accreditation	UKAS	UKAS	UKAS
Client Reference:	SOCOTEC Ref:	Matrix	Th-234	U-235	Am-241
GBS2-BH-SPT-12 (ES4) 1.00m - COMPOSITE	MAR02275.001	Sediment	<28	<5.3	<2.8

* See report notes

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Test Report ID MAR02275
 Issue Version 1
 Customer Reference 23-1739 - Hunterston Marine Yard GI

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
SOCOTEC Didcot*	MAR02275.001	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SOCOTEC Didcot*	MAR02275.001	Analyses and/or samples marked with an asterisk are not covered under UKAS schedule 1252.
SOCOTEC Didcot*	MAR02275.001	Results are presented as Bq/kg of dried and homogenised sample and are decay corrected to the sampling date.
SOCOTEC Didcot*	MAR02275.001	For results below the Limit of Detection, the LoD is rounded up to 2 significant figures. Results above the LoD are reported with expanded (2σ) uncertainties based on a total uncertainty budget. Uncertainties are rounded to 2 significant figures; results are rounded to the same precision.
SOCOTEC Didcot*	MAR02275.001	The gross alpha and beta activity are relative activities and the reported result might depend on the time between sampling, preparation and analysis due to decay and ingrowth processes and semi-secular equilibrium of natural and/or artificial radio-nuclides present in the sample.
SOCOTEC Didcot*	MAR02275.001	Detector calibrations are based upon homogeneous standard solutions. For quantification purposes the sample is assumed to be homogeneous.
SOCOTEC Didcot*	MAR02275.001	226Ra has only one gamma ray at 186 keV and the major gamma ray from 235U also occurs at 186 keV. 235U can be measured by the lower abundance gamma ray at 144 keV and if a positive result for 235U is reported, the 226Ra result will be unreliable and overestimated. However even if 235U is below the LoD there may still be a contribution to the 226Ra from 235U and the 226Ra result may be unreliable and overestimated. If an accurate result for 226Ra is required, this is better obtained by radiochemical analysis.
SOCOTEC Didcot*	MAR02275.001	228Ra and 228Th are derived from their daughter radionuclides (228Ac and 224Ra, respectively), assuming secular equilibrium.

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 MAR02275
Issue Version 1
Customer Reference 23-1739 - Hunterston Marine Yard GI

Method	Sample and Fraction Size	Method Summary
NORM	Air dried	High resolution gamma ray spectrometry
Gross Alpha/Beta	Air dried	Proportional Counting

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D SEPA CORRESPONDENCE

Waste Management Licence Pre-application. Use of dredging spoil for infill at Hunterston, Ayrshire

Requestor	Donny Morrison	Team	Waste and Industry Permitting
Date	27/03/2024	Author	Alan Hern
Reviewer	Not required	Authoriser	Not required

Introduction

Donny Morrison of the Waste and Industry Team requested that a proposal to use waste dredging spoil to infill a dry dock and create a development platform at the site was considered. The site is the Hunterston Development and at this stage the review is for the testing requirements to develop the site investigation.

The dredging spoil will be tested for the marine dredging licence suite. As stated by the applicant, this suite is quite broad and covers the likely contaminants of concern. It is assumed that the testing will include representative samples of the dredged depths to be re-used.

The dredging spoil is likely to become a waste material and will therefore, need to be tested and assessed to confirm if it should be considered non-hazardous or hazardous waste. This may affect the proposal for re-use. The chemical composition of the spoil is used to assign hazardous substances and assess the hazardous properties as described in the WM3 technical guidance. The WM3 Waste Classification guidance requires a sampling plan that meets the requirements stated in Appendix D, or relevant European/British standards as listed in WM3.

Dredging spoil is typically coded using the mirror entries from Chapter 17 of the European Waste Catalogue "Construction and demolition wastes (including excavated soil from contaminated sites)" subchapter 5 "soil (including excavated soil from contaminated sites), stones and dredging spoil".

- 17 05 05* dredging spoil containing hazardous substances (mirror hazardous entry)
- 17 05 06 dredging spoil other than those mentioned in 17 05 05 (mirror non-hazardous entry)

We would recommend the following metals in addition to those in the marine licensing suite:

- Antimony
- Barium
- Beryllium
- Chromium VI
- Molybdenum
- Selenium

From a waste classification point of view, chromium VI is useful the analysis confirms that many of the worst case compounds for assessing hazardous properties can be safely disregarded for example chromates of lead, nickel and zinc.

The hydrocarbon contamination for risk assessment requires the analysis to split the hydrocarbons into aliphatic and aromatic hydrocarbons (for example, TPHCWG not total). For waste classification, the data can be either total petroleum hydrocarbons or TPHCWG. The ranges are slightly different and many laboratories can report these ranges in such a way that the same test can be used for both purposes. Otherwise, the applicant at their discretion may use the risk assessment range for waste

classification. This runs the slight risk of overstating the hydrocarbon concentrations for waste classification.

