Peterhead - Smith Quay Extension

Report to Inform Appropriate Assessment and Marine Protected Area Assessment

Peterhead Port Authority

Date: 24 November 2025

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Contents

Abbreviations

Term	Definition
AA	Appropriate Assessment
AEOI	Adverse Effect on Integrity
CD	Chart Datum
EIA	Environmental Risk Assessment
HRA	Habitat Regulations Appraisal
IROPI	Imperative Reasons of Overriding Public Interest
JNCC	Joint Nature Conservation Committee
LSE	Likely Significant Effects
MD-LOT	Marine Directorate – Licencing Operations Team
MHWS	Mean High Water Spring
NCMPA	Nature Conservation Marine Protected Area
PMF	Protected Marine Feature
PPA	Peterhead Port Authority
PTS	Permanent Threshold Shift
RIAA	Report to Inform Appropriate Assessment
SAC	Special Area of Conservation
SPA	Special Protection Area
TTS	Temporary Threshold Shift
ZoI	Zone of Impact

1 Introduction

1.1 Project Description

1.1.1 Smith Quay is a 120 m long suspended deck quay with a separate berthing dolphin at its western end and reclamation behind the quay (Figure 1.1). It is a westward extension of the existing outer harbour quays at Peterhead. Peterhead Port Authority (PPA) proposes an up to 85 m extension to the western end of the existing quay. The port is used by many industries, such as the pelagic fishing sector, renewable energy, oil and gas decommissioning, subsea construction and maintenance industry, and ship repair facilities. The proposed extension will provide vital additional berthing capacity and deck space with adjacent laydown area for this busy port. A number of alternatives were considered including the construction of a new quay and extensions to other facilities however these were deemed to be unviable.

1.2.1 The 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 10 m below chart datum (CD). By October 2010, 100,000 m³ of rock and soft materials were dredged and suitable material was combined with imported material to construct 9,000 m² of reclamation behind the quay[1]. An additional 32,000 m² of reclaimed land was added to the west of Smith Quay in 2018 coming from the harbour deepening project.

Figure 1.1 Smith Quay location within Peterhead Port.

[1] Peterhead Port Authority: https://www.peterheadport.co.uk/areas/smith-embankment [Accessed 20/09/2024]

1.2 Purpose of this Report

1.2.1 This Report, termed the Report to Inform Appropriate Assessment (RIAA) and Marine Protected Area (MPA) Assessment, provides the information required by the Marine Directorate – Licencing Operations Team (MD-LOT), as Competent Authority, to undertake an Appropriate Assessment (AA) and inform in relation to any MPA assessment, of the marine aspects of the Smith Quay Extension Project (hereafter termed the 'Proposed Works') i.e. for all works from Mean High Water Spring (MHWS) seawards.

1.2.2 This RIAA draws on the HRA Screening Report (NIRAS, 2024), together with consultee feedback (Section 3), to provide the context for AA, to determine if the marine aspects of the proposed works will have an adverse effect on integrity (AEOI) on any European site, either alone or in combination with other plans or projects. The MPA assessment considers whether the proposed works could hinder achievement of the conservation objectives (COs) of any MPA. The assessments consider the construction, operation and decommissioning of the proposed works. Decommissioning impacts are considered to be no greater than construction impacts.

2 Legislative Background

2.1.1 A number of policies guide the Habitats Regulations Appraisal (HRA) process at international and national levels (see Table 2-1). The European Union (EU) Habitats and Birds Directives were transposed into national law via the Habitats Regulations and Offshore Habitats Regulations. These have been amended post Brexit to 'The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019' but the core principles and terminologies remain.

Table 2-1 Key Legislation for the HRA process in Scotland.

Legislation	Relevance
The Habitats Directive (92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora (the 'Habitats Directive')	The Habitats Directive requires the establishment of a strict protection regime for certain habitats, commonly referred to as the 'Natura 2000' network of European protected sites. European sites designated under the Habitats Directive are called Special Areas of Conservation (SACs).
Council Directive (2009/147/EC) on the conservation of wild birds (the 'Birds Directive')	The Birds Directive aims to protect all naturally occurring wild bird species and their most important habitats. The designated sites form part of the 'Natura 2000' network of European protected sites. European sites designated under the Birds Directive are called Special Protection Areas (SPAs).
Conservation (Natural Habitats &c.) Regulations 1994 (the 'Habitats Regulations')	UK legislation that covers terrestrial areas and territorial waters out to 12 nm and implements the Habitats and Birds Directives.
Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2017 (the 'Offshore Habitats Regulations')	UK legislation that covers waters beyond 12 nm, up to the extent of the British Fishery Limits and UK Continental Shelf Designated Area and implements the Habitats and Birds Directives.

Legislation	Relevance
Conservation on Wetlands of International Importance especially as Waterfowl Habitat 1971 (the 'Ramsar Convention')	Designates wetland sites for protection ('Ramsar sites'). The Scottish Government reiterated its policy on the protection of Ramsar sites in 20193, specifically stating that "where Ramsar interests coincide with Natura qualifying interests protected under an SPA or an SAC, as the case may be, the interests are thereby given the same level of (legal) protection as Natura sites" and "where Ramsar interests are not the same as Natura qualifying interests but instead match Sites of Special Scientific Interest (SSSI) features, these receive protection under the SSSI regime".
Amendments Post EU Exit	The Habitats Regulations and the Offshore Habitats Regulations remain in force, with the same protections retained, but UK sites are no longer part of the EU's Natura 2000 network, instead forming a national network of protected sites. Key terminology is primarily unchanged, with the terms 'European site', 'European marine site', 'European offshore marine site', 'Special Area of Conservation (SAC)' and 'Special Protection Area (SPA)' all being retained. The Habitats Regulations have been amended as a result of the UK leaving the EU in the 'The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019'. In cases where no adverse effect on integrity (AEOI) can be proven, the competent authority (i.e., Scottish Ministers, for projects of this type) would previously have been required to seek the opinion of the European Commission on whether the plan or project should be carried out for imperative reasons of overriding public interest (IROPI). Since exiting the EU, this now falls under the remit of the Scottish Ministers, who must seek the opinion of the Secretary of State, the Joint Nature Conservation Committee (JNCC), and any other person the Scottish Ministers consider appropriate.

2.1 Habitats Regulations Appraisal

2.1.2 HRA is a requirement under the provisions of the Habitats Regulations, where any proposal (including permitted development) is likely to have a significant effect on a 'European Site'. The 'European Sites' in the UK consist of Special Protection Areas (SPA), Special Areas of Conservation (SAC), and RAMSAR. In this context, 'significant' means any effect on the features for which the site has been designated, which could adversely affect site integrity, and which cannot be excluded on the basis of objective information.

2.2 The Stepped Process for HRA

2.2.1 Figure 2.1 below summarises the steps to take when determining if a plan or project could affect a European Site. For the proposed works, the answer to stage 1 is that the PPA have progressed the plan to extend Peterhead Smith Quay. With respect to stage 2, the proposed works is not directly connected with or necessary to site management for nature conservation, progressing the project to stage 3. From this point, the HRA process occurs across a number of different stages. The key stages are summarised as follows:

- Stage 3 - Screening: Identification of European Sites and determination of potential for likely significant effect (LSE) of the proposal on the sites, either alone or in combination with other projects or plans. Mitigation measures cannot be considered at this stage.

- Stage 4 and 5 - AA and determination of adverse effect: A RIAA is prepared to provide the Competent Authority with the necessary information to determine whether the project will have an AEOI on any European Site. Consideration is given here to any planned mitigation measures within the proposal.
- Stage 6 – Examination of Alternative Solutions: If an AA cannot rule out potential AEOI, alternative options for the project must be considered.
- Stage 7 – Presence/Absence of a Priority Habitat or Species: To determine if the assessment includes a priority habitat or species. If yes, stage 9 is required (additional).
- Stage 8 – Assessment of Imperative Reasons of Overriding Public Interest (IROPI): Where no alternative solutions are determined to be possible, assessment will be undertaken to determine whether there is an overriding public interest for the proposal to be consented.

