Peterhead Smith Quay Dredging

Best Practicable Environmental Option Report

Peterhead Port Authority

Date: 24 November 2025

Rev.no.	Date	Description	Prepared by	Verified by	Approved by
00	24/11/2025	First Release	AATH/MERO	IGP	ACW

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1. Introduction

1.1. Background

This report has been prepared by NIRAS Group (UK) Ltd (hereafter NIRAS), on behalf of Peterhead Port Authority (PPA), and presents an assessment of the Best Practicable Environmental Option (BPEO) for the disposal of dredge material arising from the proposed capital dredging of Peterhead Smith Quay (The Quay).

Smith Quay is located within Peterhead Port (Figure 1.1). The existing Smith Quay came into service in October 2010 and has a width of 40 m, an adjacent working area of 16,000 m², and a water depth of approximately 10 m below Chart Datum (CD).

This BPEO report is submitted together with an application for disposal of dredged material to the Marine Directorate Licensing and Operations Team (MD-LOT), as required by the Marine (Scotland) 2010 Act.

Under the Marine (Scotland) Act 2010, Section 21(1) a Marine Licence, issued by MD-LOT, is necessary for dredging and depositing substances or objects within the Scottish inshore region, which extends out to 12 nautical miles from the coast. When considering applications for disposing of dredged spoil at sea, MD-LOT must assess practical alternatives and ensure that disposal does not pose an unacceptable risk to the marine environment and other users. Marine Licences for capital works are valid for the specified duration agreed upon with MD-LOT.

Figure 1.1 Smith Quay location within Peterhead Port (Source: Google Earth – edited).

1.2. The Need for Dredging and Spoil Disposal

The Quay is an existing 120 m long quay in Peterhead Port. PPA propose to extend the quay by up to 85 m, moving the berthing dolphin in the process. In order for this work to take place and the quay to be functional, capital dredging is required. The area that is to be dredged in the berthing pocket generally ranges in depth from –9 m to -10 m CD currently.

1.3. Proposed Dredging and Disposal Operations

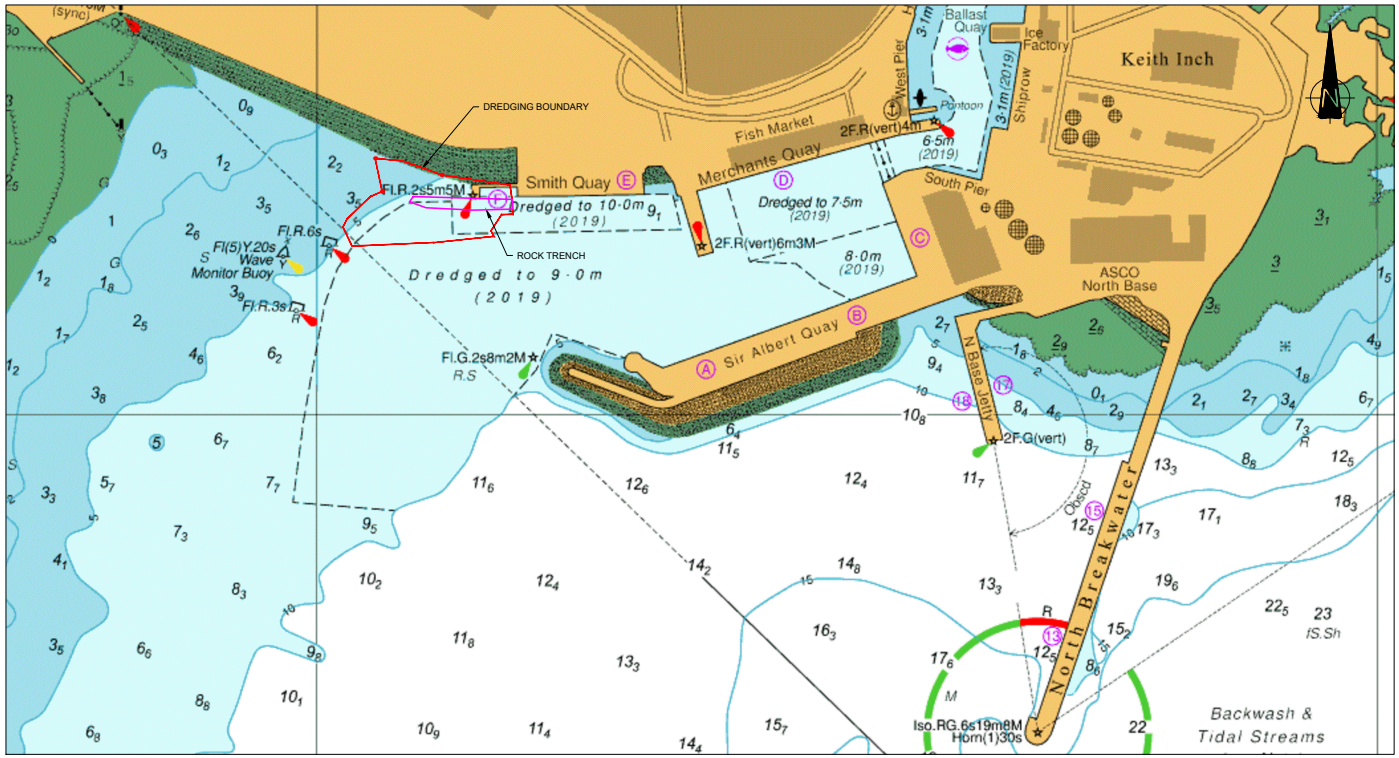
1.3.1. Location of Dredging

The estimated total dredging volume is circa 35,000 wet tonnes and within the berthing pocket dredging will generally not exceed -10 m CD in depth with a limited rock trench –11.8m CD adjacent to the revetment. The proposed dredging schedule will be dependent on the licence award date, dredger availability and construction periods. Further details on construction activities for the Quay can be found in the Environmental Appraisal for the extension of Smith Quay (NIRAS, 2025). It is intended that the dredging works will be completed in phased campaigns between January 2026 and May 2026.

The boundary coordinates of the proposed dredge area are presented in Table 1.1 and illustrated in Figure 1.2.

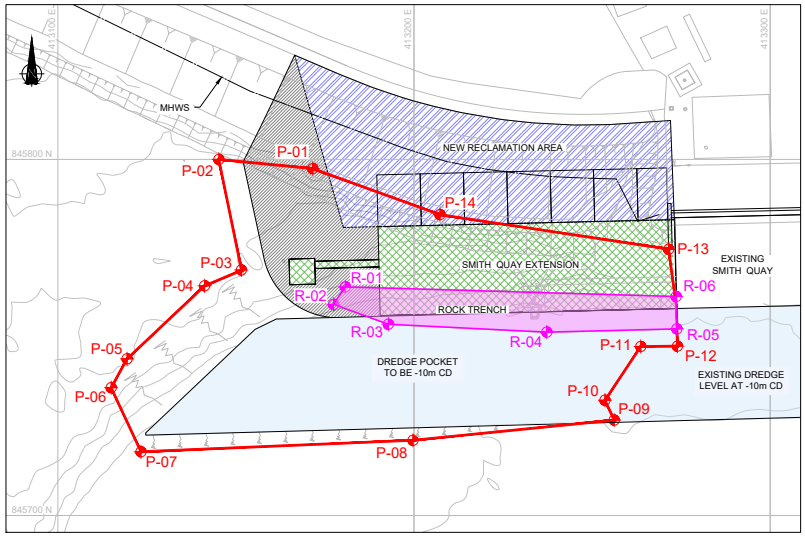
Table 1.1 Dredge area coordinates in WGS84 (UTM Zone 30N, degrees decimal minutes).

Node	Latitude	Longitude
P-01	57°30.132' N	001°46.912' W
P-02	57° 30.133′ N	001° 46.939′ W
P-03	57° 30.116′ N	001° 46.932′ W
P-04	57° 30.114′ N	001° 46.943′ W
P-05	57° 30.103′ N	001° 46.964′ W
P-06	57° 30.099′ N	001° 46.986′ W
P-07	57° 30.089′ N	001° 46.961′ W
P-08	57° 30.090′ N	001° 46.884′ W
P-09	57° 30.093′ N	001° 46.828′ W
P-10	57° 30.096′ N	001° 46.830′ W
P-11	57° 30.105′ N	001° 46.820′ W
P-12	57° 30.105′ N	001° 46.810′ W
P-13	57°30.119' N	001°46.812' W
P-14	57°30.124' N	001°46.876' W



GENERAL PLAN; SCALE 1:2500

0 50 100 150 200m 250m



LOCATION PLAN; SCALE 1:750

0 10 20 30 40 50 60 70 75m

DREDGING BOUNDARY COORDINATES POINTS - WGS84		
Point No.	Longitude	Latitude
P-01	001° 46.912' W	57° 30.132' N
P-02	001° 46.939' W	57° 30.133' N
P-03	001° 46.932' W	57° 30.116' N
P-04	001° 46.943' W	57° 30.114' N
P-05	001° 46.964' W	57° 30.103' N
P-06	001° 46.986' W	57° 30.099' N
P-07	001° 46.961' W	57° 30.089' N
P-08	001° 46.884' W	57° 30.090' N
P-09	001° 46.828' W	57° 30.093' N
P-10	001° 46.830' W	57° 30.096' N
P-11	001° 46.820' W	57° 30.105' N
P-12	001° 46.810' W	57° 30.105' N
P-13	001° 46.812' W	57° 30.119' N
P-14	001° 46.876' W	57° 30.124' N

ROCK TRENCH COORDINATES POINTS - WGS84		
Point No.	Longitude	Latitude
R-01	001° 46.903' W	57° 30.114' N
R-02	001° 46.906' W	57° 30.111' N
R-03	001° 46.891' W	57° 30.108' N
R-04	001° 46.846' W	57° 30.106' N
R-05	001° 46.810' W	57° 30.107' N
R-06	001° 46.810' W	57° 30.112' N

NOTES

1. ALL LEVELS TO CHART DATUM.
2. ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE.
3. ALL COORDINATES TO WGS84.
4. TIDE LEVELS AS FOLLOW:
   - MEAN HIGH WATER SPRINGS (MHWS) +3.80m CD
   - MEAN LOWER WATER SPRINGS (MLWS) +0.50m CD

LEGEND

DREDGING BOUNDARY

ROCK TRENCH

Rev.	Date	Description	App'd
P1	24-11-25	FOR INFORMATION	ACW

PRELIMINARY

Client :

PETERHEAD PORT AUTHORITY

Title :

Figure 1.2 Proposed dredging area for Peterhead Smith Quay.

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Drawn	Checked	Approved	Scale (at A1): As Shown
MAAO	MFAU	ACW	Date: Nov 2025

Drg No: PHSQ-NIR-GW-DR-205

Rev P1

1.3.2. Method of Dredging

The dredging sequence and methodology outlined below will be subject to further development and is indicative at this stage.

The first activity to be undertaken on site will be dredging to -10 m CD, to form an enlarged dredged pocket, including the dredging of the rock trench for toe of the new revetment (Figure 1.3). Both the rock trench and dredge pocket are anticipated to be completed using a backhoe dredger, plough dredging may be necessary on completion. If necessary, pre-treatment using underwater hydraulic attachment and/or Cardox rock breaking may be applied. A backhoe dredger will be mobilised, capable of dredging to the design depth. The dredged material, which includes gravel sand and microgranite, will be loaded into split hopper barges.

During the dredging works, there will be interfaces with other port users including offshore vessels and fishing boats. To manage these interactions and ensure safety, the contractor will issue a Notice to Mariners to keep them informed about the ongoing works. This communication will help to minimise disruptions and coordinate activities effectively with other users of the port.

Dredging works are expected to take approximately 7 weeks to complete. Pre-treatment, including rock breaking, may be required during the first 5 weeks, although it is possible that rock breaking will not be required if the material proves to be sufficiently friable to be excavated directly. Dredging is anticipated to take place within a 3 month period.

Figure 1.3 Proposed backhoe dredging of rock trench, berthing pocket, and approach.

1.3.3. Disposal operations

Material dredged from the harbour to maintain navigable depths has historically been disposed of by placement in sea locations offshore from the harbour, specifically disposal sites CR070 (Peterhead) and CR080 (North Buchan Ness). The method of disposal at the offshore locations has historically been the CR080 disposal site as confirmed by Bidwells on behalf of Crown Estate Scotland on 14/07/2025 (see Appendix D). It is anticipated that this method would be used again, should offshore disposal be the selected option.

This BPEO report considers this disposal option alongside alternatives.

1.4. Scope of the Report

This report provides an appraisal of available disposal options and short-lists those that are considered to be practicable. Options are reviewed according to the Waste Hierarchy, as outlined in the Waste (Scotland) Regulations 2012. The options on the short-list are then reviewed against environmental and cost considerations. The options are then compared and the BPEO identified through an options appraisal process.

Further supporting information is provided in the four appendices:

- Appendix A: Dredging Sampling Plan
- Appendix B: Sediment Sampling Results
- Appendix C: Marine Directorate Action Levels
- Appendix D: Communications with consultees.

2. Sediment Sampling

2.1. Introduction

In line with Marine Directorate's guidelines on pre-dredge sampling protocol[1], sediment samples were collected on the 12 May 2025 from five locations (three surface grab samples (GS) and two x 3 m vibrocorer (VB) samples) within the proposed dredge zone. The surface grab samples were collected using the Van Veen Sampler up to approximately 20 cm depth, with circa 2.5 kg of sediment collected per GS. The locations from which the samples were taken are presented in Table 2.1 and illustrated in Figure 1.2. The full sampling plan is detailed in Appendix A: Dredging Sampling Plan. The number of sample locations was agreed in advance with Marine Directorate through email correspondence on 12 March 2025. For each of the samples the following chemical analysis was undertaken:

- Sediment water content.
- Total Organic Carbon (TOC).
- Sediment particle distribution (PSD).
- Metals: arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), mercury (Hg), nickel (Ni), lead (Pb), and zinc (Zn).
- Tributyl Tin (TBT).
- Polycyclic Aromatic Hydrocarbons (PAHs): US EPA 16.
- Poly Chlorinated Biphenyls (PCB): ICES 7 congeners.

Table 2.1 Sampling location points for The Quay in WGS84 (UTM Zone 30N, degrees decimal minutes).

Sample Location	Sample ID	Type of Sample & depth	Latitude	Longitude
VB101	MAR02674.001	Core @ 0 m	57° 30.927' N	001° 46.908 'W
	MAR02674.002	Core @ 1 m		
	MAR02674.003	Core @ 2.4 m		
VB102	MAR02674.004	Core @ 0 m	57° 30.381' N	001° 46.612' W
	MAR02674.005	Core @ 1.5 m		
	MAR02674.006	Core @ 3 m		
GS101	MAR02674.007	Grab	57° 30.143' N	001° 46.567' W

[1] Marine Scotland Pre-disposal Sampling Guidance Version 2 – November 2017

GS102	MAR02674.008	Grab	57° 30.411’ N	001° 46.580’ W
GS103	MAR02674.009	Grab	57° 30.455’ N	001° 46.520’ W

All analysis was completed by a laboratory accredited to the ISO17025 standard for marine sediment analysis, and also engages in inter-comparison analysis exercises such as QUASIMEME. The limit of detection (LOD) and sensitivity requirements were met as per those set out in the Clean Seas Environmental Monitoring Programme (CSEMP) Green Book.

2.2. Results of Sediment Sampling

Sediment samples were collected at the locations detailed in Table 2.1. Full analyses results for all samples are presented in Appendix B.

Both surface grab and vibro core samples up to 3 m depth were taken. There was a limited proportion of gravel in the grab samples compared to core samples (see below) which likely relates to the grab sampling equipment which does not reliably collect coarse particles. These grab samples were silty sand, containing 45 to 63% sand and 37 to 54% silt.

Core samples results indicated gravelly sand with a relatively high proportion of silt also present (sand (26 to 51%), gravel (12 to 63%), and silt (11 to 56%)) (Table 2.2).

Table 2.2 Classification of sediment samples taken at The Quay for dredging works.

Sample ID (sample depth)	Textural Group Classification	Folk and Ward De-scription	Folk and Ward Sorting	Major Sediment Fractions		
				% Gravel	% Sand	% Silt
MAR02674.001 (core, 0 m)	msG: Muddy Sandy Gravel	Coarse Sand	Very Poorly Sorted	40.43	44.07	15.50
MAR02674.002 (core, 1 m)	gmS: Gravelly Muddy Sand	Medium Sand	Very Poorly Sorted	22.08	50.58	27.35
MAR02674.003 (core, 2.4 m)	gmS: Gravelly Muddy Sand	Medium Sand	Extremely Poorly Sorted	29.84	40.06	30.10
MAR02674.004 (core, 0 m)	msG: Muddy Sandy Gravel	Very Fine Gravel	Extremely Poorly Sorted	49.21	37.87	12.92
MAR02674.005 (core, 1.5 m)	msG: Muddy Sandy Gravel	Very Fine Gravel	Very Poorly Sorted	62.84	25.81	11.35
MAR02674.006 (core, 3 m)	gM: Gravelly Mud	Very Coarse Silt	Extremely Poorly Sorted	12.32	31.83	55.85
MAR02674.007 (grab, 0 m)	(g)mS: Slightly Gravelly Muddy Sand	Very Fine Sand	Poorly Sorted	0.07	63.05	36.87

Sample ID (sample depth)	Textural Group Classification	Folk and Ward Description	Folk and Ward Sorting	Major Sediment Fractions		
				% Gravel	% Sand	% Silt
MAR02674.008 (grab, 0 m)	(g)mS: Slightly Gravelly Muddy Sand	Very Coarse Silt	Poorly Sorted	0.06	57.66	42.28
MAR02674.009 (grab, 0 m)	(g)sM: Slightly Gravelly Sandy Mud	Very Coarse Silt	Very Poorly Sorted	0.44	45.34	54.22

The sampling results from Smith Quay did not exceed CEFAS Action Level 1 for organohalogens (PCBs) and organotins.

Action Level 1 was exceeded for PAHs and copper at one sample location (grab sample GS103). These results are presented in Table 2.3, alongside values for these determinants at other locations.

All other results indicated contaminant levels below Action Level 1. Full sample results are provided in Appendix B and an explanation of Action Levels can be found in Appendix C.

No results exceeded Action Level 2 at any location.

Table 2.3 Peterhead Smith Quay results which exceeded Action Level 1 (blue text).

Sample Location	Sample ID	Trace Metals	PAHs			
		Copper (Cu) mg/kg	Di-ben(ah)anthracene ug/kg	Fluoranthene ug/kg	Pyrene ug/kg	Total Hydrocarbon Content (THC) ug/kg
VB101	MAR02674.001	8.1	<1	4.17	5.98	29900
	MAR02674.002	10.4	<1	<1	<1	9650
	MAR02674.003	7.8	<1	<1	<1	2530
VB102	MAR02674.004	11.9	2.11	16.9	26.6	62900
	MAR02674.005	11	<1	<1	<1	4040
	MAR02674.006	3.9	<1	<1	<1	3280
GS101	MAR02674.007	10.8	4.27	56.4	60.7	72200
GS102	MAR02674.008	11.7	3.96	49.1	54.7	95100
GS103	MAR02674.009	37.9	11.2	133	165	355000

3. BPEO Assessment Method

The BPEO study was undertaken using the following method:

- Identification of potential disposal options;
- Scoping and short-listing of options based on practicability;
- Assessment of the short-listed options based on:
  - strategic considerations;
  - health, safety and environment considerations i.e., what the impacts would be; and
  - cost, in terms of capital and operational costs.
- Comparison of the relative merits and performance of the options and identification of the BPEO.