- For risk assessment this should cover the carbon range $>C_5$ up to C_{44}
- For waste classification, this should cover the carbon range C_6 up to C_{40}

Beyond this we consider, that testing for benzene, toluene, ethylbenzene and xylene (BTEXs) and volatile organic compounds (VOC) semi volatile organic compounds (SVOC) in at least some samples should be considered.

For leachable components, the proposals are acceptable for metals, TPH, VOC and SVOC although we would add PAHs from the marine suite.

E RADIONUCLIDE ASSESSMENT

Radiological Assessment Individual Dose

Client Reference:	SOCOTEC Ref:	Matrix	Units											
			Bq/kg		Bq/kg		Bq/kg		Bq/kg		Bq/kg		Bq/kg	
			Method No	SOCOTEC Dtdcot*	SOCOTEC Dtdcot*	SOCOTEC Dtdcot*	SOCOTEC Dtdcot*	SOCOTEC Dtdcot*	SOCOTEC Dtdcot*	SOCOTEC Dtdcot*	SOCOTEC Dtdcot*	SOCOTEC Dtdcot*	SOCOTEC Dtdcot*	
Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	N	N	UKAS	UKAS				
			Co-60	I-125	I-129	Cs-134	Cs-137	Ra-224	Ra-226 *	Th-228 *	U-235	Am-241		
BH03 (E54) 0.50m - COMPOSITE	MAR02253.001	Sediment	1.70	43	19	1.6	7.7	41	28	41	5.8	2.2		
BH05 (E54) 0.50m - COMPOSITE	MAR02253.002	Sediment	1.100	31	13	1.1	9.7	27.00000	20.00000	27.00000	5.20000	1.80000		
BH06 (E54) 2.50m - COMPOSITE	MAR02253.003	Sediment	1.500	37	15	1.5	15.2	20.00000	21.00000	20.00000	5.30000	2.50000		
BH10 (E54) 0.50m - COMPOSITE	MAR02253.004	Sediment	1.700	25	11	1.6	30.3	18.00000	19.00000	18.00000	4.40000	2.00000		
BH12 (E54) 0.50m - COMPOSITE	MAR02253.005	Sediment	1.400	40	18	1.3	14.4	34.00000	25.00000	34.00000	5.60000	1.80000		
BH13A (E54) 0.50m - COMPOSITE	MAR02253.006	Sediment	1.100	33	13	1.2	4.3	28.00000	21.00000	28.00000	5.30000	2.00000		
BH14 (E54) 0.50m - COMPOSITE	MAR02253.007	Sediment	1.200	22	14	1.2	11.4	24.00000	18.00000	24.00000	4.40000	2.60000		
BH15 (E54) 0.50m - COMPOSITE	MAR02253.008	Sediment	2.000	26	12	1.9	10.7	22	22	22	5.3	1.6		
BH16 (E54) 0.50m - COMPOSITE	MAR02253.009	Sediment	1.500	42	18	1.6	10.4	39.00000	26.00000	39.00000	6.10000	1.90000		
BH17 (E54) 0.50m - COMPOSITE	MAR02253.010	Sediment	0.860	26	11	0.9	13.5	20.00000	17.00000	20.00000	4.20000	1.50000		
BH18 (E54) 0.50m - COMPOSITE	MAR02253.011	Sediment	1.200	33	14	1.3	8.2	25.00000	18.00000	25.00000	4.70000	2.80000		
BH19 (E54) 0.50m - COMPOSITE	MAR02253.012	Sediment	1.500	21	9.6	1.4	8.4	20.00000	17.00000	20.00000	3.80000	1.50000		
