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Redevelopment of St. Ola Pier

Environmental Impact Assessment Scoping Report

RPS

Scrabster Harbour

CONTENTS

1 INTRODUCTION

1.1 This Environmental Impact Assessment Scoping Report (ESR) has been prepared by RPS on behalf of Scrabster Harbour Trust (SHT) in respect of the proposed redevelopment of St. Ola Pier, Scrabster Harbour, Thurso, Caithness. An EIA Screening Opinion on the proposed redevelopment issued from Marine Scotland Licensing Operations Team (MSLOT) in March 2018 (Appendix 1.1). This Opinion determined the proposed redevelopment to be EIA development under The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations), and as such an Environmental Impact Assessment must be carried out.

1.2 On foot of this Opinion, SHT commissioned RPS to prepare an ESR for the proposed redevelopment of St. Ola Pier. The layout of the existing Scrabster Harbour is illustrated in Appendix 1.2.

1.3 The ESR has been provided in order to assist the Scottish Ministers in adopting a scoping opinion. In line with the EIA Regulations, the following has been provided within this report:

- a description of the location of the works in Section 2, including a plan sufficient to identify the area in which the works are proposed to be sited;
- a brief description of the nature and purpose of the works in Section 2 and their likely impact on the environment in Sections 3-18.

1.4 The main purpose of the EIA scoping exercise is to identify potentially significant issues for detailed examination and those that can be 'scoped out' of future assessments. Scoping out is justified on the basis of any of the following:

- A topic is irrelevant, due to the nature of the works on the receiving environment
- The proposed option results in negligible impacts and is located in an area that is not environmentally sensitive to the anticipated effects
- Effects on a particular receptor are considered to be below the significance threshold; or
- Any design or mitigation measures proposed will avoid the particular environmental effect.

1.5 The ESR considers environmental topics having regards to:

- A brief assessment of the existing situation (baseline)
- The identification of potential effects and key issues which may be associated with both the construction and operation of the proposed redevelopment;
- An indication of any mitigation measures likely to be proposed; and
- An indication of the approach to be adopted towards a detailed assessment of potential effects (where appropriate).

Outline of Alternatives

1.6 This project is focused on the redevelopment of the existing St. Ola Pier and alternative locations were ruled out as they would have caused greater environmental impact.

1.7 A key driver of this redevelopment project is to provide safe navigable berthage for cruise liners as well as reinstated quay berths for offshore oil & gas supply vessels and ongoing cargo berths. The potential for cruise vessels could not be accommodated at the Queen Elizabeth Pier due to their length & draught and the constraint of frequent daily ferry sailings to Orkney using that berth. As a result, the focus of the redevelopment of St. Ola Pier which was nearing the end of its serviceable life. Given that major maintenance works would be needed to simply reinstate the original capacity of the pier, it was decided to focus on this location and include an upgrade by providing a useable berth on the outer side of the pier.

Before the Queen Elizabeth Pier was built, there was no sheltered berthage on the outside of the St. Ola Pier and this location would have been deemed too exposed to consider as a useful berth. Now that the Queen Elizabeth Pier provides the necessary shelter from wave exposure, it has been deemed viable to construct a berth on each side of the St. Ola Pier.

Alternative Pier Layouts

1.8 Alternative layouts and alignments of berth were considered for each side of St. Ola Pier with varying extent of reclamation within those alignments. All alignments have been proposed to encompass the existing pier structures which are nearing the end of their serviceable life and offer little prospect of being usefully incorporated into the new quay structure. The alignments considered to date have only varied by a few degrees off parallel to the main Pier alignment.

1.9 The variations in alignment and types of quay structure envisaged offer the prospect of varied amounts of dredged material being incorporated into the renovated quay. However, it is noted that this variation does not extend to accommodating all of the dredged material as a reusable resource and a significant amount of dredged material will need to be disposed of off-site. This is further discussed at paragraphs 2.12 and 2.13 in Section 2 of the ESR.

Proposed Structure of the EIA Report

1.10 The proposed structure for the EIAR is:

- Non-Technical Summary
- Volume I. Main Report
- Volume II. Technical Appendices
- Volume III. Design Drawings, Figures

EIA Methodology

1.11 The methodology for EIA provides for a staged approach, which can be summarised as follows:

- Scoping / consultation exercise: to be undertaken with those organisations listed in Appendix 1.3 to compile relevant background data and identify issues and constraints
- Baseline surveys: including walk-over visits, detailed specialist surveys and discussions with relevant statutory and other consultees to determine the nature and extent of the existing environment
- Identification of potential significant effects: predicting the likely significant environmental effects of the redevelopment during construction and during operation of the facility for the range of predicted uses as well as setting the scene for the identifying appropriate mitigation for the redevelopment

- Mitigation: on-going development and description of mitigation proposals which will be incorporated into the project design as it evolves, including regular review and evaluation, to mitigate the potential environmental effects
- Monitoring: if considered necessary, monitoring requirements may be identified for the both the construction and operational phase of the redevelopment
- Residual and cumulative effects: consideration of the residual effects remaining after mitigation
- Reporting: preparation of the EIA Report, including Non-Technical Summary (NTS)

Assessment of Environmental Effects

1.12 The assessment of whether the redevelopment is likely to have a significant impact on the environment will be undertaken through a variety of methods:

- Professional judgement and experience based on published guidance criteria
- Assessment of both temporary and permanent effects
- Assessment of cumulative effects
- Assessment of duration, frequency and reversibility of effects
- Assessment against local, regional and national planning policy
- Consultation with statutory and non-statutory consultees (as listed in Appendix 1.3)

1.13 Significance criteria will be based on the type of potential consequences, the probability of the consequence occurring and the magnitude of the consequence. Table 1.1 identifies the scale that will be used to evaluate significance of effect, thus providing a consistent approach throughout the EIA Report.

Table 1.1: Significance Criteria

Significance Criteria	Definition
Major Adverse/Beneficial Effect	Substantial deterioration/improvement compare to the current scenario e.g. high impact on a regionally or nationally importance resource
Moderate Adverse/Beneficial Effect	Noticeable deterioration/improvement compared to the current scenario e.g. moderate to high impact on a locally important resource
Minor Adverse/Beneficial Effect	Slight deterioration/improvement compared to the current scenario e.g. low impact on a locally important resource
Neutral	No noticeable alterations to the current scenario

1.14 Each topic chapter will identify significant effects relevant to each topic having regard to this scale.

2 PROJECT DESCRIPTION

Location of the Proposed Redevelopment

2.1 Scrabster is located on the north coast of Caithness and has a grid reference centre point of ND10437 70310. Scrabster is situated 1.5 miles northwest of Thurso, the largest town in Caithness, provides a ferry link to Orkney and is ideally located for access to the North Sea and Atlantic Ocean.

2.2 Scrabster Harbour falls within the boundary of the Highland Council. The location and layout of the Harbour are shown in Figures 2.1 and 2.2 respectively.

Figure 2.1: Location of Scrabster Harbour

2.3 St. Ola Pier is located at the centre of a busy operational harbour. It was constructed in 1972 and incorporates a 100m long berth face to the southwest, a linkspan and a further 115m berth which was used by the Orkney Ferry prior to the Queen Elizabeth Pier being constructed in 2003. The northeast side of St. Ola Pier currently has no berthage because of a 1.5m sea protection wall. Due to the age of pier it is in need of upgrade. The proposed redevelopment aims to ensure the ongoing structural integrity of the pier while also providing additional berthage for use, particularly by oil and gas supply vessels and cruise ships.

Figure 2.2: Scrabster Harbour Layout

Description of the Proposed Redevelopment

2.4 At this stage, and subject to any design evolution or refinement, the proposed redevelopment comprises redevelopment of St. Ola Pier and is described as follows:

2.5 The proposed redevelopment is a redevelopment of the existing St. Ola Pier (see Figure 2.2) which has fallen into declining use due to ongoing corrosion of steel piling and lack of load bearing capacity for imposed deck loads.

2.6 The opportunity afforded by redevelopment is being used to provide an enhanced straight berthing face on the inner side for service and cargo vessels with a new berth on the outside face; particularly for cruise vessels of up to 250m long.

2.7 The linkspan will be removed as all ferry traffic has now been migrated to the new Queen Elizabeth (QE) Pier.

2.8 The pier will be widened locally to accommodate the straight berthing faces with resulting parallel berthing faces at approximately 32m apart.

2.9 The renovated pier will be circa. 280m long and be fully enclosed by newly driven steel piles around the perimeter. There will be a concrete deck with drainage captured through bypass interceptors as well as lighting masts at circa 50m spacing.

2.10 The outer side will have a new berth depth of -9m CD to accommodate cruise vessels and the inner side will be dredged to provide a consistent berth depth of -7.5m CD.

2.11 The works may also include for reclamation of 0.65ha at the root of the pier and reclamation of 0.27ha stretching towards the QE Pier to provide storage space for cargo handling and improved queuing area towards the QE Pier respectively. Each reclaimed area would reuse the rock armour from the seaward face on the newly reclaimed seaward face with a small additional requirement for extra rock armouring.

2.12 The volume of dredge material generated by the works is approximately 145,000m^3 of sandy gravel & clay. The fate of this material will be in part determined by marine Site Investigations that will be conducted in summer 2018. Material can be re-used within reclaimed areas of the proposed redevelopment as indicated in Appendix 2.1; disposed at a sea disposal site indicated in Appendix 2.2; disposed at a licenced waste facility on land and off-site; or a combination of these solutions. The solution to be proposed as part of the redevelopment project will be finalised in due course and be informed by results of site investigations.

2.13 The Design & Build tender will include a requirement that detailed designs will accommodate as much reuse of dredged material into the reclamation areas and into the body of the pier as economically feasible. The successful contractor's methodology, weather exposure and programme constraints may dictate the practical amount of dredged material that can be reused vs. the importation of rockfill to fill the reclamation and pier.

2.14 A water pipe and fuel pipe will be laid on the seabed from the Jubilee Pier to the root of the Ice Pier and on land to St. Ola Pier to service vessels from the existing tank farm near the Jubilee Pier.

2.15 Operational stage activities, in addition to the conventional cargoes already handled at St. Ola Pier, are anticipated to comprise:

- Berthing of oil, gas and renewables supply vessels and associated refuelling and fresh water bunkering in addition to handling of related goods, materials and equipment;
- Berthing of cruise ships and associated tourist traffic for Highland tours and day trips to John O'Groats, Castle of Mey and whisky distilleries. SHT is targeting up to 30 additional cruise ships per annum;
- Operational stage activities for coaches and taxis will allow for their parking, laydown and pick-up on the renovated pier itself and will not require additional parking facilities beyond the pier boundary; and
- No road network upgrades are proposed for transit of goods to service supply vessels or cruise vessels.

2.16 A Preliminary Design Drawing of the likely proposed development is included as Appendix 2.1. The location of proposed Sea Disposal Grounds to be used to dispose of dredged material is indicated by coordinates and black dots illustrated in Appendix 2.2.

3 COASTAL PROCESSES

Context

3.1 The redevelopment of St. Ola Pier at Scrabster Harbour involves the reconstruction of the St. Ola Pier and the dredging of the area between the St. Ola and Queen Elizabeth Piers. In terms of the potential impact on the coastal processes and water quality of the area, the proposed dredging between St. Ola Pier and Queen Elizabeth Pier is the most significant part of the redevelopment project.

Baseline Environment

3.2 Scrabster Harbour lies on the southern side of the Pentland Firth and faces east. Storm waves from the north Atlantic can be refracted around and reach the harbour. The harbour is sheltered from the strong tidal currents in the Pentland Firth so the tidal currents around the harbour area are relatively weak. The spring tidal range is 5m while the neap range is 2m.

3.3 The volume of dredge material generated by the works is approximately 145,000m^3 of sandy gravel & clay. The fate of this material will be in part determined by the results of a marine site investigation campaign to be conducted in summer 2018. As noted in paragraphs 2.12 and 2.13, material may be re-used within reclaimed areas of the proposed redevelopment; disposed at a sea disposal site; disposed at a licenced waste facility on land and off-site; or a combination of these solutions depending on results of site investigations.

Assessment Methodology

3.4 The assessment of the coastal processes around Scrabster and the potential impact of the proposed redevelopment on these processes will be undertaken using advanced computational hydraulic modelling techniques. These models will include coupled wave tide and sediment transport modules so that all aspects of the coastal processes can be included in the simulations. Model simulations of the coastal processes will be undertaken for both the existing harbour and for the harbour with the proposed redevelopment in place.

3.5 The impact of the dredging on the water quality around the harbour area and at the sea disposal site will be identified by simulating the dispersion and fate of material lost to the water column during the dredging, reclamation and sea dumping processes. The simulations will include the dispersion of any pollutants that may be contained within the bed sediments to be dredged from around the existing St Ola Pier.

Potential Mitigation Measures

3.6 If the proposed dredging methodology and programme results in unacceptable suspended sediment concentrations or sediment deposition depths, then the hydraulic coastal process models will be used to examine alternative dredging programmes and/or dredging techniques to ensure that acceptable water quality and sediment deposition patterns are achieved.

Summary of Coastal Processes Scoping Exercise

3.7 The scoping exercise has concluded that a number of potential environmental effects associated with the construction stage, should be scoped into EIA, that is: suspended sediment arising from dredging in the harbour, release and dispersion of contaminated bed sediments in the harbour as a result of dredging and suspended sediment arising from disposal of dredge material at sea. The matter of changes in coastal processes as a result of the pier redevelopment at operational stage will be scoped out.

4 FLOOD RISK

Introduction

4.1 This section of the ESR identifies the potential impact of the proposed redevelopment on flood risk within the harbour, by firstly summarising the baseline flood risk to the redevelopment; as defined through desk-based assessment and consultation. This section then goes on to provide a description of the methodology to determine potential effects of the proposed redevelopment upon local flood risk.

Context

Legislative Context

4.2 A Flood Risk Assessment (FRA) will be carried out in accordance with Scottish Planning Policy (SPP).

4.3 A key requirement of SPP is that a FRA should be carried out in relation to development which is considered to be at a medium to high risk of coastal or fluvial flooding i.e. Annual Exceedance Probability (AEP) is greater than 0.5%. An FRA may also be required in relation to development which is considered to be at low to medium risk, between 0.1% and 0.5% AEP, when the nature of the development or local circumstances indicate heightened risk.

4.4 The results of the FRA shall be used to inform the final design of a development and to demonstrate that all risks have been identified and appropriately mitigated for so as to provide for its safe use for the duration of its proposed lifetime.

4.5 The prime objective of an FRA is to develop a full appreciation of:

- The consequences of flooding on the development;
- The consequences (i.e. the overall impacts) of the development on flood risk elsewhere within the catchment for a range of potential flooding scenarios up to that flood having a probability of 0.1%;
- Whether appropriate mitigation measures can be incorporated into the design of the development so as to ensure that the development minimises risk to life, damage to property and disruption to people.

4.6 This consideration of flood risk effects will determine whether an FRA needs to be undertaken.

Planning Context

4.7 In order to provide a basis for decision making with regard to planning, a characterisation of flood risk into ‘little or none’, ‘low to medium’ and ‘medium to high’ is set out in the Risk Framework developed by the Scottish Executive.

4.8 The Risk Framework, as detailed in SPP, outlines the appropriate response of the planning system to flood risk. This is based upon the annual probability of flooding. This Framework will be taken into account with regard to assessing flood risk effects.

4.9 In addition to SPP, the assessment will also take into consideration a number of local and regional Plans. In particular, it will consider the Highland Coastal Development Strategy, which provides strategic guidance for coastal development, the Highland-wide Local Development Plan, which sets out spatial planning policy for the Highland Council area, and other such Plans as the Caithness and Sutherland Local Development Plan and the National Marine Plan.

Baseline Environment

4.10 The baseline conditions at the proposed redevelopment site will be thoroughly reviewed to identify all potential impacts relating to water environment.

4.11 To achieve this, a relevant data request will be submitted to SEPA and the Local Authority; and publically available information such as that provided by the SEPA flood maps, UKCP18, the Highland and Argyll Flood Risk Management Strategy and the River Basin Management Plan for the Scotland River Basin District 2015-2027, etc. will be employed.

4.12 The baseline report will thus document the desk-based assessment and describe the baseline conditions in terms of existing hydrology, catchment characteristics, local drainage and water quality.

Key Issues and Scope of EIA

4.13 An initial review of strategic flood mapping developed by SEPA identifies a risk of coastal and pluvial flooding within the harbour. No significant risk of fluvial or reservoir flooding was identified.

4.14 As part of impact assessment it will be necessary to determine whether flood risk is likely to increase as a result of the proposed redevelopment. If it is clear that such risk is likely to increase, then the submission of a FRA will be required.

4.15 Similarly, it will be necessary to demonstrate that the proposed redevelopment will not have significant effect on surface water drainage and will not contribute towards the creation of additional flow paths for coastal flooding as a result of land reclamation or other works. In the event that the proposed redevelopment is likely to have a significant effect on surface water drainage then the procedure outlined within SEPA Guidance Note 9 will be recommended. Specifically, this entails the submission of a Drainage Impact Assessment to accompany a planning application.