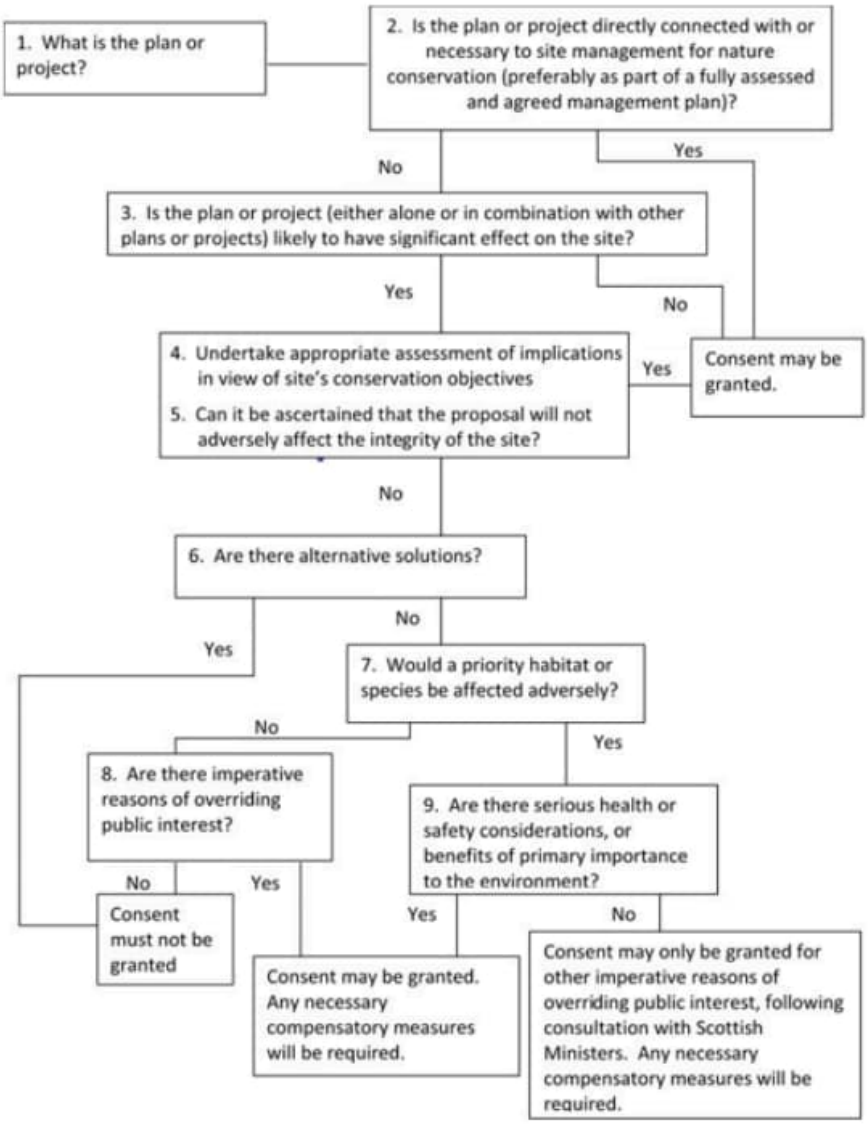

Figure 2.1 How to consider plans and projects which could affect European Sites[2].

[2] Nature Scot: https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra [Accessed 20/09/2024]

2.3 Relevant Guidance

2.3.1 HRA Screening, and subsequent preparation of the RIAA, which includes Steps 3 to 5 in Figure 2.1, will be undertaken with reference to key HRA guidance, including:

- Habitats Regulations Appraisal (NatureScot, 2024);
- Guidance on the use of the Habitats Regulations Assessment (UK Government, 2019);
- European Commission (2019). Managing Natura 2000 Sites, the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC;
- European Commission (2000). Communication from the Commission on the Precautionary Principle;
- European Commission (2002). Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC;
- Scottish Natural Heritage (SNH) (2016). NatureScot guidance on assessing connectivity with Special Protection Areas.

2.4 Types of Designated Sites Included in HRA

2.4.1 The classes of designations considered by HRA are:

- SPA: Designated for the protection of one or more bird species or assemblage listed in Annex 1 of the Birds Directive (Directive 79/409/EEC) as features of marine and coastal European sites;
- SAC: Designated for the protection of one or more habitat or species features listed in Annex I and Annex II respectively of the Habitats Directive (Council Directive 92/43/EEC) as features of marine and coastal European sites; and
- RAMSAR: Wetland sites of international importance designated under the Ramsar Convention (The Convention on Wetlands of International Importance especially as Waterfowl Habitat) (JNCC, 2025). Many Ramsar sites are also designated SPAs.

2.4.2 This RIAA and previous HRA Screening also considered Nature Conservation Marine Protected Areas (NCMPAs).

2.5 Marine Protected Areas

2.5.1 Marine Protected Areas are designated under the Marine (Scotland) Act 2010 and its Orders. The Act requires public authorities to meet general duties related to MPAs when granting permissions such as Marine Licences.

3 Engagement and Consultation

3.1.1 An Environmental Impact Assessment (EIA) Screening Opinion request report for the Peterhead Smith Quay Extension was produced and provided to Marine Directorate – Licensing Operations Team (MD-LOT) for review on the 30 April 2024. Responses were received from the consultation on 18 July 2024. The EIA Screening Request Report was also submitted to Transport Scotland to determine the grant of a Harbour Revision Order authorising PPA to carry out the proposed activities, in accordance with The Harbours Act 1964 ("the 1964 Act").

3.1.2 MD-LOT and Transport Scotland, on behalf of the Scottish Ministers, consulted with NatureScot, SEPA, Aberdeenshire Council, and Historic Environment Scotland (HES) to determine if the proposed works are an EIA project.

3.1.3 On 10/07/24, Transport Scotland concluded that an EIA is not required in terms of the 1964 Act. On 18/07/2024, MD-LOT confirmed that the Scottish Ministers concluded that the proposed works are not an EIA project under paragraph 1(e) of schedule 2 of The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ("the 2017 MW Regulations"), and therefore, that an EIA would not be required.

3.1.4 As part of the consultation, NatureScot concluded that HRA should consider the connectivity with the European sites Buchan Ness to Collieston Coast SPA, Ythan Estuary, Sands of Forvie and Meikle Loch SPA and Loch of Strathbeg SPA for breeding seabirds, minke whale in the Southern Trench MPA[3] and bottlenose dolphin from the Moray Firth SAC.

3.1.5 Since the original screening opinion, and following results of ground investigation surveys, it has been necessary to make alterations to the proposed design of the Project. These alterations are detailed in Section 4; however, a summary of key changes are as follows:

- A more traditional open piled construction methodology is required resulting in a larger number of smaller diameter piles.
- The length of the extended quay has increased from up to 80 m to up to 85 m. Current working design = 83.2 m
- Moderate increases in area and extent are required to the reclamation area, western revetment and dredge volumes.

3.1.6 Following recent consultation with MD-LOT and Transport Scotland, it was concluded that the previously issued Screening Opinion is not valid in relation to the revised Project Description and that a new Screening Request should be submitted, in line with the requirements of the EIA Regulations. The new Screening Opinion, re-validated that the proposed works do not constitute an 'EIA Development' according to the EIA Regulations and consequently a formal EIA is not considered to be necessary. No new advice was provide with regards to HRA or MPA assessment in relation to this consultation.

3.1.7 HRA Screening was submitted to NatureScot on 14 Mar 2025. They confirmed agreement in their response, received on 07 Apr 2025, with the conclusions from the Screening Report for the relevant protected areas and species. They recommended that pink-footed, greylag, and barnacle geese and whooper swans found in Loch Strathbeg SPA and Ythan Estuary, Sands of Forvie and Meikle Loch SPA should be screened out of the assessment because they are unlikely to use Peterhead Harbour. The following RIAA is therefore based on the protected species and areas that were screened in in the HRA Screening Report (NIRAS, 2024).

3.1.8 Since the HRA Screening Report (March 2025), the design of the Peterhead Smith Quay Extension has been refined following ground investigations and further engineering

[3] MPA is used here as an abbreviation for Nature Conservation Marine Protected Areas (NCMPA) to maintain consistency with terminology in other project documentation.

development. The HRA Screening was based on a design comprising an 80 m extension supported by 70 piles (5 rows of 14), each 1067 mm in diameter. Subsequent to the report submission, the following key design changes took place:

- The quay extension has increased from 80 m to up to 85 m in length, with a slight reduction in width.
- The structural design now comprises a multi-piled quay (up to 84 piles, most likely 68 for the quay and 4 for the dolphin), with a reduced average pile diameter (1.1 m, max 1.25 m).
- The position of the new mooring dolphin has been moved closer to the quay (30 m from the quay, set back from the berthing line).
- The reclamation area has increased from approximately 2,670 m² to up to 3,500 m², and the overall site area is now up to 1.3 ha.
- The dredge volume is now specified as under 25,000 m³, with a minor extension to the dredge pocket to address siltation and ground conditions.

3.1.9 These changes are not considered material in the context of the environmental assessment as updated design parameters are assessed in this report, which confirms that the scale and nature of the changes do not introduce new or materially different environmental risks.

3.1.10 In summary, while the design has been refined and certain parameters updated, these changes do not materially affect the conclusions of the HRA Screening.

4 The Proposed Development

4.1 Summary of the Proposed Development

4.1.1 PPA propose an up to 85 m extension to the western end of the existing 120 m long Smith Quay (Figure 4.1). The works planned for this extension compromise:

- Demolition of the concrete deck of an existing berthing dolphin, with the dolphin's supporting tubular steel piles cut-off at bed level and removed;
- Partial demolition of a concrete wing wall at the west end of the existing quay;
- Removal and re-use of revetment rock armour adjacent to the west end of the existing quay;
- Quay extension comprising a concrete deck supported on tubular steel piles;
- Rock revetment beneath the quay extension;
- New mooring dolphin comprising a concrete deck supported on tubular steel piles;
- New/repurposed steel access bridge spanning between quay extension and new dolphin;
- Deck furniture;
- Area of reclamation; and
- Capital dredging to enlarge the existing berth pocket.

4.1.2 Table 4-1 provides information on the maximum design scenario for key project design parameters.

Table 4-1 Key project design parameters

Parameters	Maximum Design Scenario
Quay dimensions	Up to 85 m long and 25.25 m wide.

Parameters	Maximum Design Scenario
	Most likely scenario is 83.25 m long.
Piles	A more traditional multi-piled quay, up to 84, typically 1.1m diameter piles (up to 85 No. piles assessed in the Environmental Appraisal, based on 1.1 m (1.067 m) diameter piles in noise modelling). Most likely scenario is 68 No. Quay, 4 No. Dolphin permanent piles.
Dolphin use & Position	A Mooring Dolphin positioned up to ~30 m from west of Quay, and set back from the berthing line.
Dredging extents	Total dredge volume under 25,000 m3. Apart from the existing dredge pocket, which has silted up, further dredging may be required under the new dolphin and quay to remove structurally unsuitable material. The ground survey indicated a lower rock head, resulting in a decreased requirement for pre-treatment, including use of Cardox (described as blasting in noise modelling report, but note that this is a non-explosive method).
Reclamation Area	Up to 3,500 m^2.
Eastern Revetment	As shown on the updated drawing (Figure 4.1), oriented slightly to the west as it runs landward.
Overall site area	Maximum extent indicated by the red line (Figure 4.1). Up to 1.3 hectares, including underwater dredge slopes and with a percentage of the total area reclaimed over already developed ground on the existing revetment above MHWS.