The BPEO determination takes into account the Waste Hierarchy set out in Article 4(1) of the EU Waste Framework Directive (2008/98/EC) (European Parliament and of the Council, 2008). The Waste (Scotland) Regulations 2012 implement the Waste Framework Directive obligations in Scotland. Furthermore, the Environmental Protection Act 1990 section 34 makes it the duty of everyone who produces, keeps or manages controlled waste, or as a broker or dealer has control of such waste, to take all such measures available to that person as are reasonable in the circumstances to apply the waste hierarchy set out in Article 4(1) of the Waste Directive. The waste Hierarchy places emphasis on minimisation and re-use of dredged material, with sea deposit only being used if no alternative options are available (Figure 3.1).

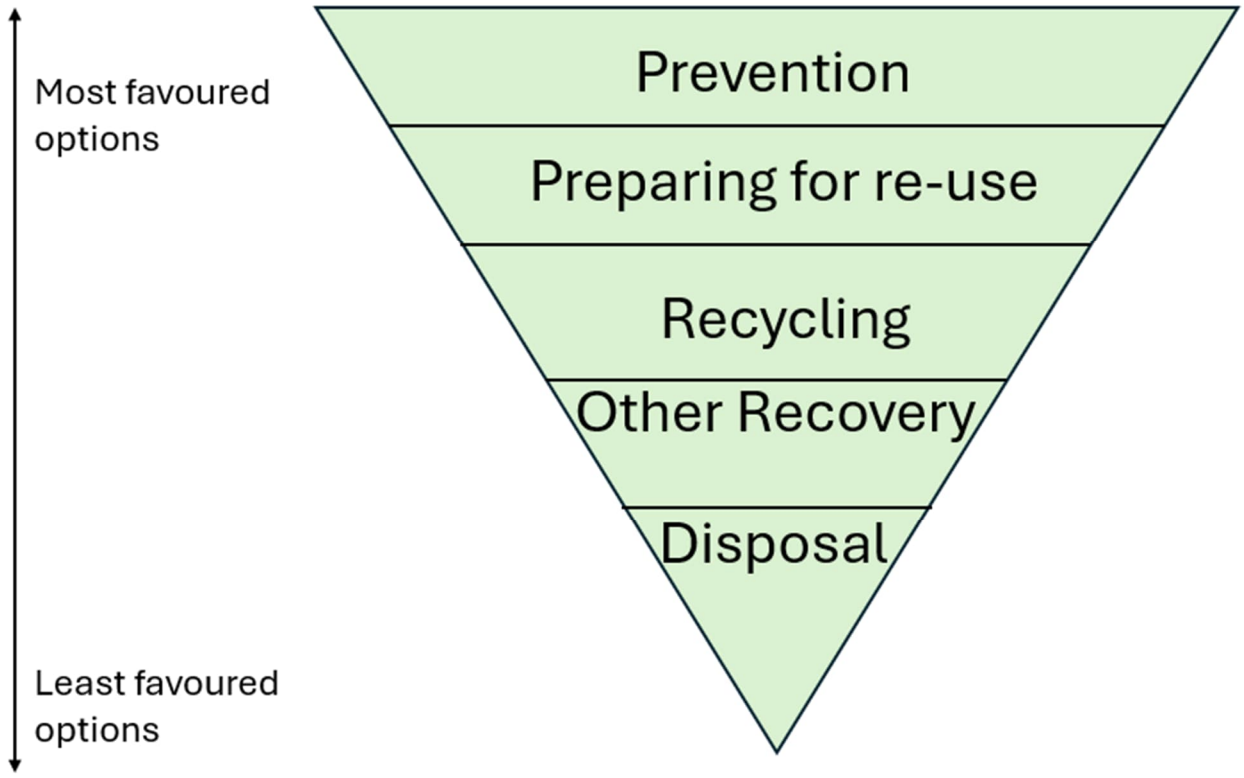


Figure 3.1 Waste hierarchy for dredged material.

3.1. Identification of Options

An evaluation of dredge material disposal methods was conducted through a desk-based analysis of standard disposal practices. Relevant regulators and statutory bodies were asked for any relevant information that they hold or any comment on the options for disposal of the dredged material. Table 3.1 summaries the responses received, with full responses provided in Appendix D.

Table 3.1 Summary of consultee responses.

Consultee	Response
Aberdeenshire Council	Council advised that SEPA and MD-LOT should be consulted. Council confirmed that there are no plans for beach nourishment in the next 12-18 months.
SEPA	Dredged material might not be suitable for beach nourishment. It needs to be of similar composition to existing beach materials. Because dredged material is from a working harbour, there may be contaminants present. Marine Directorate should be consulted on disposal method. NatureScot should be consulted to determine if there is any anticipated impact to nearby conservation areas.
NatureScot	No further advice received
Crown Estate Scotland	Confirmed that previous dredging operations in Peterhead have used the CR080 disposal site and Crown Estate Scotland will be content for that site to be used again. Number of samples confirmed to be in order.
Northern Lighthouse Board	Advised the NLB would formally respond to MD-LOT's request upon receipt. Advised that PPA should issue marine safety advice ahead of dredging and inform the UK Hydrographic Office of the changing depths so that charts can be updated.
Maritime and Coastguard Agency	MCA confirmed that works fall under the jurisdiction of the Statutory Harbour Authority, PPA. MCA confirmed no objection to dredging on the understanding that all maritime safety legislation is followed.
Marine Directorate	General information given on how to apply for a dredging marine licence and selecting a disposal site.

Eight treatment/disposal options have been identified:

- Option 1: Do Nothing
- Option 2: Coastal Reclamation
- Option 3: Construction Material
- Option 4: Landfill
- Option 5: Agricultural Use
- Option 6: Beach Nourishment
- Option 7: Incineration
- Option 8: Disposal to Sea

3.2. Method of Assessment

An initial assessment is conducted on the options listed in Section 3.1 exploring the suitability of each option, taking into account the amount of dredge material to be disposed, its composition, and the presence of any contaminants. At this stage, options may be ruled out and only those short-listed will be brought to the next stage of assessment.

The parameters which were used to assess the short-listed options are discussed below.

3.2.1. Strategic Considerations

Strategic Considerations include:

- Operational Feasibility: Assessing if the option is technically and operationally viable.
- Availability of Sites/Facilities: Evaluating the presence of sites or facilities capable of handling the dredge spoil.
- Security of Option: Ensuring Peterhead Harbours can oversee all disposal stages.
- Established Practice: Considering if the technologies and techniques are proven, allowing for predictable performance and challenges.
- Public Acceptability: Determining the likelihood of public support or opposition to the proposals.
- Agency Acceptability: Anticipating any significant concerns from public agencies during the FEPA application consultation.
- Legislative Implications: Ensuring compliance with relevant laws and assessing the required management controls.

3.2.2. Health, Safety and Environmental Considerations

The factors used to assess the health, safety and environmental performance of the options are:

- Safety: Identifying potential hazards and the likelihood of risks to the public or workers.
- Public Health: Evaluating the risk of adverse effects on public health based on predicted exposure pathways and receptors.
- Pollution/Contamination: Determining the potential for pollution or contamination that could lead to exceeding Action Level thresholds.
- Ecological Impact: Assessing the potential impact on significant habitats or species.
- Interference: Considering the potential impacts on other activities, such as estuary, dock, or road users.
- Amenity/Aesthetic: Evaluating the potential visual impact and effects on local amenities.

3.2.3. Cost Considerations

Cost of disposing of dredged material was considered in terms of the following:

- Capital costs; and
- Operational costs (i.e., transport and disposal costs).

4. Scoping of Potential Options

This section describes potential options for the dredged material. Where an option is not considered feasible, the reason is given and it is not taken forward to the assessment stage. Options that are considered practicable are considered in Section 5.

4.1. Option 1: Do Nothing

In the baseline scenario, the proposed capital dredging would not occur at the Quay. The proposed extension works at the Quay would not be possible without dredging since the facility would not have the required depth for visiting vessels. While omitting dredging would prevent waste generation, this option is deemed impractical as it would not provide the necessary depth for vessels and efficient operation of the extended Quay would not be possible.

This option has been discounted.

4.2. Option 2: Coastal Reclamation

Coastal reclamation involves converting coastal wetlands or shallow seas into dry land or enclosed shallow water bodies. The dredged material, which can include sand, silt, clay, and gravel, is excavated from the seabed using dredgers and transported to the reclamation site, where it undergoes processes such as landing, storage, dewatering, and possibly desalination to make it suitable for use. Once prepared, the material is placed at the reclamation site to create new land or restore eroded areas. This can involve spreading the material in thin layers to build up the land gradually. In this occasion, coastal use involving pumping or spraying the material directly from the dredger or barge to the site where it was needed is not feasible given the nature of the material to be dredged.

The material grade and quality are critical: material suitable for reclamation is generally medium to coarse sands and gravel fractions, typically in large volumes. As the material to be dredged is characterised, according to Folk and Ward (1957), as very coarse silt to very fine sand it cannot easily be sorted to provide a useful volume of suitable material. Any fine material would also still remain to be disposed of if coarser fractions were used for coastal reclamation.

This option has been discounted.

4.3. Option 3: Construction Material

Reusing dredged material as construction material in onshore construction projects would involve landing, drying, and transporting the material. Any material that is re-used will need to be assessed to ensure it is geotechnically suitable. Potentially, additional material might need to be added to ensure the dredge material is compliant with specifications for infill and/or treatment for contamination then relocated to be deposited at the construction site.

While the dredged material could potentially be used as construction material, the presence of hydrocarbons (PAHS and total hydrocarbons) and trace metals in the sampling results makes this option unattractive. The grading and washing required coupled with the drying and storage challenges previously identified makes this option uneconomical and unpractical.

This option has been discounted.

4.4. Option 4: Landfill

A common use of dredged material within landfill sites is as capping or restoration material. Material would need to be brought ashore, e.g. at Peterhead harbour, and dewatered before being loaded into trucks and transported to the landfill site by road. It is assumed that the waste would need to be transported to either Stonyhill Environ Park or Savoch Quarry for disposal as these are the nearest suitably licenced sites to Peterhead Port.

Existing landfill sites must cope with large volumes of domestic and industrial requirements, and marine dredgings on the present scale (> 5000 m^3) would place an increased burden on such sites. Dredged material is relatively inert by landfill standards, so disposal at a suitably licenced landfill site is not usually necessary unless it is significantly contaminated with Action Level 2 exceedance, which it is not in this case (see Section 2.2).

Dredged material would have to be dried in lagoons before being transported by road to the landfill site. Suitable land for drying lagoons is not available within the port estate due to the location of the construction site and the port subletting land. Transportation of material from the port to the landfill would generate significant vehicle movements on local roads, contributing to congestion and air and noise pollution, as well as road safety concerns.

Landfill is one of the least favoured disposal methods based on the waste hierarchy (Figure 3.1) and should only be considered when all other options have been discounted.

Based on the significant operational and financial cost of landfill disposal, this option has been discounted.

4.5. Option 5: Agricultural Use

The North East of Scotland is a rural farming area with an abundance of good arable land and there is no known requirement for a supplement of imported material. The dredged material would have to be de-watered and desalinated to make it suitable for soil conditioning or spreading, and no land is available to locate a drying lagoon. Transportation of material from the harbour to agricultural land would generate significant vehicle movements on local roads, contributing to traffic congestion and air and noise pollution.

This option has been discounted.

4.6. Option 6: Beach Nourishment

The use of dredged material for beach nourishment or recharge is a sustainable beneficial use: it generates a purpose for the material that benefits a local amenity. Material is typically deposited direct from the dredging vessel via a pipeline or by 'rainbowing' onto the beach, where it is reprofiled using land-based plant.

The results of sediment sampling discussed in Section 2.2 indicate that the sediment is poorly sorted. Beach nourishment requires sediment with high quantities of sand, which rules out the dredge material in question since it contains substantial silt and gravel fractions. The sediment would need to be brought onshore and sorted before it could be used for beach nourishment, increasing the overall cost and timescale of the operation and leaving a residue of material still requiring disposal.

Therefore this option has been discounted.

4.7. Option 7: Incineration

Incineration of dredged material would involve landing, dewatering, possibly storing, and transporting it to an incinerator. The nearest incinerator to Peterhead Harbour is in Aberdeen[2]. The resulting ash would need to be disposed of, with options including landfill, reclamation, or spreading on agricultural land. However, the dredged material has a low organic content (around 0.5%) with around 44% of the material volume being sand, making it unsuitable for efficient combustion, as incinerators typically require an organic content above 20%.

[2] UK Incinerators – United Kingdom Without Incineration Network (ukwin.org.uk) [Accessed 10/03/2025]

This option has been discounted.

4.8. Option 8: Disposal at Sea

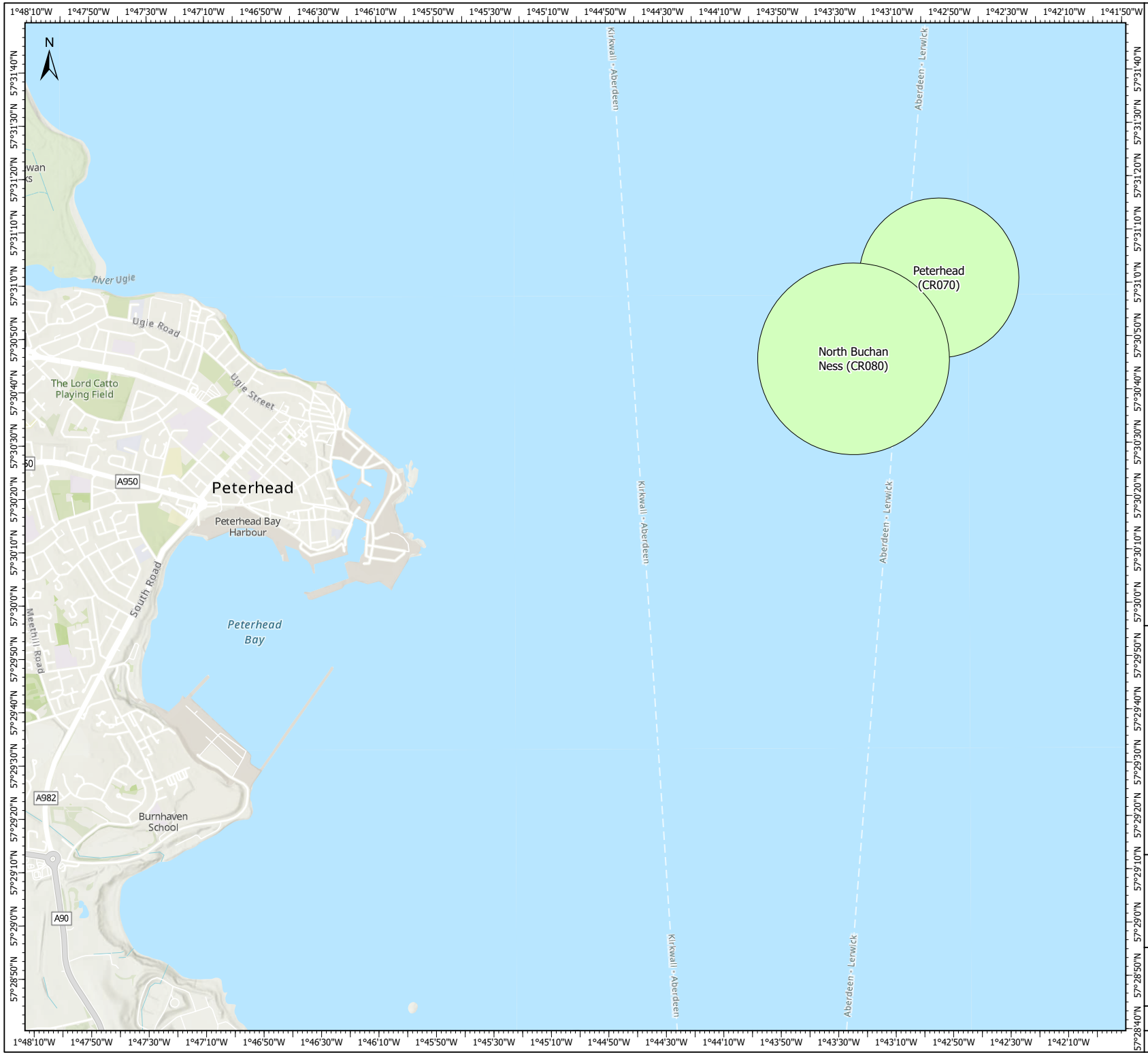
Disposal at sea involves transporting dredged material to a licensed marine spoil disposal site using a dredging vessel. This method does not require landing the material onshore. Instead, the dredger travels to the designated disposal site and releases the material, e.g. through bottom doors or a split hull.

MD-LOT designates marine disposal sites. Although the dredged material meets the chemical requirements for sea disposal (below AL2), the exceedances of AL1 necessitate engagement with the Marine Directorate to agree on disposal strategies.

There are two licenced marine spoil disposal grounds in close proximity to Peterhead: Peterhead (Site ID: CR070) and North Buchan Ness (Site ID: CR080) as shown in Figure 4.1. It is our understanding that CR070 has been closed since 2018[3] and therefore CR080 would be considered for use in this project. CR080 is also the closer of these two sites to Peterhead Port, as evident in Figure 4.1.

The nature of the dredged material and the proximity of a suitable licensed deposit site makes deposition at sea a viable option, which will be considered in detail in Section 5.

[3] CEFAS portal: https://data.cefas.co.uk/view/407 [Accessed July 2025]



Legend

Dredge Spoil Disposal Sites

Figure 4.1 Dredge spoil disposal sites within range of Peterhead Harbour

0 0.5 1 Kilometres

0 0.25 0.5 UK Nautical Miles

NIRAS

Drawn by: RDEN Approved by: AATH

Drawing ref: 81400408-015

4.9. Options Conclusion

Table 4.1 details the options that have been initially investigated for this dredging work and whether they have been discounted or progressed to the assessment stage. Of the eight options, one has been further progressed: disposal at sea.

Table 4.1 Summary of options and the outcome of scoping.

Option	Outcome
Option 1: Do Nothing	Discounted
Option 2: Coastal Reclamation	Discounted
Option 3: Construction Material	Discounted
Option 4: Landfill	Discounted
Option 5: Agricultural Use	Discounted
Option 6: Beach Nourishment	Discounted
Option 7: Incineration	Discounted
Option 8: Disposal at Sea	Further Assessed

5. Assessment of Available Disposal Options

In this section, Option 8 is considered in greater detail. The BPEO assessment comprises three aspects: strategic, environmental, and cost considerations.