4.16 As part of the impact assessment, a determination will be made as to whether the footprint of the proposed redevelopment is likely to change, with reference to Appendix 2 of SEPA Guidance Note 8. If it is not likely to change, then resilience measures will be reviewed as part of the impact assessment.

4.17 The impact assessment will further consider the requirement of The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) to ensure that surface water discharge does not result in pollution of the water environment. It will also consider the requirement for Sustainable Drainage Systems (SuDS).

EIA Report Assessment Methodology

4.18 To determine the impact of the redevelopment upon flood risk, an assessment of flood risk will be made in line with SEPA's requirements for flood risk assessment for new development.

4.19 The outputs from the Coastal Processes modelling exercise will further inform the assessment of the impact on flood risk of the proposed redevelopment. The consideration of flood risk with surface water drainage and climate change scenarios will be included.

4.20 Consultation with SEPA and the Local Authority will form an integral part of developing an accurate representation of flood risk within the area.

Preliminary Mitigation Measures

4.21 Where the impact assessment identifies potential impacts upon coastal and/or pluvial mechanism which can be reduced or eliminated through mitigation, suitable mitigation measures will be suggested. This may include changes to development design, should this be deemed necessary, or recommendations for a particular methodology e.g. dredging type or method. Where necessary, monitoring programmes may also be proposed; to confirm compliance with any environmental requirements and to minimise the impact of future works.

4.22 Following the incorporation of any mitigation measures, the potential impacts will be re-examined and a description of impact and significance of the residual impacts, with mitigation in place, will be provided.

Summary of Flood Risk Scoping Exercise

4.23 . FRA is scoped in to consider the redevelopments consistency with Scottish Planning Policy and potential coastal or pluvial flooding effects.

5 MARINE BIODIVERSITY

Introduction

5.1 This section of the ESR provides information on the key marine ecology receptors in the vicinity of Scrabster Harbour that have the potential to be impacted by the St. Ola Pier redevelopment works. Marine Ecology will cover relevant aspects of the marine ecosystem that may potentially be affected, including the benthic environment (i.e. the seabed), fish and marine mammals (e.g. whales, dolphins, seals). The following provides information on the relevant aspects of the marine ecology of Scrabster Harbour and the waters adjacent to the harbour.

5.2 The key aspects of the redevelopment for the marine environment include the enclosure of the pier with newly driven steel piles, dredging activity, reclamation of a total of 0.92ha of seabed at the root of the pier and at the quayside, disposal of dredged material at sea and installation of a water pipe and fuel pipe from the Jubilee Pier via the Ice Pier to St Ola Pier. These activities have the potential to impact the marine environment and the species and organisms present in the harbour within the vicinity of the works and the selected dredge disposal area.

Baseline Environment

Introduction

This section describes the key biological aspects of the marine environment within Scrabster Harbour. The characterisation of the marine ecology of the area is based on existing information available on the environment of Scrabster Harbour and available literature regarding the ecology of the Pentland Firth and Caithness coastline.

Benthic Ecology

5.3 Little historical information exists to describe the seabed and sediments present in Scrabster Harbour. However, data available from studies undertaken in the Pentland Firth for renewable energy developments provides some insight into the likely ecological receptors in the harbour and the selected dredge disposal area.

5.4 Sediments within the harbour are expected to comprise fine sand or muddy sand and areas of hard substrate based on the predicted habitats in Thurso Bay by the EMODnet Seabed Habitats (EMODnet, 2018) predictive habitats model. The main difference between the coastal sediments and those within the harbour will relate to the semi-enclosed and stable nature of the harbour compared to the dynamic environment in coastal areas outside the harbour walls. This has the potential to lead to sediments being more cohesive and potentially more highly reduced (poorly oxygenated), therefore potentially hosting slightly different ecological communities than those characterising the coastal habitats outside the harbour. Studies of harbours and docks have demonstrated very low densities of only a few macrobenthic species within dock sediments (e.g. Derweduwen *et al*., 2014) and those that have been recorded have generally been short lived species (e.g. Hawkins *et al*., 2002).

5.5 In 2009 Scottish Natural Heritage (SNH) undertook a baseline characterisation of the wider Pentland Firth (Moore, 2009). Where sediments were predominantly sandy the evidence suggested low diversity communities. Further studies within the Pentland Firth (DTL, 2016;

Moore, 2015; MeyGen, 2012) suggest areas of sediment are characterised by polychaetes and bivalves and dominated by interstitial organisms such as turbellarians, the polychaete *Saccocirrus papillocercus,* amphipods such as *Socarnes erythrophthalmus*, *Leptocheirus pectinatus* and *Liljeborgia pallida*. Where hard substrates are also present, a range of epifaunal species including hydroids and bryozoans are found attached to the hard surfaces and mobile fauna such as echinoderms (e.g. the sea urchin *Echinus esculentus*) are also present.

5.6 Based on photographs taken by RPS of Scrabster Harbour (Figure 5.1) areas of hard substrate, similar to the infralittoral rock and other hard substrata predicted to be present to the north of the area (EMODnet, 2018) are present within the harbour. Intertidally and subtidally, these hard substrates are likely to host encrusting benthic flora and fauna including taxa such as bryozoans, barnacles, mussels, sea squirts and sea anemones (e.g. Russell *et al.,* 1983; Hawkins *et al*., 2002; Derweduwen *et al*., 2014) as well as seaweeds common to the area, such as fucoids and kelp.

Figure 5.1: View of hard substrate in Scrabster Harbour

5.7 The selected dredge disposal area is likely to be similar to much of the habitat within Thurso Bay, which is predicted to consist of a mixture of fine sand, fine mud, coarse sediment, gravel and cobbles with areas of rock (EMODnet, 2018). Again, this area is likely to be characterised by interstitial organisms in areas of sediment with encrusting organisms where areas of rock occur.

5.8 There are no Special Areas of Conservation (SACs) or Marine Protected Areas (MPAs) designated for marine habitats and / or benthic species within proximity of Scrabster Harbour. The closest designated site is the North-west Orkney MPA 38 km to the north of Scrabster. The

closest SACs designated for marine habitats are the Solan Bank Reef SAC, approximately 85km to the north-west and Sanday SAC in Orkney which is approximately 86 km to the north-east.

Fish Ecology

5.9 The fish community within Scrabster Harbour and the dredge disposal area would be expected to reflect the species known to occur in the Pentland Firth and along the Caithness coastline. Previous studies have summarised the key species in the Pentland Firth and along the Caithness coastline (e.g. MeyGen, 2012; DTL, 2016). Based on these studies the key fish species likely to be present within and in in close proximity to Scrabster Harbour and the proposed dredge disposal area include elasmobranchs (e.g. sharks, rays and skates, including the basking shark (*Cetorhinus maximus*)) and a number of commercially important fish species, either as adults or juveniles, including herring (*Clupea harengus*), lemon sole (*Microstomus kitt*), sandeel (*Ammodytes spp*.), whiting (*Merlangius merlangus*), cod (*Gadus morhua*), mackerel (*Scomber scombrus*), haddock (*Melanogrammus aeglefinus*), plaice (*Pleuronectes platessa*) and saithe (*Pollachius virens*) (MeyGen, 2012; DTL, 2016). Based on fisheries sensitivity maps available from Marine Scotland Information (Marine Scotland, 2018) and spawning and nursery area data from Coull *et al*. (1998) and Ellis *et al*. (2010), several species have spawning and nursery areas that coincide with or are near Scrabster Harbour and the selected dredge disposal area. These include:

- Herring (spawning area approximately 9km to the north of Scrabster Harbour);
- Lemon sole (spawning and nursery area);
- Haddock (nursery area);
- Plaice (nursery area);
- Saithe (nursery area);
- Sandeel (spawning and nursery area);
- Sprat (spawning area);
- Spurdog (nursery area);
- Tope (nursery area); and
- Spotted ray (nursery area).

5.10 Due to the presence of the River Thurso and other key rivers for migratory fish species on the north and northeast coast of Scotland (Malcolm *et al*.., 2010) occurring within the vicinity of Scrabster Harbour, sea trout (*Salmo trutta*) and Atlantic salmon (*Salmo salar*) are likely to move through the area. It should also be noted that there are records of European eel (*Anguilla anguilla*) in nearby water courses (e.g. River Thurso, MeyGen, (2012)) although large populations of eels are not expected to be present. Several Special Areas of Conservation (SACs) have been designated for salmon on the north and east coasts of Scotland, the closest being the River Thurso SAC, approximately 2.5 km to the south-east where salmon are a primary feature.

5.11 In addition to the finfish species identified above, populations of brown crab (*Cancer pagarus*) and European lobster (*Homarus gammarus*) are also present within the Pentland Firth and along the Caithness coastline. These species are both of commercial importance and so are of local fishing interest.

Marine Mammals

5.12 Over the last 25 years a total of 23 cetacean species have been recorded in Scottish waters, of which 11 are regularly sighted. The remaining 12 are considered to be vagrants or rare visitors which do not occur regularly in Scottish waters. Cetaceans have the potential to range widely with some undertaking large scale seasonal migrations to other parts of Europe or rest of the world. Some species are more localised in their distribution and resident populations of some species are present in Scottish waters. Many of these species may use areas within proximity of Scrabster Harbour and within Thurso Bay.

5.13 Based on data available from Marine Scotland Information (Marine Scotland, 2018), and surveys conducted in the Pentland Firth within the vicinity of Scrabster Harbour by MeyGen (2012) and DTL (2016), the most likely species to be present in the area include bottlenose dolphin (*Tursiops truncatus*), harbour porpoise (*Phocoena phocoena*), killer whale (*Orcinus orca*), minke whale (*Balaenoptera acutorostrata*), Risso's dolphin (*Grampus griseus*) and white-beaked dolphin (*Lagenorhyncus albirostris*) which have all been observed in the area during surveys. The closest SAC for marine mammals is the Moray Firth SAC designated for its population of bottlenose dolphins, approximately 55 km to the south.

5.14 Two species of seals (grey seal - *Halichoerus grypus*, and harbour (common) seal - *Phoca vitulina*) are found around Scotland's coast and inshore waters. Seal usage data presented by Russell *et al*., (2017) demonstrate that both grey seal and harbour seal are present within Thurso Bay and the vicinity of Scrabster Harbour. The closest SAC designated for grey seals is the Faray and Holm of Faray SAC in Orkney, approximately 77 km to the north-east of Scrabster and for harbour seals Sanday SAC in Orkney which is approximately 86 km to the north-east.

Key Issues and Scope of EIA

5.15 A full marine ecology assessment will be undertaken which will include a review of readily available information from desktop sources supported by benthic survey at the site of the redevelopment.

5.16 Key sources of information to be consulted will include the data collected previously within Scrabster Harbour as well as any additional information from local sources.

5.17 As discussed above, there is limited information available on the marine ecology of Scrabster Harbour, therefore the marine ecology baseline will draw upon data available for the Pentland Firth and Caithness coastline and from studies of similar harbour environments to provide some insight into the ecological receptors likely to be present. Given the lack of data on the benthic environment in Scrabster Harbour a benthic environment survey is proposed to collect seabed samples, to identify key benthic organisms and to undertake analysis of the sediment composition.

5.18 Surveys are also proposed to collect sediment chemistry samples from within the areas to be dredged in the harbour to inform the EIA and to assess the suitability of the material for disposal at a licensed disposal site.

5.19 A benthic survey of the selected dredge disposal area will not be undertaken as Marine Scotland has already determined this site suitable for disposal of dredge material. Bathymetric surveys

are conducted as part of marine disposal licence conditions, and the most recent survey results shall be sought from Marine Scotland as part of EIA.

5.20 In the harbour, all marine habitats and species identified as having the potential to occur in the vicinity of the proposed development will be categorised as Valued Ecological Receptors (VERs) against which impacts associated with the construction and operation of the proposed redevelopment will be assessed. VERs will include intertidal and subtidal habitats, fish and marine mammal species and communities. Identification of VERs will consider the economic, ecological and nature conservation importance of the features within the vicinity of Scrabster Harbour.

5.21 The impacts arising from the construction and operation of the redevelopment project will be identified, and an assessment made of the likely effects on the marine ecology VERs identified through the desktop review and the results of surveys. The effects will be assessed from the project alone as well as cumulatively with other relevant proposed developments. Impacts will be assessed assuming the implementation of mitigation measures included as part of the design of the project, as well as any residual effects assessed after any further mitigation has been factored in if necessary.

5.22 The following potential impacts have been identified for the marine works associated with the proposed redevelopment:

- Temporary disturbance/loss of habitat arising from dredging activity within the harbour;
- Temporary disturbance/loss of habitat arising from displacement/compaction of the seabed in the vicinity of piling activities and placement of material on the seabed;
- Permanent habitat loss arising from the redevelopment of the St. Ola Pier and due to reclamation of a total of 0.92 ha of seabed;
- Effects of increased suspended sediment concentrations and sediment deposition within Scrabster Harbour and the selected dredge disposal location on marine ecology receptors;
- Potential for resuspension of contaminated sediments with effects on marine ecology receptors;
- Effects on marine ecology receptors associated with the disposal of dredged material at a licensed disposal site;
- Effects of underwater noise arising from construction activities (e.g. dredging, vessel noise and piling) on fish including migratory fish species and marine mammals; and
- Disturbance and collision risk to marine mammals from increased vessel traffic during construction.

EIA Report Assessment Methodology

5.23 The assessment of effects for marine ecology will follow the EIA methodology set out in paragraphs 1.11-1.13 above. Specific to this topic, the following guidance documents will also be considered:

- Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater and Coastal, 2nd edition (CIEEM, 2016); and

- Guidelines for Ecological Impact Assessment in Britain and Ireland. Marine and Coastal published by the Chartered Institute of Ecology and Environmental Management (IEEM, 2010).

Preliminary Mitigation Measures

5.24 Mitigation measures include the following:

- A Construction Environmental Management Plan (CEMP) which will include pollution prevention measures during construction;
- Navigation safety management processes during construction and operation by the Scrabster Harbour authority to manage vessel movements; and
- Update of the Oil Spill Contingency Plan (OSCP) to incorporate relevant pollution measures for operation of the St Ola Pier and for the fuel pipe from the Jubilee Pier to St Ola Pier.

Summary of Marine Biodiversity Scoping Exercise

5.25 The scoping exercise has concluded that a number of potential environmental effects at construction stage should be scoped into EIA, that is: effects on fisheries, marine mammals and benthic ecology. The matter of the effects on marine receptors as a result of pollution events during operational phase, should be scoped into the EIA.

6 WATER QUALITY

Introduction

6.1 This section of the ESR considers the potential impact of the proposed redevelopment on water quality within the marine environment and the risk to water quality dependent designations in the surrounding environs.

6.2 The Water Quality Assessment will be initiated through a desktop study of the existing baseline environment and through consultation with the relevant statutory bodies.

6.3 This will be supplemented by a water quality monitoring programme as outlined below, where results will be used to determine the impact of the proposed redevelopment on the water environment and any residual impact which may result from the development following the implementation of relevant mitigation.

Context

Legislative Context

6.4 The Marine Scotland Licensing Operations Team (MS-LOT) consider that any impact from a development that compromises the achievement of WFD objectives or causes deterioration in status of waters to be a significant environmental impact in terms under Part 2, Regulation 11 of the Marine Works (Environmental Impact Assessment) Scotland Regulations 2017 (as Amended).

6.5 The following relevant legislation and guidance relating to water quality will be considered during the preparation of the Water Quality chapter of the EIA;

- the Water Framework Directive (WFD); the WFD is the European legislation which was developed to establish systems to manage Europe's water environment - rivers, lochs, estuaries, coastal waters and groundwater;
- the Water Environment and Water Services (Scotland) Act 2003; this Act transposes the requirement of the WFD into Scottish law;
- The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended); these regulations were introduced under the 2003 Act to specify the control regimes for discharges to, abstractions from and impoundments and engineering activities affecting the water environment (i.e. rivers, lochs, transitional waters (estuaries), coastal waters groundwater, and groundwater dependant wetlands);
- The Water Environment (Oil Storage) (Scotland) Regulations 2006; these regulations set out standards for the design and installation of oil storage containers, including those used on construction sites;
- SEPA Land Use Planning System Guidance Note 7: Guidance on the Water Framework Directive including river basin planning; provides guidance on implementing the requirement of WFD within development planning;
- Planning Advice Note (PAN) 51 Planning, Environmental Protection and Regulation; provides guidance regarding the integration of environmental protection within planning policy;

- PAN 79 Water and Drainage; this specifically sets out the requirements for developers in delivering appropriate drainage infrastructure which meets planning policy;
- Pollution Prevention Guidelines (PPG) 1: General Guide to the Prevention of Pollution, Guidance for Pollution Prevention (GPP) 2: Above Ground Oil Storage Tanks, GPP 5: Works and maintenance in or near water, and PPG6 Working at Construction and Demolition Sites, in addition to all other relevant PPGs and GPPs relating to general site activities such as plant refuelling and incident response;
- Additional SEPA guidance including 'Special Requirements for Civil Engineering Contracts for the Prevention of Pollution v2' and 'Guidance on the Special Requirements for Civil Engineering Contracts v2'; and
- CIRIA C532 'Control of Water Pollution from Construction Sites - Guidance for Consultants and Contractors'.