4.1.3 These works are detailed in Section 4.2. The 67 week construction programme with an anticipated construction start date of March 2026, and completion in August 2027 is further detailed in Section 4.4. The final schedule is subject to receipt of necessary approvals.

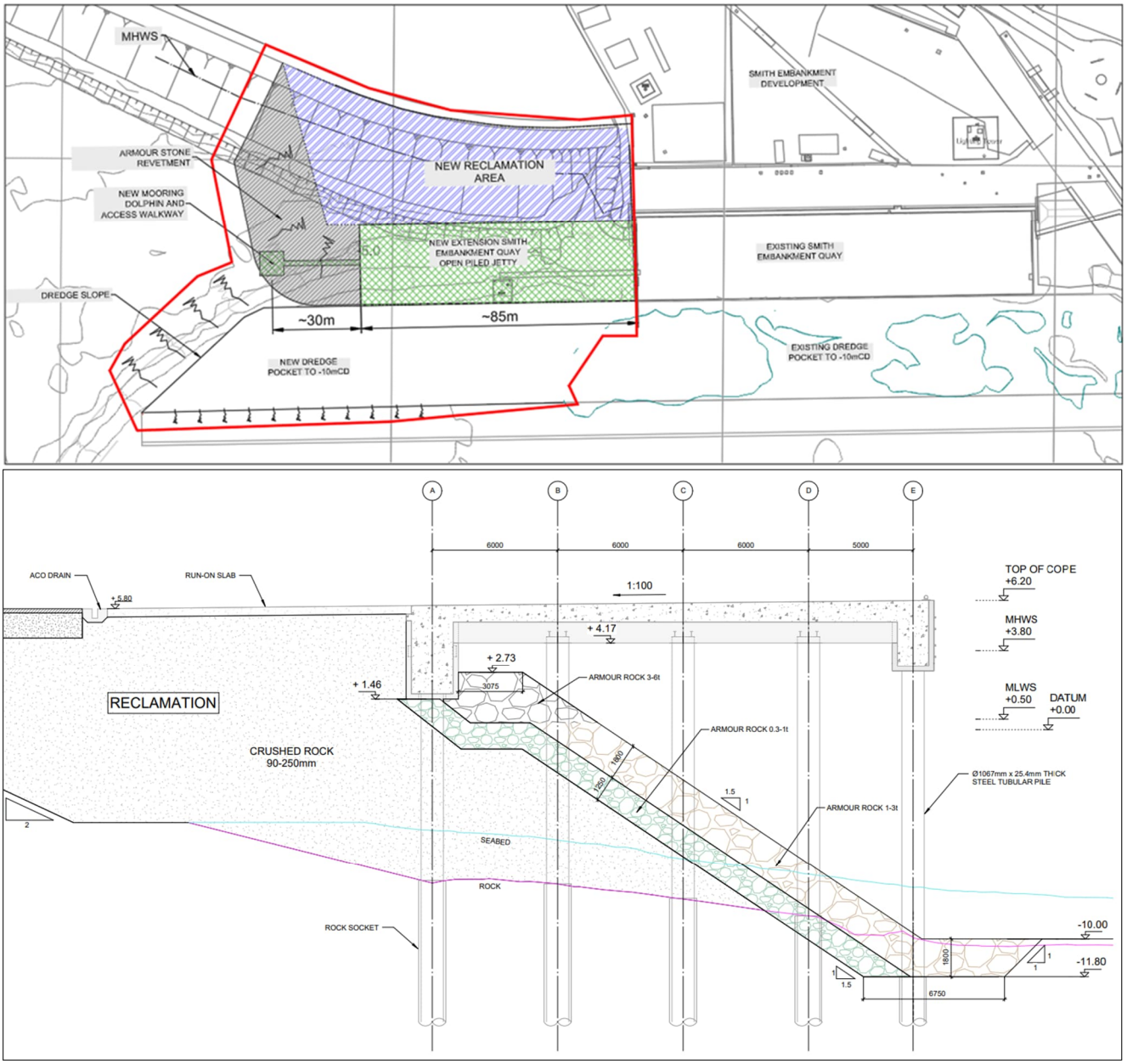

Figure 4.1 Proposed extension of Smith Quay.

4.2 Construction Phase

Dredging Operations

4.2.1 The dredging sequence and methodology outlined below may be subject to further development.

4.2.2 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 4.2). 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.

4.2.3 Sea disposal of dredge arisings at a licenced site is anticipated (application will be completed separately). The rock trench is required to be dredged prior to the pile installation, to eliminate the risk of pile damage from dredging the trench.

Figure 4.2 Proposed backhoe dredging of rock trench, berthing pocket, and approach.

Site Clearance and Demolition

4.2.4 Demolition will include the removal of an existing berthing dolphin, footbridge and rock armour and the partial removal of the west wing wall.

- Rock armour which requires to be removed, will be left in-situ for as long as possible to minimise the period of exposure of the un-armoured length of revetment to wave action. The rock armour removed will be set aside for re-use in the proposed works.
- Following removal of sufficient rock armour adjacent to the west wing wall, the wing wall will be partly demolished down to a level necessary to avoid obstructing construction of the extension structure immediately adjacent to the wing wall, using combination of concrete coring equipment, wire saws and hydraulic breakers.
- The existing steel footbridge will be removed in one piece by a land based crane.
- The existing berthing dolphin will be demolished in situ, using a combination of a barge mounted crane or long reach excavator with hydraulic breaker, supported by a shore based crane. The concrete deck will be broken into smaller sections and recovered to land for processing. Where concrete sections drop onto seabed, these will be recovered from the seabed and transferred to land for recycling or disposal.

Piling

Seaward Bearing Piles

4.2.5 There will be ~72 No. permanent vertical steel tubular piles in total in the quay extension and new mooring dolphin. An indicative arrangement is shown in Figure 4.3. Some temporary piles and structural steel bracing members may be necessary to support the initial pile installation works in the temporary condition and will be removed on completion of the works.

4.2.6 All piles will require a combination of rock drilling and driving to achieve the required embedment depth and capacity. All piles will be filled with concrete.

4.2.7 To achieve the required deck load capacity of 10 tonnes/m^2, the piles will be up to 1100 mm in diameter and will be embedded into sockets up to 10 m long drilled in rock and then concreted.

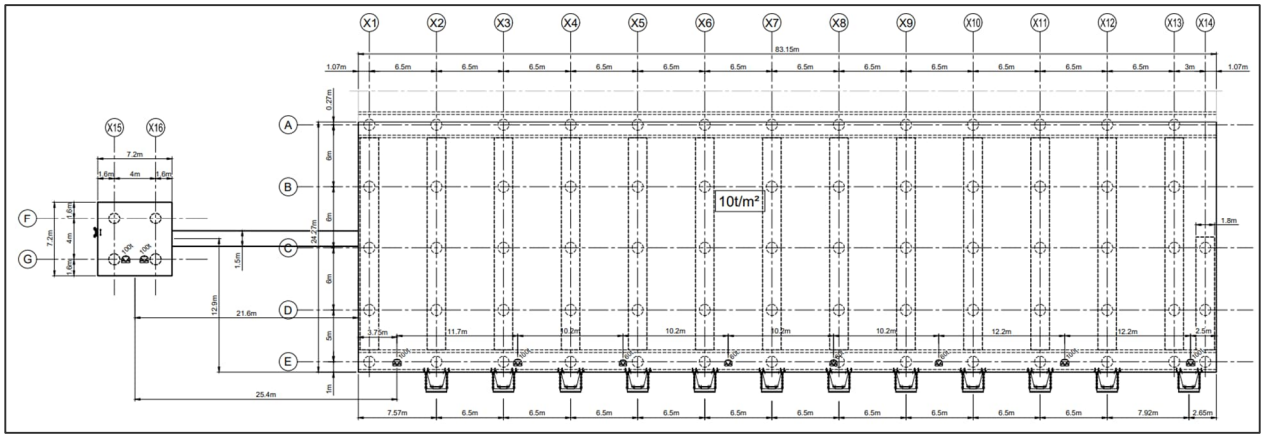

Figure 4.3 Smith Quay General Arrangement showing proposed pile layout.

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

4.2.9 The three seaward pile rows may be installed first, with the drilling rig located on the existing Smith Quay. Primary and underlayer rock armour will be removed in advance using a long-reach excavator working from the existing Smith Quay. A crawler crane will pitch the pile into the pile gate, the drilling rig will then place the tooling inside the tubular pile and advance the drill head to achieve the required rock socket depth.

4.2.10 A reinforcement cage or structural steel member will then be placed prior to concrete filling the rock sockets and piles. The crawler crane will either be land based or mounted on a barge as shown in Figure 4.4, which illustrates both the initial pile installation process and the removal of the existing dolphin's concrete deck.

Figure 4.4 Initial pile install working from Smith Quay.

4.2.11 Following installation of the first 3 piles, the drill rig will be transferred onto the jack-up barge or temporary works platform and secured in position. The crawler crane will be located on a spud leg barge or temporary works platform, which will be used to transport piles from the quay to the pile location (Figure 4.5). The crawler crane will pitch the piles into the pile gate, cantilevered over the edge of the jack-up barge / temporary works platform. The drill rig will then advance the rock socket, prior to concrete filling the rock sockets and piles.

4.2.12 The pile install method will continue along the full length of the works, installing all the piles along.

Figure 4.5 Pile installation from Jack-Up Barge.