BH20 (E54) 0.50m - COMPOSITE	MAR02253.013	Sediment	1.800	43	19	1.8	9.1	41	29	41	6.4	2		
BH21 (E54) 0.50m - COMPOSITE	MAR02253.014	Sediment	0.780	25	11	0.85	8.1	20.00000	16.00000	20.00000	4.00000	1.80000		
BH22 (E54) 0.50m - COMPOSITE	MAR02253.015	Sediment	1.300	34	14	1.3	9.1	18.00000	18.00000	18.00000	4.70000	2.50000		
BH25 (E54) 0.50m - COMPOSITE	MAR02253.016	Sediment	1.900	25	11	1.8	5.6	20.00000	20.00000	20.00000	4.80000	1.90000		
BH26 (E54) 0.50m - COMPOSITE	MAR02253.017	Sediment	1.400	40	17	1.5	7.3	36.00000	25.00000	36.00000	5.80000	2.00000		
BH27 (E54) 0.50m - COMPOSITE	MAR02253.018	Sediment	1.300	25	12	1.2	39.2	17.00000	18.00000	17.00000	4.40000	1.90000		
BH29 (E54) 0.50m - COMPOSITE	MAR02253.019	Sediment	1.300	37	14	1.4	7.2	26.00000	19.00000	26.00000	4.90000	2.00000		
BH30 (E54) 0.50m - COMPOSITE	MAR02253.020	Sediment	1.800	27	12	1.8	5.5	28.00000	20.00000	28.00000	4.80000	1.90000		
BH31 (E54) 0.40m - COMPOSITE	MAR02274.001	Sediment	1.700	26	14	1.7	1.6	42.00000	28.00000	42.00000	6.30000	3.60000		
BH32 (E54) 0.40m - COMPOSITE	MAR02274.002	Sediment	0.880	14	7.7	0.93	2.34	22.00000	17.00000	22.00000	4.10000	2.10000		
BH33 (E54) 0.40m - COMPOSITE	MAR02274.003	Sediment	1.300	16	8.7	1.3	2.56	17.00000	17.00000	17.00000	4.30000	2.40000		
BH34 (E54) 0.50m - COMPOSITE	MAR02274.004	Sediment	1.800	16	9	1.2	0.99	17.00000	17.00000	17.00000	4.30000	2.30000		
BH35 (E54) 0.50m - COMPOSITE	MAR02274.005	Sediment	2.300	17	9.3	2	1.7	22.00000	23.00000	22.00000	5.30000	2.40000		
GBS2-BH-SPT-11 (E54) 0.50m - COMPOSITE	MAR02274.006	Sediment	0.980	15	8.5	1.1	1.91	25.00000	18.00000	25.00000	4.60000	2.20000		
GBS2-BH-SPT-12 (E54) 1.00m - COMPOSITE	MAR02275.001	Sediment	1.500	19	12	1.5	3.17	20.00000	21.00000	20.00000	5.30000	2.80000		
			1.418518518	28.11111111	12.84444444	1.426666667	9.243333333	21.51851852	20.66666667	25.51851852	4.966666667	2.148148148		
			0.709259259	14.05555556	6.422222222	0.703333333	9.243333333	32.75925926	30.33333333	32.75925926	2.483333333	1.074074074		
			0.062000000	0.00015	0.0011	0.028	0.0081	0.045	0.06	0.047	0.025	0.0023		
			0.043974074	0.002108333	0.007064444	0.019693333	0.074871000	0.574166667	0.620000000	0.59985185	0.062083333	0.002479370		
			0.00068	0.00026	0.00034	0.00029	0.00028	0.00047	0.026	0.033	0.00022			
			0.000482286	0.000365444	0.000899111	0.0002743	0.002588133	0.005919682	0.388666667	0.029344236	0.00745	2.36295E-05		
												0.31609273	24	1.58622551