6.6 A fundamental requirement of the WFD is to attain good ecological and chemical water quality status and ensure that any deterioration in the status of waters is prevented. Any new development must ensure that these two fundamental requirements of the Directive are not compromised, nor are there any detrimental impacts to nearby EU designated Natura 200 sites.

Baseline Environment

6.7 The baseline conditions at the proposed redevelopment site will be thoroughly reviewed to identify all potential impacts relating to water quality.

6.8 Baseline data will be gathered from existing sources such as water quality monitoring stations included in the Scottish Environment Protection Agency (SEPA) WFD monitoring programme, as part of their River Basin Management Plan (RBMP) reporting.

6.9 A relevant data request may be submitted to SEPA and the relevant Local Authority if the available data is insufficient.

6.10 This will be supplemented by additional localised monitoring programmes with methodologies detailed below.

6.11 The impact on marine water quality will be based on the development's potential to hinder the achievement of the WFD objectives.

6.12 Scrabster Harbour is located within Thurso Bay, a coastal water body (ID: 200218), in the Scotland River Basin District (RBD). It is 5.8 square kilometres in area and the most recent available WFD reporting data (2016) is outlined in Table 5.1.

Table 5.1: Recent WFD status

Parameter	2016
1: Overall status	Good
1-1: Pre-HMWB status	Good
1-3: Overall ecology	Good
1-3-2: Biological elements	Good
1-3-2-3: Invertebrate animals	Good
1-3-2-3-4: Benthic invertebrates (IQI)	Good
1-3-2-7: Macroalgae	High
1-3-2-7-1: Macroalgae (FSL)	High
1-3-2-7-2: Macroalgae (RSL)	Good
1-3-4: Hydromorphology	Good
1-3-4-1: Morphology	Good

Key Issues and Scope of EIA

6.13 A review of the baseline data suggests that Thurso Bay is currently meeting its WFD Objectives by achieving Good ecological status, as outlined in the RBMP for the Scotland RBD. The WFD objectives require that this must not be compromised and as such the proposed redevelopment must not cause deterioration in status.

6.14 As part of the impact assessment it will be necessary to identify and monitor key parameters to ensure that the development is not likely to cause a significant impact on water quality. Appropriate mitigation will be recommended where potential risk of impact is identified.

6.15 Similarly, any pollution events or recorded increases in concentrations of contaminants will be considered in terms of their potential impact on hydrologically linked designated protected areas.

6.16 The impact assessment will consider hydrological connectivity and potential water quality effects on designated sites.

6.17 The potential impact from additional drainage will be considered alongside the Flood Risk chapter, in that it will be assesses if existing foul and storm networks have the capacity for any additional loading which may arise from the proposed redevelopment.

EIA Report Assessment Methodology

6.18 To determine the impact of the redevelopment upon water quality, a monitoring programme will be scheduled in line with SEPA's requirements for new development.

6.19 This will include:

- a suite of physico-chemical monitoring on surface sediment grab samples to assess alongside WFD and Local Authority monitoring;
- sampling of the surface seabed by diver grab sample to inform the baseline study;
- marine boreholes which will fully comply with the requirements of MS-LOT seabed sampling and testing at the various requisite depth.

6.20 The outputs from surveys undertaken within the Marine Biodiversity chapter will further inform the assessment of the impact on water quality and ecological status from the redevelopment project.

Preliminary Mitigation Measures

6.21 Initial mitigation will be included by consideration of the design in line with best practice.

6.22 Where the impact assessment identifies potential impacts upon water quality which can be reduced or eliminated through mitigation, suitable mitigation measures will be suggested. This may include changes to development design, should this be deemed necessary, or recommendations for a particular methodology e.g. dredging type or method.

6.23 Prior to the commencement of construction a CEMP will be prepared to assist the main contractor in preventing, managing and/or minimizing significant environmental impacts during the construction phase. In order to achieve this, the CEMP shall comprehensively incorporate all environmental commitments and provide a method of compliance with these.

6.24 Mitigation and control measures will be implemented to address the potential impacts from the construction, such as elevated suspended solids, concrete, oils and chemicals. This will be supplemented by contingency planning for any accidental spillages which may arise from working with fuels and chemicals.

6.25 Where necessary, monitoring programmes may also be proposed; to confirm compliance with any environmental requirements and to minimise the impact of future works.

6.26 Following the incorporation of any mitigation measures, the potential impacts will be re-examined and a description of impact and significance of the residual impacts, with mitigation in place, will be provided.

Summary of Water Quality Scoping Exercise

6.27 The scoping exercise has concluded that a number of potential environmental effects on water quality at construction stage due to dredging in the harbour, release and dispersion of contaminated bed sediments, disposal of dredge material at sea and pollution events should be scoped into the EIA. The potential effects on water quality at operational stage as a result of drainage loading and pollution events should also be scoped in to the EIA.

7 TERRESTRIAL BIODIVERSITY AND ORNITHOLOGY

Context

7.1 This section of the ESR considers terrestrial biodiversity (including ornithology) interest, and provides information on the key ornithology receptors that have the potential to be impacted by the St. Ola Pier redevelopment.

7.2 The key aspects of the redevelopment for the marine environment include the enclosure of the pier with newly driven steel piles, dredging activity, reclamation of a total of 0.92ha of seabed at the root of the pier and at the quayside, disposal of dredged material at sea and installation of a water pipe and fuel pipe from the Jubilee Pier via the Ice Pier to St Ola Pier.

7.3 As the zone of influence of the proposed activities is potentially greater than the area occupied by the pier and harbour itself, terrestrial biodiversity and ornithological receptors that may occur within the harbour itself and in the adjacent area are considered.

Baseline Environment

Introduction

7.4 This section describes the key terrestrial biodiversity and ornithological interests that are likely to utilise Scrabster Harbour, the adjacent area and the dredge disposal area. This account is based on existing information available on the environment of Scrabster Harbour and available literature regarding the ecology of the Caithness coastline.

7.5 The terrestrial part of the site comprises hardstanding for parking, pavements, buildings and roadways. Otters may use the shoreline and harbour area. They are a European Protected Species.

7.6 It is noted however, that members of the Highland Biodiversity Partnership, Scrabster Harbour Trust and other parties previously carried out small scale planting of nector rich plants to benefit the small blue butterfly and bumble bees on the adjacent cliffs to the rear of the Harbour. If practical, opportunities will be sought to accommodate further small scale planting to benefit these species within the site.

Designated Sites

7.7 Within the wider north Caithness coast region there are a number of designated sites. The nearest of these to Scrabster Harbour is the North Caithness Cliffs Special Protection Area (SPA). This SPA overlaps either partly or wholly with Duncansby Head Site of Special Scientific Interest (SSSI), Stroma SSSI, Dunnet Head SSSI, Holborn Head SSSI, and Red Point Coast SSSI. The seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface. This SPA is designated for the following species:

- *Breeding peregrine (Falco peregrinus) (approximately six pairs);*
- *Breeding common guillemot (Uria aalge) (approximately 27,000 pairs); and*
- *During the breeding season, the area regularly supports 110,000 individual seabirds including nationally important populations of –*

- *puffin (Fratercula arctica) (approximately 1,750 pairs);*
- *razorbill (Alca torda) (approximately 4,000 individuals);*
- *kittiwake (Rissa tridactyla) (approximately 13,100 pairs);*
- *northern fulmar (Fulmarus glacialis) (approximately 14,700 pairs); and*
- *common guillemot (approximately 38,300 individuals).*

7.8 The North Caithness Cliffs SPA is split into several discrete areas, the nearest of which to Scrabster Harbour has a boundary that is within 200m of the proposed development. More distant parts of this SPA lie up to 30km from the site of the proposed development.

7.9 Although distribution information for seabirds of the local area is not available, it is known that seabirds associated with this SPA will nest on sea cliffs and will forage in waters both inside and outside the SPA. This may include waters within and adjacent to Scrabster Harbour.

7.10 Other SPAs are present in the wider area; however, the next nearest is the East Caithness Cliffs SPA, which is situated approximately 35km from Scrabster Harbour. Birds associated with this or any of the more distant SPAs are less likely to routinely utilise Scrabster Harbour or its habitats.

Overview of Receiving Environment

7.11 Based on photographs taken by RPS of Scrabster Harbour (Figure 5.1), the area consists of mainly subtidal habitat which main be utilised by foraging seabirds. Intertidal areas contain mainly hard substrate.

7.12 The selected dredge disposal area is shown in Appendix 2.2. This site is partly within the boundary of a designated site, and is expected that it would provide subtidal habitat of reasonable quality for foraging seabirds.

Species of Interest

7.13 Scrabster Harbour itself does not contain any nesting habitat that is considered optimal for the species named on the citation for the North Caithness Cliffs SPA, although it is likely some birds will utilise the subtidal habitat for foraging. The proximity of the harbour to the SPA suggests that some seabirds will be present, particularly during the breeding season (April to August) when foraging bird numbers are highest. Due to the size of the limited extent of the harbour (compared to the potential foraging area) it is not considered that these species would routinely occur in the harbour in substantial numbers.

7.14 Foraging auks, in particular common guillemot and razorbill, would be expected to regularly occur in the harbour and in the vicinity, but in relatively small numbers. Both species are Amber listed by the latest versions of Birds of Conservation Concern (BoCC4; Eaton *et al*., 2015). Peregrine has previously been noted occasionally in the area (Scottish Ornithologists Club, 2012). Some of the more pelagic SPA-qualifying species (notably fulmar and kittiwake) would be expected to occur less in the vicinity of the harbour because of the limited suitability for foraging.

7.15 There are various non-SPA seabird species that are also expected to occur in and around the waters of Scrabster Harbour. Although not present in the general area in the same numbers as common guillemot or razorbill, the Amber-listed black guillemot (*Cepphus grille*) are known to feed in coastal areas more frequently than other auks. It is therefore anticipated that they will occur in and around the harbour. It is expected that a range of foraging gull species will be

present, including (but not limited to) herring gull (*Larus argentatus*), common gull (*Larus canus*) and black-headed gull (*Chroicocephalus ridibundus*). Of these species, herring gull are Red listed, with the other two species noted here found on the Amber list.

7.16 The latest available edition of the Caithness Bird Report (Scottish Ornithologists Club, 2012) does not refer to any seabird species breeding within or in the vicinity of Scrabster Harbour.

7.17 Scrabster Harbour is situated within a relatively sheltered bay. Outside the breeding season there is the possibility that relatively small numbers of birds may use the area for roosting. The 2012 Caithness Bird Report states that species observed in the vicinity of the harbour have included redshank (*Tringa tetanus*), whooper swan (*Cygnus cygnus*), brent goose (*Branta bernicla*), red-throated diver (*Gavia stellata*), great northern diver (*Gavia immer*) and shag (*Phalacrocorax aristotelis*).

7.18 A single ornithological surveyor has visited the harbour three times per month since April 2018, on each visit carrying out a watch of approximately one hour and thirty minutes duration covering the harbour and surrounding habitat. Data regarding birds on the water has been collected from two viewpoints, which combined give a complete view across the harbour, the site of the proposed redevelopment and an appropriate buffer. These surveys will continue through to July 2018.

7.19 Data collected to date (as of June) indicate a typical range of coastal bird species present. Three out of the 16 species recorded are qualifying species of the North Caithness Cliffs SPA (namely puffin, guillemot and razorbill), with numbers in all cases being limited,

7.20 This location of the proposed redevelopment as illustrated in Appendix 2.2 covers a relatively small area. The harbour habitats are not used by SPA qualifying seabirds as a breeding or nesting site.

7.21 This sea disposal site was first licensed in 2012, at a time when the UK's 3rd SPA Review was well underway. That review considered *inter alia* important foraging and rafting seabird areas offshore, and the sea disposal site was not highlighted as an area of interest to JNCC.

Key Issues and Scope of EIA

7.22 To inform both EIA and Habitats Regulations Assessment, an ornithology desk based assessment will be undertaken which will include a review of readily available information from desktop sources. The key sources of information to be consulted will include any data collected previously within Scrabster Harbour as well as any additional information from local sources.

7.23 Information collated during the desk study will be supplemented by a programme of baseline data collection, which has to date shown that the harbour area is not significant for seabird or waterbird activity.

7.24 All ornithological interests identified as having the potential to occur in the vicinity of the proposed development will be categorised as Valued Ecological Receptors (VERs) against which impacts associated with the construction and operation of the proposed development will be assessed. Allocation of value/sensitivity to VERs will consider the nature conservation importance of the features within and near Scrabster Harbour and selected dredge disposal area in proximity to North Caithness Cliffs SPA.

7.25 The impact pathways arising from the construction and operation of the project will be identified, and an assessment made of the likely effects on the ornithological VERs identified through the desktop review and the results of surveys. The effects will be assessed from the project alone as well as cumulatively with other relevant proposed developments. Impacts will be assessed assuming the implementation of mitigation measures included as part of the design of the project, as well as any residual effects assessed after any further mitigation has been factored in if necessary.

7.26 Other than otter and ornithological interests for which survey is proposed, the terrestrial biodiversity interest is likely to be negligible and given the nature of the works, there are not considered to be any significant ecological receptors within the site that would be impacted by the development. Therefore no other terrestrial habitat or protected species surveys are proposed. In light of the above, no further reference is made to terrestrial habitats and species.

7.27 The following potential impacts have been identified for the marine works associated with the proposed development:

- Permanent habitat loss arising from the redevelopment of the St. Ola Pier and due to reclamation of a total of 0.92 ha of seabed, resulting in displacement;
- Temporary habitat loss from disturbance/displacement due to airborne construction noise (including piling);
- Temporary habitat loss from disturbance/displacement due to construction activity (visual disturbance);
- Temporary disturbance/loss of habitat arising from dredging activity within the harbour; and
- Effects on prey species due to underwater noise arising from construction activities (notably dredging, vessel noise and piling), increased suspended sediment concentrations and sediment deposition in the harbour *and the selected dredge disposal location*, and potential for resuspension of contaminated sediments;

EIA Report Assessment Methodology

7.28 The assessment of effects for ornithology will follow the EIA methodology set out in paragraphs 1.11-1.14 of Section 1. The following guidance documents will also be considered:

- Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater and Coastal, 2nd edition (CIEEM, 2016); and
- Guidelines for Ecological Impact Assessment in Britain and Ireland. Marine and Coastal published by the Chartered Institute of Ecology and Environmental Management (IEEM, 2010).

Preliminary Mitigation Measures

7.29 Embedded mitigation measures include the following:

- A CEMP which will include pollution prevention measures during construction;
- Navigation safety management processes during construction and operation by the Scrabster Harbour authority to manage vessel movements; and
- Update of the Oil Spill Contingency Plan (OSCP) to incorporate relevant pollution measures for operation of the St Ola Pier and for the fuel pipe from the Jubilee Pier to St Ola Pier.

Summary of Terrestrial Biodiversity & Ornithology Scoping Exercise

7.30 The scoping exercise has concluded that a number of potential environmental effects at construction stage should be scoped into EIA, that is: effects on seabirds and otters and their prey species. The effects on otters, seabirds and their prey species as a result of pollution events at operational stage, shall also be scoped in to the EIA.

8 TRANSPORTATION

8.1 This section of the ESR contains the following information in relation to transportation:

- information on the existing environmental baseline for transportation relation to the scheme;
- proposed methodologies for surveys and data collection;
- Key Issues for EIA and an overview of the likely significant effects of the proposed redevelopment on Transportation.

Context

8.2 As part of the EIA Screening Opinion for the proposed redevelopment, issued March 2018, the Highland Council determined that a Transportation Assessment was not considered necessary regarding the Council's Transportation interests. However, consultation on a Transport Statement (TS) is requested.

8.3 Therefore consultation will be carried out with The Highland Council regarding the requirement to prepare a TS to address their specific concerns as included in the Screening Opinion.

8.4 The A9 Trunk Road gives access to the scheme for which Transport Scotland are the Road Authority, not the Highland Council. Hence, scoping discussions in relation to the preparation of the TS will also be carried out with Transport Scotland.

8.5 The TS will be carried out in accordance with the document 'Guidance on the Preparation of Transport Assessments' issued by The Highland Council, particularly Paragraph 2.2 in relation to TS and Chapter 3 in relation to scoping. The report will also take cognisance of Chapter 4 of 'Transport Assessment Guidance' issued by Transport Scotland which states:

> *A TS should identify the main transport issues relating to a proposed development. This will normally include details of the existing conditions and for the proposed development. The TS will identify the existing transport infrastructure, travel characteristics associated with the site and the proposed measures to improve the infrastructure and services to encourage sustainable travel to the site. Detailed accessibility analysis and assessment of the traffic impacts will not be required*.

Existing Site and Baseline Transport Conditions

8.6 The TS will provide information on the existing site to include:

- a site location plan showing the proposed development site in relation to the surrounding area and transport system;
- the permitted and existing use of the site;
- the existing land uses in the vicinity of the site;
- existing site access arrangements including access constraints if applicable.

8.7 The TS will also provide information on the baseline transport conditions:

- a qualitative description of the travel characteristics of the existing site, including pedestrian and cyclist movements and facilities.
- existing public transport provision, including frequency of services, operators, location of bus stops/train stations, park and ride facilities;
- details of any proposed transport improvements or projects;
- a description and functional classification of the highway network in the vicinity of the site;
- an analysis of the injury accident records on the road network in the vicinity of the site access for the most recent three-year period or five-year period if the proposed site has been identified as within a high accident area. This information will initially be checked on the crashmap database, and will also be sought from the local police.