Revetment Works

4.2.13 The revetment construction sequence and methodology outlined below may be subject to further development.

4.2.14 With the seaward piles sufficiently progressed, existing primary rock armour will be removed using a long reach excavator and stored on site for reuse in the permanent works. Rock core material will then be imported to site by road and placed in front of the existing rock core to advance the new revetment structure. Core material will be placed using a long reach excavator, working from the Smith Quay Embankment, initially placing material adjacent to the existing Smith Quay and working westward.

4.2.15 The placed revetment core material may be utilised as a working platform to install the landward 2 rows of piles. With the revetment core progressed, primary armour will be placed along the extent of the revetment to provide protection from wave action. The primary armour will be placed along the revetment slope, keeping the rear berm clear to allow pile installation through the revetment core.

4.2.16 While the rock armour is being placed, the piling equipment will be utilised to install the mooring dolphin piles working from the jack-up barge / temporary works platform.

Landward Bearing Piles

4.2.17 The pile installation sequence and methodology outlined below may be subject to further development.

4.2.18 The landward pile rows may be installed using land-based equipment. The new revetment core material will be used as a temporary working platform, with the platform raised above MHWS to allow pile installation during all states of the tide. The drill rig and crawler crane will be mobilised onto the core material. The crawler crane will pitch piles into the piling gate and the drill rig will then advance the drill head to achieve the required rock socket depth. The rock sockets and piles will then be concrete filled. Pile heads will be cut to required level using burning equipment. The process will be repeated for subsequent pile installations. Figure 4.6 illustrates the installation of these piles.

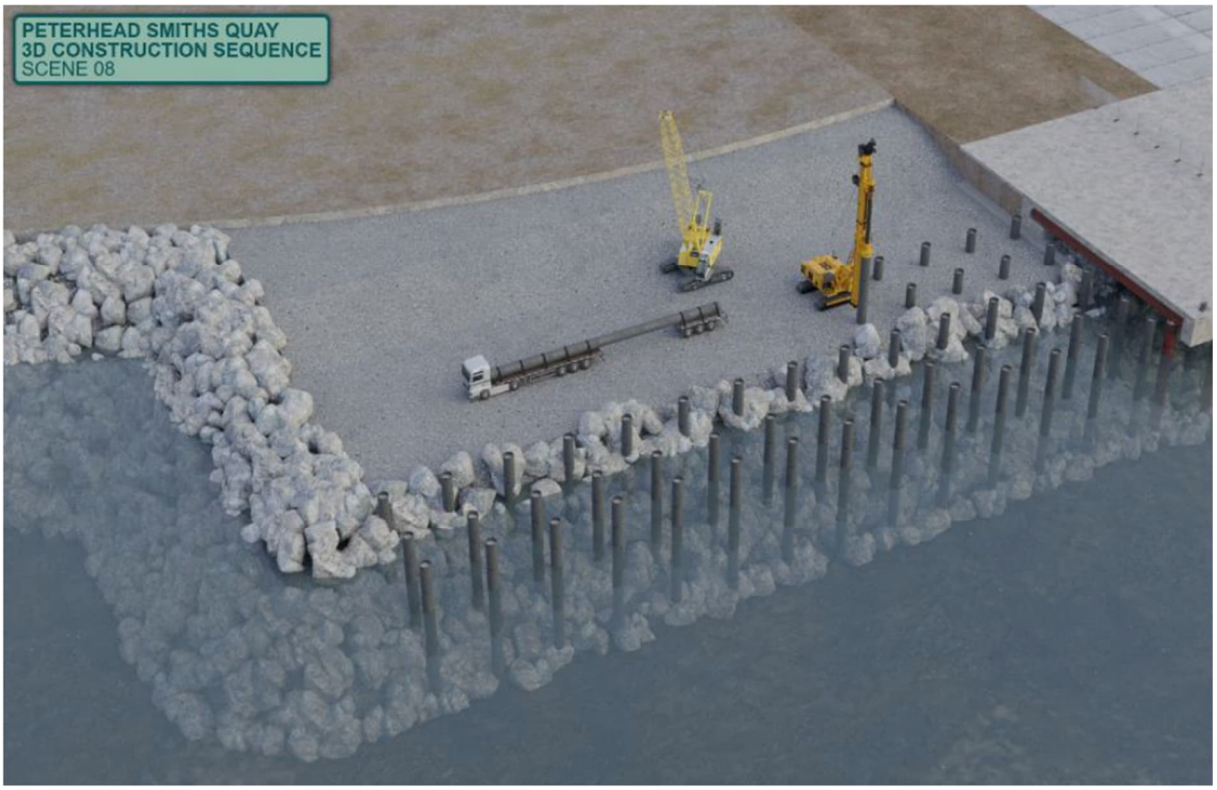

Figure 4.6 Install of pile rows A & B using land-based equipment.

Seaward Piles and Landward Piles - Alternative Methodology

4.2.19 As a potential alternative to the pile installation methodology outlined above, a “land-based” piling method which does not require marine plant is currently being explored and is dependant on final Contractor award.

4.2.20 The alternative would enable all piles to be installed from a temporary platform supported on two of the rows of permanent piles. The piles and platform would progressively extend westwards “hand over hand” from the existing quay. Installed piles would be used to support

a temporary working platform, allowing the pile drilling equipment to transverse and install subsequent piles, as illustrated in Figure 4.7. Both installation methods will be progressed in parallel.

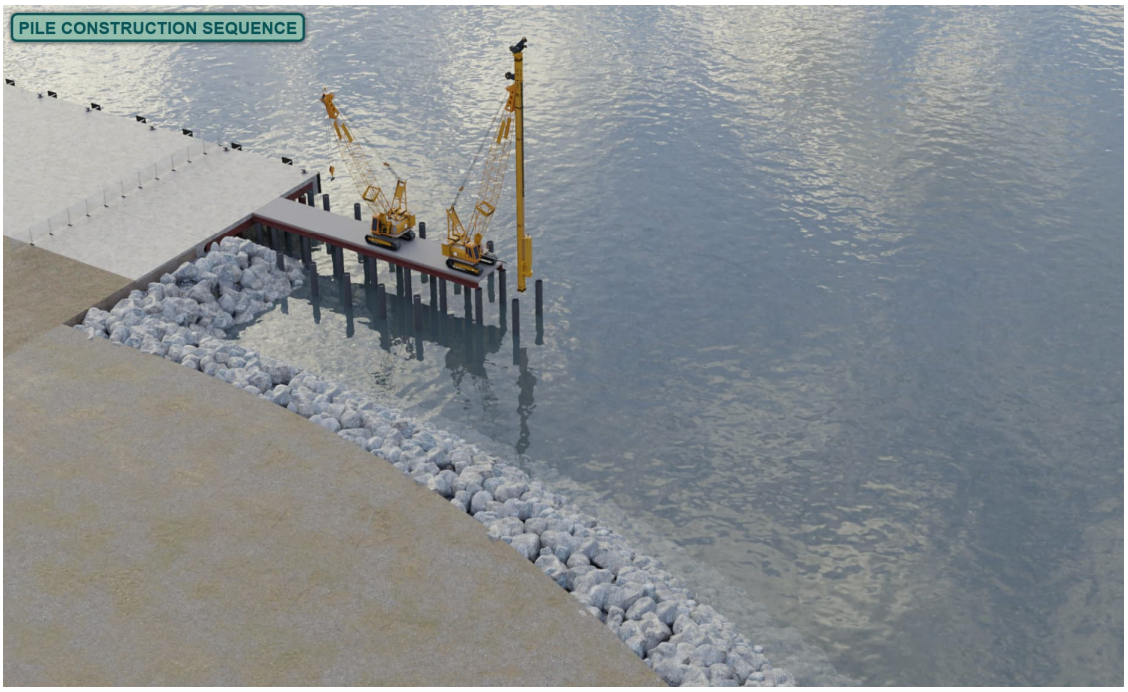

Figure 4.7 Pile installation from temporary working platform.

4.2.21 A similar alternative installation methodology for the new mooring dolphin piles is currently being developed. This method would require the temporary platform to be extended west of gridline X1 using temporary piles, which would be extracted upon completion of the new build dolphin works.

Concrete Backseat

4.2.22 Following installation of the piles and cutting of the pile heads to the correct level, precast concrete elements will be placed to form quay beams and deck. Precast beam elements will be installed in sequence, with cope beam and rear downstand beam installed, prior to transverse beams being placed in between. The beams will be placed in sections and will consist of pre-cast concrete 'U-shaped' troughs supported on the permanent piles and infilled with in-situ reinforced concrete. The connection between the beams and supporting piles will made by reinforcement protruding from the top of the concrete filled piles into the in-situ part of the beams. The process will be completed along the length of the structure, installing cope beam, rear downstand beam and transverse beams in sequence.

4.2.23 As the transverse beams are constructed and the in-situ concrete in them has developed the required strength, pre-cast concrete planks will be placed, spanning between the transverse beams. The planks will be pre-cast with protruding stirrups made from reinforcing bars, to ensure that the planks act compositely with the in-situ concrete to be placed on top of them.

4.2.24 A mat of reinforcement will be fixed on top of the beams and planks and in-situ concrete slab constructed. Figure 4.8 demonstrates the general sequence of works working west from the existing Smith Quay.

Figure 4.8 Placement of trough beams and precast deck planks.

4.2.25 Ducts will be incorporated within the deck structure to allow for future install of quayside services, such as power and water. On completion of the deck structure, quay furniture including ladders, grab chains, bollards and fenders will be installed.

Mooring Dolphin and Footbridge

4.2.26 A pile installation method similar to that for the quay extension method may be used to install the vertical piles for the new mooring dolphin, using the drilling rig working from the jack-up barge or an alternative land-based approach. Temporary support piles may be required to facilitate installation.

4.2.27 Once the rock-socketed piles are installed, temporary works would be constructed as falsework and formwork to support the in-situ concrete pour which will be the deck of the new dolphin.