5.1. Option 8: Disposal to Sea

The use of North Buchan Ness (CR080) is proposed as it has historically been used (with no known adverse effects) for the disposal of dredged material from Peterhead Harbour and is the closest site to the port, thus minimising the distance for vessel transport and the carbon footprint.

5.1.1. Strategic Considerations

Established Practice

Dredging and deposition at sea is an established practice at Peterhead Harbour throughout its history. Dredged material has been disposed of offshore in the North Buchan Ness CR080 spoil ground, shown in Figure 4.1.

Operational Aspects

The practicalities of depositing dredged material at the designated North Buchan Ness CR080 site are straightforward: it is likely that a split hopper barge would be used, which would discharge directly at the deposit site. No preparation of the material is required prior to deposition.

Availability of Sites
The licensed deposit site is available for the acceptance of dredged material and has been used for many years by the harbour.

Legislative Implications
Under the provisions of Marine Directorate, a dredging license is required. This requires the acceptance of the BPEO by the statutory consultees.

The option to deposit the material at an offshore site ranks poorly on the waste hierarchy (see Section 3 for details). To minimise waste generation and to manage the high costs and logistical challenges of accommodating a dredger in the harbour, PPA dredges only the volume of material required to maintain the navigation channel and berths at the published depths. This rationale will apply also to the dredging proposed here, which will involve the minimum necessary to achieve the required depth.

Third Party Considerations
The North Buchan Ness spoil ground is a licenced disposal ground, and given that the dredge material has shown relatively low levels of contamination it is considered unlikely that there will be objections to disposal.

5.1.2. Environmental Considerations

Public Safety Implications
Deposition at sea is a well established and regulated practice and would have negligible implications for safety providing that normal navigational and maritime procedures are observed.

Public Health Implications
There are no known threats to public health associated with deposition at sea.

Pollution/Contamination Implications
As presented in Section 2.2, the material to be dredged contains isolated elevations above Marine Scotland Revised Action Level 1 for PAHs and copper (Cu) but not to an extent that would prevent deposition of the material in the marine environment. This exceedance was only seen in one surface sediment sample which have a natural expectation of mobility e.g. under storm conditions. The core results show no contamination at depth, which means the total volume of contaminated sediment is likely to be very small. The risk of pollution/contamination is very low.

Interference with Other Activities
There is the potential for interference between the dredging vessel and other users of the sea (e.g. fishing vessels and recreational vessels). This is managed through compliance with harbour byelaws and standard communications between the dredging crew, PPA, and other users. The works are planned outside the main recreational season to minimise disruption where possible.

Amenity/Aesthetic Implications
There are no amenity or aesthetic implications of depositing material at a designated offshore site.

Ecological Implications
Deposition at sea can smother marine life on the seabed within the site. The North Buchan Ness disposal site has been in use for many years and is subject to annual deposition of material, therefore it is likely that any benthic species in or around the site can tolerate the periodic disturbance caused by deposition and temporary increased turbidity. This impact is increased where sediment has a higher composition of silt/fine sediments due

to the possibility of sediment plume dispersal and subsequent settlement. The Smith Quay samples have a range of 11.35 to 55.85% composition of silt in sub-surface core samples and 36.87 to 54.22% silt composition in surface grab samples. Based on these results, and an assumed average silt concentration of 31.8% across all samples, it is expected that approximately 5,756 m^3 of silt will be released at the disposal site.

The disposal site is open water and is subject to consistent tidal flow and therefore will not pose any major environmental or fishing hazard. The site has been previously approved by MD-LOT as a suitable disposal site and has been used for this purpose without any known detrimental effect. In addition, the quantity of dredge spoil is insignificant.

5.1.3. Cost Considerations

The total cost of dredging and sea deposit is estimated to be circa £2 million based on pre-ground investigations estimations by the appointed construction contractor.

6. Additional Assessment

Due to the exceedances of Action Level 1, it is necessary to conduct an additional assessment to determine if the dredged material is suitable for sea disposal. This assessment will compare the laboratory sample results with other recognised sediment assessment criteria.

6.1. Assessment criteria

The Background Assessment Concentration (BAC) was developed by the OSPAR Commission as a statistical tool to assess contaminant concentrations in the marine environment. BACs are used to test whether observed concentrations are near background levels for naturally occurring substances or close to zero for man-made substances (OSPAR 2005-6). The BACs have been developed for various substances, including polybrominated diphenyl ethers (PBDEs) in fish and shellfish, and are part of the OSPAR Commission's Comprehensive Environmental Monitoring Programme (CEMP), which includes methods for data screening, quality assurance, temporal trend assessment, and assessment against criteria. BACs were calculated by OSPAR using samples taken from four regions: south North Sea, north North Sea, Barents Sea, and Arctic to Iceland.

The aforementioned background approach had raised concerns in the past as it did not consider the types of biological resources in aquatic environments or the concentration levels at which these organisms would experience adverse effects. To address these limitations, sediment quality guidelines were developed to assess sediment quality by identifying contaminant concentrations that cause harmful effects (SETAC, 2002).

The Effects Range Low (ERL) was adopted by the United States Environmental Protection Agency (USEPA) as a measure of toxicity in marine sediment. ERLs are used to assess the ecological significance of sediment concentrations and to formulate guidelines for assessing toxicity hazards, particularly from trace metals or organic contaminants. ERLs identify threshold concentrations that, if exceeded, are expected to produce ecological or biological effects based on the literature evaluated (US EPA, n.d.). Concentrations below the ERL rarely cause adverse effects in marine organisms, while concentrations above the ERL often cause adverse effects in some marine organisms. Sediment condition is determined by comparing the observed concentrations to ERL and Effects Range Median (ERM) values developed by the National Oceanic and Atmospheric Administration. Sediment contamination is rated moderate if five or more ERLs are exceeded and high if one or more ERMs are exceeded. Additionally, sediment toxicity depends not only on the concentrations of toxic materials but also on their biological availability, which is controlled by factors such as acid volatile sulphides, pH, particle size and type, organic content, resuspension potential, and the specific form of contaminant. Biological availability is determined

in practice by bioassays that expose test organisms to sediments and evaluate their effects on the organisms' survival.

The Probable Effects Level (PEL) for marine environments is a sediment quality guideline adopted from the Canadian Environmental Quality Guidelines. PELs are used to evaluate the degree to which adverse biological effects are likely to occur as a result of exposure to contaminants in sediments. The Canadian Council of Ministers of the Environment (CCME) developed these guidelines to ensure the protection of aquatic life by setting benchmarks for sediment quality[4]. PEL values represent concentrations above which adverse biological effects are frequently found. These guidelines help in assessing the ecological significance of sediment contamination and are part of the broader framework for protecting aquatic life. The guidelines provide threshold effects levels (TELs) and PELs for various contaminants, including polycyclic aromatic hydrocarbons (PAHs), trace metals, and other organic compounds.

6.2. Assessment

Information for samples where Action Level 1 was exceeded (for diben(ah)anthracene, fluoranthene, pyrene, and copper) is presented in Table 6.1. The average concentration of each contaminant across all samples taken is compared against each of the environmental thresholds: Action Level 1, Action Level 2, BAC, ERL, ERM and PEL where information is available. There are no historical data available.

[4] CCME: https://ccme.ca/en/summary-table#void [Accessed July 2025]

Table 6.1 Assessment of results exceeding Action Level 1 (blue text are values exceeding Action Level 1).

Samples	Sample ID	Diben(ah)anth-racene (µg/kg)	Fluoranthene (µg/kg)	Pyrene (µg/kg)	THC (ug/kg)	Copper (Cu) mg/kg
2025 samples	MAR02674.001	<1	4.17	5.98	29900	8.1
	MAR02674.002	<1	<1	<1	9650	10.4
	MAR02674.003	<1	<1	<1	2530	7.8
	MAR02674.004	2.11	16.9	26.6	62900	11.9
	MAR02674.005	<1	<1	<1	4040	11
	MAR02674.006	<1	<1	<1	3280	3.9
	MAR02674.007	4.27	56.4	60.7	72200	10.8
	MAR02674.008	3.96	49.1	54.7	95100	11.7
	MAR02674.009	11.2	133	165	355000	37.9
	Average	5.4	51.9	62.6	70511.1	12.6
Action Levels	Action Level 1	10	100	100	100,000	30
	Action Level 2	-	-	-	-	300

Samples	Sample ID	Diben(ah)anth-racene (µg/kg)	Fluoranthene (µg/kg)	Pyrene (µg/kg)	THC (ug/kg)	Copper (Cu) mg/kg
Assessment Criteria	BAC	-	39	24	-	27
	ERL	63.4	600	665	-	34
	ERM	260	5100	2600	-	270
	PEL	135	1494	1398	-	108

6.2.1. Diben(ah)anthracene

The average concentration of Diben(ah)anthracene across all samples locations does not exceed Action Level 1, ERL, ERM or PEL thresholds, indicating that the sediment quality is within acceptable limits for this PAH.

6.2.2. Fluoranthene

The average concentration of Fluoranthene across all samples locations does not exceed Action Level 1, ERL, ERM or PEL thresholds, indicating that the sediment quality is within acceptable limits for this PAH.

6.2.3. Pyrene

The average concentration of Pyrene across all samples locations does not exceed Action Level 1, ERL, ERM or PEL thresholds, indicating that the sediment quality is within acceptable limits for this PAH.

6.2.4. Total Hydrocarbon Content

The average concentration of Total Hydrocarbon Content across all samples locations does not exceed Action Level 1 indicating that the sediment quality is within acceptable limits.

6.2.5. Copper

The average concentration across all samples does not exceed Action Level 1, ERL, ERM or PEL thresholds, indicating that the sediment quality is within acceptable limits for this trace metal.

7. Conclusion

The material to be dredged is a mix of very poorly sorted sand, gravel and silt. The only suitable disposal option identified is disposal at sea due to the nature of the material in terms of particle size distribution and the presence of contaminants in the form of trace metals and PAHs.

Option 8: Sea Disposal was determined to be the best option in terms of operational, environmental, and cost considerations for dredged material at the Quay. The disposal site identified is North Buchan Ness (CR080), located approximately 3.4 km northeast of the Quay.

8. References

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Appendix A: Dredging Sampling Plan

Peterhead Smith Quay Dredging

Sampling plan

Peterhead Port Authority

Date: 05 March 2025

Contents

1 Introduction

This note has been prepared by NIRAS UK Group LTD, on behalf of Peterhead Port Authority (PPA), and presents a plan for the sampling of the seabed prior to the marine application submission of the proposed capital dredging of Peterhead Smith Quay.

Peterhead Port Authority (PPA) proposes an 80 m extension to the western end of the existing 120 m long Smith Quay. The quay is used by many industries, such as renewable energy, oil and gas decommissioning and the pelagic fishing sector. A prerequisite for the potential future proposed extension is dredging high spots of not more than 1m.

Under the Marine (Scotland) Act 2010, Section 21(1), a Marine Licence issued by the Marine Directorate Licensing and Operations Team (MD-LOT) is necessary for dredging and depositing substances or objects within the Scottish marine area—which includes the sea and seabed adjacent to Scotland. As a pre-requisite for capital dredging operations, a pre-dredge survey and sediment chemical analysis report is required by MD-LOT.

2 Sampling plan

Smith Quay is a 120 m long suspended deck quay to the west of the existing outer harbour quays at Peterhead with a separate berthing/mooring dolphin at its western end and reclamation behind the quay (Figure 1). In 2010, 100,000 m^3 of rock and soft materials were dredged and suitable material was combined with imported material to construct 9,000 m^2 of reclamation behind the quay. Other than by sea, Smith Quay is accessible via road (Merchant's Quay) and access to the quay is secured by a fence with no public access.

Figure 1 Smith Quay location (source: Google Earth)

Upon review of Table 1 presented in the *Pre-disposal Sampling Guidance Version 2 – November 2017*[1], the project will be looking to have 5 (five) sample stations; taking into consideration that the volume of the proposed dredge is smaller than 25,000 m^3. The suggested sample locations are indicated in Figure 2.2. The areas marked blue are the confirmed dredge areas with total depth 1 m, approximate area 5800 m^2, and approximate volume 5800 m^3.

The yellow coloured area indicates regions where limited dredging may be necessary; however, the extent has yet to be fully determined. This will partly be informed by the Geotechnical Investigations (Notice of Exempted Activities already issued) and the results of the vibrocore sampling. The locations of the two vibro-cores are situated beneath the proposed new rock revetment. If this material proves unsuitable for placing fill material, a limited volume (less than 1 meter of dredging) may need to be removed from this area. Should limited dredging be required within the yellow indicated area, rather than repeating the sampling process, the six samples results from the two vibrocore station (three samples per vibrocore) will be utilised to provide additional data, thereby removing the need for repeated sampling and ensuring comprehensive coverage of the area necessitating dredging.

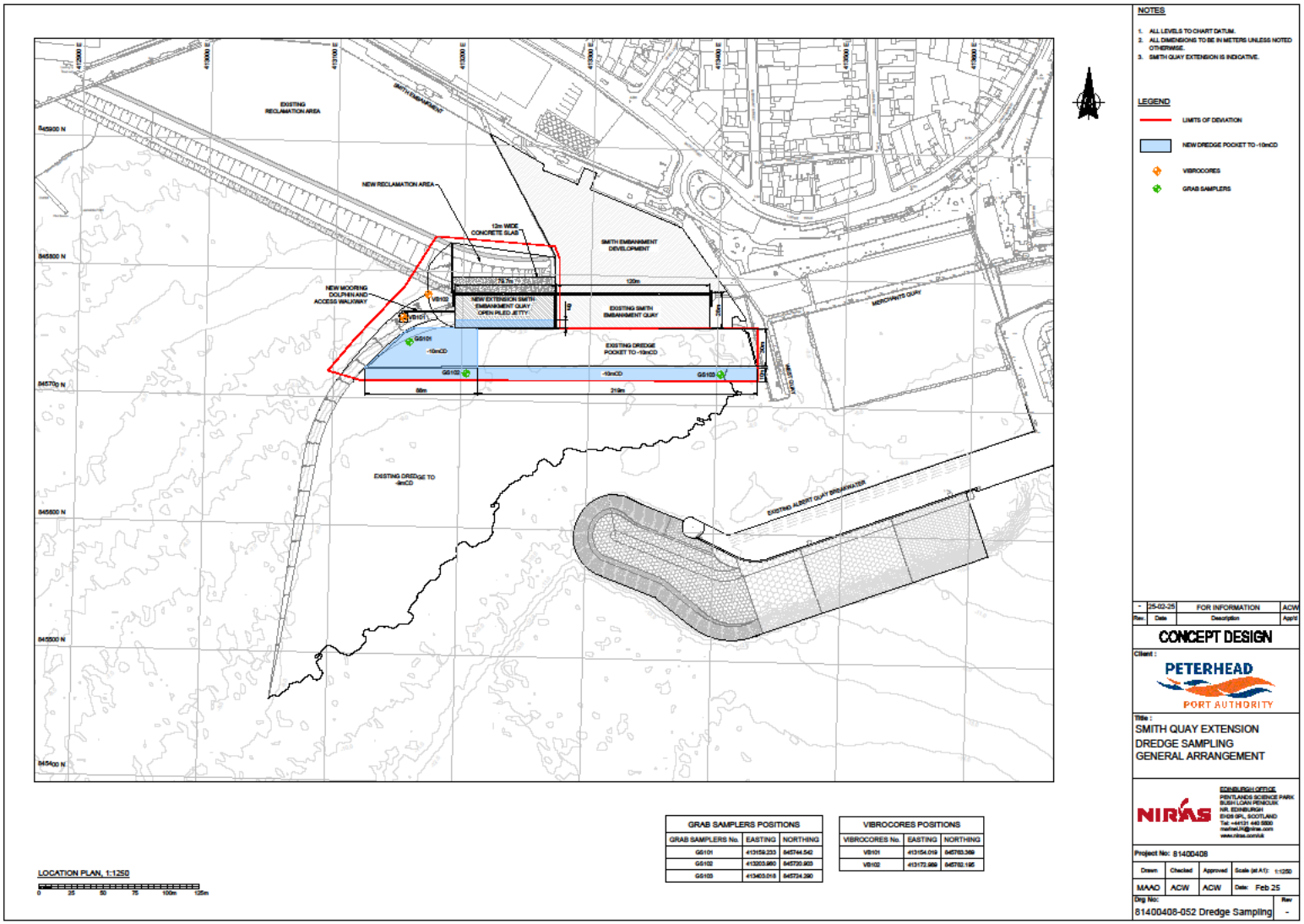
The total volume of dredge will be under 25,000 m^3, and each grab sample volume is expected to be circa 2 L.

[1] Marine Scotland. 2017. Pre-disposal sampling guidance Version 2. https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2020/02/marine-licensing-applications-and-guidance/documents/guidance/pre-disposal-sampling-guidance/pre-disposal-sampling-guidance/govscot%3Adocument/Pre-disposal%2Bsampling%2Bguidance.pdf

Please note that the suggested sample locations are not additional but a refinement of the initially 2 grab sample locations and initially 3 vibrocore locations approved under the *00010924_Ground_Investigations_Smith Quay_Peterhead_Notice_of_exempted_activity*.

Table 2.1 Coordinates of sampling stations

Samplers No.	Latitude	Longitude
GS101	57° 30.103' N	1° 46.924' W
GS102	57° 30.090' N	1° 46.879' W
GS103	57° 30.091' N	1° 46.680' W
VB101	57° 30.113' N	1° 46.929' W
VB102	57° 30.123' N	1° 46.910' W



Project ID: 81400460
Prepared by: AATH Verified by: ACW Approved by: ACW
Document ID: 5TEWASR6TEQW-1829886479-2911

Figure 2.2 Dredge area and sample locations

3 Grab sampler

The grab sampler comprises two steel clamshells acting on a single or double pivot. The shells are brought together either by a powerful spring (Shipek type) or powered hydraulic rams operated from the support vessel.

In operation, the grab is lowered to the seabed and activated either automatically or by remote control. The shells swivel together in a cutting action and remove a section of seabed. The sample is then recovered to the surface for examination. The three samples will be taken of the surface layer (0-50cm).

For each of the samples the following chemical analysis will be undertaken:

- Sediment water content.
- Total Organic Carbon (TOC).
- Sediment particle distribution (PSD).
- Metals: arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), mercury (Hg), nickel (Ni), lead (Pb), and zinc (Zn).
- Tributyl Tin (TBT).
- Polycyclic Aromatic Hydrocarbons (PAHs): US EPA 16.
- Poly Chlorinated Biphenyls (PCB): ICES 7.

Figure 3-1 Grab sampler

A Marine laboratory will be used for the marine sediment testing. As required, the selected lab will be ISO17025 accredited for marine sediment analysis and take part in intercomparison exercises such as QUASIMEME. Additionally, it will meet the LOD and sensitivity requirements set out in the CSEMP Green Book.

Appendix B: Sediment Sampling Results

Applicant Information

Applicant:	Peterhead Port Authority
Description of dredging:	Capital dredging
Total amount to be dredged (wet tonnes)	35000

Sample Details & Physical Properties

Explanatory Notes:
An example of a 'Dredge area' is: 'Dock A, Harbour X'
Provide description of the dredge area and the latitude and longitude co-oridnates (WGS84) for each sample location. Co-ordinates taken from GPS equipment should be set to WGS84.
Note for sample depth that the seabed is 0 metres.
Gravel is defined as >2mm, **Sand** is defined as >63um<2mm, **Silt** is deinfed as <63um).