8.8 The Department for Transport holds traffic survey information for the A9 truck road that serves the harbour. The nearest counter point has identification number 20801, located as indicated in Figure 8.1 below.

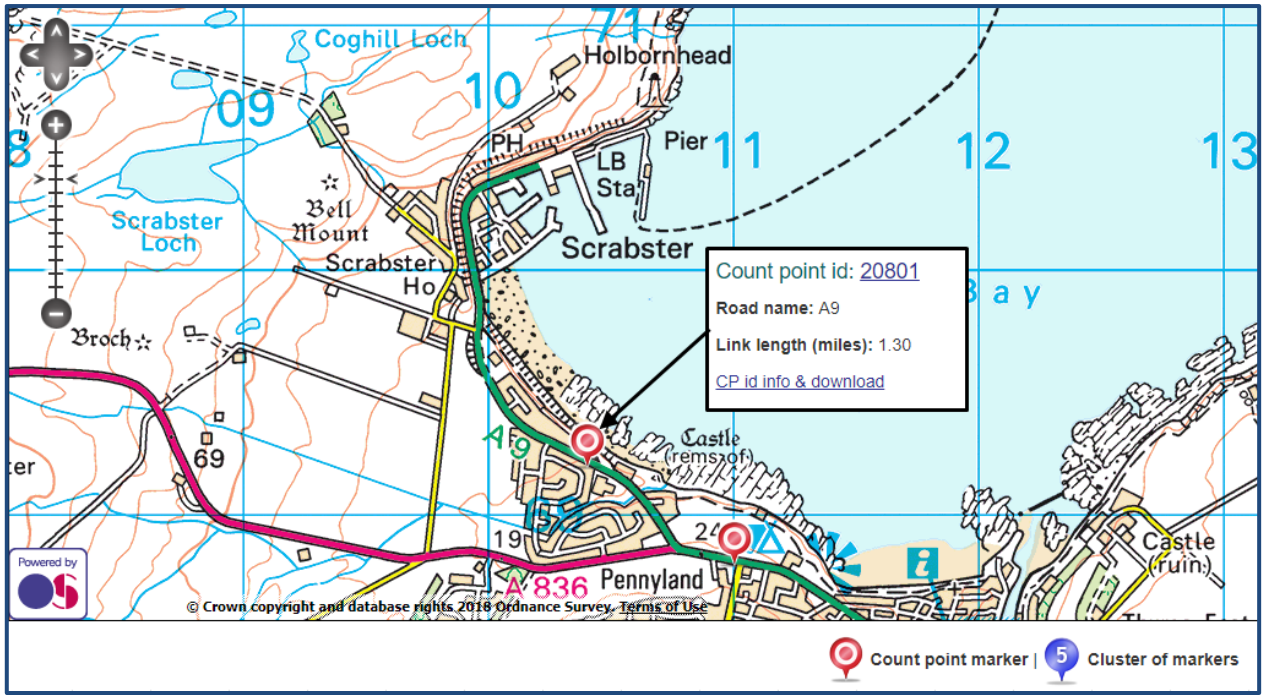

Figure 8.1: Location of Counter Point 20801 on the A9

8.9 The counter gives historic data on 12 categories of traffic streams, and will be considered within the TS.

8.10 A traffic survey will be carried out at the harbour access to identify the daily traffic volumes and the peak traffic hours.

8.11 The traffic survey results will be compared to the Ro-Ro (Roll on, Roll off) ferry timetable currently being implemented at the harbour by NorthLink Ferries when assessing the peak period. Ro-Ro scheduling often has an impact on traffic peaks at ports and harbours.

Key Issues and Scope of EIA

8.12 The TS will address the specific concerns raised by The Highland Council in their Screening Opinion response, which are:

- The increase in vehicular traffic and in particular HGV traffic during operation and construction due to the development. This should be compared against the base line condition for the immediate access route to verify the assumption that the proposals will not have a significant impact. If the impact is shown to be significant then further consultation with the Council on local roads issues will be carried out as requested.
- Access, turning and parking provision to mitigate any increase in vehicular traffic. In particular the TS will consider if any upgraded facilities for public transport and coaches are required to service additional cruise ships.
- Appropriate links and facilities for pedestrians and cyclists within the development connecting to the external network.

8.13 The Council has an interest in ensuring appropriate transportation links by sustainable modes to Thurso and other destinations to safeguard health and road safety and to encourage economic benefits for the local community. The Caithness and Sutherland emerging Local Development Plan notes that there are congestion and HGV problems within Thurso due to the historic nature of the road layout and single bridge crossing of the river within the town.

EIA Report Assessment Methodology

8.14 The following information relating to the proposals for the scheme will be included in the TS:

- a plan showing the proposed site layout;
- description of proposed land use;
- the scale of the redevelopment;
- access arrangements for pedestrians, cyclist and vehicles, and location of public transport facilities;
- the trip generation for the proposed dreevelopment;
- potential location of trip destinations (or origins) for the proposed redevelopment;
- how location, layout and design will influence the choice of mode;
- a proposed parking strategy and internal vehicle circulation (including number of spaces, parking layout, ratio of operational to non-operational spaces, method of car park operation, overspill parking considerations, disabled parking, motorcycle parking, cycle parking, taxi drop-off points);
- the transport impacts of freight or service operations;
- The construction related traffic movements.

8.15 The proposals will be compared against the baseline transport conditions to establish the impacts of the extent of the area of influence.

Preliminary Mitigation Measures

8.16 It has been noted by the Highland Council in their Screening Opinion that, as the proposed redevelopment proposes to re-use of dredgings on site or disposal at sea and that the redevelopment proposes upgrading an existing pier rather than development of a new facility, it

appears that the transport impact remote from the site and on the Trunk Road during construction and operation will not be significant. It is anticipated therefore, at this preliminary stage, that mitigation measures may not be required to offset the impact related to transportation matters. However, this will be confirmed in the TS.

Summary of Transportation Scoping Exercise

8.17 The scoping exercise has concluded that due to the potential increase in vehicle traffic including HGV movements at construction stage Transportation should be scoped in to EIA. The environmental effects of an increase in vehicle traffic, access, turning and parking provision and links and facilities for pedestrians and cyclists at operational should also be scoped into the EIA.

9 AIR QUALITY AND CLIMATE

Context

9.1 This section of the ESR considers the potential impact on air quality and climate arising from the construction, operation and maintenance of the proposed redevelopment.

9.2 This section will be comprised of three sub-topics:

- Local air quality, which relates to pollutants with potential to affect human health and ecosystems at a local level (this includes a construction phase assessment);
- Regional air quality, which relates to pollutants dispersing over a larger area, with potential to affect human health and ecosystems; and,
- Climate change, which is related to emissions of greenhouse gases (GHGs).

Baseline Environment

9.3 Scrabster Harbour is located on the northern shore of Thurso Bay which is the between the points of Clairdon Head and Holborn Head. The harbour, which faces southwards, is the terminal point of the A9 road.

9.4 The site of proposed redevelopment is dominated by harbour infrastructure and associated commercial services (such as maritime engineering and fish processing). Other land uses / operations within the harbour estate include restaurants, RNLI station, government offices and the Fisherman's Mission.

9.5 The wider landscape, beyond the harbour estate, is largely agricultural land use with residential properties (approximately 70) at St. Clair Avenue, Holburn Place, Clett Terrace and Holburn Head; a number of residential properties are also located within the harbour, along the A9 road. Consideration shall be given to the potential impact of the proposed redevelopment upon the residential properties in proximity to the Harbour.

9.6 Scrabster Harbour falls within the boundary of the Highland Council administrative area.

Existing Atmospheric Pollution

9.7 Atmospheric pollution in the vicinity of the proposed redevelopment is largely dominated by road traffic exhaust fumes, harbour activity including boat movements, and to a lesser extent commercial and residential emissions and agricultural practices. Changes in road traffic associated with the redevelopment have the potential to impact on concentrations of air pollution. Vehicular transport sources account for a large proportion of the emissions of several air pollutants, although most of the pollutants emitted by road vehicles are also produced by a wide range of industrial, commercial and domestic processes.

9.8 The assessment will also set out existing pollution monitoring locations and results undertaken by the local authorities across Scotland.

9.9 Climate will also be detailed in terms of local impacts and whilst also highlighting Scotland's targets regarding GHG emissions and responsibilities to control and reduce emission.

Key Issues and Scope of EIA

9.10 This section will summarise the levels of atmospheric pollution in the coastal area and also provides details on the latest Highland Council's air quality reports. The air quality assessment considers the likely impacts of the proposal on the local environment and ascertains whether or not the proposed pier extension will lead to a breach of relevant threshold levels of particular atmospheric pollution concentrations.

9.11 The scope of the assessment during the construction phase will include emissions of nitrogen dioxide (NO_2) and particulate matter (PM_{10} and $PM_{2.5}$) from construction plant and vehicles, and dust arising from construction activities. Construction activities will be examined to identify those that have the potential for air emissions. Activities during the construction phase of the redevelopment have the potential to generate air pollutants associated with movement of plant and construction vehicles. These emissions are produced by the use of construction materials, transport of materials, construction machinery, and general site operations. The operational phase will include assessment of NO_2 and PM_{10} (and $PM_{2.5}$) concentrations associated with vehicle traffic on the road network. The operational phase will also examine any changes in harbour activities (both on shore and off shore) in relation to impacts on air pollutants.

9.12 Local council air quality monitoring information will be used as background data along with Defra background estimates. The DMRB Screening Method will be used to estimate pollutant levels for the base year and future years of operation.

Assessment Methodology

9.13 Whilst it is noted that the proposed redevelopment does not introduce any fundamental changes to or new types of harbour operations, the impact assessment of the redevelopment on air quality will consider demolition, construction and operational phases.

9.14 The air quality impact assessment will examine the existing air quality situation in the vicinity of the proposed redevelopment and assesses the potential impacts for future years with and without the proposed redevelopment in place.

9.15 The air quality assessment will comprises the following key elements:

- Review of the most recent The Highland Councils Progress Reports and Updating and Screening Reports;
- Presentation of DEFRA background levels (NO_2 and PM_{10} (and $PM_{2.5}$)) at the closest locations to the development;
- Operational Phase (Road Traffic) - Requirements for an assessment are presented and a determination is then made on the option to screen out an operational air quality assessment in accordance with The Highways Agency's Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 HA 207/07 for local and regional emissions;
- Operational Phase (Road Traffic) - Requirements for an assessment are presented and a determination is then made on the option to screen out an operational air quality assessment in accordance with Environmental Protection UK (EPUK) and Institute of Air Quality Management (IAQM) guidance (EPUK & IAQM) "Land-Use Planning & Development Control: Planning for Air Quality (January 2017);

- Demolition Phase and Construction Phase - The air quality impacts are assessed in accordance with the requirements of IAQM (2014): Guidance on the Assessment of Dust from Demolition and Construction.
- Emissions in accordance with the requirements as set out in Local Air Quality Management Technical Guidance 2016 (LAQM.TG16).

9.16 The assessment will include appropriate reference to the following guidance documents:

- DMRB Volume 11, Section 3, Part 1 (HA207/07) Air Quality;
- Local Air Quality Management - New Technical Guidance TG(16);
- Local Air Quality Management - New Policy Guidance PG(S) (16);
- Institute of Environmental Management and Assessment (IEMA) Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2017;
- IAQM Guidance on the assessment of dust from demolition and construction (2014), and
- Land-use Planning & Development Control: Planning for Air Quality (2017).

Legislation and policy

EU Legislation

9.17 Activities relating to the monitoring and management of air quality in the UK are primarily driven by European (EU) legislation. The 2008 ambient air quality directive (2008/50/EC) sets legally binding limits for concentrations in ambient (outdoor) air of major air pollutants that are known to have a significant impact on human health including particulate matter (PM_{10} and $PM_{2\,5}$) and nitrogen dioxide (NO2).

9.18 The 2008 directive replaced most of the earlier EU air quality legislation and was made law in Scotland through the Air Quality Standards (Scotland) Regulations 2010. The Regulations also incorporates the 4th air quality daughter directive (2004/107/EC) that sets targets for levels in ambient air of specific heavy metals and polycyclic aromatic hydrocarbons. Equivalent regulations exist in England, Wales and Northern Ireland.

9.19 Further legislation is also in place to control emissions of air pollutants, with the main legislation being the UNECE Gothenburg Protocol. The Protocol was originally adopted by the executive body in 1999 to abate acidification, eutrophication and ground-level Ozone and sets emission ceilings for 2010 for sulphur, NOx, VOCs and ammonia. Similar ceilings have since been set in European law under the 2001 National Emission Ceilings Directive (2001/81/EC), which was subsequently made into UK law as the National Emission Ceilings Regulations 2002. The Protocol has since been amended in 2012 to include national emission reduction commitments to be achieved in 2020 and beyond.

9.20 The European Commission recently undertook a comprehensive review of existing EU air policy, building on the 2005 Thematic Strategy on Air Pollution. Following on from the review, in December 2013 the Commission has adopted a Clean Air Policy Package which includes a new Clean Air Programme for Europe with new air quality objectives for the period up to 2030.

UK and Scottish Air Quality Legislation

9.21 The UK Government leads on the UK's input to International and European legislation relating to Air Quality, with input from the Scottish Government, and the other devolved administrations. Linking to the requirements of the EU Directives, the latest Air Quality Strategy published in July 2007 established the framework for air quality improvements across the UK. Measures agreed at the national and international level are the foundations on which the strategy is based. The strategy sets out the Air Quality Standards and Objectives which have been set to benchmark air quality in terms of protecting human health and the environment.

9.22 However, within the UK, air quality is a devolved matter, with the Scottish Government having responsibility for the development of air quality policy and legislation for Scotland.

Local Air Quality Management (LAQM)

9.23 The Air Quality Strategy establishes a framework for the improvement of air quality and focusses on measures agreed at a national and international level. However, it was recognised, that despite such strategic measures, areas of poor air quality would likely remain, and that these will best be dealt with using local measures implemented through the LAQM regime. Part IV of The Environment Act 1995 sets provisions for protecting air quality in the UK and for local air quality management.

9.24 The system of Local Air Quality Management has been in place in the UK since 1997, and is currently under review. The role of the LAQM review and assessment process is to review local air quality, identify all relevant locations where the air quality objectives are being or are likely to be exceeded. Where an area of exceedance is identified, the local authority is required to declare an Air Quality Management Area (AQMA) and implement an Air Quality Action Plan to improve air quality within the areas.

9.25 A set of air quality standards and objectives has been developed for several pollutants of concern for human health. Standards are concentrations of pollutants that are considered safe for humans and the environment. Objectives are derived from the standards and are a compromise between what is desirable purely on health grounds and what is practical in terms of feasibility and costs. Each objective has a date by when it must be achieved.

9.26 The objectives adopted in Scotland for the purpose of Local Air Quality Management are set out in the Air Quality (Scotland) Regulations 2000, the Air Quality (Scotland) Amendment Regulations 2002 and the Air Quality (Scotland) Amendment Regulations 2016. Similar targets are set at EU level, where there are called limit or target values. These are set out in the European 2008 Ambient Air Quality Directive (2008/50/EC) and transposed into Scottish legislation by the Air Quality Standards (Scotland) Regulations 2010. It is the responsibility of EU Member States to achieve the limit and target values.

9.27 The UK AQS objective for particulate matter (PM) smaller than 10µm aerodynamic diameter (PM_{10}) annual mean is 40µg m^{-3}. However, Scotland has adopted a more stringent annual mean objective of 18µg m^{-3}. The UK AQS objective for the 24-hour mean PM_{10} concentration is 50µg m^{-3}, not to be exceeded on more than 35 days per calendar year. The more stringent Scottish objective requires that daily mean PM_{10} concentrations do not exceed 50µg m^{-3} on more than seven days per year.

9.28 PM smaller than 2.5µm aerodynamic diameter ($PM_{2.5}$), is not currently included in the DMRB HA207/07 air quality guidance; however, the Scottish Government has adopted the World Health Organisation (WHO) guideline value of 10µg m^{-3} as an annual mean objective.

9.29 The air quality objectives of most relevance to the redevelopment are shown in Table 9.1.

Table 9.1: Air Quality Objectives for NOX, NO_2, PM_{10} and $PM_{2.5}$

Pollutant	Averaging Period	Limits (ug/m3)
Nitrogen Oxides (NOx) for the protection of vegetation and ecosystems)	Annual Mean	30
Nitrogen Dioxide (NO_2) (for human health)	Annual Mean	40
	1-hour mean (not to be exceeded more than 18 times per year)	200
Particulate Matter (PM_{10}) (for human health)	Annual Mean	18
	24-hour mean (not to be exceeded more than 7 times per year)	50
Particulate Matter ($PM_{2.5}$) (for human health)	Annual Mean	10

Potential Mitigation Measures

9.30 The findings of the air quality assessment will be used to develop relevant mitigation measures as appropriate for the operational and construction phases of the proposed redevelopment to mitigate any significant adverse impacts.

9.31 An important consideration during the construction phase is nuisance dust. Without appropriate mitigation, nuisance dust could cause soiling of surfaces, particularly windows, cars, and laundry. Mitigation measures will be developed where appropriate to ensure that the risk of nuisance dust effects is reduced to a minimum.