4.2.28 Quay furniture including bollards, ladder and handrailing will be installed, including reinstatement of navigation aids and lighting.

4.2.29 Following completion of the dolphin structure, the walkway will be reinstated providing access from Smith Quay to the dolphin.

4.3 Operational and Decommissioning Phase

4.3.1 The planned operation of the site involves the same vessel movements and site operations allowed under the current Harbour Revision Order, including the passage of vessels over 1,350 tonnes. No deviation from this is expected.

4.3.2 An expected timeline for the quay's operational phase can be estimated as 50 years for a project of this type. Assessments on the decommissioning impacts will need to be undertaken within an appropriate period before any decommissioning commences. Accordingly, only construction activities and their effects will be considered in this assessment.

4.4 Programme

4.4.1 The construction programme is summarised in Table 4-2, as based on a Pre-construction Services Delivery Agreement Contract Award of 01 April 2025. This assumes Engineering Construction Contract award in January 2026. Site access is scheduled for March 2026. The final schedule is subject to receipt of necessary approvals.

Table 4-2 Estimated Construction Schedule.

Activity	Duration	Start	Finish
Detailed Design	9 months	January 2025	October 2025
Consents	18 Months	October 2024	March 2025
Procurement	9 Months	January 2026	September 2026
Construction	16 Months	April 2026	August-December 2027

4.4.2 A high-level construction sequence, and indicative timings, is provided below. These activities will not necessarily be carried out consecutively and may be undertaken partially or wholly in parallel:

- Dredging and demolition: 11 weeks (dredging 7 weeks, of which 5 weeks could include rock breaking)
- Revetment works: 12 weeks
- Suspended Jetty: 44 weeks, which includes:
  - Marine & land based piling: 23 weeks (around 4 hours of drilling and a few minutes of piling every other day- piling on approximately 81 days)
  - Concrete works: 20 weeks
- Quay furniture and footbridge: 8 weeks
- Dolphin works: 30 weeks (in parallel to suspended jetty works).

5 HRA & MPA Screening

5.1 Screening Criteria

5.1.1 The Screening exercise is detailed in the HRA Screening Report (NIRAS, 2024), and summarised in the following section.

5.1.2 Following the initial identification of sites, the potential for LSEs was considered. Where there was no potential impact pathway or the potential effects associated with an impact were considered to be insignificant, a site was screened out for further consideration in HRA.

Where the potential for LSE could not be excluded, sites were taken forward for further consideration.

5.1.3 For MPAs the screening consideration was whether the proposal is capable of affecting (other than insignificantly) a protected feature of an MPA.

5.1.4 The criteria used in screening for European Sites (and MPAs) takes account of the location of the sites relative to Peterhead Smith Quay and the ecology and distribution of qualifying features. These criteria are as follows:

1. Protected site overlaps with Peterhead Harbour Smith Quay area of works.
2. Protected site or mobile features ranging from such site may interact with the zone of impact (ZoI) associated with Peterhead Smith Quay (e.g. mobilisation of suspended sediments or increased underwater noise).
3. Protected site screened in by request of a statutory consultee.

5.1.5 Further detail on the site selection criteria used in the screening exercise, broken down for Annex I habitats, Annex II species and bird qualifying features can be found in NIRAS (2024).

5.1.6 For MPA screening, equivalent rationale was applied, taking into account site location and the characteristics of designates features.

5.2 Potential Impacts

5.2.1 The potential impacts arising from construction works associated with the Peterhead Smith Quay Extension Project are detailed in Table 5-1.

5.2.2 Given that this port is already operational, and the proposed works are not planned to change the function or increase operations, the potential impacts due to operations are not considered in this document.

Table 5-1 Anticipated impacts of the Proposed Works on relevant marine features.

Receptor Type	Pressure	Screening Parameter	Potential Impact
Benthic Habitats	Temporary increase in suspended sediments/smothering	2 km from area	Sediment disturbance arising from construction activities may result in adverse and indirect impacts on benthic communities as a result of temporary increases in suspended sediment concentrations and associated sediment deposition

Receptor Type	Pressure	Screening Parameter	Potential Impact
	Toxic contamination	2 km from area	There is a risk of pollution being accidentally released from sources including construction vessels/vehicles and machinery and from the construction process itself. The release of such contaminants may lead to impacts on the benthic communities present, through toxic effects resulting in reduced benthic diversity, abundance and biomass
	Habitat loss/gain	Direct area	This relates to the loss of marine seabed habitats due to installation of structures, and where relevant the associated introduction of new habitat.
	Direct Physical Impact (to habitat)	Direct area	This relates to the physical impact caused by, for example, pre-treatment of rock, abrasion from mooring lines, movement of armour rocks, or anchors.
	Indirect Physical Impact (to habitat)	2 km from area	This relates to changes in hydrological energy flows, waves, tidal currents, sediment transport, erosion/deposition etc. arising from the physical presence of structures in the marine environment or temporary seabed preparation works.
Migratory Fish Species	Underwater noise	50 km from area	Construction activities, in particular the pile-driving of foundations, will result in the highest levels of underwater noise, that may result in mortality, injury and behavioural impacts on fish.
	Toxic contamination	2 km from area	There is a risk of pollution being accidentally released from sources including construction vessels/vehicles and machinery and from the construction process itself. The release of such contaminants may adversely affect fish species.
	Direct Physical Impact (to habitat)	Direct area	This relates to the physical impact caused by, for example, pre-treatment of rock, abrasion from mooring lines, movement of armour rocks, or anchors.

Receptor Type	Pressure	Screening Parameter	Potential Impact
			Loss of potentially supporting habitat outside a designated site boundary is deemed inconsequential in the context of wider habitat availability, with direct overlap with SACs considered only.
	Indirect Physical Impact (to habitat)	2 km from area	This relates to changes in hydrological energy flows, waves, tidal currents, sediment transport, erosion/deposition etc. arising from the physical presence of structures in the marine environment or temporary seabed preparation works.
Marine Mammals	Underwater noise	Cetacean species: 200 km Harbour seals: 50 km Grey seals: 20 km	Construction activities, in particular the pile-driving of foundations, will result in the highest levels of underwater noise, that may result in mortality, injury and behavioural impacts on marine mammals.
	Toxic contamination	2 km from area	There is a risk of pollution being accidentally released from sources including construction vessels/vehicles and machinery and from the construction process itself. The release of such contaminants may adversely affect marine mammals.
	Habitat loss/gain	Direct area	This relates to the loss of marine habitat due to installation of structures, and where relevant the associated introduction of new habitat. Loss of potentially supporting habitat outside a designated site boundary is deemed inconsequential in the context of wider habitat availability, with direct overlap with SACs considered only.
	Direct Physical Impact (to habitat)	Direct area	This relates to the physical impact caused by, for example, pre-treatment of rock, abrasion from mooring lines, movement of armour rocks, or anchors.

Receptor Type	Pressure	Screening Parameter	Potential Impact
			Loss of potentially supporting habitat outside a designated site boundary is deemed inconsequential in the context of wider habitat availability, with direct overlap with SACs/NCMPAs considered only.
	Indirect Physical Impact (to habitat)	2 km from area	This relates to changes in hydrological energy flows, waves, tidal currents, sediment transport, erosion/deposition etc. arising from the physical presence of structures in the marine environment or temporary seabed preparation works.
Ornithology	Toxic contamination	2 km from area	There is a risk of pollution being accidentally released from sources including construction vessels/vehicles and machinery and from the construction process itself. The release of such contaminants may adversely affect seabirds species foraging in the area.
	Indirect temporary habitat loss/damage	2 km from area	The impact of construction activities such as increased vessel activity and underwater noise may result in disturbance or displacement of prey from important bird feeding areas
	Direct Physical Impact (to habitat)	Direct area	This relates to the physical impact caused by, for example, pre-treatment of rock, abrasion from mooring lines, movement of armour rocks, or anchors. Loss of potentially supporting habitat outside a designated site boundary is deemed inconsequential in the context of wider habitat availability, with direct overlap with SPAs considered only.

5.3 Summary of Screening

Benthic Habitats

5.3.1 Key data sources include site specific information for relevant designated sites, available through NatureScot and the JNCC. These will be drawn on as required for the subsequent assessment with respect to Annex I subtidal and intertidal habitat features screened in. A maximum of a 2 km buffer zone for potential pressures for benthic habitats was established based on the likelihood of impacts occurring outside the Peterhead Port breakwaters.

5.3.2 The proposed works are not located within a SAC or MPA. The nearest protected site to the proposed works is the Buchan Ness to Collieston SAC which is 3.9 km south. No protected sites were screened in for benthic habitats.

Marine Mammals

5.3.3 Key data sources include site specific information for relevant designated sites. That information is available through NatureScot and the JNCC. These will be drawn on as required for the subsequent assessment with respect to screened in Annex II marine mammal features. Given the foraging range of marine mammals and the semi-enclosed nature of the works, a buffer of 20 km for grey seal, 50 km for harbour seal, and 200 km for cetaceans was established.

5.3.4 The following protected sites with marine mammal features were screened in:

- Southern Trench MPA which is 4 km east and is designated for minke whale *(Balaenoptera acutorostrata*)
- Moray Firth SAC, which is 109 km to the north and is designated for bottlenose dolphin (*Tursiops truncatus*).

Migratory Fish

5.3.5 Key data sources include site specific information for relevant designated sites. That information is available through NatureScot and the JNCC. These will be drawn on as required for the subsequent assessment with respect to screened in Annex II migratory fish features. Given the nature of migratory fish and the semi-enclosed nature of the works, a buffer of 50 km was established for migratory fish.