Sample information:

Sample ID	Dredge area	Latitude										Longitude											Type of sample	Sample depth	Total solids	Gravel (%)	Sand (%)	Silt (%)	TOC (%)	Specific gravity	Asbestos
MAR02674.001	VB101 (ES1 @ 0.00m)	5	7	°	3	0	.	9	2	7	'N	0	0	1	°	4	6	.	9	0	8	'W	Core	0	88.9	40.43	44.07	15.5	1.48	2.68	No
MAR02674.002	VB101 (ES3 @ 1.00m)	5	7	°	3	0	.	9	2	7	'N	0	0	1	°	4	6	.	9	0	8	'W	Core	1	89.8	22.08	50.58	27.35	0.09	2.67	No
MAR02674.003	VB101 (ES6 @ 2.40m)	5	7	°	3	0	.	9	2	7	'N	0	0	1	°	4	6	.	9	0	8	'W	Core	2.4	91.2	29.84	40.06	30.1	0.1	2.64	No
MAR02674.004	VB102 (ES1 @ 0.00m)	5	7	°	3	0	.	3	8	1	'N	0	0	1	°	4	6	.	6	1	2	'W	Core	0	85.3	49.21	37.87	12.92	0.18	2.68	No
MAR02674.005	VB102 (ES4 @ 1.50m)	5	7	°	3	0	.	3	8	1	'N	0	0	1	°	4	6	.	6	1	2	'W	Core	1.5	92.7	62.84	25.81	11.35	0.07	2.67	No
MAR02674.006	VB102 (ES7 @ 3.00m)	5	7	°	3	0	.	3	8	1	'N	0	0	1	°	4	6	.	6	1	2	'W	Core	3	92.2	12.32	31.83	55.85	0.12	2.49	No
MAR02674.007	GS101 (ES2 @ 0.00m)	5	7	°	3	0	.	1	4	3	'N	0	0	1	°	4	6	.	5	6	7	'W	Grab	0	67.4	0.07	63.05	36.87	0.5	2.64	No
MAR02674.008	GS102 (ES2 @ 0.00m)	5	7	°	3	0	.	4	1	1	'N	0	0	1	°	4	6	.	5	8	0	'W	Grab	0	70.4	0.06	57.66	42.28	0.54	2.65	No
MAR02674.009	GS103 (ES2 @ 0.00m)	5	7	°	3	0	.	4	5	5	'N	0	0	1	°	4	6	.	5	2	0	'W	Grab	0	50.1	0.44	45.34	54.22	1.8	2.65	No

Trace Metals & Organotins

Explanatory Notes:
Results above Action Level 1 will be highlighted in blue and above Action Level 2 in red.

Sample information:

Sample ID	Dredge area	Type of sample	Sample depth (m)	mg/kg dry weight									
				Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Mercury (Hg)	Nickel (Ni)	Lead (Pb)	Zinc (Zn)	Dibutyltin (DBT)	Tributyltin (TBT)
MAR02674.001	VB101 (ES1 @ 0.00m)	Core	0	1.2	0.07	10.7	8.1	<0.01	7.9	4.8	25.1	<0.001	<0.001
MAR02674.002	VB101 (ES3 @ 1.00m)	Core	1	1.2	0.08	9.4	10.4	<0.01	7.8	4.7	33.9	<0.001	<0.001
MAR02674.003	VB101 (ES6 @ 2.40m)	Core	2.4	1	0.11	3.4	7.8	<0.01	2.4	5.3	18.6	<0.001	<0.001
MAR02674.004	VB102 (ES1 @ 0.00m)	Core	0	1.5	0.09	11.8	11.9	<0.01	6.3	4.7	26.4	<0.001	0.003
MAR02674.005	VB102 (ES4 @ 1.50m)	Core	1.5	4.4	0.14	4	11	<0.01	5.7	2.4	25.4	<0.001	<0.001
MAR02674.006	VB102 (ES7 @ 3.00m)	Core	3	5.5	0.13	2.4	3.9	<0.01	3.4	3.1	19.2	<0.001	<0.001
MAR02674.007	GS101 (ES2 @ 0.00m)	Grab	0	5	0.12	15.8	10.8	0.03	9.7	7.1	35.6	<0.005	<0.005
MAR02674.008	GS102 (ES2 @ 0.00m)	Grab	0	4.8	0.12	16.4	11.7	0.01	10	8.3	38.8	<0.005	<0.005
MAR02674.009	GS103 (ES2 @ 0.00m)	Grab	0	7.5	0.24	24.5	37.9	0.03	15.9	16.7	85.7	<0.005	0.01

Polyaromatic Hydrocarbons (PAH)

Explanatory Notes:
Results above Action Level 1 will be highlighted in blue

Definitions:

ACENAPTH	Acenaphthene
ACENAPHY	Acenaphthylene
ANTHRACN	Anthracene
BAA	Benz(a)anthracene
BAP	Benzo(a)pyrene
BBF	Benzo(b)fluoranthene
BEP	Benzo(e)pyrene
BENZGHIP	Benzo(ghi)perylene
BKF	Benzo(K)fluoranthene
C1N	C1-naphthalenes
C1PHEN	C1-phenanthrene
C2N	C2-naphthalenes
C3N	C3-naphthalenes
CHRYSENE	Chrysene
DBENZAH	Diben(ah)anthracene
FLUORANT	Fluoranthene
FLUORENE	Fluorene
INDPYR	Indeno(1,2,3-cd)pyrene
NAPTH	Naphthalene
PERYLENE	Perylene
PHENANT	Phenanthrene
PYRENE	Pyrene
THC	Total Hydrocarbon Content

Sample information:

				µg/kg																					
Sample ID	Dredge area	Type of sample	Sample depth	ACENAPTH	ACENAPHY	ANTHRACN	BAA	BAP	BBF	BEP	BENZGHIP	BKF	C1N	C1PHEN	C2N	C3N	CHRYSENE	DBENZAH	FLUORANT	FLUORENE	INDPYR	NAPTH	PERYLENE	PHENANT	PYRENE	THC
MAR02674.001	VB101 (ES1 @ 0.00m)	Core	0	<1	<1	1.24	2.6	2.81	2.53		2.3	2.11					3.05	<1	4.17	<1	1.59	1.29		6.66	5.98	29900
MAR02674.002	VB101 (ES3 @ 1.00m)	Core	1	<1	<1	<1	<1	<1	<1		<1	<1					<1	<1	<1	<1	<1	<1		<1	<1	9650
MAR02674.003	VB101 (ES6 @ 2.40m)	Core	2.4	<1	<1	<1	<1	<1	<1		<1	<1					<1	<1	<1	<1	<1	<1		<1	<1	2530
MAR02674.004	VB102 (ES1 @ 0.00m)	Core	0	3.14	2.09	6.43	11.2	14.5	13.3		12.2	12.1					14.5	2.11	16.9	5.96	10.2	21		29.5	26.6	62900
MAR02674.005	VB102 (ES4 @ 1.50m)	Core	1.5	<1	<1	<1	<1	<1	<1		<1	<1					<1	<1	<1	<1	<1	<1		<1	<1	4040
MAR02674.006	VB102 (ES7 @ 3.00m)	Core	3	<1	<1	<1	<1	<1	<1		<1	<1					<1	<1	<1	<1	<1	<1		<1	<1	3280
MAR02674.007	GS101 (ES2 @ 0.00m)	Grab	0	5.81	3.35	12	30.4	36.4	30.4		22.7	31.9					33.2	4.27	56.4	5.99	25	7.82		39	60.7	72200
MAR02674.008	GS102 (ES2 @ 0.00m)	Grab	0	5.13	3.07	8.57	24.5	27.5	28.5		23.8	27					30.7	3.96	49.1	5.75	24.3	7.33		34.5	54.7	95100
MAR02674.009	GS103 (ES2 @ 0.00m)	Grab	0	11	8.21	32	67.9	74.6	69.3		59.7	66.7					72.3	11.2	133	17.7	60.5	15.6		99.3	165	355000
0	0	0	0																							

Organohalogens

Explanatory Notes:
Results above Action Level 1 will be highlighted in blue and above Action Level 2 in red.
ICES7 is the sum of PCB 28,52,101,138,153,180 and 118.

Definitions:

AHCH	alpha-Hexachlorcyclohexane
BHCH	beta-Hexachlorcyclohexane
GHCH	gamma-Hexachlorcyclohexane
DIELDRIN	Dieldrin
HCB	Hexachlorobenzene
PPDDE	p,p'-Dichorodiphenyldicloroethylene
PPDDT	p,p'-Dichorodiphenyltrichloroethane
PPTDE	p,p'-Dichorodiphenyldicloroethane

Sample information:

Sample ID	Dredge area	Type of sample	Sample depth	PCB28 (µg/kg)	PCB52	PCB101	PCB118	PCB138	PCB153	PCB18	PCB105	PCB110	PCB128	PCB141	PCB149	PCB151	PCB156	PCB158	PCB170	PCB180	PCB183	PCB187	PCB194	PCB31	PCB44	PCB47	PCB49	PCB66
MAR02674.001	VB101 (ES1 @ 0.00m)	Core	0	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08											<0.08								
MAR02674.002	VB101 (ES3 @ 1.00m)	Core	1	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08											<0.08								
MAR02674.003	VB101 (ES6 @ 2.40m)	Core	2.4	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08											<0.08								
MAR02674.004	VB102 (ES1 @ 0.00m)	Core	0	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08											<0.08								
MAR02674.005	VB102 (ES4 @ 1.50m)	Core	1.5	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08											<0.08								
MAR02674.006	VB102 (ES7 @ 3.00m)	Core	3	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08											<0.08								
MAR02674.007	GS101 (ES2 @ 0.00m)	Grab	0	0.09	<0.08	<0.08	<0.08	<0.08	0.1											<0.08								
MAR02674.008	GS102 (ES2 @ 0.00m)	Grab	0	<0.08	<0.08	<0.08	<0.08	0.08	<0.08											0.09								
MAR02674.009	GS103 (ES2 @ 0.00m)	Grab	0	0.15	0.15	0.14	0.22	0.14	0.28											0.11								
0	0	0	0																									
0	0	0	0																									
0	0	0	0																									

Sample ID	ICES7 (µg/kg)	AHCH	BHCH	GHCH	DIELDRIN	HCB	DDE	DDT	TDE	BDE100	BDE138	BDE153	BDE154	BDE17	BDE183	BDE209	BDE28	BDE47	BDE66	BDE85	BDE99
MAR02674.001	<0.56	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1.9	<0.05	0.07	<0.05	<0.05	<0.05
MAR02674.002	<0.56	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.14	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1.9	<0.05	0.12	<0.05	<0.05	<0.05
MAR02674.003	<0.56	<0.1	<0.1	<0.1	0.17	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	0.11	<1.9	<0.05	0.07	<0.05	<0.05	<0.05
MAR02674.004	<0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1.9	<0.05	0.19	<0.05	<0.05	<0.05
MAR02674.005	<0.56	<0.1	<0.1	<0.1	0.22	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1.9	<0.05	<0.05	<0.05	<0.05	<0.05
MAR02674.006	<0.56	<0.1	<0.1	<0.1	0.24	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1.9	<0.05	<0.05	<0.05	<0.05	<0.05
MAR02674.007	<0.59	<0.1	<0.1	<0.1	0.21	<0.1	0.16	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	4.09	<0.05	<0.05	<0.05	<0.05	<0.05
MAR02674.008	<0.57	<0.1	<0.1	<0.1	0.12	<0.1	<0.1	0.12	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	2.93	<0.05	<0.05	<0.05	<0.05	<0.05
MAR02674.009	1.19	<0.1	<0.1	0.12	<0.1	<0.1	0.36	<0.1	0.16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	11.1	<0.05	0.09	<0.05	<0.05	0.07
0																					
0																					
0																					

PR Details

Total amount to be dredged (wet tonnes)	

Explanatory Notes:
The values entered for each determinand should be an average wet weight concentration from all the samples representing the material to be disposed to sea. They should be entered in the units stated in the Unit of measurement column in the table below.
Results above Action Level 1 will be highlighted in blue and above Action Level 2 in red.

Average for the total dredge area:

Sample ID	Unit of measureme	
Total Solids	%	80.9
Gravel	%	24.14
Sand	%	44.03
Silt	%	31.83
Arsenic (As)	mg/kg	2.7
Cadmium (Cd)		0.09
Chromium (Cr)		8
Copper (Cu)		9.1
Mercury (Hg)		0.01
Nickel (Ni)		5.7
Lead (Pb)		4.6
Zinc (Zn)		25.3
Dibutyltin (DBT)		<0.005
Tributyltin (TBT)		<0.005
Acenapth	µg/kg	2.3
Acenapthylene		1.7
Anthracn		4.53
BAA		9.74
BAP		11.1
BBF		10.3
BEP		
Benzghip		8.71
BKF		10
C1N		
C1PHEN		
C2N		
C3N		
Chrysene		11
Debenzah		2.01
Flurant		17.9
Fluorene		3
Indypr		8.71
napth		4.6
perylene		
phenant		15.1
pyrene		21.6
THC		43506
PCB28		<0.08
PCB52		<0.08
PCB101		<0.08
PCB118		<0.08
PCB138		<0.08
PCB153		0.08
PCB18		
PCB105		
PCB110		
PCB128		
PCB141		
PCB149		
PCB151		
PCB156		
PCB158		
PCB170		
PCB180		<0.08
PCB183		
PCB187		
PCB194		
PCB31		
PCB44		
PCB47		
PCB49		
PCB66		
ICES7		<0.56
AHCH		<0.1
BHCH		<0.1
GHCH		<0.1
DIELDRIN		0.12
HCB		<0.1
DDE		0.1
DDT		<0.1
TDE		<0.1
BDE100		<0.05
BDE138		<0.05
BDE153		<0.05
BDE154		<0.05
BDE17		<0.05
BDE183		0.05
BDE209		2.29
BDE28		<0.05
BDE47		0.07
BDE66		<0.05
BDE85		<0.05
BDE99		<0.05

Comments:

Laboratory Details

Explanatory Notes:
Please complete a separate worksheet for each laboratory (e.g. complete 'Laboartory_1' worksheet for 1 laboratory and complete 'Laboartory_2' worksheet for a second laboratory). If there are more than 3 laboratories then please contact MD-LOT.

Laboratory 1 Details:

Laboratory name:	SOCOTEC
Year:	2025

LabRefMat	**Q1**	Does the laboratory carrying out the analyses undertake the analysis of blank	Yes
CompAnal	**Q2**	Does the laboratory carrying out the analyses undertake periodic	Yes
QAQC	**Q3**	Does the laboratory carrying out the analyses undertake the compilation of	Yes
InterlabCaleb	**Q4**	Does the laboratory carrying out the analyses undertake periodic	Yes
InternatCaleb	**Q5**	Does the laboratory carrying out the analyses undertake periodic	Yes
SpikedSamples	**Q6**	If the answer to questions 4 or 5 is 'Yes' then does the laboratory analyse	Yes
BlindSamples	**Q7**	If the answer to questions 4 or 5 is 'Yes' then does the laboratory confirm	Yes
Ranking	**Q8**	If the answer to questions 4 or 5 is 'Yes' then does the laboratory confirm	Yes
FracAnal	**Q9**	Enter the size fraction that is analysed i.e. Whole or less than 63µm etc.	<63um(metals)
GranMeth	**Q10**	PSA method	Distribution by wet & dry sieving and laser detraction
OCMeth	**Q11**	Organic Carbon method	Carbonate removal and sulfurous acid/combustion at 1600°C/NDIR,
MetExtrType	**Q12**	Method of extraction used for metal analysis	Aquaregia
MethOfDetMetals	**Q13**	Method of detection used for metal analysis	ICP-MS
PAHExtrType	**Q14**	Method of extraction used for poly aromatic hydrocarbon analysis	Methanol/DCM solvent extraction with silica clean up and copper clean up stages
MethOfDetPAH	**Q15**	Method of detection used for poly aromatic hydrocarbons analysis	GCMS
OHExtrType	**Q16**	Method of extraction used for organohalogens inc PCBs, pesticides, flame	Ultrasonic acetone/hexane solvent extraction
MethOfDetOH	**Q17**	Method of detection used for organohalogens inc PCBs, pesticides, flame	GCMSMS
OTExtrType	**Q18**	Method of extraction used for organotin analysis	Derivatisation and solvent extraction
MethOfDetOT	**Q19**	Method of detection used for organotin analysis	GCMS

		LOD/LOQ	Precision (%)	Recovery (%)
mg/kg	Hg	0.01	4.2	100
	As	0.5	2.7	94
	Cd	0.04	3.6	99
	Cu	0.5	2.9	104
	Pb	0.5	3	101
	Zn	2	2.6	98
	Cr	0.5	3.1	99
	Ni	0.5	3.6	100
	TBT	0.001	12.62	50
	DBT	0.001	12.62	56
µg/kg	PCB28	0.08	12.56	63
	PCB31			
	PCB44			
	PCB47			
	PCB49			
	PCB52	0.08	6.999	103
	PCB66			
	PCB101	0.08	8.43	101
	PCB105			
	PCB110			
	PCB118	0.08	14.61	98
	PCB128			
	PCB138+163	0.08	12.93	90
	PCB141			
	PCB149			
	PCB151			
	PCB153	0.08	7.41	100
	PCB156			
	PCB158			
	PCB170			
	PCB180	0.08	9.85	94
	PCB183			
	PCB187			
	PCB194			
	DDE	0.1	8.2	80
	DDT	0.1	10.6	95
	DDD	0.1	11	54
	Dieldrin	0.1	10.8	88
	Lindane	0.1	8.5	107
	HCB	0.1	2.8	110
	BDE17	0.05	7.6	99
	BDE28	0.05	2.8	143
	BDE47	0.05	3.4	183
	BDE66	0.05	8.5	68
	BDE85	0.05	14.4	105
	BDE99	0.05	9.3	102
	BDE100	0.05	5.3	100
	BDE138	0.05	10.1	117
	BDE153	0.05	6.5	107
	BDE154	0.05	3.9	106
	BDE183	0.05	11	95
	BDE209	0.1	4.5	88
	ACENAPTH	1	6.68	61
	ACENAPHY	1	7.74	103
	ANTHRACN	1	4.95	65
	BAA	1	9.8	63
	BAP	1	9.07	53
	BBF	1	8.44	81
	BENZGHIP	1	13.46	67
	BEP			
	BKF	1	8.9	78
	C1N			
	C1PHEN			
	C2N			
	C3N			
	CHRYSENE	1	7.87	80
	DBENZAH	1	19.23	92
	FLUORENE	1	5.25	48
	FLUORANT	1	4.36	74
	INDPYR	1	17.1	66
	NAPTH	1	3.02	57
	PERYLENE			
	PHENANT	1	5.41	74
	PYRENE	1	4.29	64
	THC	100	N/A	97