9.32 A dust management plan shall be developed for construction phase dust control and mitigation measures to be employed by the construction contractor within a CEMP. The series of mitigation and control measures will help prevent significant air quality and dust impacts during the demolition and construction phase.

Summary of Air Quality & Climate Scoping Exercise

9.33 The scoping exercise has concluded that a number of potential environmental effects at construction stage should be scoped into EIA, that is: emissions from plant and vehicles and dust levels from construction activities. The effect of emissions at operational stage should be scoped in to the EIA.

10 NOISE AND VIBRATION

Context

10.1 This section of the ESR sets out the proposed methodology for assessing the impact on noise and vibration arising from the construction, operation and maintenance of proposed redevelopment.

10.2 This chapter of the ESR will be comprised of the following:

- potential noise impacts associated with construction phase activities from the proposed redevelopment;
- potential noise impacts associated with increased traffic flows and vessel numbers at the operational stage of the redevelopment; and
- noise mitigation measures necessary to comply with current noise standards and guidance during both construction and operation.

Baseline Environment

10.3 Scrabster Harbour is located on the northern shore of Thurso Bay which is the between the points of Clairdon Head and Holborn Head. The harbour, which faces eastwards, is the terminal point of the A9 road.

10.4 The harbour is dominated by harbour infrastructure and associated commercial services (such as maritime engineering and fish processing). Other land uses / operations within the harbour estate include restaurants, RNLI station, government offices and the Fishermans Mission.

10.5 The wider landscape, beyond the harbour estate, is largely agricultural land use with residential properties (approximately 70) at St. Clair Avenue, Holburn Place, Clett Terrace and Holburn Head; a number of residential properties are also located within the harbour, along the A9 road. Consideration shall be given to the potential impact of the proposed redevelopment upon the residential properties in proximity to the Harbour.

10.6 Scrabster Harbour falls within the boundary of the Highland Council area.

Baseline Noise Monitoring Survey

10.7 A baseline noise monitoring survey will be conducted within the Harbour and at nearest sensitive receptors. Noise monitoring locations will be selected so as to be representative of all groups of sensitive receptors. Noise sensitive receptors include residential properties and any non-residential buildings that may have particular sensitivities to increased noise levels (e.g. hospitals, nursing homes, educational facilities, establishments/laboratories/workshops where high precision tasks are performed etc.). Noise monitoring will be conducted over day and night-time periods. The baseline noise monitoring survey including locations will be discussed and agreed with the Highland Council Environmental Health Department in advance of commencement of the monitoring survey.

10.8 Baseline measurements will be made at a height of 1.2 – 1.5m above ground level. The weather conditions will be accordance with the requirements of BS7445: Description and Measurement

of Environmental Noise and ISO 1996: Acoustics - Description, Measurement and Assessment of Environmental Noise.

Table 10.2 outlines the applicable noise threshold limits that apply at the nearest noise sensitive receptors. The determination of what category to apply is dependent on the existing baseline ambient (L_{Aeq}) noise level (rounded to the nearest 5dB) at the nearest noise sensitive property.

10.9 The following parameters will be recorded during each monitoring period:

- **L_{Aeq}** The continuous equivalent A-weighted sound pressure level. This is an "average" of the sound pressure level.
- **L_{Amax}** This is the maximum A-weighed sound level measured during the sample period.
- **L_{Amin}** This is the minimum A-weighted sound level measured during the sample period.
- **L_{A10}** This is the A-weighted sound level that is exceeded for noise for 10% of the sample period.
- **L_{A90}** This is the A-weighted sound level that is exceeded for 90% of the sample period.

Key Issues and Scope of EIA

10.10 The proposed redevelopment has the potential to give rise to noise and vibration impacts on the immediate surrounding environment as a result of construction phase activities at the proposed site and construction phase traffic travelling to and from the site.

10.11 During the operational phase, the most significant potential noise impacts will be as a result of increased vessel movements and associated road traffic.

10.12 There is potential for other operational phase noise impacts such plant/equipment noise during operations.

Assessment Methodology

10.13 Whilst it is noted that the proposed redevelopment does not introduce any fundamental changes to or new types of harbour operations, impact assessment will consider the impact of the proposal on noise and vibration considers demolition, construction including dredging and operational phases of the proposed redevelopment.

10.14 A noise and vibration chapter will be submitted as part of the EIAR which will be submitted in support of the marine licence application.

The assessment report will include:

- Construction Phase: BS5228:2009+A1:2014 Assessment of potential construction phase noise and vibration impacts at nearest residential properties and adjacent commercial buildings within the harbour estate;
- Operational Phase: CadnaA noise modelling software will be used to predict the worst-case operational phase noise levels from the proposed development;
- Operational Phase: BS4142:2014, BS8233:2014 and WHO Guidelines will be used to assess the potential noise impact from plant/equipment associated with the proposed development;

- Traffic Noise: An assessment of construction and operational phase traffic noise in accordance with the Design Manual for Roads and Bridges (Vol. 11, Section 3, Part7, HD 213/11) and the Calculation of Road Traffic Noise
- Vibration: General consideration of potential vibration impacts in accordance with BS5228:2009+A1:2014 Part 2.

10.15 Mitigation measures will be outlined for the construction and operational phases of the proposed redevelopment to help minimise potential noise impact.

10.16 It is unlikely that there will be operational vibration affecting noise sensitive receptors as there are no known significant vibration sources affecting the site.

Legislation and policy

10.17 General guidance and policy concerning noise is summarised below in Table 10.1.

Table 10.1: Summary of Noise and Vibration guidance, policy and legislation

National Policy	Summary
Planning Advice Note 1/2011: Planning and Noise	This note provides advice on how the planning system can be used to minimise the adverse impact of noise.
British Standard BS5228, Code of Practice of Noise and Vibration Control on Construction and Open sites	BS5228 consists of two parts and covers the need for protection against noise and vibration of persons living and working in the vicinity of construction and open sites. The standard recommends procedures for noise and vibration control in respect of construction operations.
British Standard 8233: 2014 Sound Insulation and Noise Reduction for Buildings – Code of Practice	BS8233:2014 provides guidance values for a range of ambient noise levels within residential properties. The noise and vibration impact assessment will ensure that the appropriate internal noise levels at the nearest noise sensitive receptors to the proposal are not exceeded as a result of activities associated with the proposed pier extension.
World Health Organisation (WHO) – Guidelines for Noise	WHO) Guidelines for Community Noise (1999), a L_{Aeq} threshold daytime noise limit of 55 dB is suggested for outdoor living areas in order to protect the majority of people from being seriously annoyed. A second daytime limit of 50 dB is also given as a threshold limit for moderate annoyance. The guidelines suggest that an internal L_{Aeq} not greater than 30 dB for continuous noise is needed to prevent negative effects on sleep. This is equivalent to a façade level of 45 dB L_{Aeq}, assuming open windows or a free-field level of about 42 dB L_{Aeq}. If the noise is not continuous, then the internal level required to prevent negative effects on sleep is a $L_{Amax,fast}$ of 45 dB.
Calculation of Road Traffic Noise (CRTN) – Department of Transport Welsh Office 1988	Calculation of Road Traffic Noise (CRTN) guidance document outlines the procedures to be applied for calculating noise from road traffic. They provide guidance appropriate to the calculation of traffic noise for more general applications e.g. environmental appraisal of road schemes, highway design and land use planning.
Design Manual for Roads and Bridges (DMRB) Section 3 Part 7 , HD213/11 Noise and Vibration	DMRB provides guidance on the assessment of the impacts that road projects may have on levels of noise and vibration, predominately traffic noise and vibration.
British Standard BS4142:2014 Methods for rating and assessing industrial and commercial sound	BS4142:2014 describes methods for rating and assessing sound of an industrial and/or commercial nature.

Control of Pollution Act 1974	The contractor will adopt the Best Practicable Means as defined in Section 72 as a means of controlling noise from construction sites.

Potential Mitigation Measures

10.18 The findings of the noise and vibration assessment will be used to develop relevant mitigation measures as appropriate for the operational and construction phases of the proposed redevelopment to mitigate significant adverse noise impacts.

10.19 British Standard BS5228:2009+A1:2014 – Noise and vibration control on construction and open sites outlines a range of measures that can be used to reduce the impact of construction phase noise on the nearest noise sensitive receptors. Table 10.2 outlines the applicable noise threshold limits that apply at the nearest noise sensitive receptors.

10.20 The determination of what category to apply is dependent on the existing baseline ambient (L_{Aeq}) noise level (rounded to the nearest 5dB) at the nearest noise sensitive property. For daytime, if the ambient noise level is less than the Category A threshold limit, the Category A threshold limit (i.e. 65dB) applies. If the ambient noise level is the same as the Category A threshold limit, the Category B threshold limit (i.e. 70dB) applies. If the ambient noise level is more than the Category A threshold limit, the Category C threshold limit (i.e. 75dB) applies.

Table 10.2: Noise Threshold Limits at Nearest Sensitive Receptors for Construction Activities

Periods	**Threshold Limits [dB(A)]**		
	Category A	*Category B*	*Category C*
Night-time (23:00 - 07:00)	45	50	55
Evening and Weekends (19:00 - 23:00 Weekdays, 13:00-23:00 Saturdays, 07:00-23:00 Sundays)	55	60	65
Weekday daytime (07:00-19:00) and Saturdays (07:00-13:00)	65	70	75

10.21 A range of measures should be taken to ensure that the quietest machinery is used or that the use of machinery is such as to be sensitive to the residents at the nearest properties.

Summary of Noise & Vibration Scoping Exercise

10.22 The scoping exercise has concluded that as a result of potential environmental effects of noise from plant/equipment, vessels and road traffic during both operation and construction stage that noise and vibration should be scoped into the ESR.

11 WASTE MANAGEMENT

Context

11.1 This section of the ESR will consider the effects from waste arisings during the construction and operational phases of the proposed redevelopment.

Baseline Environment

11.2 Scrabster Harbour Trust currently has an approved Waste Management Plan. In relation to current waste management operations, Euro Bins for use by vessels are provided on all quays and special waste can be disposed of by arrangement with the port authority or through the vessel's agents.

11.3 All vessels landing waste at Scrabster Harbour (other than those with approved exemptions from the MCA) must give notification of waste disposal to Port Control:

- where Scrabster is known to be the next port of call at 24 hours before arrival; or
- as soon as possible after Scrabster as a destination is known;
- where the duration of the voyage is less than 24 hours, at latest on departure from the previous port.

11.4 The Scottish waste sites and capacity reports provide information about the numbers and types of waste management activities holding a Waste Management Licence (WML) or Pollution Prevention Control (PPC) permit issued by SEPA. It also provides the sites annual capacity, which is the tonnage of waste a regulated site is licensed or permitted to handle in a given year and the remaining capacity for landfills.

11.5 Table A11.1 in Appendix 11.1 lists information on operational waste sites in the vicinity of the redevelopment. Table A11.2 in Appendix 11.1 lists information on operational landfill sites with capacity to accept various materials for disposal from the redevelopment.

Key Issues and Scope of EIA

11.6 The design of the proposed redevelopment involves various construction stage activities which are likely to have significant effects on the environment including piling, land reclamation and dredging. It is anticipated that the proposed redevelopment will produce waste in the form of dredge material and sedimentation. It is proposed that, if deemed suitable, the dredge material will be potentially reused as infill material in the reclamation works. The impacts associated with this needs to be assessed.

11.7 The proposed redevelopment is located within the existing Scrabster Harbour and any vessels using the redeveloped pier will continue to follow the harbours waste management procedures. Therefore the operational stage waste assessment is scoped out.

EIA Report Assessment Methodology

11.8 A qualitative assessment of potential effects in relation to waste will be undertaken. The assessment comprises the following stages:

- A review of applicable legislation and policy;
- A review of current waste arisings at the facility and current management routes;
- A review of the proposedredevelopment, undertaken in consultation with the project design team to estimate the waste generation during the various phases of construction;
- Consideration of potential interactions between proposals and the current site conditions, and identification of possible impacts;
- Assessment of impacts;
- Identification of measures and solutions to avoid, reduce or remedy potential impacts; and
- Assessment of residual impacts, taking account of mitigation measures.

11.9 An assessment will be made of the potential environmental effects that are associated with the production, movement, transport, processing and disposal of arisings from sites.

11.10 There are no accepted criteria for determining the value (sensitivity) of material resources and waste (including waste infrastructure). In the absence of such guidance, the assessment has been undertaken using professional judgement of waste and resources specialists.

11.11 The assessment of effects for noise and vibration will follow the EIA methodology set out in paragraphs 1.11-1.14 of Section 1. Furthermore, professional judgement will be applied to determine the likely significance of effects.

Preliminary Mitigation Measures

11.12 In relation to construction related waste, proposed preliminary measures include development of a CEMP and a Site Waste Management Plan (SWMP) to manage all waste materials generated on site. The CEMP will contain site specific environmental measures and procedures for the management of waste and related pollution control measures.

11.13 A site specific pre-construction SWMP will be also prepared by the appointed contractor and form a component part of the CEMP to ensure effective waste management and recycling of waste generated during the works. The SWMP will be prepared in line with the waste management hierarchy with waste reduction and re-use on site being of primary focus. The SWMP will be completed by the appointed contractor, and implemented prior to construction works. The appointed contractors for the site preparation, piling, earthworks and construction phases of the works will be contractually obliged to follow the SWMP and all relevant legislation.

11.14 In relation to waste materials arisings from dredging, testing as waste classification will be conducted to inform management routes.

Summary of Waste Management Scoping Exercise

11.15 The scoping exercise has concluded that the effect at construction stage of waste arising including seabed sediments as a result of dredging, should be scoped into EIA. No further related matters should be scoped in to the EIA including operation stage.

12 SOILS, GEOLOGY AND CONTAMINATION

Context

12.1 This section of the ESR sets out the proposed methodology for assessing the impact on soils, geology and contamination.

Baseline Environment

12.2 The site and surrounding area is underlain by the Scrabster Flagstone Member (SFM) which consists of siltstone and sandstone from the Mid Devonian Epoch.

12.3 Superficial deposits consist of glacial Till. Made ground (reclaimed land) is likely to be present within the harbour.

12.4 The site and surrounding area is underlain by a moderately productive aquifer associated with the Middle Old Red Sandstone which may locally provide small amounts of groundwater.

Key Issues and Scope of EIA

12.5 Key issues for soils and geology are as follows;

- Confirm site geology as identified in British Geological Survey maps.
- Establish contaminant status of sediments to ascertain if they are suitable for dumping at sea, re-use within the site for reclamation or as backfill within the new harbour wall.
- Excavated sediment material which is not suitable for re-use on site or for dumping at sea may be disposed off-site to a licensed landfill. Waste classification of any unsuitable material will be established using the WM3 guidance.

12.6 A land and marine based ground investigation will be undertaken to establish the ground conditions beneath the site and to ascertain samples of sediment material for contaminant testing. The ground investigation will be scoped and specified in consultation with Marine Scotland.

EIA Report Assessment Methodology

12.7 To aid the environmental assessment process, a preliminary risk assessment (desk study) will be prepared to accompany the chapter. The preliminary assessment will be carried out within the current UK and European legislative framework with particular attention paid to the guidance set out in CLR 11 '*Model Procedures for the Management of Land Contamination*' published by the Environment Agency and DEFRA, UK. The Desk Study will examine the potential for sources of contamination and pollutant linkages to be present. An intrusive land and marine based ground investigation will be undertaken to confirm the actual ground conditions in the area of the proposed development site.

12.8 Samples of sediment will be tested in an accredited laboratory to ascertain their suitability for dumping at sea. The proposed excavated sediment material will also undergo waste classification in accordance with the EA/SEPA WM3 waste classification guidance document to ascertain if the material is hazardous or non-hazardous waste.

12.9 Effects of contaminated land on receptors will be assessed taking into account sensitivity of the receptor and magnitude of the effect and will follow the EIA methodology set out in paragraphs 1.11-1.14 of Section 1 and criteria to determine magnitude of effect as set out in Table 12.1.

12.10 The magnitude of a potential effect is independent of the sensitivity of the feature. The magnitude considers the scale of the predicted change to the baseline condition taking into account its duration (i.e. the magnitude may be moderated by the effects being temporary rather than permanent, short term rather than long term) and whether the effect is direct or indirect. Definitions for impact magnitude are described in Table 12.1.