5.3.6 The following SAC with Annex II migratory fish features was screened in:

- River Dee SAC, which is located 43.2 km south of the proposed works. The River Dee SAC is designated for the protection of Atlantic salmon (*Salmo salar*) and freshwater pearl mussels (*Margaritifera margaritifera*).

Ornithology

5.3.7 Key data sources include site specific information for relevant designated sites. That information is available through NatureScot and the JNCC. These will be drawn on as required for the subsequent assessment with respect to Annex I bird features screened in. due to the foraging nature of seabirds, a buffer zone of 15 km was established around the proposed works.

5.3.8 The following SPAs were screened in:

- Buchan Ness to Collieston Coast SPA – 1.9 km south
- Ythan Estuary, Sands of Forvie and Meikle Loch – 11.2 km south
- Loch of Strathbeg SPA/RAMSAR/SSSI – 11.5 km north

Listing of screened in sites and features

5.3.9 Table 5-2 summarises the conservation objectives for each protected site and screened in feature(s), including their status/condition.

Table 5-2 Conservation objectives and status for screened in protected sites and features

Site Name	Designation	Screened In Protected Feature(s)	Conservation Objectives (Summary)	Status / Condition*	Reference / Source
Southern Trench MPA	MPA	Minke whale	Maintain or restore features in favourable condition. For mobile species: ensure access to resources, healthy supporting features.	Favourable (2019)[4]	NatureScot https://sitelink.nature.scot/site/10477
Moray Firth SAC	SAC	Bottlenose dolphin	Maintain or restore qualifying species in favourable condition. Prevent deterioration and disturbance. Maintain supporting habitats.	Favourable (2024)	NatureScot https://sitelink.nature.scot/site/8327
River Dee SAC	SAC	Atlantic salmon	Maintain or restore qualifying habitats/species in favourable condition. Prevent deterioration and disturbance. Maintain supporting habitats.	Favourable (2015)	NatureScot https://sitelink.nature.scot/site/8357
Buchan Ness to Collieston Coast SPA	SPA	Fulmar, guillemot, herring gull, kittiwake, shag, seabird assemblage	Maintain or restore qualifying bird species in favourable condition. Prevent deterioration and disturbance. Maintain supporting habitats.	Fulmar: unfavourable (2024); guillemot: favourable (2024); herring gull: unfavourable (2024); kittiwake: unfavourable (2024); shag: unfavourable (2024);	NatureScot https://sitelink.nature.scot/site/8473

[4] For minke whale this is their Favourable Conservation Status for the UK and the Marine Atlantic Biogeographic Region (MATL) in Europe as reported under Article 17 of the Habitats Directive in 2019. See also NatureScot, (2025a).

Site Name	Designation	Screened In Protected Feature(s)	Conservation Objectives (Summary)	Status / Condition*	Reference / Source
				seabird assemblage: favourable (2017)	
Loch of Strathbeg SPA/RAMSAR/SSSI	SPA/RAMSAR/SSSI	Goldeneye, sandwich tern, teal, waterfowl assemblage	Maintain or restore qualifying bird species/assemblages in favourable condition. Prevent deterioration and disturbance. Maintain supporting habitats.	Goldeneye: favourable (2018); sandwich tern: unfavourble (2014); teal: favourable (2012); waterfowl assemblage: favourable (2024)	NatureScot https://sitelink.nature.scot/site/8537
Ythan Estuary, Sands of Forvie & Meikle Loch SPA/ RAMSAR	SPA/ RAMSAR	Common tern, eider, lapwing, little tern, redshank, sandwich tern, waterfowl assemblage	Maintain or restore qualifying bird species/assemblages in favourable condition. Prevent deterioration and disturbance. Maintain supporting habitats.	Common tern: favourable (2024); eider: unfavourable (2024); lapwing: favourable (2012); little tern: unfavourable (2024); redshank: favourable (2024); sandwich tern: favourable (2024); waterfowl assemblage: favourable (2024)	NatureScot https://sitelink.nature.scot/site/8592

6 RIAA & MPA Assessment Methodology

6.1 Overall approach

6.1.1 The HRA considers whether the activities associated with the proposed development could have an adverse effect on the integrity of the protected site.

6.1.2 For MPAs, the assessment focuses on whether there may be a significant risk of the proposal hindering achievement of the COs of the MPA.

6.1.3 The following pressures are considered:

- Habitat loss/gain;
- Direct Physical Damage;
- Indirect Physical Damage;
- Collision (marine mammals and fish);
- Collision (birds);
- Physical Presence;
- Underwater Noise;
- Above Water Noise;
- Toxic Contaminants;
- Light;
- Temperature;
- Suspended Sediments; and
- Invasive Species.

6.1.4 The assessment approach has adopted a risk-based approach which takes into consideration both the vulnerability of features ("Feature Vulnerability") and the vulnerability of the Protected Sites ("Protected Site Vulnerability") to the potential impacts arising from the Smith Quay Extension. The feature assessment is considered in sections 6.2 (Feature Vulnerability) and 6.3 (Protected Site Vulnerability).

6.2 Feature Vulnerability

6.2.1 Feature Vulnerability has been determined on the basis of the feature's risk ("Feature risk") to the pressures screened in and the nature of a feature's interaction ("Feature Interaction") with the Smith Quay Extension area.

Feature risk

6.2.2 For all features a risk score has been assigned in relation to each pressure screened into the assessment. Feature Risks have been scored as low, medium or high based on an evaluation supported by available evidence as cited in the assessment which follows.

6.2.3 For all features, an overall Feature risk score has been assigned based on the pressure with the highest score.

Minke Whale

Conservation Objectives

6.2.4 Minke whale are a feature of the Southern Trench MPA. As a mobile species of marine fauna, the Nature Conservation Marine lists minke whale as "*a species of marine fauna with the ability to move freely between different locations that may be within, or outwith, the boundary of the Southern Trench MPA*''.

6.2.5 The overarching conservation objectives for the Southern Trench MPA are that the protected features:

- so far as already in favourable condition, remain in such condition
- so far as not already in favourable condition, be brought into such condition, and remain in such condition.

6.2.6 For mobile species such as the minke whale, "favourable condition" is defined by several criteria:

- the species is conserved or, where relevant, recovered to include the continued access by the species to resources provided by the MPA for, but not restricted to, feeding, courtship, spawning or use as nursery grounds;
- the extent and distribution of any supporting features upon which the species is dependent is conserved or, where relevant, recovered; and
- the structure and function of any supporting feature, including any associated processes supporting the species within the MPA, is such as to ensure that the protected feature is in a condition which is healthy and not deteriorating.

6.2.7 Any changes to the condition of protected features that result solely from natural processes are not considered when assessing favourable condition. According to the most recent site assessment (NatureScot, 2025a), the minke whale feature within the Southern Trench MPA is considered to be in favourable condition.

Pressures

6.2.8 Collision and underwater noise were screened in for minke whales based on the proximity of the Southern Trench NCMPA and the animal's ranging behaviour.

6.2.9 Sensitivity of minke whales to these pressures are summarised in Table 6-1.

Table 6-1 Pressure sensitivity for minke whales.

Pressure	Feature Risk
Collision	Low
Underwater Sound	Medium
Summary	Medium

Collision

6.2.10 Minke whales are considered to be sensitive to collision and incidental bycatch. There is evidence of minke whales with injuries that could have been caused by collision with boat propellers, and blunt trauma injuries associated with collision with the bows of vessels (Laist et al., 2001). There is potential for an increase in vessel movement during the construction works; however, other than transits to and from site operations will be within the Peterhead Harbour area, which is semi-enclosed. The vessels used are also slow moving and not associated with high risk of marine mammal collision. Based on this, the risk associated with collision is low.

Underwater Sound

6.2.11 Minke whales are known to be sensitive to underwater noise, although the degree to which they are sensitive is not well understood. There is potential for auditory injury, disturbance and displacement from foraging areas as a result of activities which produce underwater noise at frequencies which overlap with the whales' hearing range.

6.2.12 Noise modelling was conducted (Annex 1 Noise Modelling Report) to evaluate the impact of underwater noise generated from construction activities on cetaceans. The results from this modelling indicate that dredging is associated with the greatest effect range for minke whale, which are considered a low frequency (LF) cetacean. However, ranges for behavioural impacts and auditory injury were restricted largely to the inner harbour, out to harbour entrance area (1.46 km range).

6.2.13 While disturbing levels of underwater noise will not reach the boundary of the Southern Trench MPA it is possible that animals passing close to the harbour area could experience temporary disturbance. The most important area for minke whale, which are understood to visit to feed during summer months, is to the west of Fraserburgh. The southern part of this MPA, off Peterhead, supports relatively low densities of minke whale in comparison (Figure 6.1). Notwithstanding this, there is some risk of disturbance and the overall risk associated with underwater noise is considered to be up to medium.

6.2.14 As set out in the EPS Risk Assessment (NIRAS, 2025b), mitigation is planned in the form of marine mammal observers which will seek to reduce the risk of any effects on minke whale to very low levels, given that this species would be readily detected by visual observation during daylight hours, when works will occur. The residual feature risk will be low.