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

SOCOTEC

Test Report ID MAR02674

Issue Version: 1

Customer: Causeway Geotech Ltd, 8 Drumahiskey Road, Ballymoney, County Antrim, BT53 7QL

Customer Reference: Peterhead Smith Quay Extension - Marine Scotland Analysis

Date Sampled: 12-May-25

Date Samples Received: 22-May-25

Test Report Date: 26-Jun-25

Condition of samples: Cold Satisfactory

Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation
The results reported relate only to the sample tested
The results apply to the sample as received

[Redacted]

Authorised by: Jane Colbourne

Position: Customer Service Specialist

UKAS TESTING
1252

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 MAR02674
Issue Version 1
Customer Reference Peterhead Smith Quay Extension - Marine Scotland Analysis

		Units	%	%	%	%	%	Mg/m3
		Method No	ASC/SOP/303	ASC/SOP/303	SUB_01*	SUB_01*	SUB_01*	SUB_02*
		Limit of Detection	0.2	0.2	N/A	N/A	N/A	N/A
		Accreditation	UKAS	UKAS	N	N	N	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Gravel (>2mm)**	**Sand (63-2000 µm)**	**Silt (<63 µm)**	**Particle Density**
VB101 (ES1 @ 0.00m)	MAR02674.001	Sediment	11.1	88.9	40.43	44.07	15.50	2.68
VB101 (ES3 @ 1.00m)	MAR02674.002	Sediment	10.2	89.8	22.08	50.58	27.35	2.67
VB101 (ES6 @ 2.40m)	MAR02674.003	Sediment	8.80	91.2	29.84	40.06	30.10	2.64
VB102 (ES1 @ 0.00m)	MAR02674.004	Sediment	14.7	85.3	49.21	37.87	12.92	2.68
VB102 (ES4 @ 1.50m)	MAR02674.005	Sediment	7.34	92.7	62.84	25.81	11.35	2.67
VB102 (ES7 @ 3.00m)	MAR02674.006	Sediment	7.77	92.2	12.32	31.83	55.85	2.49
GS101 (ES2 @ 0.00m)	MAR02674.007	Sediment	32.6	67.4	0.07	63.05	36.87	2.64
GS102 (ES2 @ 0.00m)	MAR02674.008	Sediment	29.6	70.4	0.06	57.66	42.28	2.65
GS103 (ES2 @ 0.00m)	MAR02674.009	Sediment	49.9	50.1	0.44	45.34	54.22	2.65
Reference Material (% Recovery)			N/A	N/A	N/A	N/A	N/A	N/A
QC Blank			N/A	N/A	N/A	N/A	N/A	N/A

* See Report Notes
NAD - No Asbestos Detected

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	MAR02674
Issue Version	1
Customer Reference	Peterhead Smith Quay Extension - Marine Scotland An

		Units	N/A	% M/M
		Method No	SUB_02*	WSLM59*
		Limit of Detection	N/A	0.02
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Asbestos**	**TOC**
VB101 (ES1 @ 0.00m)	MAR02674.001	Sediment	NAD	1.48
VB101 (ES3 @ 1.00m)	MAR02674.002	Sediment	NAD	0.09
VB101 (ES6 @ 2.40m)	MAR02674.003	Sediment	NAD	0.10
VB102 (ES1 @ 0.00m)	MAR02674.004	Sediment	NAD	0.18
VB102 (ES4 @ 1.50m)	MAR02674.005	Sediment	NAD	0.07
VB102 (ES7 @ 3.00m)	MAR02674.006	Sediment	NAD	0.12
GS101 (ES2 @ 0.00m)	MAR02674.007	Sediment	NAD	0.50
GS102 (ES2 @ 0.00m)	MAR02674.008	Sediment	NAD	0.54
GS103 (ES2 @ 0.00m)	MAR02674.009	Sediment	NAD	1.80
		Reference Material (% Recovery)	N/A	98
		QC Blank	N/A	<0.02

* See Report Notes

NAD - No Asbestos Detected

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 MAR02674
Issue Version 1
Customer Reference Peterhead Smith Quay Extension - Marine Scotland Analysis

		Units	mg/Kg (Dry Weight)							
		Method No	ICPMSS*							
		Limit of Detection	0.5	0.04	0.5	0.5	0.01	0.5	0.5	2
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic**	**Cadmium**	**Chromium**	**Copper**	**Mercury**	**Nickel**	**Lead**	**Zinc**
VB101 (ES1 @ 0.00m)	MAR02674.001	Sediment	1.2	0.07	10.7	8.1	<0.01	7.9	4.8	25.1
VB101 (ES3 @ 1.00m)	MAR02674.002	Sediment	1.2	0.08	9.4	10.4	<0.01	7.8	4.7	33.9
VB101 (ES6 @ 2.40m)	MAR02674.003	Sediment	1.0	0.11	3.4	7.8	<0.01	2.4	5.3	18.6
VB102 (ES1 @ 0.00m)	MAR02674.004	Sediment	1.5	0.09	11.8	11.9	<0.01	6.3	4.7	26.4
VB102 (ES4 @ 1.50m)	MAR02674.005	Sediment	4.4	0.14	4.0	11.0	<0.01	5.7	2.4	25.4
VB102 (ES7 @ 3.00m)	MAR02674.006	Sediment	5.5	0.13	2.4	3.9	<0.01	3.4	3.1	19.2
GS101 (ES2 @ 0.00m)	MAR02674.007	Sediment	5.0	0.12	15.8	10.8	0.03	9.7	7.1	35.6
GS102 (ES2 @ 0.00m)	MAR02674.008	Sediment	4.8	0.12	16.4	11.7	0.01	10.0	8.3	38.8
GS103 (ES2 @ 0.00m)	MAR02674.009	Sediment	7.5	0.24	24.5	37.9	0.03	15.9	16.7	85.7
Certified Reference Material SETOC 768 (% Recovery)			94	99	99	104	100	100	101	98
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 MAR02674
Issue Version 1
Customer Reference Peterhead Smith Quay Extension - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
VB101 (ES1 @ 0.00m)	MAR02674.001	Sediment	<1	<1
VB101 (ES3 @ 1.00m)	MAR02674.002	Sediment	<1	<1
VB101 (ES6 @ 2.40m)	MAR02674.003	Sediment	<1	<1
VB102 (ES1 @ 0.00m)	MAR02674.004	Sediment	<1	3.46
VB102 (ES4 @ 1.50m)	MAR02674.005	Sediment	<1	<1
VB102 (ES7 @ 3.00m)	MAR02674.006	Sediment	<1	<1
GS101 (ES2 @ 0.00m)	MAR02674.007	Sediment	<5	<5
GS102 (ES2 @ 0.00m)	MAR02674.008	Sediment	<5	<5
GS103 (ES2 @ 0.00m)	MAR02674.009	Sediment	<5	10.1
Certified Reference Material BCR-646 (% Recovery)			56	50
QC Blank			<1	<1

* 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 MAR02674
Issue Version 1
Customer Reference Peterhead Smith Quay Extension - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
VB101 (ES1 @ 0.00m)	MAR02674.001	Sediment	<1	<1	1.24	2.60	2.81	2.53
VB101 (ES3 @ 1.00m)	MAR02674.002	Sediment	<1	<1	<1	<1	<1	<1
VB101 (ES6 @ 2.40m)	MAR02674.003	Sediment	<1	<1	<1	<1	<1	<1
VB102 (ES1 @ 0.00m)	MAR02674.004	Sediment	3.14	2.09	6.43	11.2	14.5	13.3
VB102 (ES4 @ 1.50m)	MAR02674.005	Sediment	<1	<1	<1	<1	<1	<1
VB102 (ES7 @ 3.00m)	MAR02674.006	Sediment	<1	<1	<1	<1	<1	<1
GS101 (ES2 @ 0.00m)	MAR02674.007	Sediment	5.81	3.35	12.0	30.4	36.4	30.4
GS102 (ES2 @ 0.00m)	MAR02674.008	Sediment	5.13	3.07	8.57	24.5	27.5	28.5
GS103 (ES2 @ 0.00m)	MAR02674.009	Sediment	11.0	8.21	32.0	67.9	74.6	69.3
Certified Reference Material Nist 1941b (% Recovery)			61	103	65	63	53	81
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.
*See report notes

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	MAR02674
Issue Version	1
Customer Reference	Peterhead Smith Quay Extension - Marine Scotland An

		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**	**BENZGHIP**	**BKF***	**CHRYSENE ***	**DBENZAH**	**FLUORANT**	**FLUORENE**
VB101 (ES1 @ 0.00m)	MAR02674.001	Sediment	2.30	2.11	3.05	<1	4.17	<1
VB101 (ES3 @ 1.00m)	MAR02674.002	Sediment	<1	<1	<1	<1	<1	<1
VB101 (ES6 @ 2.40m)	MAR02674.003	Sediment	<1	<1	<1	<1	<1	<1
VB102 (ES1 @ 0.00m)	MAR02674.004	Sediment	12.2	12.1	14.5	2.11	16.9	5.96
VB102 (ES4 @ 1.50m)	MAR02674.005	Sediment	<1	<1	<1	<1	<1	<1
VB102 (ES7 @ 3.00m)	MAR02674.006	Sediment	<1	<1	<1	<1	<1	<1
GS101 (ES2 @ 0.00m)	MAR02674.007	Sediment	22.7	31.9	33.2	4.27	56.4	5.99
GS102 (ES2 @ 0.00m)	MAR02674.008	Sediment	23.8	27.0	30.7	3.96	49.1	5.75
GS103 (ES2 @ 0.00m)	MAR02674.009	Sediment	59.7	66.7	72.3	11.2	133	17.7
Certified Reference Material Nist 1941b (% Recovery)			67	78	80	92	74	48
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries

~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.

As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.

*See report notes

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	MAR02674
Issue Version	1
Customer Reference	Peterhead Smith Quay Extension - Marine Scotland An

		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	UKAS	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**INDPYR**	**NAPTH**	**PHENANT**	**PYRENE**	**THC**
VB101 (ES1 @ 0.00m)	MAR02674.001	Sediment	1.59	1.29	6.66	5.98	29900
VB101 (ES3 @ 1.00m)	MAR02674.002	Sediment	<1	<1	<1	<1	9650
VB101 (ES6 @ 2.40m)	MAR02674.003	Sediment	<1	<1	<1	<1	2530
VB102 (ES1 @ 0.00m)	MAR02674.004	Sediment	10.2	21.0	29.5	26.6	62900
VB102 (ES4 @ 1.50m)	MAR02674.005	Sediment	<1	<1	<1	<1	4040
VB102 (ES7 @ 3.00m)	MAR02674.006	Sediment	<1	<1	<1	<1	3280
GS101 (ES2 @ 0.00m)	MAR02674.007	Sediment	25.0	7.82	39.0	60.7	72200
GS102 (ES2 @ 0.00m)	MAR02674.008	Sediment	24.3	7.33	34.5	54.7	95100
GS103 (ES2 @ 0.00m)	MAR02674.009	Sediment	60.5	15.6	99.3	165	355000
Certified Reference Material Nist 1941b (% Recovery)			66	57	74	64	97~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries

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As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.

*See report notes

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 MAR02674
Issue Version 1
Customer Reference Peterhead Smith Quay Extension - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB180**
VB101 (ES1 @ 0.00m)	MAR02674.001	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
VB101 (ES3 @ 1.00m)	MAR02674.002	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
VB101 (ES6 @ 2.40m)	MAR02674.003	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
VB102 (ES1 @ 0.00m)	MAR02674.004	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
VB102 (ES4 @ 1.50m)	MAR02674.005	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
VB102 (ES7 @ 3.00m)	MAR02674.006	Sediment	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
GS101 (ES2 @ 0.00m)	MAR02674.007	Sediment	0.09	<0.08	<0.08	<0.08	<0.08	0.10	<0.08
GS102 (ES2 @ 0.00m)	MAR02674.008	Sediment	<0.08	<0.08	<0.08	<0.08	0.08	<0.08	0.09
GS103 (ES2 @ 0.00m)	MAR02674.009	Sediment	0.15	0.15	0.14	0.22	0.14	0.28	0.11
Certified Reference Material Nist 1941b (% Recovery)			63	103	101	98	90	100	94
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
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Issuing Laboratory SOCOTEC, Marine Department, Advanced Chemistry and Research, Etwall House, Bretby Business Park, Ashby Road, Burton-upon-Trent DE15 0YZ

Test Report ID MAR02674
Issue Version 1
Customer Reference Peterhead Smith Quay Extension - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
VB101 (ES1 @ 0.00m)	MAR02674.001	Sediment	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	0.10	<0.1
VB101 (ES3 @ 1.00m)	MAR02674.002	Sediment	<0.1	<0.1	<0.1	<0.1	0.10	<0.1	0.14	<0.1
VB101 (ES6 @ 2.40m)	MAR02674.003	Sediment	<0.1	<0.1	<0.1	0.17	<0.1	<0.1	<0.1	<0.1
VB102 (ES1 @ 0.00m)	MAR02674.004	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
VB102 (ES4 @ 1.50m)	MAR02674.005	Sediment	<0.1	<0.1	<0.1	0.22	<0.1	<0.1	<0.1	<0.1
VB102 (ES7 @ 3.00m)	MAR02674.006	Sediment	<0.1	<0.1	<0.1	0.24	<0.1	<0.1	<0.1	<0.1
GS101 (ES2 @ 0.00m)	MAR02674.007	Sediment	<0.1	<0.1	<0.1	0.21	<0.1	0.16	<0.1	<0.1
GS102 (ES2 @ 0.00m)	MAR02674.008	Sediment	<0.1	<0.1	<0.1	0.12	<0.1	<0.1	0.12	<0.1
GS103 (ES2 @ 0.00m)	MAR02674.009	Sediment	<0.1	<0.1	0.12	<0.1	<0.1	0.36	<0.1	0.16
Certified Reference Material Nist 1941b (% Recovery)			97~	87~	107~	88~	110	80	95~	54
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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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 MAR02674
Issue Version 1
Customer Reference Peterhead Smith Quay Extension - Marine Scotland Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.05
		Accreditation	UKAS	UKAS	N*	UKAS	UKAS	N*
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 17**	**PBDE 28**	**PBDE 47**	**PBDE 66**	**PBDE 100**	**PBDE 99**
VB101 (ES1 @ 0.00m)	MAR02674.001	Sediment	<0.05	<0.05	0.07	<0.05	<0.05	<0.05
VB101 (ES3 @ 1.00m)	MAR02674.002	Sediment	<0.05	<0.05	0.12	<0.05	<0.05	<0.05
VB101 (ES6 @ 2.40m)	MAR02674.003	Sediment	<0.05	<0.05	0.07	<0.05	<0.05	<0.05
VB102 (ES1 @ 0.00m)	MAR02674.004	Sediment	<0.05	<0.05	0.19	<0.05	<0.05	<0.05
VB102 (ES4 @ 1.50m)	MAR02674.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
VB102 (ES7 @ 3.00m)	MAR02674.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
GS101 (ES2 @ 0.00m)	MAR02674.007	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
GS102 (ES2 @ 0.00m)	MAR02674.008	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
GS103 (ES2 @ 0.00m)	MAR02674.009	Sediment	<0.05	<0.05	0.09	<0.05	<0.05	0.07
Certified Reference Material Quasimeme SED56(% Recovery)			99~	143	183	68~	100~	102~
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

* See Report Notes

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		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308	ASC/SOP/308
		Limit of Detection	0.05	0.05	0.05	0.05	0.05	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PBDE 85**	**PBDE 154**	**PBDE 153**	**PBDE 138**	**PBDE 183**	**PBDE 209**
VB101 (ES1 @ 0.00m)	MAR02674.001	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1.9
VB101 (ES3 @ 1.00m)	MAR02674.002	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1.9
VB101 (ES6 @ 2.40m)	MAR02674.003	Sediment	<0.05	<0.05	<0.05	<0.05	0.11	<1.9
VB102 (ES1 @ 0.00m)	MAR02674.004	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1.9
VB102 (ES4 @ 1.50m)	MAR02674.005	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1.9
VB102 (ES7 @ 3.00m)	MAR02674.006	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	<1.9
GS101 (ES2 @ 0.00m)	MAR02674.007	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	4.09
GS102 (ES2 @ 0.00m)	MAR02674.008	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	2.93
GS103 (ES2 @ 0.00m)	MAR02674.009	Sediment	<0.05	<0.05	<0.05	<0.05	<0.05	11.1
Certified Reference Material Quasimeme SED56(% Recovery)			105~	106~	107~	117~	95	88
QC Blank			<0.05	<0.05	<0.05	<0.05	<0.05	<1.9*

* 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 MAR02674
Issue Version 1
Customer Reference Peterhead Smith Quay Extension - Marine Scotland Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
WSLM59*	MAR02674.001-009	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
ICPMSS*	MAR02674.001-009	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SUB_01*	MAR02674.001-009	Analysis was conducted by an approved subcontracted laboratory.
SUB_02*	MAR02674.001-009	Analysis was conducted by an approved subcontracted laboratory.
ASC/SOP/301	MAR02674.007-009	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/303/304	MAR02674.001-009	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.
ASC/SOP/303/304	MAR02674.001-009	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	MAR02674.001-009	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 (BDE47, BDE99) . These circumstances should be taken into consideration when utilising the data.
ASC/SOP/308	MAR02674.001-009	Benzo[k]fluoranthene is known to coelute with Benzo[j]fluoranthene and these peaks can not be resolved. It is believed Benzo[j]fluoranthene is present in these samples therefore it is suggested that the Benzo[k]fluoranthene results should be taken as a Benzo[k]fluoranthene (inc. Benzo[j]fluoranthene). Benzo[j]fluoranthene is not UKAS accredited. This should be taken into consideration when utilising the data.