Table 12.1: Criteria to determine the magnitude of effect

Magnitude	Criteria	Typical examples
Major adverse	Total loss or major alteration to key features of the baseline conditions such that post development character/composition of baseline condition will be fundamentally changed.	Pollution of potable sources of water abstraction. Loss of, or extensive change, to an aquifer, groundwater supported designated wetlands. Loss of, or extensive change, to nationally important geological features.
Moderate adverse	Loss or alteration to one or more key features of the baseline conditions such that post development character/composition of baseline condition will be materially changed.	Partial loss or change to an aquifer. Partial loss of the integrity of groundwater supported designated wetlands. Permanent loss of, regionally important geological features, or substantial changes to nationally important geological features.
Minor adverse	Results in some measurable change in attributes quality or vulnerability compared to baseline conditions. Changes arising from the alteration will be detectable but not material; the underlying character/composition of baseline condition will be similar to the pre-development situation.	Measurable impact or aquifer but of limited size or proportion, which does not lead to a reduction in the aquifer status. Minor effects on groundwater supported wetlands. Loss of, or extensive change, to locally important geological features
Neutral	Very little change from baseline conditions. Change is barely distinguishable approximately to a “no change” situation.	No measurable impact upon groundwater. No measurable impact on geological features.
Beneficial	Benefit to, or addition of, key characteristics, features or elements compared to baseline conditions.	Treatment or removal of contaminated soils from site Improvement to geological features

12.11 The significance of a specific potential effect is derived from both the sensitivity of the feature and the magnitude of the effect. Effects can be beneficial, adverse or neutral and their significance Very Large, Large, Moderate, Slight or Neutral or an intermediary designation as cases dictate based on professional judgement. The significance of an impact should also be qualified based on the likelihood of an effect occurring (using a scale of certain, likely or unlikely) and the confidence in the accuracy of the assessment. Professional judgement can be used to vary the

category where specific circumstances dictate, for example due to the vulnerability or condition of the receptor.

Preliminary Mitigation Measures

12.12 Mitigation measures will be proposed if necessary once significance of effects has been established.

Summary of Soils, Geology & Contamination Scoping Exercise

12.13 The scoping exercise has concluded that the potential construction stage effects for Soils, Geology and Contamination should be scoped into EIA. No further related matters should be scoped in to the EIA.

13 CULTURAL HERITAGE

13.1 This section of the ESR considers Cultural Heritage. It provides the results of an initial baseline study and considers the potential for significant effects to arise as a result of the proposed redevelopment.

13.2 In general developments may affect cultural heritage assets either by causing physical damage or disturbance, generally during construction, or as a result of changes in setting, generally during operation; changes in setting during the construction phase are generally short-lived and hence rarely have the potential to result in significant effects. The key aspects of the proposed redevelopment in relation to cultural heritage therefore comprise the enclosure of the pier with newly driven steel piles, dredging activity, reclamation of a total of 0.92ha of seabed at the root of the pier and at the quayside, disposal of dredged material at sea and installation of a water pipe and fuel pipe from the Jubilee Pier via the Ice Pier to St Ola Pier and the operational phase.

13.3 Historic Environment Scotland have provided a screening response (letter dated 19th February 2018), which stated '*We are… content that the proposed works are unlikely to have significant impacts on assets within our statutory remit* [Scheduled Monuments, Category A Listed Buildings, Inventory Gardens and Designed Landscapes and Inventory Battlefields].'

13.4 Highland Council Historic Environment Team have been consulted and have confirmed that cultural heritage may be scoped out of the EIA (email dated 19th June 2018 included as Appendix 13.1).

Baseline Environment

13.5 The initial baseline study draws upon the following sources:

- Historic Environment Scotland designated asset datasets (downloaded 8th March 2018);
- Canmore;
- Highland Council Historic Environment Record (HER), provided by the HER on the 31st May 2018 (the HER incorporates data from RCAHMS' Project Adair and hence all wrecks and obstructions recorded by UKHO as of March 2013);
- Historic maps held by the National Library of Scotland; and
- Satellite imagery.

13.6 Data has been considered from the above sources in relation to the harbour and a 1km radius centred on St Ola's pier. In addition, data relating to proposed dumping ground has been considered.

Designated Heritage Assets

13.7 There are two listed buildings within Scrabster Harbour:

- Holborn Head Lighthouse and keeper's cottage (LB14952, Category B); and
- Scrabster Ice House and adjoining cottage (LB14955, Category C)

13.8 The lighthouse and associated keeper's cottage were designed by David and Thomas Stevenson and built in 1862. It is of an unusual design; the tower is short and chamfered and is integrated with the double pile keeper's house. It stands at the foot of the cliffs and when first built lay approximately 400m from the rest of the harbour, overlooking the Scrabster Roadstead. The harbour has since been extended and the Queen Elizabeth Pier is approximately 70m to the south-west. The St Ola pier is approximately 370m to the south-west of the lighthouse.

13.9 The ice house and associated cottage date to the 19th century. They are of a single storey and rubble built; in recent years they have been converted to function as a restaurant. The conversion has resulted in several external alterations including the addition of a large glass-fronted porch. They stand at the foot of the cliff with car parking, the road to the Queen Elizabeth Pier and modern buildings separating them from the harbour front and the Ice Pier. When first constructed the ice house and cottage were much closer to the harbour front; a substantial amount of land has been reclaimed between the Ice Pier and St Ola Pier to the east to form the marshalling area for vehicles boarding the ferry.

13.10 Aside from these, there is one further listed building in the wider area, the Category C-listed Scrabster House (LB14954). This is located at the top of the cliffs to the south-west of the harbour.

13.11 There are no Historic Marine Protected Areas near the Caithness coast.

Non-Designated Heritage Assets

13.12 There is a general background of Prehistoric - Medieval features and finds in the vicinity of Scrabster; Thurso Bay is a natural harbour that is likely to have seen use throughout history and the place name Scrabster is indicative of the settlement having its origins in the Viking period. However, all the HER entries relating to the harbour concern elements of the harbour (MHG49682) that developed following the construction of the first pier at Scrabster by Thomas Telford in the 1820s. Before this there was little in the way of infrastructure at Scrabster. The entries therefore comprise features such as the Old Lifeboat House (MHG37235), houses (MHG42774 & MHG51286), a hotel (MHG36692), a former chapel (MHG56519), a mill (MHG36842), stores and warehouses (MHG35399 & MHG36381), piers (MHG40024, MHG49680, MHG49689, MHG50939) and other similar entries.

13.13 Canmore and the HER record numerous marine losses in Thurso Bay. Many of these entries are extremely indicative, the exact location of the loss being only poorly recorded and most entries have not been verified. Amongst these entries are six that are placed within Scrabster Harbour. However, the locations are for the most part uncertain:

- Craigie (MHG46430) a brig burnt to the waterline at Scrabster Pier in 1852. It was presumably towed away and disposed of;
- Star of Hope (MHG46487) a sloop broken to pieces when at anchor in heavy seas in 1893. The location is noted as 'essentially tentative'.
- Bee (MHG50042) a smack sank in the harbour in 1859. The location is noted as 'essentially tentative'.
- Jessie (MHG50608) a lugger 'driven from moorings and stranded at Scrabster harbour.' The entry suggests that is most likely to have been moored in Scrabster Roads.
- James & Margaret (MHG50610) a schooner loaded with pavement wrecked at New Quay in 1874. The entry notes that the location of New Quay is unknown. The 1873

Ordnance Survey map shows a quay in the area now occupied by the ferry car park. Given the ship's cargo, it is likely that it was wrecked here.

13.14 No information is available regarding the circumstances or location of the loss of the Osprey (MHG38242) and it appears to have been placed in Scrabster Harbour indicatively. Similarly, no information relating to an unknown vessel lost on the 10th November 1941 in Thurso Bay (MHG38444) is provided. Given that no details are known regarding the loss, it is highly unlikely that it took place in the harbour.

13.15 The HER places the wreck of an unknown vessel (MHG28345) of 20th century date approximately 230m to the south of the entrance to the eastern harbour. However, the description states that this is 'straight out from the end of the old pier'. This would place the wreck substantially further west.

13.16 The HER places the loss of the schooner Jane Shearer (RCAHMS 327417) 410m to the south-east of the end of the St Ola Pier. However, the report states that it was stranded in 1865 at New Quay with a cargo of pavement. It is described as 'All gone' and was presumably removed in order to maintain access to New Quay.

13.17 The Charles (RCAHMS 327106) was wrecked in 1712 'near Scrabster'. The location given by Canmore is entirely indicative.

13.18 The HER contains an entry relating to the St Ola Pier (MHG49680) and its navigational light (MHG49681). Built in the 1970s this pier lacks any features that might be considered to lend it any cultural significance. The pier and its navigational light are not considered to represent a heritage asset.

13.19 Canmore records a further 22 losses at two locations approximately 400m to the south-east of the end of Jubillee Pier. These are entirely indicative.

13.20 There are no marine losses recorded in or near the proposed sea disposal site. The disposal site was used in 2012 for the disposal of material from the construction of the Jubilee Pier.

Key Issues and Scope of EIA

13.21 Given the nature of the proposed development, namely redevelopment of an existing pier and reclamation of an area of land, it is considered that there is no potential for impacts upon the setting of heritage assets either within the harbour or in the surrounding area. The setting of these assets will remain essentially unchanged by the proposed development following construction.

13.22 The construction footprint of the proposed development predominantly lies below the high water mark or has been reclaimed since the 19th century. It is considered that there is negligible potential for terrestrial archaeology to be affected by the proposed redevelopment. A number of marine losses are recorded in the vicinity of the harbour and in Scrabster Bay. As the proposed development lies in a part of the harbour developed since the 1970s, it may be assumed that any remains lying in the construction footprint of the proposed redevelopment will have been dispersed to prevent their posing a hazard to shipping.

13.23 There is some potential for previously unrecorded marine losses to be present within the proposed sea disposal area. Given that dredged material will be used to reclaim land where possible rather than disposal the area affected by disposal is likely to be very small and hence there is low potential for the remains of unrecorded marine losses to be affected.

13.24 It is concluded that there is negligible potential for the proposed redevelopment to adversely affect cultural heritage assets.

EIA Report Assessment Methodology

13.25 Given the known baseline situation and the nature of the development, it is considered that there is negligible potential for significant adverse effects to arise in relation to cultural heritage assets. It is therefore proposed to scope cultural heritage out of the EIAR.

Summary of Cultural Heritage Scoping Exercise

13.26 The scoping exercise has concluded that potential cultural heritage effects at construction and operational stages should be scoped out of EIA.

14 LANDSCAPE AND VISUAL

Context

14.1 The proposed redevelopment at Scrabster Harbour will result in a combination of new features and amendments to existing features in terms the local landscape character and visual context of the harbour. This section considers potential effects of the proposed redevelopment on the local landscape character and visual amenity.

14.2 The proposed redevelopment is located with the existing harbour in the small fishing settlement of Scrabster in Caithness, roughly 1.5 miles from Scotland's northernmost mainland town of Thurso. The harbour is located with Thurso Bay. The settlement lies northwest of the mouth of the River Thurso and provides an important port for the fishing industry as well as ferries to the Orkney Islands and is visited by Cruise ships.

14.3 The following sections outline the baseline situation as it is currently understood.

Baseline Situation

14.4 Scrabster Harbour is an established harbour at the west of Thurso Bay and slightly over 20km from the Orkney Islands. The port is important for the fishing industry and also provides a vital ferry link to the Orkney Islands. It is important to the energy industry as it is the closest mainland port to the oil and gas activity west of the Shetland Islands. Furthermore it is the closest mainland port to the marine renewable energy developments in Pentland Firth and Orkney waters.

14.5 The proposed redevelopment will be undertaken within the Scrabster Harbour port boundary. This is an area with small scale industrial and marine related development. Warehouse type buildings dominate the local landscape. There is a modern chilled fish market with sorting and distribution facilities as well as modern infrastructure including cranes and cargo handling facilities. Large storage tanks are also prominent locally (see Plate 14.1).

14.6 The harbour has a busy and workmanlike character and is constantly used by fishing vessels and vessels related to oil and gas industry. Cruise ships regularly berth within or just outside the harbour.

14.7 The built harbour sits at sea level hugging tall cliffs and escarpments with rocky outcrops (the Braes) to the west and south with an open aspect across Thurso Bay to the north and east. The predominantly green Braes contrast with the built form of the harbour. Small scale linear development on the A9 faces eastwards to the harbour with a combination of stone buildings and warehouse type structures including Scrabster Ice House and adjoining Cottage; and Scrabster House. The existing piers extending outwards in the harbour and Holburn Head Lighthouse to the north of the harbour are all noticeable features.

14.8 Above the harbour there is an extensive level pastoral agricultural landscape with large fields defined by stone walls. Trees are almost completely absent. Farmsteads are infrequent but noticeable within the open agricultural landscape. The small settlement of Scrabster extends to sit above the cliffs where mostly single storey modern houses are located with a village hall.

Plate 14.1: Scrabster Harbour Landscape and Visual Context

14.9 Of relevance to consideration of landscape and visual baseline the Caithness Local Plan 2002 states that it is an objective to minimise impact of development on Scrabster House, the Braes and the broader landscape setting of Thurso Bay. Further, the draft Caithness and Sutherland Local Development Plan 2018 identifies a number of Special Landscape Areas (SLAs) are regionally valuable landscapes identified to protect and enhance landscape qualities and promote their enjoyment. The nearest SLA to Srabster Harbour is located approx. 35km northeast at Dunnet Head SLA.

14.10 The Scottish Natural heritage (SNH) prepared Caithness and Sutherland Landscape Character Assessment identifies the following landscape character types; to the south and south east of Scrabster is ‘Town’; to the west and southwest the landscape character type is ‘Mixed Agriculture and Settlement’; to the north the landscape character type is ‘High Cliffs and Sheltered Bays’; ‘Open Intensive Farmland’ is also identified to the east and west of Scrabster along the coastline and a small ‘Inland Lough’ to the west.

Plate 14.2: View from Clett Terrace Scrabster

Plate 14.3: View from A9 at Thurso towards Harbour

Plate 14.4: View from A9 near Scrabster Farm towards Harbour

Plate 14.5: View from Thurso Harbour public car park

Plate 14.6: View from near Thurso Castle

14.11 Views are generally limited within this environment. The harbour is nestled against the Braes that prevent views from the north, west and southwest. Views from elsewhere (see list below) are from longer distances and towards a landscape that has been influenced by the harbour itself with light marine related industry already visible in views. There are potential views from:

- Clett Terrance Scrabster (Plate 14.2);
- A9 between Thurso and Scrabster (intermittent views - Plate 14.3);
- Car Park at Thurso Harbour (Plate 14.3);
- Thurso Castle (Plate 14.4); and
- Holburn Head Lighthouse

Key Issues and Scope of LVIA

14.12 Due to the nature of the proposed redevelopment and its location within an existing harbour the potential landscape and visual impacts are negligible to low and no significant landscape or visual effects are predicted. The proposed redevelopment is consistent with the existing landscape character at Scrabster Harbour and utilises existing features that will be redeveloped. Vessels currently come and go from the harbour (including Cruise ships) and they will continue to do so. When viewed from the local surroundings it will be difficult to discern the changes from the existing visual context described above.

14.13 Based on this conclusion it is not considered that a detailed Landscape and Visual Impact Assessment is required.

Assessment Methodology

14.14 It is recommended that as no significant landscape or visual effects are predicted a brief summary of landscape and visual impacts should be included in the EIA Report providing reasons why a detailed LVIA was scoped out of the EIA.

Summary of Landscape & Visual Scoping Exercise

14.15 The scoping exercise has concluded that potential landscape or visual effects at construction and operational stages should be scoped out of EIA.

15 POPULATION, HUMAN HEALTH AND SOCIO-ECONOMICS

Context

15.1 This section of the ESR seeks to provide an overview of the proposed redevelopment in the context of local populations, settlement and the general human environment within the locale. Information is also presented in relation to demography of the local area and the wider region.

15.2 Consideration is also given to the matter of human health where this is not assessed within other EIA chapters / topics e.g. air quality, noise and vibration, transportation, water quality and contaminated land.

15.3 Consideration is also given to the socio economic impacts associated with the proposed redevelopment, both direct (construction employment, material and plant supplies, increased port revenue) and indirect (tourism, secondary spend).

Baseline Environment

Population

15.4 Scrabster is a small settlement on the north coast of Caithness, situated approximately 1.5 miles north of the town of Thurso.

15.5 Scrabster Harbour is located on the northern shore of Thurso Bay which is the between the points of Clairdon Head and Holborn Head. The harbour, which faces eastwards, is the terminal point of the A9 road.

15.6 There are a number of residential properties (approximately 70), close to the harbour along St Clair Avenue, Holburn Place, Clett Terrace and Holburn Head; a small number of residential properties are also located within the harbour, along the A9 road. A village hall is also located on St Clair Avenue.

15.7 Scrabster falls within the boundary of the Highland Council area. The population of Thurso and Scrabster has decreased from 8234 to 7850 (-384 or -4.9%) between 2011 and 2016 (National Records for Scotland (NRS)).

Human Health

15.8 Residential land use and residential population within the study is relatively limited, reflective of the small size of the settlement of Scrabster. The harbour estate facilitates a wide range of port and associated commercial operations with approximately 170 full time equivalent (FTE) direct employees in the operation of the harbour and over 400 FTE jobs in businesses dependent on Scrabster Harbour (*Scrabster Harbour Economic Impact Assessment: 2016, Grangeston*). This represents a significant human population within the harbour and the wider Caithness economy, which can be considered in the context of human health.

15.9 Existing operations within the harbour, such as the movement of shipping, associated road transportation, storage and handling of materials/goods and general operational activities, have the potential to impact upon human health in relation to issues such as noise and air quality. These matters were noted within the Marine Scotland EIA Screening Opinion received in March

2018 (see Appendix 1.1) and will be addressed in the EIAR as set out in sections 9 and 10 of the ESR above.