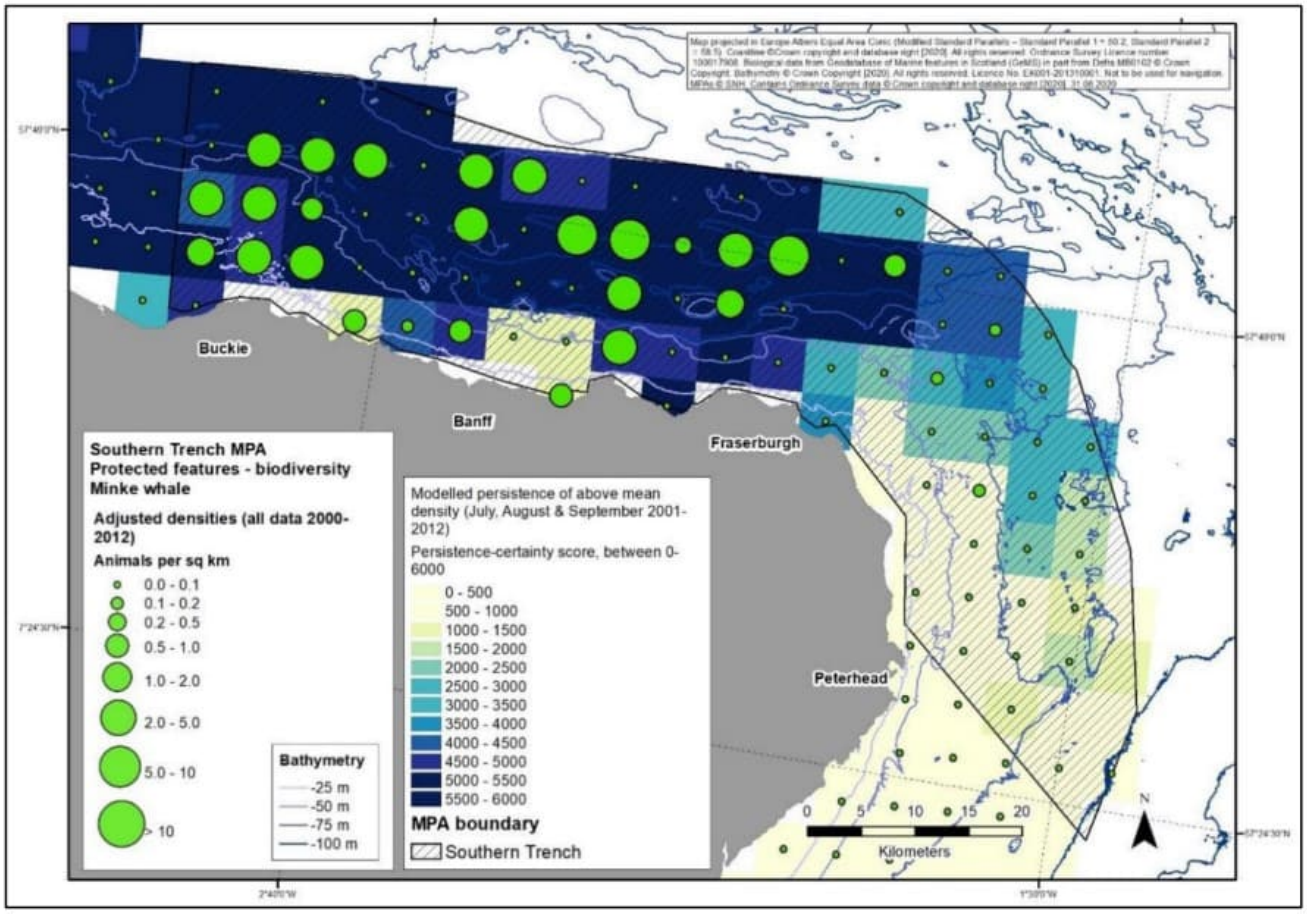

Figure 6.1 Minke whale densities and predicted persistence of above mean densities in the Southern Trench NCMPA. From NatureScot, 2020

Atlantic Salmon

Conservation Objectives

6.2.15 The River Dee SAC is designated to protect Atlantic salmon, a migratory fish species that relies on the river and its supporting habitats for key stages of its life cycle.

6.2.16 The conservation objectives for Atlantic salmon in the River Dee SAC are:

- To ensure that the qualifying features of the River Dee SAC are in favourable condition and make an appropriate contribution to achieving favourable conservation status.
- To ensure that the integrity of the River Dee SAC is restored by meeting the below objectives:
    - Maintain the population of Atlantic salmon, including range of genetic types, as a
    - viable component of the site.
    - Maintain the distribution of Atlantic salmon throughout the site
    - Maintain the habitats supporting Atlantic salmon within the site and availability of food.

6.2.17 The River Dee SAC Conservation Advice Package (NatureScot, 2025b) states that the integrity of the River Dee SAC must be maintained or restored by achieving these objectives, and

management should address pressures such as water abstraction, pollution, river engineering, flooding, and intensive land use, which can affect salmon populations and their habitats.

6.2.18 Conservation measures should ensure that Atlantic salmon can complete their life cycle successfully within the SAC, contributing to the favourable conservation status of the species at site and national levels.

Pressures

6.2.19 Underwater noise was screened in for Atlantic salmon based on the relative proximity of the River Dee SAC to Peterhead Port and then migratory and foraging tendencies.

6.2.20 Sensitivity of Atlantic salmon to these pressures are summarised in Table 6-2.

Table 6-2 Pressure sensitivity for Atlantic salmon.

Pressure	Feature Risk
Underwater Sound	Low
Summary	Low

Underwater Sound

6.2.21 The proposed works area is within 50 km of the River Dee SAC, which is designated for Atlantic salmon. Noise modelling (Annex 1) indicated that fish with a swim bladder (including Atlantic salmon) are expected to show behavioural reaction to pile driving noise at a maximum distance of 2.8 km from source. Injury effects are expected to be restricted to the harbour basin area.

6.2.22 Atlantic salmon migrating to or from the River Dee SAC could experience temporary disturbance if passing close to Peterhead. Smolt which leave the river in spring/early summer are understood to head south and east into the North Sea towards feeding grounds in the Norwegian Sea (River Dee Trust & Marine Scotland Science, 2019), and so are not expected to be affected by noise from the works.

6.2.23 Returning adult fish (multi-sea-winter fish in January to May) and summer/autumn grilse (one-sea-winter fish) are understood to generally approach Scotland from the north and northeast Atlantic, moving toward the Scottish east coast shelf before entering the Dee estuary. Fish may arrive at the coast to the south of the Dee and potentially move up past Peterhead (Malcolm *et al.,* 2010); however, at this point in their migration it is expected that fish will be prioritising return to their natal river to spawn and temporary disturbance around the immediate area of the harbour mouth is not expected to be significant in the context of spawning migration.

6.2.24 The risk is categorised as Low.

Bottlenose dolphin

Conservation Objectives

6.2.25 The Moray Firth SAC is designated to protect bottlenose dolphins, ensuring the long-term viability of the population and the habitats that support them.

6.2.26 The conservation objectives for bottlenose dolphins in the Moray Firth SAC are:

- To ensure that the qualifying features of Moray Firth SAC are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.
- The population of bottlenose dolphin is a viable component of the site; the population should be robust and sustainable, able to complete all life stages within the SAC.
- The distribution of bottlenose dolphin throughout the site is maintained by avoiding significant disturbance of bottlenose dolphin.
- The supporting habitats and processes relevant to bottlenose dolphin and their prey/food resources are maintained.

6.2.27 The Conservation and Management Advice for Moray Firth SAC (NatureScot, 2025c) states that the integrity of the Moray Firth SAC must be maintained or restored by achieving these objectives, and management should address pressures such as disturbance from vessels, pollution, habitat loss, and changes in prey availability, which can affect dolphin populations and their habitats.

6.2.28 Conservation measures should ensure that bottlenose dolphins can complete their life cycle successfully within the SAC, contributing to the favourable conservation status of the species at site and national levels.

Pressures

6.2.29 Collision and underwater noise were screened in for bottlenose dolphins based on the typical foraging distances and sightings of bottlenose dolphins around Peterhead Port.

6.2.30 Sensitivity of bottlenose dolphins to these pressures are summarised in Table 6-3.

Table 6-3 Pressure sensitivity for bottlenose dolphin.

Pressure	Feature Risk
Collision	Low
Underwater Sound	Medium
Summary	Medium

Collision

6.2.31 Bottlenose dolphin are considered to be at risk from vessel collision; however given that they are a highly agile and fast moving species, it is unlikely that collision would occur. There is potential for an increase in vessel movement during the construction works, however it will likely be within the Peterhead Harbour area, which is semi-enclosed. Based on this, the risk associated with collision is low.

Underwater Sound

6.2.32 Bottlenose dolphin are known to be sensitive to underwater noise, with potential for auditory injury, disturbance and displacement occurring as a result of activities which produce underwater noise at frequencies which overlap with the animal's hearing range.

6.2.33 Based on noise modelling completed in relation to planned activities (Annex 1 Noise Modelling Report), the behavioural response impact for high frequency (HF) cetaceans, which includes bottlenose dolphin, is expected to reach at most 1.46 km for any activity and be largely restricted to the harbour basin area, up to the harbour entrance for dredging and within the harbour for all other activities. Auditory injury risk for bottlenose dolphin is predicted to reach not more than 1.16 km for any activity and be confined to the Peterhead harbour basin.

6.2.34 Bottlenose dolphin associated with the Moray Firth SAC regularly travel south, down the coast and will therefore pass Peterhead, although hot spots are understood to be further south (Civil *et al.,* 2019). There is no known evidence of dolphins entering the harbour area and intermittent disturbance, should this coincide with the presence of animals close to the harbour entrance, is considered to represent no more than a medium risk.

6.2.35 As set out in the EPS Risk Assessment (NIRAS, 2025b), mitigation is planned in the form of marine mammal observers which will seek to reduce the risk of any effects on bottlenose dolphin to very low levels given that this species would be readily detected by visual observation during daylight hours, when works will occur. The residual feature risk will be low.

Bird species and Assemblages

6.2.36 The Smith Quay Extension does not overlap with any SPA, but Peterhead Port is potentially inside the foraging range for a number of qualifying seabirds from SPAs.