* See report notes

INDIVIDUAL DOSE
2.096116741
7.586225511

Radiological Assessment Collective Dose

Client Reference:	SOCOTEC Ref:	Matrix	Units												
			Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg	Bq/kg			
			SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*	SOCOTEC Didcot*		
Accreditation	UKAS		UKAS		UKAS		UKAS		N		UKAS				
		Co-60	I-125	I-129	Cs-134	Cs-137	Ra-224	Ra-226 *	Th-228 *	U-235	Am-241				
BH03 (ES4) 0.50m - COMPOSITE	MAR02253.001	Sediment	1.70	43	19	1.6	7.7	41	28	41	5.8	2.2			
BH05 (ES4) 0.00m - COMPOSITE	MAR02253.002	Sediment	1.100	31	13	1.1	9.7	27.00000	20.00000	27.00000	5.20000	1.80000			
BH06 (ES4) 2.30m - COMPOSITE	MAR02253.003	Sediment	1.500	37	15	1.5	15.2	20.00000	21.00000	20.00000	5.30000	2.50000			
BH10 (ES4) 0.00m - COMPOSITE	MAR02253.004	Sediment	1.700	25	11	1.6	30.3	18.00000	19.00000	18.00000	4.40000	2.00000			
BH12 (ES4) 0.00m - COMPOSITE	MAR02253.005	Sediment	1.400	40	18	1.3	14.4	34.00000	25.00000	34.00000	5.60000	1.80000			
BH13A (ES4) 0.00m - COMPOSITE	MAR02253.006	Sediment	1.100	33	13	1.2	4.3	28.00000	21.00000	28.00000	5.30000	2.00000			
BH14 (ES4) 0.00m - COMPOSITE	MAR02253.007	Sediment	1.200	22	14	1.2	11.4	24.00000	18.00000	24.00000	4.40000	2.60000			
BH15 (ES4) 0.00m - COMPOSITE	MAR02253.008	Sediment	2.000	26	12	1.9	10.7	22	22	22	5.3	1.6			
BH16 (ES4) 0.00m - COMPOSITE	MAR02253.009	Sediment	1.500	42	18	1.6	10.4	39.00000	26.00000	39.00000	6.10000	1.90000			
BH17 (ES4) 0.00m - COMPOSITE	MAR02253.010	Sediment	0.860	26	11	0.9	13.5	20.00000	17.00000	20.00000	4.20000	1.50000			
BH18 (ES4) 0.00m - COMPOSITE	MAR02253.011	Sediment	1.200	33	14	1.3	8.2	25.00000	18.00000	25.00000	4.70000	2.80000			
BH19 (ES4) 0.00m - COMPOSITE	MAR02253.012	Sediment	1.500	21	9.6	1.4	8.4	20.00000	17.00000	20.00000	3.80000	1.50000			
BH20 (ES4) 0.00m - COMPOSITE	MAR02253.013	Sediment	1.800	43	19	1.8	9.1	41	29	41	6.4	2			
BH21 (ES4) 0.00m - COMPOSITE	MAR02253.014	Sediment	0.780	25	11	0.85	8.1	20.00000	16.00000	20.00000	4.00000	1.80000			
BH22 (ES4) 0.00m - COMPOSITE	MAR02253.015	Sediment	1.300	34	14	1.3	9.1	18.00000	18.00000	18.00000	4.70000	2.50000			
BH25 (ES4) 0.00m - COMPOSITE	MAR02253.016	Sediment	1.900	25	11	1.8	5.6	20.00000	20.00000	20.00000	4.80000	1.90000			
BH26 (ES4) 0.00m - COMPOSITE	MAR02253.017	Sediment	1.400	40	17	1.5	7.3	36.00000	25.00000	36.00000	5.80000	2.00000			
BH27 (ES4) 0.00m - COMPOSITE	MAR02253.018	Sediment	1.300	25	12	1.2	39.2	17.00000	18.00000	17.00000	4.40000	1.90000			
BH29 (ES4) 0.00m - COMPOSITE	MAR02253.019	Sediment	1.300	37	14	1.4	7.2	26.00000	19.00000	26.00000	4.90000	2.00000			
BH30 (ES4) 0.00m - COMPOSITE	MAR02253.020	Sediment	1.800	27	12	1.8	5.5	28.00000	20.00000	28.00000	4.80000	1.90000			
BH01 (ES4) 0.40m - COMPOSITE	MAR02274.001	Sediment	1.700	26	14	1.7	1.6	42.00000	28.00000	42.00000	6.30000	3.60000			
BH02 (ES4) 0.40m - COMPOSITE	MAR02274.002	Sediment	0.880	14	7.7	0.93	2.34	22.00000	17.00000	22.00000	4.10000	2.10000			
BH04 (ES4) 0.00m - COMPOSITE	MAR02274.003	Sediment	1.300	16	8.7	1.3	2.56	17.00000	17.00000	17.00000	4.30000	2.40000			
BH23 (ES4) 0.00m - COMPOSITE	MAR02274.004	Sediment	1.300	18	9	1.2	0.99	17.00000	17.00000	17.00000	4.30000	2.30000			
BH24 (ES4) 0.00m - COMPOSITE	MAR02274.005	Sediment	2.300	17	9.3	2	1.7	22.00000	23.00000	22.00000	5.30000	2.40000			
GBS2-BH-SPT-11 (ES4) 0.90m - COMPOSITE	MAR02274.006	Sediment	0.980	15	8.5	1.1	1.91	25.00000	18.00000	25.00000	4.60000	2.20000			
GBS2-BH-SPT-12 (ES4) 1.00m - COMPOSITE	MAR02275.001	Sediment	1.500	18	12	1.5	3.17	20.00000	21.00000	20.00000	5.30000	2.80000			
			1.418518519	28.11111111	12.84444444	1.406666667	9.243333333	25.51851852	20.66666667	25.51851852	4.966666667	2.148148148			
			0.709259259	14.05555556	6.422222222	0.703333333	11.765000000	12.759259259	10.333333333	12.759259259	2.483333333	1.074074074			
			0.000006200	0.000000015	0.000000011	0.000000028	0.000000081	0.00000045	0.00000006	0.00000047	0.00000025	0.000000023	TOTAL	MASS CONVERSION	
			0.000004397	0.000000021	0.000000706	0.0000001969	0.0000009530	0.000057417	0.0000062000	0.000059969	0.000006208	0.000000247	0.000202654		
			0.00000025	0.00000008	0.00000071	0.00000044	0.00000031	0.00000076	0.0012	0.000034	0.000038	0.00000029			
			1.77315E-06	1.12444E-05	4.55978E-05	3.09467E-06	3.64715E-05	9.69704E-05	0.0124	0.000433815	9.43667E-05	3.11481E-07	0.013123645	24	0.31496748
* See report notes															

0.315170131