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

Certificate of Analysis

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Test Report ID	MAR02674
Issue Version	1
Customer Reference	Peterhead Smith Quay Extension - Marine Scotland Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Particle Size Analysis	Wet Sediment	Wet and dry sieving followed by laser diffraction analysis.
Total Organic Carbon (TOC)	Air dried and ground	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Metals	Air dried and seived to <63µm	Aqua-regia extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Brominated Flame Retardants (PBDEs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions

Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

Aperture	MAR02674.001	MAR02674.002	MAR02674.003	MAR02674.004	MAR02674.005	MAR02674.006	MAR02674.007	MAR02674.008	MAR02674.009
63000.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45000.000	0.000	0.000	0.000	19.793	0.000	0.000	0.000	0.000	0.000
31500.000	0.000	0.000	0.000	0.000	12.003	0.000	0.000	0.000	0.000
22400.000	4.854	0.000	0.000	0.000	3.220	0.000	0.000	0.000	0.000
16000.000	0.000	1.248	7.661	1.565	1.475	0.000	0.000	0.000	0.000
11200.000	1.175	2.789	3.947	1.098	2.812	1.221	0.000	0.000	0.006
8000.000	4.814	0.812	4.509	0.760	3.383	3.607	0.000	0.000	0.000
5600.000	5.243	2.433	3.880	3.289	4.448	2.039	0.000	0.000	0.126
4000.000	7.555	2.923	3.518	5.719	8.413	1.800	0.000	0.000	0.157
2800.000	9.235	5.179	3.509	8.579	13.413	2.146	0.025	0.041	0.071
2000.000	7.555	6.692	2.813	8.408	13.676	1.508	0.048	0.018	0.080
1400.000	6.715	7.992	4.104	8.026	10.302	2.146	0.062	0.048	0.111
1000.000	4.973	5.134	3.227	5.902	5.035	1.639	0.058	0.034	0.092
707.000	2.677	4.733	3.499	3.620	1.971	1.435	0.000	0.000	0.429
500.000	3.731	2.332	3.775	2.870	2.296	2.961	0.177	0.064	0.085
353.600	5.903	6.060	5.757	2.712	1.494	4.047	1.991	1.166	2.483
250.000	4.340	5.937	5.731	2.965	1.375	5.039	3.017	2.568	5.295
176.800	4.977	5.521	4.146	2.507	0.829	3.772	6.688	5.997	6.566
125.000	4.448	5.455	4.863	3.965	1.111	5.583	13.368	11.719	8.015
88.390	3.265	3.794	2.914	2.764	1.020	3.095	19.521	18.018	10.070
62.500	3.041	3.621	2.043	2.543	0.378	2.109	18.170	18.048	12.190
44.190	2.733	3.655	3.059	2.274	0.991	3.674	10.814	11.773	11.420
31.250	2.255	3.473	2.858	1.730	1.140	4.034	5.635	6.535	8.609
22.097	1.773	3.064	2.230	1.356	1.009	3.292	3.751	4.349	6.308
15.625	1.371	2.785	2.068	1.041	0.858	3.676	3.207	3.646	5.307
11.049	1.112	2.297	1.593	0.862	0.710	3.829	3.070	3.546	5.105
7.813	1.067	2.035	1.548	0.956	0.862	3.533	2.750	3.287	4.779
5.524	1.039	2.043	2.290	1.004	0.969	5.063	2.244	2.736	4.066
3.906	0.889	1.805	2.642	0.873	0.894	5.938	1.565	1.918	2.911
2.762	0.668	1.323	2.143	0.651	0.672	4.638	0.956	1.156	1.768
1.953	0.487	0.915	1.721	0.468	0.525	3.146	0.535	0.626	0.930
1.381	0.409	0.760	1.697	0.382	0.514	2.687	0.343	0.390	0.531
0.977	0.373	0.702	1.531	0.331	0.499	2.392	0.297	0.339	0.415
0.691	0.331	0.624	1.193	0.276	0.437	2.044	0.301	0.349	0.402
0.488	0.281	0.529	0.943	0.220	0.369	1.904	0.305	0.355	0.394
0.345	0.229	0.431	0.805	0.169	0.307	1.862	0.291	0.339	0.363
0.244	0.179	0.338	0.676	0.125	0.240	1.645	0.262	0.304	0.312
0.173	0.130	0.243	0.494	0.086	0.163	1.174	0.215	0.249	0.245
0.122	0.093	0.174	0.340	0.059	0.106	0.761	0.169	0.195	0.185
0.086	0.057	0.106	0.196	0.036	0.058	0.407	0.110	0.127	0.118
	0.025	0.045	0.079	0.016	0.023	0.153	0.053	0.061	0.055

Aperture	MAR02674.001	MAR02674.002	MAR02674.003	MAR02674.004	MAR02674.005	MAR02674.006	MAR02674.007	MAR02674.008	MAR02674.009
63000.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45000.000	0.000	0.000	0.000	19.793	0.000	0.000	0.000	0.000	0.000
31500.000	0.000	0.000	0.000	0.000	12.003	0.000	0.000	0.000	0.000
22400.000	4.854	0.000	0.000	0.000	3.220	0.000	0.000	0.000	0.000
16000.000	0.000	1.248	7.661	1.565	1.475	0.000	0.000	0.000	0.000
11200.000	1.175	2.789	3.947	1.098	2.812	1.221	0.000	0.000	0.006
8000.000	4.814	0.812	4.509	0.760	3.383	3.607	0.000	0.000	0.000
5600.000	5.243	2.433	3.880	3.289	4.448	2.039	0.000	0.000	0.126
4000.000	7.555	2.923	3.518	5.719	8.413	1.800	0.000	0.000	0.157
2800.000	9.235	5.179	3.509	8.579	13.413	2.146	0.025	0.041	0.071
2000.000	7.555	6.692	2.813	8.408	13.676	1.508	0.048	0.018	0.080
1400.000	6.715	7.992	4.104	8.026	10.302	2.146	0.062	0.048	0.111
1000.000	4.973	5.134	3.227	5.902	5.035	1.639	0.058	0.034	0.092
707.000	2.677	4.733	3.499	3.620	1.971	1.435	0.000	0.000	0.429
500.000	3.731	2.332	3.775	2.870	2.296	2.961	0.177	0.064	0.085
353.600	5.903	6.060	5.757	2.712	1.494	4.047	1.991	1.166	2.483
250.000	4.340	5.937	5.731	2.965	1.375	5.039	3.017	2.568	5.295
176.800	4.977	5.521	4.146	2.507	0.829	3.772	6.688	5.997	6.566
125.000	4.448	5.455	4.863	3.965	1.111	5.583	13.368	11.719	8.015
88.390	3.265	3.794	2.914	2.764	1.020	3.095	19.521	18.018	10.070
62.500	3.041	3.621	2.043	2.543	0.378	2.109	18.170	18.048	12.190
44.190	2.733	3.655	3.059	2.274	0.991	3.674	10.814	11.773	11.420
31.250	2.255	3.473	2.858	1.730	1.140	4.034	5.635	6.535	8.609
22.097	1.773	3.064	2.230	1.356	1.009	3.292	3.751	4.349	6.308
15.625	1.371	2.785	2.068	1.041	0.858	3.676	3.207	3.646	5.307
11.049	1.112	2.297	1.593	0.862	0.710	3.829	3.070	3.546	5.105
7.813	1.067	2.035	1.548	0.956	0.862	3.533	2.750	3.287	4.779
5.524	1.039	2.043	2.290	1.004	0.969	5.063	2.244	2.736	4.066
3.906	0.889	1.805	2.642	0.873	0.894	5.938	1.565	1.918	2.911
2.762	0.668	1.323	2.143	0.651	0.672	4.638	0.956	1.156	1.768
1.953	0.487	0.915	1.721	0.468	0.525	3.146	0.535	0.626	0.930
1.381	0.409	0.760	1.697	0.382	0.514	2.687	0.343	0.390	0.531
0.977	0.373	0.702	1.531	0.331	0.499	2.392	0.297	0.339	0.415
0.691	0.331	0.624	1.193	0.276	0.437	2.044	0.301	0.349	0.402
0.488	0.281	0.529	0.943	0.220	0.369	1.904	0.305	0.355	0.394
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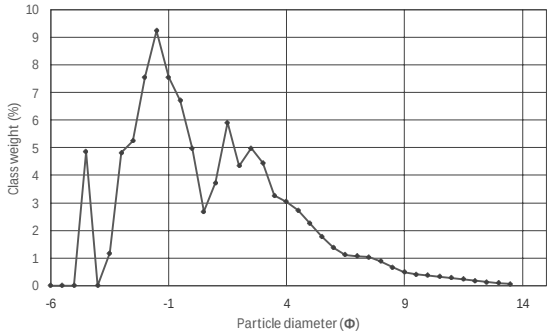
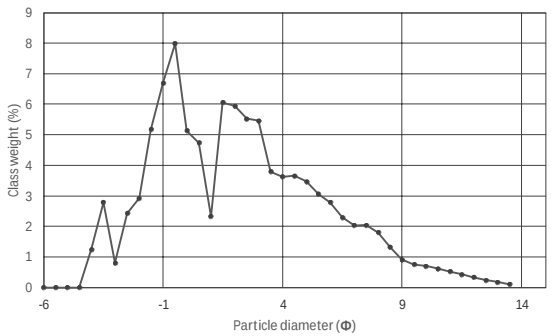
0.244	0.179	0.338	0.676	0.125	0.240	1.645	0.262	0.304	0.312
0.173	0.130	0.243	0.494	0.086	0.163	1.174	0.215	0.249	0.245
0.122	0.093	0.174	0.340	0.059	0.106	0.761	0.169	0.195	0.185
0.086	0.057	0.106	0.196	0.036	0.058	0.407	0.110	0.127	0.118
	0.025	0.045	0.079	0.016	0.023	0.153	0.053	0.061	0.055

Sample ID	Treatment	Textural Group Classification	Folk and Ward Description	Folk and Ward Sorting	Mean µm	Mean phi	Sorting Coefficient	Skewness	Kurtosis	Major Sediment Fractions		
										% Gravel	% Sand	% Mud
MAR02674.001	Sediment	msG: Muddy Sandy Gravel	Coarse Sand	Very Poorly Sorted	754.842723	0.4057519	3.273718664	0.3051119	0.9899819	40.43%	44.07%	15.50%
MAR02674.002	Sediment	gmS: Gravelly Muddy Sand	Medium Sand	Very Poorly Sorted	255.385571	1.9692515	3.517094185	0.1652559	0.9116927	22.08%	50.58%	27.35%
MAR02674.003	Sediment	gmS: Gravelly Muddy Sand	Medium Sand	Extremely Poorly Sorted	272.111709	1.8777284	4.677020692	0.1568390	0.8689049	29.84%	40.06%	30.10%
MAR02674.004	Sediment	msG: Muddy Sandy Gravel	Very Fine Gravel	Extremely Poorly Sorted	2062.075999	-1.0441070	4.170217701	0.0978049	1.1142918	49.21%	37.87%	12.92%
MAR02674.005	Sediment	msG: Muddy Sandy Gravel	Very Fine Gravel	Very Poorly Sorted	2617.033456	-1.3879298	3.358825126	0.2162863	2.1212910	62.84%	25.81%	11.35%
MAR02674.006	Sediment	gM: Gravelly Mud	Very Coarse Silt	Extremely Poorly Sorted	43.345097	4.5279873	4.374985299	-0.0839799	0.9297174	12.32%	31.83%	55.85%
MAR02674.007	Sediment	(g)mS: Slightly Gravelly Muddy Sand	Very Fine Sand	Poorly Sorted	64.096911	3.9636014	1.601891429	0.3657615	1.4485266	0.07%	63.05%	36.87%
MAR02674.008	Sediment	(g)mS: Slightly Gravelly Muddy Sand	Very Coarse Silt	Poorly Sorted	55.147615	4.1805577	1.685186549	0.3889434	1.2952526	0.06%	57.66%	42.28%
MAR02674.009	Sediment	(g)sM: Slightly Gravelly Sandy Mud	Very Coarse Silt	Very Poorly Sorted	45.540011	4.4567216	2.027076682	0.2100246	0.9986994	0.44%	45.34%	54.22%

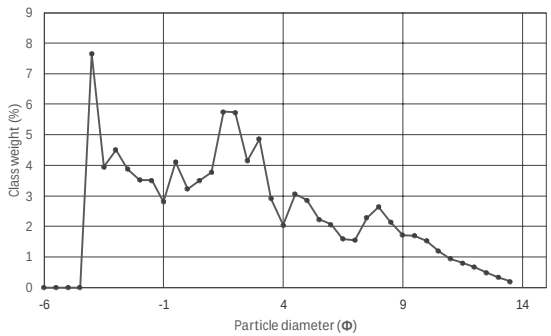
MAR02674.001



MAR02674.002



MAR02674.003



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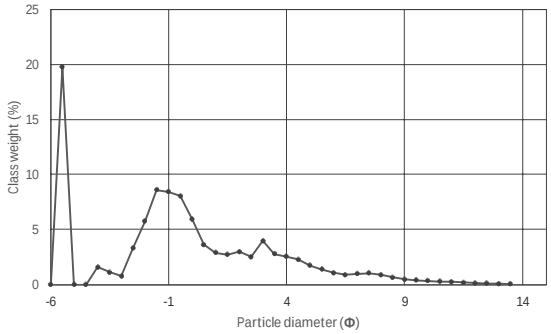

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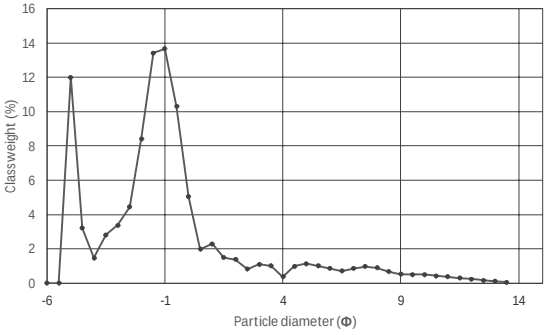

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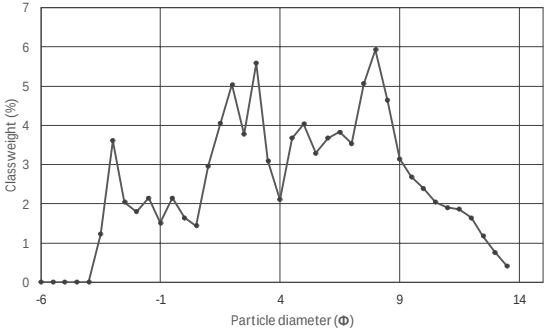

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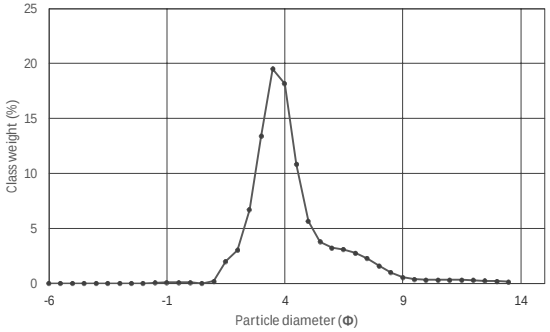

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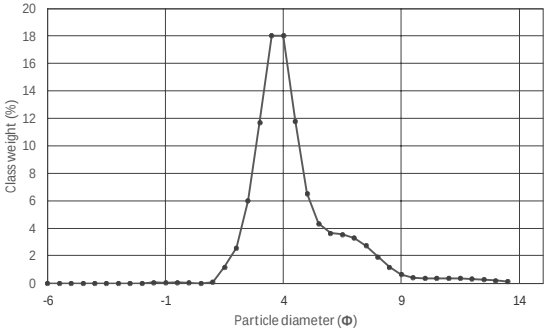

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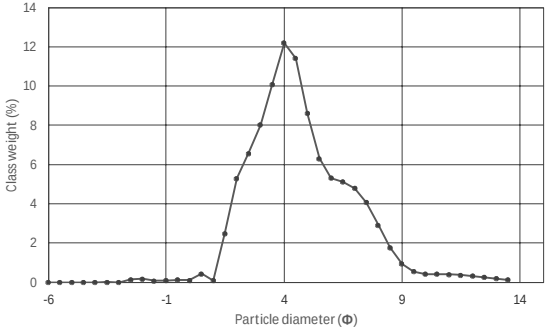

Appendix C: Marine Directorate Action Levels

Contaminant	Action Level 1 mg/kg dry weight (ppm)	Action Level 2 mg/kg dry weight (ppm)
Arsenic (As)	20	70
Cadmium (Cd)	0.4	4
Chromium (Cr)	50	370
Copper (Cu)	30	300
Lead (Pb)	50	400
Mercury (Hg)	0.25	1.5
Nickel (Ni)	30	150
Zinc (Zn)	130	600
Tributyltin (TBT)	0.1	0.5
Polychlorinated Biphenyls	0.02	0.18
Polyaromatic Hydrocarbons		
Acenaphthene	0.1	-
Acenaphthylene	0.1	-
Anthracene	0.1	-
Fluorene	0.1	-
Naphthalene	0.1	-
Phenanthrene	0.1	-
Benzo[a]anthracene	0.1	-
Benzo[b]fluoranthene	0.1	-
Benzo[k]fluoranthene	0.1	-
Benzo[a]pyrene	0.1	-
Benzo[g,h,i]perylene	0.1	-

Contaminant	Action Level 1 mg/kg dry weight (ppm)	Action Level 2 mg/kg dry weight (ppm)
Dibenzo[a,h]anthracene	0.01	-
Chrysene	0.1	-
Fluoranthene	0.1	-
Pyrene	0.1	-
Indeno(1,2,3cd)pyrene	0.1	-
Total hydrocarbons	100	-

Appendix D: Consultation Responses

Northern Lighthouse Board

84 George Street
Edinburgh EH2 3DA

Tel: 0131 473 3100
Fax: 0131 220 2093

Website: www.nlb.org.uk
Email: enquiries@nlb.org.uk

Your Ref: Email dated 14/07/25
Our Ref: GB/ML/P2_01_090

Arhontia Athanasiou
Senior Project Manager (Marine)
Pentlands Science Park
Bush Loan
Penicuik
Midlothian
EH26 0PL

31 July 2025

PETERHEAD PORT AUTHORITY: PETERHEAD PORT – DREDGE SPOIL DISPOSAL

Thank you for your e-mail correspondence dated 14th July 2025 regarding the proposal by Peterhead Port Authority for dredging and disposal operations at Peterhead Port, Peterhead.

Northern Lighthouse Board has no objections to the proposed dredging and/ or disposal of dredged spoil to the charted and approved spoil ground at North Buchan Ness (CR080) and possible beach nourishment, we will respond formally to the Marine Licence application, however we would advise the following:

- **Peterhead Port Authority** issue marine safety information as considered appropriate prior to the commencement of each dredge campaign.
- **Peterhead Port Authority** advise the UK Hydrographic Office (sdr@ukho.gov.uk) of any revised water depths in order that chart updates are completed.

Yours sincerely
[Redacted]

Peter Douglas
Navigation Manager

Arhontia Athanasiou (AATH)

From: Lynn Campbell [Redacted] on behalf of Harbours Admin <harboursadmin@aberdeenshire.gov.uk>
Sent: 23 July 2025 09:36
To: Arhontia Athanasiou (AATH)
Cc: Oliver Deeming; Kenneth Regan; Simon Jessel; Gavin Penman
Subject: RE: Peterhead dredged material use consultation

Good Morning

Aberdeenshire council has No plans within the next 12-18 months for beach nourishment in the area where the dredged sediment from Peterhead Bay Marine could be used.

Kind Regards

Lynn Campbell
Technical Assistant - Harbours
Environment & Infrastructure Services
Aberdeenshire Council
St Leonards
Sandyhill Road
Banff
AB45 1BH

☎: 01467 539079
☎: [Redacted]

💻: [Redacted]

Web: www.aberdeenshireharbours.gov.uk
Follow us at:

From: Kenneth Regan [Redacted]
Sent: 23 July 2025 09:26
To: Harbours Admin <harboursadmin@aberdeenshire.gov.uk>
Subject: FW: Peterhead dredged material use consultation
Importance: High

Lynn

I'd sent this to Simon but got his out of office and thought I'd check to see whether anyone else in the harbours team might have knowledge of this project .

If so can you pass this onto them and ask that they respond to the enquire copying Oli Deeming in please.