6.2.37 The harbour area is not understood to be important habitat for any screened in SPA bird species and, as established in the Environmental Appraisal (NIRAS, 2025a), there are expected to be minimal impacts on birds foraging in or around the area of works. The risk of disturbance is negligible in the context of a busy harbour and no important habitat for birds will be lost or damaged as a result. Risk of remote effects, such as exposure to toxic contaminants, is also negligible given the low levels of contaminants in sediments and controls on construction works (see NIRAS, 2025a).

6.2.38 Feature risk is concluded to be low for all pressures.

Feature Interaction

6.2.39 The nature of a feature's interaction with the Smith Quay Extension Area has also been scored as low, medium or high, based on the feature specific criteria set out in Table 6-4.

Table 6-4 Criteria used to assign Feature Interaction scores.

Feature Group	Low	Medium	High
Annex I Habitats	No overlap between Smith Quay Extension Area and Protected Site	Direct overlap between Smith Quay Extension Area and Protected Site. Within the Protected Site, feature distribution not continuous	Direct overlap between Smith Quay Extension Area and Protected Site. Within the Protected Site, feature near continuous distribution
Marine Mammals (cetaceans)	Protected Site more than 200 km* from Smith Quay Extension Area.	Protected Site up to 200 km* from Smith Quay Extension Area (but not overlapping).	Direct overlap between Smith Quay Extension Area and Protected Site
Annex II Migratory Fish	Protected Site more than 25 km** from Smith Quay Extension Area.	Protected Site up to 25 km** from Smith Quay Extension Area (but not overlapping).	Direct overlap between Smith Quay Extension Area and Protected Site
Birds	No overlap between Smith Quay Extension Area and Protected Site, no evidence of that harbour could be functionally linked habitat	No overlap between Smith Quay Extension Area and Protected Site, evidence of use of the harbour area by ranging birds.	Direct overlap between Smith Quay Extension Area and Protected Site.

* These ranges were used in the HRA screening to account for foraging distances for each species.

** Half the distance used in screening. Peterhead Port is semi-enclosed and has no rivers flowing into it.

6.2.40 For Annex I habitats, the Smith Quay Extension are does not directly overlap with any SAC or NCMPA.

6.2.41 For all mobile mammals (cetaceans) species and Annex I bird species and assemblages, there is no direct overlap between sites designated for these features and the Smith Quay Extension area. However, marine mammals (cetaceans) are within the ranges identified and as such they have been given a medium score for feature interaction. Bird species and assemblages have been given a score of low since there is no indication that the harbour area is important (e.g. functionally linked) habitat for any relevant bird feature.

6.2.42 For Annex II migratory fish species, there is no direct overlap between sites designated for these features and the Smith Quay Extension. The proposed works area is within a semi-enclosed harbour and has no riverine input, indicating it is unlikely that Atlantic salmon will migrate into the port when returning adults are searching for their natal river (River Dee SAC). As such, migratory fish have been given a score of low.

6.3 Protected Site Vulnerability

6.3.1 For SACs and SPAs Protected Site Vulnerability is typically determined on the basis of the condition of the Protected Sites, as classified by statutory nature conservation bodies (SNCBs), and any other impacting activities affecting those sites.

6.3.2 We have identified no other plans or projects which could act in-combination with the works to cause adverse effects.

6.3.3 As no in-combination impacts have been identified, Protected Site Vulnerability was based on the condition of the Protected Sites alone. A review of publicly available Protected Site information documents has been undertaken to determine the condition of each feature at each Protected Site. The review identified that the condition of some qualifying features had been inconsistently monitored and that this information was unavailable for some Protected Sites.

6.3.4 In order to assign consistent scores, the following criteria was applied:

- Low – Protected Sites features categorised by the SNCBs as being in Favourable condition;
- Medium – Information unavailable or ambiguous; and
- High – Protected Features clearly categorised by the SNCBs as being in Unfavourable condition.

6.3.5 This information is presented in Appendix 1.

7 Determining Overall Risk of AEOI

7.1.1 To determine the overall risk of an AEOI of each Protected Site, and therefore where interventions are required, the above assessment scores were combined in two steps:

7.1.2 Step 1: A Feature Vulnerability score was established by combining the Feature Risk score with the Feature Interaction score, as shown in Table 7-1. Where the Feature Vulnerability score is LL (very low) it is concluded that there is no risk of AEOI or hinderance of COs.

Table 7-1 Determination of Feature Vulnerability.

	Feature Risk			
Feature Interaction		Low (L)	Medium (M)	High (H)
	L	LL	L	L
	M	L	M	M
	H	L	M	H

7.1.3 Step 2: The overall score to establish the risk of an AEOI was established by combining the Feature Vulnerability score and the Protected Site Vulnerability score, as shown in Table 7-2. These evaluations guide the assessment, but in no case does the indicated score rule out the

potential for a conclusion of AEOI/hinderance of COs. Further consideration is given in an assessment.

Table 7-2 Determination of overall score representing the risk of an AEOI.

		Feature Vulnerability		
		L	M	H
Protected Site Vulnerability	L	1	2	3
	M	1	2	3
	H	1	3	3

8 Assessment Outcome

8.1.1 The scores for all parameters are presented in Appendix 1, alongside the assessment overall score for each feature.

8.1.2 For Atlantic salmon (River Dee SAC) and bird features of all SPAs the Feature Vulnerability scores were LL (very low), indicating no risk of an adverse effect on site integrity.

8.1.3 For minke whale in the Southern Trench MPA, and bottlenose dolphin in the Moray Firth SAC the overall score (before application of any mitigation) was 2 (two).

8.1.4 Mitigation measures for cetaceans are set out in the EPS Risk Assessment (NIRAS 2025b, see Table 5.10 of that document) and are adopted for the purposes of this HRA and MPA assessment. As indicated in Section 6.2 above, application of mitigation (notably marine mammal observer protocols to ensure that no minke whale or bottlenose dolphin will be subject to injury risk, and that disturbance risk will be minimised) serves to reduce feature sensitivity risk to Low. In both cases, these species would be relatively easily detected in the harbour area (inner harbour or harbour entrance) by a visual observer during daylight hours, when works would occur. In this respect it is considered that mitigation would be highly effective in reducing the existing low risk of an impact to negligible levels.

8.1.5 There is concluded to be no risk of an adverse effect on the integrity of the Moray Firth SAC, or hinderance of the conservation objectives of the Southern Trench MPA, with mitigation in place.

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Appendix 1: RIAA & MPA Assessment Summary

Site Code	Site Name	Status	Common Name	Group	Season	Feature Risk	Feature Interaction	Feature Vulnerability	Protected Site Vulnerability	AEOSI/Hinderance of COs ruled out? (Yes/No)
8473	Buchan Ness to Collieston Coast	SPA	Fulmar	Birds	Breeding	L	L	LL	H	Yes
8473	Buchan Ness to Collieston Coast	SPA	Guillemot	Birds	Breeding	L	L	LL	L	Yes
8473	Buchan Ness to Collieston Coast	SPA	Herring gull	Birds	Breeding	L	L	LL	H	Yes
8473	Buchan Ness to Collieston Coast	SPA	Kittiwake	Birds	Breeding	L	L	LL	H	Yes
8473	Buchan Ness to Collieston Coast	SPA	Shag	Birds	Breeding	L	L	LL	H	Yes
8473	Buchan Ness to Collieston Coast	SPA	Seabird assemblage	Birds	Breeding	L	L	LL	L	Yes
10477	Southern Trench	MPA	Minke whale (before mitigation)	Mammal	N/A	M	M	M	L	Yes (after mitigation and further assessment- see text)
8537	Loch of Strathbeg	SPA	Goldeneye	Birds	Non-breeding	L	L	LL	M	Yes

Site Code	Site Name	Status	Common Name	Group	Season	Feature Risk	Feature In-teraction	Feature Vulnera-bility	Protected Site Vulner-ability	AEOSI/Hinder-ance of COs ruled out? (Yes/No)
8537	Loch of Strath-beg	SPA	Sandwich tern	Birds	Breeding	L	L	LL	H	Yes
8537	Loch of Strath-beg	SPA	Teal	Birds	Non-breed-ing	L	L	LL	L	Yes
8537	Loch of Strath-beg	SPA	Waterfowl assemblage	Birds	Non-breed-ing	L	L	LL	L	Yes
8357	River Dee	SAC	Atlantic salmon	Fish	N/A	L	L	LL	L	Yes
8592	Ythan Estuary, Sands of Forvie and Meikle Loch	SPA	Common tern	Birds	Breeding	L	L	LL	L	Yes
8592	Ythan Estuary, Sands of Forvie and Meikle Loch	SPA	Eider	Birds	Non-breed-ing	L	L	LL	H	Yes
8592	Ythan Estuary, Sands of Forvie and Meikle Loch	SPA	Lapwing	Birds	Non-breed-ing	L	L	LL	L	Yes
8592	Ythan Estuary, Sands of Forvie and Meikle Loch	SPA	Little tern	Birds	Breeding	L	L	LL	H	Yes

Site Code	Site Name	Status	Common Name	Group	Season	Feature Risk	Feature Interaction	Feature Vulnerability	Protected Site Vulnerability	AEOSI/Hinderance of COs ruled out? (Yes/No)
8592	Ythan Estuary, Sands of Forvie and Meikle Loch	SPA	Redshank	Birds	Non-breeding	L	L	LL	L	Yes
8592	Ythan Estuary, Sands of Forvie and Meikle Loch	SPA	Sandwich tern	Birds	Breeding	L	L	LL	L	Yes
8592	Ythan Estuary, Sands of Forvie and Meikle Loch	SPA	Waterfowl assemblage	Birds	Non-breeding	L	L	LL	L	Yes
8327	Moray Firth	SAC	Bottlenose dolphin (before mitigation)	Mammal	N/A	M	M	M	L	Yes (after mitigation and further assessment- see text)

LL = Very low; L = Low; M=Medium; H=High