Socio Economics

15.10 The current Scrabster Harbour operations consist of a wide range of services across sectors including cargo, cruise and ferry passengers, fishing, fuel and marine renewables. In addition to the port infrastructure, there are a number of other land uses / operations within the harbour estate, including restaurants, RNLI station, government offices, Fishermans Mission and other port/fishing related commercial operations. The wider area, beyond the harbour estate, is largely in agricultural land use with a cluster of residential properties as noted above with some further individual properties, located sporadically throughout.

15.11 Scrabster Harbour has been subject of significant infrastructure development in recent years with over £35 million invested since 2001. The port benefits from its strategic location in relation to the fishing industry, energy (oil, gas and renewables), tourism and passenger travel (cruise and ferry).

15.12 The *Scrabster Harbour Economic Impact Assessment* published in 2016, outlined the following key trends and performance for the harbour, across its various operations:

Ferry Service:

- Serco Northlink offers two sailings daily between Scrabster and Stromness, increasing to three sailings daily during the peak period (mid May – early September);
- A steady growth of over 20% in the number of passengers between 2013-14 and 2016-17.

Cruise:

- Cruise business established in Scrabster in 2004 with a general upward trend in the number of ships and passengers;
- The average size (tonnage) and number of passengers per ship has generally increased since 2011-12 rising from 13,987 tonnes / 394 passengers to 22,840 tonnes / 510 passengers, respectively.

Fishing:

- Seven locally based fishing vessels at Scrabster with a further four based at Scrabster but with *home ports* elsewhere;
- Approximately twenty-three additional vessels based elsewhere but periodically landing at Scrabster;
- A general upward trend in the number of (white fish) box landings since 2011-12 with an average of 1000 vessel arrivals per year since 2011 – 2017;
- The fishing industry is significant in terms of related harbour activities including fish and shell fish processing operations – the sector is also important to the wider supply chain industries such as transportation, engineering and servicing.

General Cargo:

- Covering a range of products including timber, rock salt, salmon smolts and electrical transformers;
- Decline in port cargo activity reflective of general trend – 2016-17 tonnages estimated at around 38% of 2014-14 tonnages.

Oil and Gas Sector / Renewables:

- Fluctuating levels of activity evident due to nature of exploration and development phases of offshore energy resources;
- Similar pattern evident in oil and gas sector however a general upward trend in related activity;
- Offshore renewables considered to present a greater opportunity in Scrabster in the future.

15.13 These existing operations of Scrabster Harbour have economic impacts upon the wider area in terms of employment, Gross Added Value (GVA), Income and Output. The 2016 Grangeston report stated that the harbour accounted for approximately 62 full time employment (FTE) jobs directly through the operation of and based in the harbour. The harbour however supports a total of 92 FTE including indirect and induced jobs and over 400 FTE jobs in businesses in the wider area are dependent on Scrabster Harbour, as noted above.

15.14 Further economic impacts of the harbour derive from the ferry and cruise operations and their users/passengers. Expenditure of passengers in terms of ongoing transportation (coach travel), tourism spend, accommodation and services, are generated from the passenger and cruise operations with economic impacts both upon the harbour and the wider Caithness area.

15.15 In total, it is estimated that the economic activities attributable to Scrabster Harbour generated £10.3 million in wages and salaries within Caithness (*Scrabster Harbour Economic Impact Assessment*, 2016).

Key Issues and Scope of EIA

Population & Human Health

Impacts upon population and human health shall primarily be assessed within the relevant chapters elsewhere within the EIAR including air quality, noise and vibration, transportation, water quality and contamination. Population and Human Health are therefore scoped out of the EIAR.

Socio Economics

15.16 The potential socio economic benefits of the proposed redevelopment to the local area are potentially high. Consideration shall be given to the potential socio economic impacts associated with the proposed redevelopment within the Project Description chapter of the EIAR under the need for the project. A standalone Socio-Economic Chapter is scoped out.

EIA Report Assessment Methodology

Population & Human Health

15.17 It is recommended that Population and Human Health is addressed in detail in the air quality, noise and vibration, transportation, water quality and contamination Chapters of the EIAR .

Socio Economics

15.18 Chapter 2 of the EIAR will set out the existing baseline, including the previously referenced Economic Impact Assessment report. A review of the report including opportunities identified for future economic development in the context of the proposed redevelopment with the intention of identifying the potential economic impacts which may arise from the same will be set out.

15.19 A description will be made of the proposed redevelopment in terms of both construction phase (direct employment, materials and plant hire) and operational phase (direct economic impact to the harbour and indirect impacts upon related industries [transportation, tourism and service industries).

Summary of Population, Human Health and Socio-Economics Scoping Exercise

15.20 The scoping exercise has concluded that potential population and human health effects at construction stage should be scoped into EIA *and* assessed through the specialist topics of air quality, noise and vibration, transportation, water quality and contamination. Population and human health effects at operational stage should also be scoped in and dealt with in the same way. A standalone Socio-Economic Chapter is scoped out.

16 MAJOR DISASTERS AND ACCIDENTS

Context

16.1 This section of the ESR seeks to assess the impact of the proposed redevelopment in terms of potential major accidents and disasters. The requirement to consider these matters is outlined within The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 which states, in relation to matters to be included within an EIA, "*a description of the expected significant adverse effects of the works on the environment deriving from the vulnerability of the works to risks of major accidents and/or disasters which are relevant to the project concerned".*

16.2 Potential exists for the occurrence of a major disaster during both the construction and operational phases of the proposed redevelopment.

Baseline Environment

16.3 The receiving environment is an existing, operational port. Whilst the proposed redevelopment seeks to improve port facilities there will be no fundamental changes to the types of operations currently undertaken within the harbour.

16.4 The current Scrabster Harbour operations consist of a wide range of services across sectors including cargo, cruise and ferry passengers, fishing, fuel and marine renewables.

16.5 In addition to port infrastructure, there are a number of other land uses / operations within the harbour estate, including restaurants, RNLI station, government offices, the *Fisherman's Mission* and other port / fishing related commercial operations. The wider area, beyond the harbour estate, is largely in agricultural land use; approximately 70 residential properties are located close to the harbour, along St. Clair Avenue, Holburn Place, Clett Terrace and Holburn Head.

16.6 Port operations and procedures are overseen by Scrabster Harbour Trust (SHT) which are implemented in line with a range of control measures throughout the harbour, to include (inter alia): SHT Environmental Policy, Port Marine Safety Code, SHT Health and Safety Policy, SHT Harbour Byelaws and SHT Oil Spill Contingency Plan.

16.7 SHT implement appropriate control measures across the harbour estate for all operations, extending to both SHT procedures and those of vessels and users of the harbour.

Key Issues and Scope of EIA

16.8 Impact upon the natural environment, local land uses and human population, caused by accidental discharge of dangerous substances (oils, fuels, cement, paints, contaminants exposed through excavation works etc) could occur during the construction phase but these are addressed on other chapters in the ESR including Water Quality and Soils, Geology and Contamination and don't merit a Major Accidents and Disasters chapter and is scoped out.

16.9 Similarly operational impacts may also occur through accidental discharge of dangerous substances (during servicing and refuelling of vessels, leaks, spillages and handling of sensitive cargo materials) but these matters will be addressed elsewhere within the EIA (water quality,

and soils, geology and contamination) and will not therefore be covered within the scope of the major disasters and accidents assessment. Chapter and is scoped out

16.10 The presence, movement and navigation of vessels during both construction and operational phases, has the potential to result in accidents; collision with other vessels or with natural and / or manmade features, may result in damage to the environment through accidental discharge of sensitive substances such as fuels and cargo materials. However, the existing navigational systems and controls in the harbour will be adhered to and remain in place during and post construction. The movement and navigation of vessels will be described in Chapter 2 Project Description of the EIAR and the need for major disasters and accidents chapter is scoped out.

EIA Report Assessment Methodology

16.11 It is proposed to scope Major Disasters and Accidents out of the EIAR.

Preliminary Mitigation Measures

16.12 All construction phase operations should be undertaken in line with appropriate safeguarding policies, construction method statements and risk assessments, which should be compiled in line with current best practice guidance.

16.13 Harbour operations should continue to be undertaken in line within existing operational controls which should be amended to take account of any operational changes which may occur during the construction or operational phases.

Summary of Major Disasters & Accidents Scoping Exercise

16.14 The scoping exercise has concluded that major disaster or accident effects at construction and operational stages should be scoped iout of the EIAR *and* be assessed through the specialist topics of terrestrial and marine biodiversity, water quality and soils, geology and contamination instead.

17 MATERIAL ASSETS

Context

17.1 This section of the ESR seeks to assess the impact of the proposed redevelopment upon material assets. The requirement to consider the impact of material assets is outlined within The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 however there is no clear definition as to what the topic may encompass.

17.2 Consideration of material assets within EIA practice can therefore cover a wide range of assets which can be generally categorised under *Built Environment* (transport, energy and services infrastructure, settlement and commercial land, community resources [schools, hospitals etc] and the historical environment etc) and *Natural Environment* (forestry, open space including agriculture, minerals, water resources).

17.3 A number of the above matters are to be addressed directly, elsewhere within the EIA (water quality, flood risk, transportation, air and noise, contamination and cultural heritage) and will not therefore be covered within the scope of the material assets assessment.

Baseline Environment

Built Environment

17.4 The redevelopment will be undertaken within the extents of the existing harbour without any requirement for land take or demolition of other land uses outside of the harbour estate.

17.5 Land use within the wider area is dominated by harbour infrastructure and associated commercial services (such as maritime engineering and fish processing). Other land uses / operations within the harbour estate include restaurants, RNLI station, government offices and the *Fishermans Mission*. The wider area, beyond the harbour estate, is largely in agricultural land use with a cluster of residential properties at St.Clair Avenue with further individual properties, located sporadically throughout.

Natural Environment

17.6 There are limited natural environment material assets within the wider area (which are not to be considered elsewhere within the EIA); furthermore the extents of the proposed works rule out the requirement for land take or loss of any such resources.

17.7 Agricultural land and associated elements such as field boundaries which lie outside the extent of the harbour estate, will not be impacted upon by the proposals.

Key Issues and Scope of EIA

17.8 It is considered that the extent and nature of the proposed redevelopment will have no significant impact upon those material assets referenced above, which are not specifically addressed elsewhere within the EIA.

17.9 Sufficient consideration will be given elsewhere within the EIA to matters such as water quality, flood risk, transportation, air and noise, contamination and cultural heritage, that an additional

assessment of material assets is considered unnecessary; this matter is therefore recommended to be scoped out of theEIAR.

Summary of Material Assets Scoping Exercise

17.10 The scoping exercise has concluded that material asset effects at construction and operational stages should be scoped out of the EIAR.

18 CUMULATIVE IMPACTS

Context

18.1 The EIA Regulations require an EIAR to consider '*the cumulative effects with other existing and/or approved works'*.

Baseline Environment

18.2 The proposed redevelopment will be assessed under each of the disciplines within the EIAR, in consideration of the existing and ongoing operations within the wider area.

18.3 Consideration will also be given to identified projects which have been approved (or are awaiting approval via planning or marine licencing), which may result in a cumulative effect with the proposed redevelopment.

18.4 Projects identified to date that shall be considered cumulatively along with the proposed redevelopment include the following:

- West Orkney to Caithness AC Link;
- Extension to St.Margarets Hope Pier.

18.5 It should be noted, that this list is not exhaustive and shall be reviewed in advance of and during the preparation of theEIAR.

Key Issues and Scope of EIAR

18.6 The issues outlined within this ESR under each of the disciplines above, will be considered in terms of cumulative impacts.

EIA Report Assessment Methodology

18.7 Assessment of existing projects will be undertaken following identification of the same through desk top review of the *ePlanning.scot* web portal and field survey work as necessary. In order to identify those projects which should be included within the cumulative assessment, a review will be undertaken of resources such as the Highland Council and ePlanning.scot web portals and Marine Scotland's register of *current Marine Renewable Energy Projects* and *Current Construction, Cable and National Renewables Infrastructure Plan (NRIP) Projects.* Consultation will be undertaken with relevant regulatory authorities to determine project types, status and potential for cumulative effects.

Preliminary Mitigation Measures

18.8 Mitigation measures will be outlined under each of the disciplines assessed within the EIAR.

19 CONCLUSION

19.1 An EIA Screening Opinion issued from MSLOT in March 2018. It determined the proposed pier redevelopment project to be EIA development under the relevant EIA Regulations, and as such an Environmental Impact Assessment must be carried out.

19.2 This report has been prepared in order to assist the Scottish Ministers in adopting a scoping opinion. In line with the EIA Regulations, the following has been provided within this report:

- a description of the location of the works and a description of the nature and purpose of the works
- a plan to identify the area in which the works are proposed to be sited;
- the likely effects of the works on the environment.

19.3 The EIAR scoping exercise has identified potentially significant environmental effects that require more detailed examination and analysis in an EIAR and those that can be 'scoped out' of an EIAR.

19.4 Table 19.1 summarises a range of potential environmental effects that have been scoped in or out of EIAR, based on the analysis in the foregoing sections of the report.

Table 19.1: Summary of EIAR Scoping (All Disciplines)

Environmental Effect	Scoped In	
	Construction Stage	*Operational Stage*
Coastal Processes	●	
Flood Risk		●
Marine Biodiversity	●	●
Terrestrial Biodiversity and Ornithology	●	●
Water Quality	●	●
Transportation	●	●
Air Quality and Climate	●	●
Noise and Vibration	●	●
Waste Management	●	
Soils, Geology and Contamination	●	
Cultural Heritage		
Landscape and Visual		
Population, Human Health and Socio-economics		
Major Disasters and Accidents		
Cumulative Effects	●	●

APPENDIX 1.1 EIA SCREENING OPINION CORRESPONDENCE

marinescotland

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[Redacted]

Affric Limited
Lochview Office
Loch Duntelchaig
Farr
IV2 6AW

Date: 14 March 2018

Dear [Redacted]

SCREENING OPINION UNDER PART 2, REGULATION 11 OF THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) SCOTLAND REGULATIONS 2017 (AS AMENDED) ("the EIA Regulations")

Thank you for your screening request for the proposed Scrabster Ola Pier Extension received on 30 January 2018.

In considering your screening request, the Scottish Ministers have consulted with Scottish Natural Heritage ("SNH"), Scottish Environment Protection Agency, Historic Environment Scotland and The Highland Council as to their view on whether the proposed works are an Environmental Impact Assessment ("EIA") project. Copies of the consultation responses are enclosed for your review.

The proposed works involve the construction of a new quay wall, land reclamation and associated dredging activities within Scrabster Harbour, therefore the Scottish Ministers consider the works to fall under paragraphs 1(e) and 10(g) of the EIA Regulations. The area of these works each exceeds the corresponding threshold described in column 2 of schedule 2 of the EIA Regulations.

When making a determination as to whether schedule 2 works are an EIA project, the Scottish Ministers must take into account such of the selection criteria set out in schedule 3 of the EIA Regulations as are relevant to the works. In this regard, the Scottish Ministers have considered the following:

Characteristics of the works

The size of the proposed works is 5.4 hectares. The threshold for port installations, as described in column 2 of schedule 2 of the EIA Regulations, is "the area of the works exceeds 1 hectare", therefore the proposed works significantly exceed this threshold. As the threshold for reclamation of land from the sea is "all works", the works also exceed this threshold.

The design of the proposed works involves various activities which are likely to have significant effects on the environment including piling, land reclamation and dredging.

It is anticipated that the proposed works will produce waste in the form of dredge spoil and sedimentation. It is proposed that, if deemed suitable, the dredge spoil will be reused as infill material in the reclamation works.

The proposed works may result in increased noise, dust and light nuisance, and increased sedimentation and pollution risk, which potentially may pose a risk to human health.

Location of the works

The proposed works are located within an established harbour however, there are designated sites which are in close proximity. In particular, the works are likely to have a significant effect on the North Caithness Cliffs Special Protected Area ("SPA"), classified for cliff nesting seabrids and peregrine falcon, which lies approximately 450m from the proposed works and the River Thurso Special Area of Conservation ("SAC"), designated for Atlantic salmon, lies approximately 2.3km from the proposed works.

SNH has advised that the proposed works have the potential to affect these sites by noise (and vibration), sedimentation and pollution risk associated with construction and dredging activities.

Characteristics of the potential impact

The proposed works are likely to have a significant effect on the environment based on their extent and proximity to sensitive areas.

SNH has advised that birds within the SPA could be at risk of disturbance from the proposed works and that Atlantic salmon on migration could be disturbed and/or injured from underwater noise (e.g. from piling activities) and from increases in sedimentation associated with dredging activities. In addition, SNH has noted that identification of any impacts to bottlenose dolphins will also require connectivity with the Moray Firth SAC to be considered.

The Highland Council has noted that during construction, there is potential for neighbouring residents to be significantly affected by noise, dust and possibly light nuisance. Once operational, it is likely that the pier re-development will result in increased use of Scrabster Harbour by cruise ships and other large vessels. The Highland Council has noted that the screening report has assessed any resulting noise impact as being insignificant. Although they agree that during the daytime noise from increased activities is unlikely to cause any significant problems, in their opinion the matter is less clear for noise which might arise from an increase in night time activity. In addition, The Highland Council have identified that there is the potential for the proposed works to have an impact on transportation and this requires further consideration.