Thanks

Ken Regan
Principal Landscape Services Officer
Environment and Sustainability
Aberdeenshire Council

Tel 01467 530633

[Redacted]

Find us on Facebook: **@AberdeenshireGreenspace**

From: Kenneth Regan
Sent: 23 July 2025 09:07
To: Oliver Deeming [Redacted] ; Simon Jessel [Redacted]
Cc: Alexander Scott [Redacted]
Subject: FW: Peterhead dredged material use consultation
Importance: High

Oli / Simon

I'm not sure whether you have been involved with this project or not, but it appears this company are looking for options, from the council for material taken out of the harbour.

As its not in my area, I've not been involved with any part of this project but one of you might know more and can answer their question.

Thanks

Ken

Ken Regan
Principal Landscape Services Officer
Environment and Sustainability
Aberdeenshire Council

Tel 01467 530633

[Redacted]

Find us on Facebook: **@AberdeenshireGreenspace**

From: Paul Jackson [Redacted] On Behalf Of Landscape.Services
Sent: 23 July 2025 08:35
To: Kenneth Regan [Redacted]
Subject: FW: Peterhead dredged material use consultation
Importance: High

Morning Ken

Are we aware of / able to assist the below enquiry ?

If not any idea who within the council this could be directed to ?

Paul

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: 21 July 2025 14:30
To: Landscape.Services <landscape.services@aberdeenshire.gov.uk>
Cc: Meghan Rochford (MERO) <MERO@niras.com>
Subject: FW: Peterhead dredged material use consultation
Importance: High

> You don't often get email from aath@niras.com. Learn why this is important

Good afternoon,

I believe your colleagues from Environmental Health had forwarded you our request regarding potential use of dredged material.

We would greatly appreciate your advice on the proposed disposal options and whether or not the council has plans within the next 12-18 months for beach nourishment in the area where the dredged sediment from Peterhead Bay Marine could be used.

We have been in touch with Crown Estate Scotland on the matter, and they also await for your advice.

Your timely response would be greatly appreciated. Thank you very much for your assistance.

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Senior Project Manager (Marine)

NIRAS

Pentlands Science Park, Bush Loan,
Penicuik, Nr. Edinburgh EH26 0PL
Scotland
www.niras.com

[Redacted]
T: +44 131 440 550

Follow us on:

From: Sharon Taylor [Redacted] On Behalf Of Environmental
Sent: 14 July 2025 08:43
To: Arhontia Athanasiou (AATH) [Redacted]
Subject: FW: Peterhead dredged material use consultation

Good morning

Thank you for contacting Environmental Health.

Unfortunately there would be no remit for our team but we have passed it onto our Landscapes Services Team for their information / response.

For information, their contact details are as follows:
Telephone: 03456 08 12 05
Email: landscapeservices@aberdeenshire.gov.uk

Please could you also forward the information onto SEPA (Scottish Environment Protection Agency) on the following details:
General enquiry telephone number: 0300 099 6699 Monday (Friday 8am -6pm) or via their online reporting form - https://www2.sepa.org.uk/EnvironmentalEvents

Please could you also forward the information onto Nature Scot
Tel No: 01463 725000 or via email: ENQUIRIES@Nature.scot

We could pass these details on with your consent

Best Regards

Environmental Health,
Aberdeenshire Council, Environment and Infrastructure, Planning & Economy
Protective Services (Environmental Health & Trading Standards)
Tel: 01467 539039
www.aberdeenshire.gov.uk

Environmental Health privacy notices – Aberdeenshire Council

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: 11 July 2025 15:16
To: Environmental <environmental@aberdeenshire.gov.uk>
Cc: Meghan Rochford (MERO) <MERO@niras.com>
Subject: Peterhead dredged material use consultation

> Please refer SU to SEPA for the disposal of wastes.and Nature Scot. for beach nourishment.
> Pass to Landscape Serives also re beach nourishment.

Dear Aberdeenshire Council,

Peterhead Port Authority have requested that NIRAS Group (UK) Ltd conduct a best practicable environmental options (BPEO) assessment for proposed dredging works at three locations within the Peterhead Port area:

1. Smith Quay;

2. Port Henry; and
3. Peterhead Bay Marina.

As part of this process, we are seeking to consult with your organisation to ensure all relevant information has been collected and used within the assessment. Dredging is currently planned for all three areas between January and May 2026.
Based on our preliminary assessment of sediment samples (results attached to this email for each location), sea disposal is the most likely method of disposal for Smith Quay and Port Henry due to grain size variation and small levels of PAHs and trace metals. The sea disposal location North Buchan Ness (CR080) has been identified as the closest and most suitable for these materials.
For the Bay Marina, other options are being considered, as well as sea disposal. One such option is beach nourishment. Could you please confirm if the council has plans within the next 12-18 months for beach nourishment in the area where this sediment could be used?

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Senior Project Manager (Marine)

NIRAS

Pentlands Science Park, Bush Loan,
Penicuik, Nr. Edinburgh EH26 0PL
Scotland
www.niras.com

[Redacted]
T: +44 131 440 550

Follow us on:

Dheathain.

www.aberdeenshire.gov.uk

Arhontia Athanasiou (AATH)

From: Gracey, Rachael [Redacted]
Sent: 17 July 2025 16:22
To: Arhontia Athanasiou (AATH)
Subject: RE: Peterhead dredged material use consultation

OFFICIAL

Hi Arhontia,

Thank you for your enquiry into proposed works at Peterhead Port Authority.

For dredging works and any engineering works on coastal and estuarine waters it is the remit of Marine Directorate (Formerly Marine Scotland).

Marine Directorate will be able to advise on the option for potential disposal to sea at North Buchan Ness (CR080): Marine environment: licensing and consenting requirements - gov.scot.

In terms of using the dredgings on land as beach nourishment this often requires materials of a similar composition to the existing beach materials and usually involves clean sand or gravel. There could be risk of contaminants as the material has come from a harbour, and you would need to demonstrate that material would be of appropriate physio-chemical and biological characteristics to be used for beach nourishment. The dredged material may be considered as waste but there is currently no waste exemption that covers this activity and so we would be unable to advise further on this project and would defer instead to Marine Directorate who should be able to comment. Their remit can depend on whether works are below or above Mean High Water Springs (MHWS).

There is some information at: Dredging | Scottish Environment Protection Agency (SEPA) however this generally applies to inland waters. The CAR regulations for engineering apply only to inland waters so it's unlikely you'll need any CAR authorisations from SEPA for this work.

NatureScot will be able to advise on whether proposed operations are located within or close to the boundaries of a conservation area such as a SSSI, SAC, SPA or Ramsar site.

You may also be required to consult the Local Authority Planning department: Planning and building - Aberdeenshire Council.

I would encourage you to speak with Marine Directorate though if you haven't already done so.

Many thanks,

Rachael

Rachael Gracey
Environment Protection Officer- Permitting
Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

[Redacted]

Shaw House I Mid Street I Fraserburgh I AB43 9JN

Postal address: Angus Smith Building I Unit 6, 4 Parklands Avenue I Holytown I Motherwell I ML1 4WQ

OFFICIAL

OFFICIAL

From: CB Permitting Water <waterpermitting@sepa.org.uk>
Sent: 14 July 2025 17:19
To: CB Permitting Waste <wastepermitting@sepa.org.uk>
Subject: FW: Peterhead dredged material use consultation

OFFICIAL

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: 14 July 2025 09:28
To: ENQUIRIES@Nature.scot; CB Permitting Water <waterpermitting@sepa.org.uk>
Cc: landscapeservices@aberdeenshire.gov.uk; [Redacted] Meghan Rochford (MERO) [Redacted] Andrew Walker (ACW) [Redacted]
Subject: FW: Peterhead dredged material use consultation

> CAUTION: This email originated from outside the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Good morning,

Peterhead Port Authority have requested that NIRAS Group (UK) Ltd conduct a best practicable environmental options (BPEO) assessment for proposed dredging works at three locations within the Peterhead Port area:

1. Smith Quay;
2. Port Henry; and
3. Peterhead Bay Marina.

As part of this process, we have reached out to Aberdeenshire Council and they have advised us to consult with your organisation to ensure all relevant information has been collected and used within the assessment. Dredging is currently planned for all three areas between January and May 2026.

Based on our preliminary assessment of sediment samples (results attached to this email for each location), sea disposal is the most likely method of disposal for Smith Quay and Port Henry due to grain size variation and small levels of PAHs and trace metals. The sea disposal location North Buchan Ness (CR080) has been identified as the closest and most suitable for these materials.
For the Bay Marina, other options are being considered, as well as sea disposal. One such option is beach nourishment, for which we are seeking advice from the council on whether there are plans within the next 12-18 months for beach nourishment in the area where this sediment could be used.

We would greatly appreciate your advice on the proposed disposal options mentioned above.

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Senior Project Manager (Marine)

NIRAS

Pentlands Science Park, Bush Loan,
Penicuik, Nr. Edinburgh EH26 0PL
Scotland
www.niras.com

[Redacted]
T: +44 131 440 5500
[Redacted]

Follow us on:

From: Sharon Taylor [Redacted] On Behalf Of Environmental
Sent: 14 July 2025 08:43
To: Arhontia Athanasiou (AATH) [Redacted]
Subject: FW: Peterhead dredged material use consultation

Good morning

Thank you for contacting Environmental Health.

Unfortunately there would be no remit for our team but we have passed it onto our Landscapes Services Team for their information / response.

For information, their contact details are as follows:
Telephone: 03456 08 12 05
Email: landscapeservices@aberdeenshire.gov.uk

Please could you also forward the information onto SEPA (Scottish Environment Protection Agency) on the following details:
General enquiry telephone number: 0300 099 6699 Monday (Friday 8am -6pm) or via their online reporting form - https://www2.sepa.org.uk/EnvironmentalEvents

Please could you also forward the information onto Nature Scot
Tel No: 01463 725000 or via email: ENQUIRIES@Nature.scot

We could pass these details on with your consent

Best Regards

Environmental Health,
Aberdeenshire Council, Environment and Infrastructure, Planning & Economy
Protective Services (Environmental Health & Trading Standards)
Tel: 01467 539039

www.aberdeenshire.gov.uk

Environmental Health privacy notices – Aberdeenshire Council

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: 11 July 2025 15:16
To: Environmental <environmental@aberdeenshire.gov.uk>
Cc: Meghan Rochford (MERO) [Redacted]
Subject: Peterhead dredged material use consultation

> Please refer SU to SEPA for the disposal of wastes.and Nature Scot. for beach nourishment.
> Pass to Landscape Serives also re beach nourishment.

Dear Aberdeenshire Council,

Peterhead Port Authority have requested that NIRAS Group (UK) Ltd conduct a best practicable environmental options (BPEO) assessment for proposed dredging works at three locations within the Peterhead Port area:

1. Smith Quay;
2. Port Henry; and
3. Peterhead Bay Marina.

As part of this process, we are seeking to consult with your organisation to ensure all relevant information has been collected and used within the assessment. Dredging is currently planned for all three areas between January and May 2026.
Based on our preliminary assessment of sediment samples (results attached to this email for each location), sea disposal is the most likely method of disposal for Smith Quay and Port Henry due to grain size variation and small levels of PAHs and trace metals. The sea disposal location North Buchan Ness (CR080) has been identified as the closest and most suitable for these materials.
For the Bay Marina, other options are being considered, as well as sea disposal. One such option is beach nourishment. Could you please confirm if the council has plans within the next 12-18 months for beach nourishment in the area where this sediment could be used?

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Senior Project Manager (Marine)

NIRAS

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T: +44 131 440 550

Follow us on:

Arhontia Athanasiou (AATH)

From: navigation safety <navigationsafety@mcga.gov.uk>
Sent: 17 July 2025 12:36
To: Arhontia Athanasiou (AATH)
Cc: Aberdeen Marine Office; Meghan Rochford (MERO)
Subject: RE: Peterhead dredged material use/disposal consultation

Dear Arhontia,

Thank you for the opportunity to comment on the Peterhead dredged material use/disposal consultation. The UK Technical Services Navigation team of the Maritime and Coastguard Agency has reviewed the documents received and would like to comment as follows:

We note that the works fall within the jurisdiction of a Statutory Harbour Authority (SHA) Peterhead Port Authority and therefore they are responsible for the safety of navigation within their waters.

The MCA confirms we have no objections to dredging on this occasion. This is on the understanding that all maritime safety legislation is adhered to.

Kind Regards

Sam Chudley

Marine Licence Advisor [Redacted]
Marine Licensing and Consenting
UK Technical Services Navigation [Redacted]

Maritime & Coastguard Agency

Maritime & Coastguard Agency
Bay 2/25, Spring Place
105 Commercial Road,
Southampton SO15 1EG

Safer Lives, Safer Ships, Cleaner Seas
www.gov.uk/mca

From: Aberdeen Marine Office <AberdeenMO@mcga.gov.uk>
Sent: 14 July 2025 14:12
To: navigation safety <navigationsafety@mcga.gov.uk>
Subject: FW: Peterhead dredged material use/disposal consultation

One for you?
Thanks
Cris

Cris Treacher +44 (0) 20390 85216
Business Support Manager +44 (0) 20 3817 200

UK Technical Maritime Services [Redacted]
UK Survey & Inspection

Maritime & Coastguard Agency
Marine House, Blaikie's Quay,
Aberdeen AB11 5EZ
MO Email: aberdeenmo@mcga.gov.uk
Fishing Vessels Under 15m:
aberdeen.fishing@mcga.gov.uk

Safer Lives, Safer Ships, Cleaner Seas
www.gov.uk/mca

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: 14 July 2025 10:18
To: Aberdeen Marine Office <AberdeenMO@mcga.gov.uk>; Aberdeen Marine Office <AberdeenMO@mcga.gov.uk>
Cc: Meghan Rochford (MERO) [Redacted]
Subject: Peterhead dredged material use/disposal consultation

Good morning,

Peterhead Port Authority have requested that NIRAS Group (UK) Ltd conduct a best practicable environmental options (BPEO) assessment for proposed dredging works at three locations within the Peterhead Port area:

1. Smith Quay;
2. Port Henry; and
3. Peterhead Bay Marina.

As part of this process, we would like to consult with your organisation to ensure all relevant information has been collected and used within the assessment. Dredging is currently planned for all three areas between January and May 2026.

Based on our preliminary assessment of sediment samples (results attached to this email for each location), sea disposal is the most likely method of disposal for Smith Quay and Port Henry due to grain size variation and small levels of PAHs and trace metals. The sea disposal location North Buchan Ness (CR080) has been identified as the closest and most suitable for these materials.
For the Bay Marina, other options are being considered, as well as sea disposal. One such option is beach nourishment, for which we are seeking advice from the council on whether there are plans within the next 12-18 months for beach nourishment in the area where this sediment could be used.

We would greatly appreciate your comments on the proposed disposal options mentioned above or any relevant information that you might hold.

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Senior Project Manager (Marine)

NIRAS

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T: +44 131 440 5500
[Redacted]

Follow us on:

Arhontia Athanasiou (AATH)

From: MD.MarineLicensing@gov.scot
Sent: 15 April 2025 11:53
To: Arhontia Athanasiou (AATH)
Subject: RE: Peterhead Port Authority (per NIRAS) - Peterhead Bay Marina and Port Henry Basin Dredging - Sampling Plan

Good Morning

Regarding your query.

The marine.gov.scot is the public website for all Marine Licence applications, including dredge activity.

You can search the system using geographical information i.e Peterhead which will detail all application relating to that location or using selected words such as “Dredge”, again this will result in all dredges.

The dredge applications detail the PR tab as per this example

Marine Licence Application - Capital Dredge and Sea Disposal - Hunterston Construction Yard, West Kilbride - 00010872 | marine.gov.scot

The restriction on the deposit of materials is normally identified through the AL levels. MD LOT would widely consult on any application to dredge, and our consultees may provide further information in respect of the deposit of the dredge material and any restrictions.

I trust the foregoing is helpful.

Kind regards, Maureen

Maureen McIntyre
Marine Licensing and Consenting Casework Officer
Licensing and Operations Team
Marine Directorate

My normal working days are Monday (morning only), Tuesday, Wednesday and Thursday. Friday - Non working day.

The Scottish Government

Website: Marine environment: licensing and consenting requirements - gov.scot (www.gov.scot)

Scottish Government
Riaghaltas na h-Alba

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To see how we use your personal data, please view our
Marine licensing and consenting: privacy notice - gov.scot (www.gov.scot)

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: 14 April 2025 16:14
To: MD Marine Licensing <MD.MarineLicensing@gov.scot>
Cc: Meghan Rochford (MERO) [Redacted]
Subject: RE: Peterhead Port Authority (per NIRAS) - Peterhead Bay Marina and Port Henry Basin Dredging - Sampling Plan

Good afternoon,

As part of BPEO drafting for the proposed Port Henry and Peterhead Bay Marina capital dredging we are looking into assessing against historic levels of contamination at the following two identified sea disposal sites; CR080 NORTH BUCHAN NESS, and CR070 PETERHEAD.

Could you kindly direct us to or share any available sediment data that MDLOT might hold? This data would greatly assist in informing the BPEO and establishing baseline conditions for these sea disposal sites.

Considering the locations of the identified sea disposal sites, are there any restrictions on the materials that can be disposed of at these two sites, beyond the standard Action levels? Finally, are there other limitations, such as seasonal restrictions, that we should be aware of?

Thank you in advance for your assistance.

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Marine Project Manager

NIRAS

Pentlands Science Park, Bush Loan,
Penicuik, Nr. Edinburgh EH26 0PL
Scotland
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T: +44 131 440 5500
[Redacted]

Follow us on:

From: MD.MarineLicensing@gov.scot <MD.MarineLicensing@gov.scot>
Sent: 23 September 2024 09:43
To: Arhontia Athanasiou (AATH) [Redacted] ; MD.MarineLicensing@gov.scot
Cc: Justine Saunders (JUSU) [Redacted] Andrew Walker (ACW) [Redacted]
Subject: RE: Peterhead Port Authority (per NIRAS) - Peterhead Bay Marina and Port Henry Basin Dredging - Sampling Plan

Good Morning Arhontia,

Re : Peterhead Port Authority (per NIRAS) - Peterhead Bay Marina and Port Henry Basin Dredging - Sampling Plan

Thank you for providing us with information about your proposed works. Based on the information that you have provided, MD-LOT is of the view that the works meet the criteria of THE MARINE LICENSING (EXEMPTED ACTIVITIES) (SCOTTISH INSHORE REGION) ORDER 2011 (AS AMENDED) – 18B. SEDIMENT SAMPLING

To address your question no additional steps are necessary. We look forward to receiving your application once your sampling is complete, assuming this will be a capital dredge – see comments in my email d.d 22 August.

Kind regards

Chris

Chris Pollard
Licensing Casework Officer
Marine Directorate – Licensing Operations Team
Scottish Government, 5 Atlantic Quay, Glasgow G2 8LU
M: [Redacted]
E: [Redacted]

The Scottish Government

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: Monday, September 23, 2024 8:19 AM
To: MD Marine Licensing <MD.MarineLicensing@gov.scot>
Cc: Justine Saunders (JUSU) [Redacted] Andrew Walker (ACW) [Redacted]
Subject: RE: Peterhead Port Authority (per NIRAS) - Peterhead Bay Marina and Port Henry Basin Dredging - Sampling Plan

Good morning,

Please find attached a notice for each site along with maps with the area coordinates and the NLB and MCA confirmations of navigation safety as requested on the forms.

Are there any additional steps to take or after you review the attached, we can let Peterhead Port Authority know that they can take the samples?

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Senior Consultant

NIRAS

Pentlands Science Park, Bush Loan,
Penicuik, Nr. Edinburgh EH26 0PL
Scotland
www.niras.com

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T: +44 131 440 5500
[Redacted]

Follow us on:

From: MD.MarineLicensing@gov.scot <MD.MarineLicensing@gov.scot>
Sent: Thursday, August 22, 2024 3:51 PM
To: Arhontia Athanasiou (AATH) [Redacted]
Subject: RE: Peterhead Port Authority (per NIRAS) - Peterhead Bay Marina and Port Henry Basin Dredging - Sampling Plan

Good afternoon,

Re: Peterhead Port Authority (per NIRAS) - Peterhead Bay Marina and Port Henry Basin Dredging - Sampling Plan

Thank you for your email d.d. 21 Aug 24 complete with sampling plans.

Having reviewed the plans MD-LOT can confirm they meet the requirements of a sample plan. It is noted that the dredge depth will be no more than 1m. It is also noted that whilst you highlight three locations of dredge at the Peterhead Bay Marina, MD LOT are content to regard this as a single dredge area.

You will also need to complete the notice of exempted activities, which is required for sediment sampling : Notice+of+exempted+activity.pdf (www.gov.scot)

It is not clear whether there have been any previous sampling reports, or indeed whether there has been any previous dredge of the outlined sites within the last 7 years. If so please could you advise as this may change the process due to the sites being within the SHA of Peterhead and an exemption may be applied for. If not, this is considered a capital dredge and licensable by the Marine Directorate.

Assuming a capital dredge, the results from the sampling should be contained within a Best Practicable Environmental Option (BPEO) assessment, which should be included within the application.

The application form and further guidance can be found here : Marine licensing: applications and guidance - gov.scot (www.gov.scot)

Please also note a licence to deposit the dredge material will also be required. Please find attached a copy of the pre-disposal sediment sampling analysis results form.

Thank and regards

Chris

Chris Pollard
Licensing Casework Officer
Marine Directorate – Licensing Operations Team
Scottish Government, 5 Atlantic Quay, Glasgow G2 8LU

The Scottish Government

Scottish Government
Riaghaltas na h-Alba

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Integrity Inclusivity Innovation Collaboration Kindness

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: Wednesday, August 21, 2024 10:06 AM
To: MD Marine Licensing <MD.MarineLicensing@gov.scot>
Cc: Andrew Walker (ACW) [Redacted]
Subject: RE: Peterhead Port Authority (per NIRAS) - Peterhead Bay Marina and Port Henry Basin Dredging - Sampling Plan

Good morning,

Many thanks for the advice previously provided.

We have attached for your review two sampling plans, one for Peterhead Bay Marine and one for Port Henry basin.

We will be looking forward to your reply on next steps.

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Senior Consultant

NIRAS

Pentlands Science Park, Bush Loan,
Penicuik, Nr. Edinburgh EH26 0PL
Scotland
www.niras.com

[Redacted]
T: +44 131 440 5500

Follow us on:

From: MD.MarineLicensing@gov.scot <MD.MarineLicensing@gov.scot>
Sent: Thursday, July 25, 2024 11:08 AM
To: Arhontia Athanasiou (AATH) [Redacted]
Cc: Andrew Walker (ACW) [Redacted]
Subject: RE: Peterhead Port Authority (per NIRAS) - Peterhead Bay Marina and Port Henry Basin Dredging - Sampling Plan

Good Morning Arhontia,

Thank you for your email regarding a sampling plan for Peterhead Bay Marina and Port Henry Basin dredging.

A sampling plan covering the points bulleted in your email should be sufficient, but to give you more details:

• Chart of dredge area & sample locations – Please supply as detailed a chart as possible with the dredge area/s clearly outlined and sample locations marked. Sample locations should be spread as evenly as possible across the proposed areas.
• Details on sample types & sampling methodology – Please give as much detail as possible, e.g. Vibrocore or borehole, and include sample depths.
• How many samples will be taken – this will depend on the amount of material to be dredged. Please see the pre-disposal guidelines for more information. MD-LOT can advise if you are not sure on the correct number. You are of course, welcome to take more samples than required.
• Lab used must be ISO17025 accredited for marine sediment analysis and take part in intercomparison exercises such as QUASIMEME. They should also meet the LOD and sensitivity requirements set out in the CSEMP Green Book. – Please ensure that all labs used meet these standards.

Please do not hesitate to get in touch if you have further questions.

Kind regards,

Louise

Louise Treble (pronouns she/her)
Marine Licensing Casework Officer, Marine Directorate - Licensing Operations Team,
Marine Directorate
Scottish Government, 5 Atlantic Quay, 150 Broomielaw, Glasgow, G2 8LU

E: [Redacted]

The Scottish Government

Marine Directorate | Marine Directorate Blog | @ScotGovMarine | Marine Directorate LinkedIn

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From: Arhontia Athanasiou (AATH) [Redacted]
Sent: Thursday, July 25, 2024 10:33 AM
To: MD Marine Licensing <MD.MarineLicensing@gov.scot>
Cc: Andrew Walker (ACW) [Redacted]
Subject: Peterhead Port Authority (per NIRAS) - Peterhead Bay Marina and Port Henry Basin Dredging - Sampling Plan

Dear Marine Directorate,

We would like to request a consultation on behalf of Peterhead Port Authority (PPA) regarding a new proposal for Peterhead Bay Marina and Port Henry Basin Dredging works and the required sampling plan as an initial step.

Following the completion of a bathymetric survey on 18 April 2023, raised seabed levels were highlighted in the Bay Marina and Port Henry areas of Peterhead Harbour. The requirement for dredging was recognised to ensure the safe passage of vessels in accordance with the Ports publicised information.

Could you please advise on the information we will need to provide to facilitate an agreement on a sampling plan? We note that the guidelines request:

- Chart of dredge area & sample locations
- Details on sample types & sampling methodology
- How many samples will be taken
- Lab used must be ISO17025 accredited for marine sediment analysis and take part in intercomparison exercises such as QUASIMEME. They should also meet the LOD and sensitivity requirements set out in the CSEMP Green Book.

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Senior Consultant

Pentlands Science Park, Bush Loan,
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Scotland
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****

Arhontia Athanasiou (AATH)

From: Andrew Robertson [Redacted]
Sent: 28 October 2025 12:41
To: Arhontia Athanasiou (AATH)
Subject: RE: Peterhead Port Authority - marine permitting works AB-15-21

Dear Arhontia,

Thank you for your message.

As the locations of the samples differed from those specified in the consent given to Peterhead Port Authority, I have confirmed the number of samples with Stephen Paterson and all now seems to be in order.

I will look forward to receive appropriate details of any further works which may be proposed in due course.

Regards

Andrew

BIDWELLS

Andrew Robertson BSc MBA
Consultant Partner

[Redacted] bidwells.co.uk

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: 20 October 2025 08:56
To: Andrew Robertson [Redacted]
Subject: RE: Peterhead Port Authority - marine permitting works AB-15-21

Hi Andrew,

Apologies for the delay.

I have attached my previous email that provides the information you have requested.

Another update from our side, due to an extension to the dredging area and some design parameters, we have requested the validation of the EIA screening opinion previously received for Smith Quay before we continue with the new design. Both Transport Scotland and MD-LOT have started the consultation for this re-screening.

The sampling results attached still stand correct and remain adequate for the proposed works.

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Principal Project Manager (Marine)

NIRAS

Pentlands Science Park, Bush Loan,
Penicuik, Nr. Edinburgh EH26 0PL
Scotland
www.niras.com

[Redacted]
T: +44 131 440 5500
[Redacted]

Follow us on:

From: Andrew Robertson [Redacted]
Sent: 14 October 2025 12:48
To: Arhontia Athanasiou (AATH) [Redacted]
Subject: FW: Peterhead Port Authority - marine permitting works AB-15-21

Dear Arhontia,

I don't think I have received the information requested below.

Would you please now send me the results of the testing?

Regards

Andrew

BIDWELLS

Andrew Robertson BSc MBA
Consultant Partner

[Redacted] | bidwells.co.uk

From: Andrew Robertson
Sent: 01 September 2025 14:39
To: Arhontia Athanasiou (AATH) [Redacted]
Cc: Meghan Rochford (MERO) [Redacted]
Subject: FW: Peterhead Port Authority - marine permitting works AB-15-21

Dear Arhontia,

I refer to my message below. Please let me have copies of the result for the locations shown on Niras's plan dated 21 August 2024 as well as the ones you have already sent me for the locations shown on your plan dated 23 September 2024..

Regards

Andrew

BIDWELLS

Andrew Robertson BSc MBA
Consultant Partner

[Redacted] | bidwells.co.uk

From: Andrew Robertson
Sent: 04 August 2025 16:10
To: Arhontia Athanasiou (AATH) [Redacted]
Cc: Scotland Marine <Scotland-Marine@bidwells.co.uk>; Meghan Rochford (MERO) [Redacted]
Subject: RE: Peterhead Port Authority - marine permitting works AB-15-21

Dear Arhontia,

Thank you for your comments which I note. I would, however, be grateful for your further clarification.

Peterhead Port Authority was granted retrospective consent for sampling works as indicated on the attached consent plan, dated 17 February 2025. These locations were as indicated in Niras's dredging sampling plans, dated 21 August 2024, also attached.

The latest sampling maps, dated 23 September 2024, which you provided, show different sampling locations. Were the works shown on the September maps additional to the works indicated on the August plans or instead of them?

Regards

Andrew

BIDWELLS

Andrew Robertson BSc MBA
Consultant Partner

[Redacted] | bidwells.co.uk

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: 30 July 2025 09:24
To: Andrew Robertson [Redacted]
Cc: Scotland Marine <Scotland-Marine@bidwells.co.uk>; Meghan Rochford (MERO) [Redacted]
Subject: RE: Peterhead Port Authority - marine permitting works AB-15-21

Hi Andrew,

Circling back to my email from 14/07, the results of the sediment samples from Smith Quay, Port Henry and Peterhead Bay Marina were attached in that email. For your convenience, I have reattached it to this email.

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Senior Project Manager (Marine)

NIRAS

Pentlands Science Park, Bush Loan,
Penicuik, Nr. Edinburgh EH26 0PL
Scotland
www.niras.com

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T: +44 131 440 5500
[Redacted]

Follow us on:

From: Andrew Robertson [Redacted]
Sent: 29 July 2025 18:00
To: Arhontia Athanasiou (AATH) [Redacted]
Cc: Scotland Marine <Scotland-Marine@bidwells.co.uk>; Meghan Rochford (MERO) [Redacted]
Subject: RE: Peterhead Port Authority - marine permitting works AB-15-21

Dear Arhontia,

I refer to the drawings that you sent me with your email. I note that these show a number of sampling points in each of the locations to be dredged.

Can you please advise whether these samples have already been taken or have still to be taken. In any case, please let me know what kind of sample is to be or was taken at each location – borehole, grab sample, vibrocore etc. If the work is still to be done, when are hoping to carry out the work?

Regards

Andrew

BIDWELLS

Andrew Robertson BSc MBA
Consultant Partner

[Redacted] | bidwells.co.uk

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: 16 July 2025 16:18
To: Andrew Robertson [Redacted]

Cc: Scotland Marine <Scotland-Marine@bidwells.co.uk>; Meghan Rochford (MERO) [Redacted]
Subject: RE: Peterhead Port Authority - marine permitting works

Hi Andrew,

Many thanks for your swift reply. I have added some additional information on your queries below:

1. *As regards potential beach nourishment, please let me have any information you possess regarding the potential volume of material to be disposed of by this method. Please also advise of the potential location.*
   Our engineering team has advised that for the Bay Marina we are looking at a volume of up to 8,500m^3 (unbulked). So far, we have not been able to identify a potential location, but we are in touch with Aberdeenshire Council (and NatureScot on the Council's request) to understand whether they have plans within the next 12-18 months for beach nourishment in the area where this sediment could be used. If not, it is most likely that sea disposal will be the preferred disposal option.

2. *For each of the sites, please confirm the intended finished seabed level, how this compares to previously dredged depths at these locations and the dates of the most recent dredging operations.*
   The Peterhead Port Authority has advised that Bay Marina was never officially dredged, Port Henry has not been dredged since 2006 with no records (historic dredging), and the Smith Quay site has also not been dredged in the past.
   Finished levels:
   a. Smith Quay, -10mCD (small area of deepening from -9mCD to -10mCD) (attached dredge area with bathymetry that we expect to be further refined)
   b. Port Henry, - 2.5mCD generally
   c. Bay Marina. - 1.5mCD generally

   You will also find attached two maps with the bathymetry for Port Henry and Bay Marina (bathymetric survey on 18 April 2023) and dredge areas.

If you have any further questions or require additional information, please do not hesitate to reach out.

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Senior Project Manager (Marine)

NIRAS

Pentlands Science Park, Bush Loan,
Penicuik, Nr. Edinburgh EH26 0PL
Scotland
www.niras.com

[Redacted]
T: +44 131 440 5500
[Redacted]

Follow us on:

From: Andrew Robertson [Redacted]
Sent: 14 July 2025 17:32
To: Arhontia Athanasiou (AATH) [Redacted]
Cc: Scotland Marine <Scotland-Marine@bidwells.co.uk>; Meghan Rochford (MERO) [Redacted]
Subject: RE: Peterhead Port Authority - marine permitting works

Dear Arhontia,

Thank you for this information.

I understand that previous dredging operations in Peterhead have used the CR080 disposal site. Provided the Marine Directorate of the Scottish Government is content to license such operations, Crown Estate Scotland will be content for that site to be used again.

As regards potential beach nourishment, please let me have any information you possess regarding the potential volume of material to be disposed of by this method. Please also advise of the potential location. This will enable me to consider whether Crown Estate Scotland consent is required and what costs may be incurred.

For each of the sites, please confirm the intended finished seabed level, how this compares to previously dredged depths at these locations and the dates of the most recent dredging operations.

If there is specific information which you require, please give me a call and I will be happy to discuss the matter.

Regards

Andrew

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Andrew Robertson BSc MBA
Consultant Partner

[Redacted] | bidwells.co.uk

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: 14 July 2025 10:21
To: Andrew Robertson [Redacted]
Cc: Scotland Marine <Scotland-Marine@bidwells.co.uk>; Meghan Rochford (MERO) [Redacted]
Subject: RE: Peterhead Port Authority - marine permitting works

Good morning,

Peterhead Port Authority have requested that NIRAS Group (UK) Ltd conduct a best practicable environmental options (BPEO) assessment for proposed dredging works at three locations within the Peterhead Port area:

1. Smith Quay;
2. Port Henry; and
3. Peterhead Bay Marina.

As part of this process, we would like to consult with Crown Estate Scotland to ensure all relevant information has been collected and used within the assessment. Please let us know if there is a more appropriate contact email for this matter. Dredging is currently planned for all three areas between January and May 2026.

Based on our preliminary assessment of sediment samples (results attached to this email for each location), sea disposal is the most likely method of disposal for Smith Quay and Port Henry due to grain size variation and small levels of PAHs and trace metals. The sea disposal location North Buchan Ness (CR080) has been identified as the closest and most suitable for these materials.
For the Bay Marina, other options are being considered, as well as sea disposal. One such option is beach nourishment, for which we are seeking advice from the council on whether there are plans within the next 12-18 months for beach nourishment in the area where this sediment could be used.

We would greatly appreciate your comments on the proposed disposal options mentioned above or any relevant information that you might hold.

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Senior Project Manager (Marine)

NIRAS

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From: Andrew Robertson [Redacted]
Sent: 04 September 2024 12:01
To: Arhontia Athanasiou (AATH) [Redacted]

Cc: Scotland Marine <Scotland-Marine@bidwells.co.uk>
Subject: RE: Peterhead Port Authority - marine permitting works

Good morning,

Thank you for your enquiry about works proposed at Peterhead Harbour.

For use of any land owned by Crown Estate Scotland, whether that is foreshore or seabed, an agreement, usually in the form of a lease or licence, is required. Peterhead Port Authority already has a number of agreements with Crown Estate Scotland and Stephen Paterson has been in touch with me about proposals for additional works.

When you or PPA are ready, an application will be required either to amend existing agreements or to enter into new ones. The application should include full details of the works, plans, timescales and proposed uses.

In respect of dredging works, these are considered in two categories. Maintenance dredging agreements are for areas which have previously been dredged and require to be re-dredged to maintain the bed level no deeper than was previously agreed. For areas which have not been previously dredged, or it is proposed to deepen previously dredged area to a bed level below the existing approved depth, such work is classed as capital dredging. These works are regulated by a Grant of Right to Dredge. The Grant will define the area covered, the depth to which dredging may be carried out, the disposal area and the associated charges.

Material to be dumped at sea is to be deposited at a licensed spoil ground. If dredged material is not being dumped, but is being re-used for a beneficial purpose e.g. reclamation, an additional royalty payment is due for the amount of material being re-used.

I hope these comments are helpful. Please be in touch if you wish further information.

I will look forward to receiving further details of the proposed works in due course.

Regards

Andrew Robertson

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Regional Manager - River Spey to Montrose

, Aberdeen
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From: Scotland Marine <Scotland-Marine@bidwells.co.uk>
Sent: Tuesday, August 27, 2024 3:17 PM
To: Andrew Robertson [Redacted]
Subject: FW: Peterhead Port Authority - marine permitting works

Hi Andrew

I know you mentioned Smith Quay in the meeting today, not sure if you've also received this email.

Thanks
Eilidh

Eilidh Moyes *She/Her*
Estate Assistant/Case Coordinator
[Redacted]

From: Arhontia Athanasiou (AATH) [Redacted]
Sent: Monday, August 26, 2024 3:29 PM
To: Scotland Marine <Scotland-Marine@bidwells.co.uk>
Cc: Justine Saunders (JUSU) [Redacted] Andrew Walker (ACW) [Redacted]
Subject: Peterhead Port Authority - marine permitting works

Good afternoon,

We are progressing the marine permitting for three proposed activities on behalf of Peterhead Port Authority, specifically:

- Refurbishment of Smith Quay , Peterhead
- Ground investigation works (prior to the Refurbishment of Smith Quay to assist with the engineering design)
- Dredging on Port Henry and Peterhead Bay Marina (Peterhead Port area).

We have noticed that apart from a marine licence, there is mention of a separate Crown Estate licence here: https://www.crownestatescotland.com/scotlands-property/coastal/marine-works
Could you please advise what is the process and the forms we would need to fill in, in addition to the Marine Directorate forms and process?

We are currently drafting the Best Practicable Environmental Option Reports for the above works and we would also appreciate any relevant information or suggestions you may have regarding disposal options on the dredged material. We have located two sea disposal sites in close proximity to Peterhead as per Marine Scotland - National Marine Plan Interactive (atkinsgeospatial.com).

Best Regards

Arhontia Athanasiou (pronounced: *Arh-hod-ia*)
Senior Consultant

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