Taking into account the information provided and the advice received, as referred to above, the Scottish Ministers have concluded that the proposed works are an EIA project under the EIA Regulations and therefore an environmental impact assessment must be carried out in respect of the proposed works.

In regards to the proposed dredging activities, if the applicant wishes to apply to deposit the dredge spoil at a sea disposal site, pre-disposal sample analysis will be required to establish the suitability of the material for this activity. If contaminants are identified within the spoil, the likely environmental effects associated with the potential introduction of contaminants into the marine environment during dredging and sea disposal activities will require sufficient consideration. This must include an assessment of any impacts under the Water Framework Directive.

If you increase, alter or extend the proposed works, you are advised to contact Marine Scotland Licensing Operations Team again to confirm if the screening opinion is still valid.

A copy of the screening opinion has been forwarded to The Highland Council planning department and Transport Scotland for their information.

Thank you for consulting with us on this matter. If you require any further assistance or advice on marine licensing matters, please do not hesitate to contact me.

Yours sincerely
[Redacted]

Licensing Operations Team
Marine Scotland

Scottish Natural Heritage
Dualchas Nàdair na h-Alba
All of nature for all of Scotland
Nàdar air fad airson Alba air fad

BY EMAIL

[Redacted]
Marine Licensing Casework Officer
Marine Scotland
ms.marinelicensing@gov.scot

21 February 2018
Our ref: CEA149196

Dea [Redacted]

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017
Extension to the Ola Pier at Scrabster Harbour, Caithness

Thank you for your consultation dated 31 January 2018, requesting a screening opinion for the above proposal.

1. Summary

In our opinion, based on the information provided to-date, the proposal is likely to have significant effects on the environment and therefore is an EIA project. However, it is for Marine Scotland to determine the need for an EIA. We provide further information below.

2. Appraisal of the impacts of the proposal and our advice

a) Protected areas

The proposal lies approximately 450m from the North Caithness Cliffs Special Protection Area (SPA), classified for its cliff nesting seabirds and peregrine falcon. In addition, the proposal lies approximately 2.3km from the River Thurso Special Area of Conservation (SAC), designated for its Atlantic salmon[1].

The status of the sites described mean that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the "Habitats Regulations") apply. Consequently, Marine Scotland is required to consider the effect of the proposal on these sites before it can be consented (commonly known as Habitats Regulations Appraisal). Please see our website for a summary of the legislative requirements[2].

The proposal has the potential to affect these sites by noise (and vibration), sedimentation and pollution risk. Birds within the SPA could be at risk of disturbance from the proposed works. In addition, Atlantic salmon on migration could be disturbed and/or injured from underwater noise (e.g. from piling activities) and increases in sedimentation (from dredging activities). Furthermore, should any impacts to bottlenose dolphins be identified, connectivity with the Moray Firth SAC should also be considered.

[1] Further information on these sites are available from SiteLink at: https://www.nature.scot/information-library-data-and-research/snhi-data-services
[2] https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/legal-framework/habitats-directive-and-habitats-regulations

The level of detail in the screening report is useful at this stage. However, we would expect any future application to be supported by further information to inform an Appropriate Assessment for these sites. For example, information on the timings of works, method and duration of piling and dredging, number of piles required and details of any mitigation measures proposed should be provided.

b) Protected species

Cetaceans and basking sharks are known to use the Pentland Firth and have been recorded in the area around Thurso Bay[3]. Therefore, the potential impacts to these species should be assessed in relation to disturbance and/or injury from construction activities such as piling and dredging. Further information on the nature and timings of the works will be required. Should there be risk of disturbance and/or injury to these species, we advise mitigation is put in place to avoid or minimise these impacts as part of a Marine Mammal Mitigation Plan with any future application[4].

Otters may also be present in the harbour area. We therefore recommend an otter survey is carried out which covers areas of suitable habitat within disturbance distance of the proposal. If otter is likely to be affected by the proposal, a Species Protection Plan (SPP) should be submitted with any future application[5].

As cetaceans and otter are European Protected Species (EPS), we would be happy to provide advice on the need for a licence[6].

In addition, if construction coincides with the bird breeding season, pre-construction checks for breeding birds are also likely to be required within the harbour area[7]. In relation to other marine mammals (such as seals), our advice on mitigation measures is covered above in relation to cetaceans.

3. Concluding remarks

Our comments are given without prejudice to the views which we may wish to express at a later stage in response to a formal consultation on the full proposal.

Please let me know if you need any further information or advice from us in relation to this proposal.

Yours sincerely

[Redacted]
Operations Officer, Caithness
Northern Isles & North Highland
Sian.Haddon@snh.gov.uk

[3] Further information is available within our commissioned report "Abundance and behaviour of cetaceans and basking sharks in the Pentland Firth and Orkney Waters" (2011) at: http://www.snh.org.uk/pdfs/publications/commissioned_reports/419.pdf

[4] Further information on minimising impacts to marine animals is available from "Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise" (2010) at: http://jncc.defra.gov.uk/pdf/JNCC_Piling%20protocol_August_2010.pdf and "The Protection of Marine European Protected Species from injury and disturbance" (2014) at: http://www.gov.scot/Resource/0044/00446679.pdf

[5] Further information available from: https://www.nature.scot/professional-advice/planning-and-development/natural-heritage-advice-planners-and-developers/planning-and-development-protected-animals

[6] More information available from our website at: https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/licensing/european-protected-species-licensing

[7] More information is available from: https://www.nature.scot/dealing-construction-and-birds

The Highland Council
Comhairle na Gàidhealtachd

Scrabster Harbour
c/o Scottish Government
[Redacted]
Marine Scotland
Marine Laboratory
375 Victoria Road
Aberdeen AB11 9DB

Please ask for: [Redacted]
[redacted]
Email: [Redacted] highland.gov.uk
Our Ref: 18/00455/PREAPP/SHTU/JEBA
Your Ref: GSX: Scrabster Harbour Trust
Date: 15 February 2018

Dear Sir/Madam

MS-LOT SCREENING CONSULTATION: RE-DEVELOPMENT OF SCRABSTER HARBOUR AT FERRY TERMINAL, SCRABSTER

Thank you for consulting us on 31 January 2018 regarding the screening opinion for the above works.

From the information provided and the subsequent meeting on 9th February 2018 with Scrabster Harbour, it would appear that the dredge spoil is likely to be deposited on the same spoil grounds as used for the development of the Jubilee pier. The bulk of this spoil ground lies within the North Caithness Cliffs Special Protection Area. However, it would appear that the spoil is unlikely to be significantly contaminated but a standard protocol for vessel movements could be applied ensure no significant impact on the qualifying features.

Various cetaceans, including porpoises, are found in the area therefore the impacts of piling and other construction noise on cetaceans should be considered in the Appropriate Assessment. General Policy 8A: Noise of the Pilot Pentland Firth and Orkney Waters Marine Spatial Plan would be helpful.

Sectoral Policy 7 of the Pilot Pentland Firth and Orkney Waters (PFOW) Marine Spatial Plan:
supports the sustainable growth of ports and harbours within the area, particularly within existing facilities, where:-

- access to ports and harbours is not restricted
- safety considerations are primary
- navigational routes are not compromised.

Dredging within the area will be supported by the Plan where dredged material is recycled or disposed of in appropriate locations.

Advice from our Environmental Health Officers may be helpful for furfure stages of the proposal:

> 'The works will entail partial demolition, reconstruction and extension of the existing pier. During construction, there is potential for neighbouring residents to be significantly affected by noise, dust and possibly light nuisance. Any application will need to include an assessment of noise from all construction work which would include piling, dredging and construction traffic. A Construction Environmental Management Plan which identifies the proposed mitigation measures to reduce the impact of emissions will need to be submitted for approval.

Once operational, the anticipation is that the development will result in increased use of the harbour by cruise ships and other large vessels however the screening report has assessed any resulting noise impact as being insignificant. I would agree that during the daytime, noise from increased activities is unlikely to cause any significant problems however, the matter is less clear for noise which might arise from an increase in night time activity. I would advise that any application should include an operational noise assessment in terms of any potential impact due to an increase in night time activities resulting from the redevelopment of the pier.'

The advice from our senior engineer in transport planning will also help in future stages of the proposal:

Consultation Summary

A Transport Assessment is not considered necessary regarding the Council's Transportation interests.

However Consultation on a Transport Statement at the appropriate stage is requested. The Statement should give suitable environmental consideration to the following issues and identify any appropriate mitigation;

1. The increase in vehicular traffic and in particular HGV traffic during operation and construction due to the development. This should be compared against the base line condition for the immediate access route to verify the assumption that the proposals will not have a significant impact. If the impact is shown to be significant then further consultation with the Council on local roads issues is requested.
2. Access, turning and parking provision to mitigate any increase in vehicular traffic. In particular it should consider if any upgraded facilities for public transport and coaches are required to service additional cruise ships.
3. Appropriate links and facilities for pedestrians and cyclists within the development connecting to the external network.

Impact on Transport

The Council has an interest in ensuring appropriate transportation links by sustainable modes to Thurso and other destinations to safeguard health and road safety and to encourage economic benefits for the local community. The Caithness and Sutherland emerging Local Development Plan notes that there are congestion and HGV problems within Thurso due to the historic nature of the road layout and single bridge crossing of the river within the town.

The screening report does not examine transportation in detail. This should be remedied by provision of a Transport Statement as part of the detailed environmental considerations.

However the development takes direct access onto the A9 Trunk Road for which Transport Scotland are the Roads Authority not the Council. The Scoping Report indicates re-use of dredgings on site or disposal at sea and finally; the development proposes upgrading an existing pier rather than development of a new facility. Therefore it appears that the transport impact remote from the site and the Trunk Road during construction and operation will not be significant.

It is considered that a full Transport Assessment is not required for the local network.

On balance, it is suggested that a full Environmental Statement may not be required, but additional information on the likely impacts of the spoil and construction would be required, along with the HRA requirements to ensure the qualifying features of the various Natura sites e.g. various seabirds and salmon, are appropriately assessed and mitigated. The general policies of the PFOW may be helpful for these assessments.

The transport and environmental health issues will also need due consideration at the appropriate stage in the development of the proposal.

Yours faithfully

[Redacted]
Case Officer

ePlanning Centre, The Highland Council, Glenurquhart Road, INVERNESS IV3 5NX

Email: eplanning@highland.gov.uk

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

By email to:
MS.MarineLicensing@gov.scot

Marine Scotland
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Longmore House
Salisbury Place
Edinburgh
EH9 1SH

Enquiry Line: 0131-668-8716
HMConsultations@hes.scot

Our ref: AMN/16/H
Our case ID: 300026302
Your ref: 48/1718/01-V2
19 February 2018

Dear Sir/Madam

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017
Request for Screening Opinion for Scrabster Harbour Trust, Ola Pier, Scrabster - Pier Extension

Thank you for your consultation which we received on 31 January 2018 seeking our comments on an Environmental Impact Assessment (EIA) screening opinion for the above proposed development. This letter contains our comments for our historic environment interests. That is world heritage sites, scheduled monuments and their setting, category A-listed buildings and their setting, gardens and designed landscapes and battlefields on their respective Inventories.

Our Screening opinion

Whilst the decision on the need or otherwise for Environmental Impact Assessment (EIA) lies with your organisation, I have the following advice which I hope will be helpful to you in your consideration of the matter;

I understand from the submitted details that the proposal relates to the reconstruction and expansion of the existing pier. It is anticipated that the development which will require both terrestrial and marine works. There are no heritage assets within our remit either within, or in the immediate vicinity of, the proposed development. We are therefore content that the proposed works are unlikely to have significant impacts on assets within our statutory remit.

Your archaeological and conservation advisors will also be able to offer advice for their interests. This may include unscheduled archaeology, category B- and C-listed buildings and conservation areas.

We hope this is helpful. Please contact us if you have any questions about this response. The officer managing this case is Samuel Fox and they can be contacted by phone on 0131 668 668 or by email on samuel.fox@hes.scot.

Yours faithfully

Historic Environment Scotland

Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

Our ref: PCS/157281
Your ref: None

If telephoning ask for: [Redacted]

1 February 2018

[Redacted]
Marine Scotland
Aberdeen

By email only to: MS.MarineLicensing@gov.scot

Dear [Redacted]

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017
Pier Extension
Ola Pier, Scrabster

Thank you for your consultation email which SEPA received on the 31 January 2018.

We do not generally provide site specific advice on marine consultations. Instead, please refer to our standing advice on marine consultations within guidance document SEPA standing advice for The Department of Energy and Climate Change and Marine Scotland on marine consultations.

If, after consulting this guidance, you still require our comment on some site specific issue which is not adequately dealt with by the standing advice, then we would welcome the opportunity to be re-consulted. Please note that the site specific issue on which you are seeking our advice must be clearly indicated in the body of the consultation email or letter.

Further information on our consultation arrangements generally can be found in How and when to consult SEPA.

Should you wish to discuss this letter please do not hesitate to contact me on [Redacted] or planning.dingwall@sepa.org.uk.

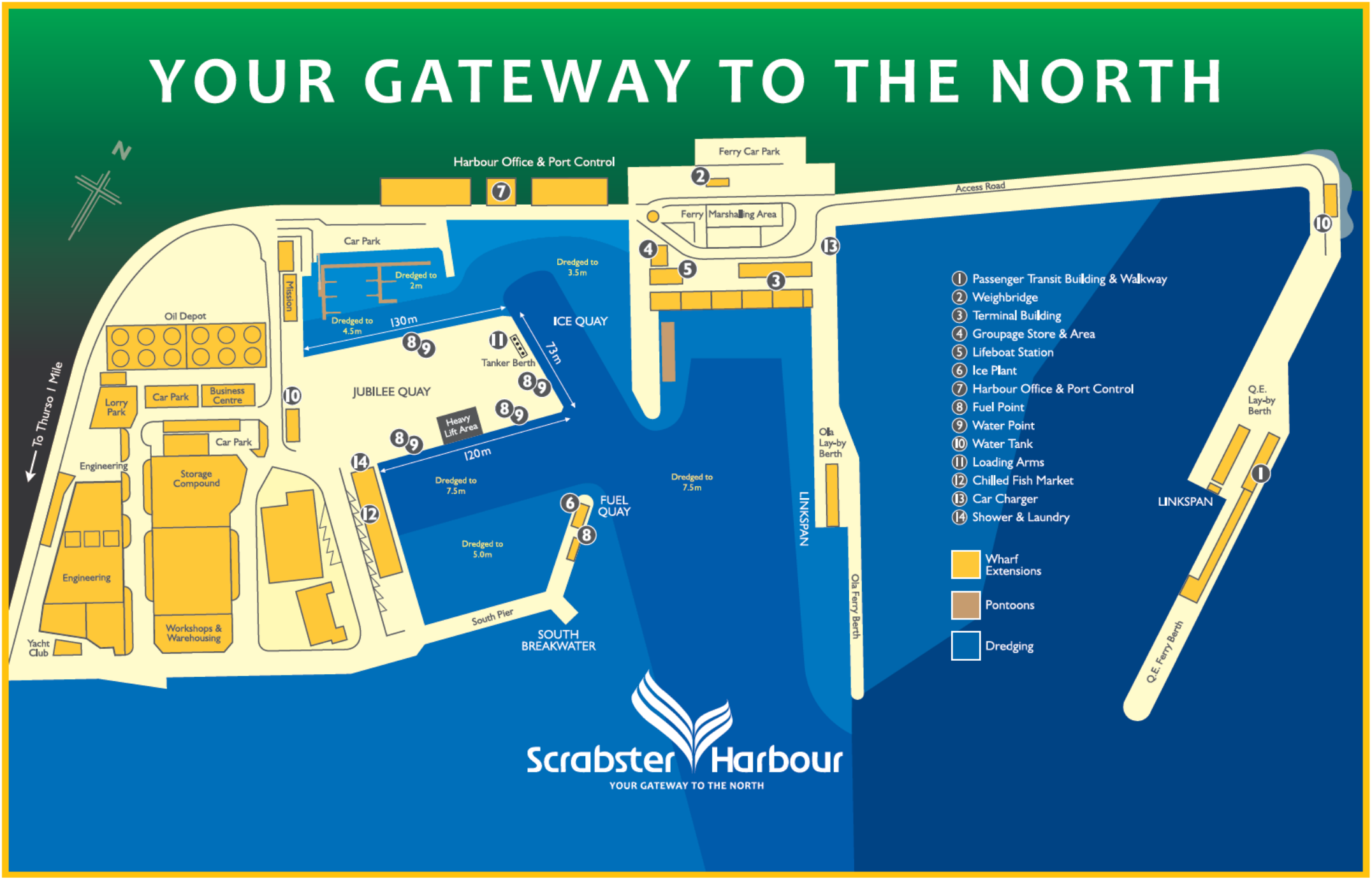
Yours sincerely

[Redacted]
Senior Planning Officer
Planning Service

SEPA Dingwall Office
Graesser House, Fodderty Way,
Dingwall Business Park, Dingwall IV15 9XB
tel 01349 862021 fax 01349 863987
www.sepa.org.uk • customer enquiries 03000 99 66 99

APPENDIX 1.2 EXISTING SCRABSTER HARBOUR LAYOUT

YOUR GATEWAY TO THE NORTH



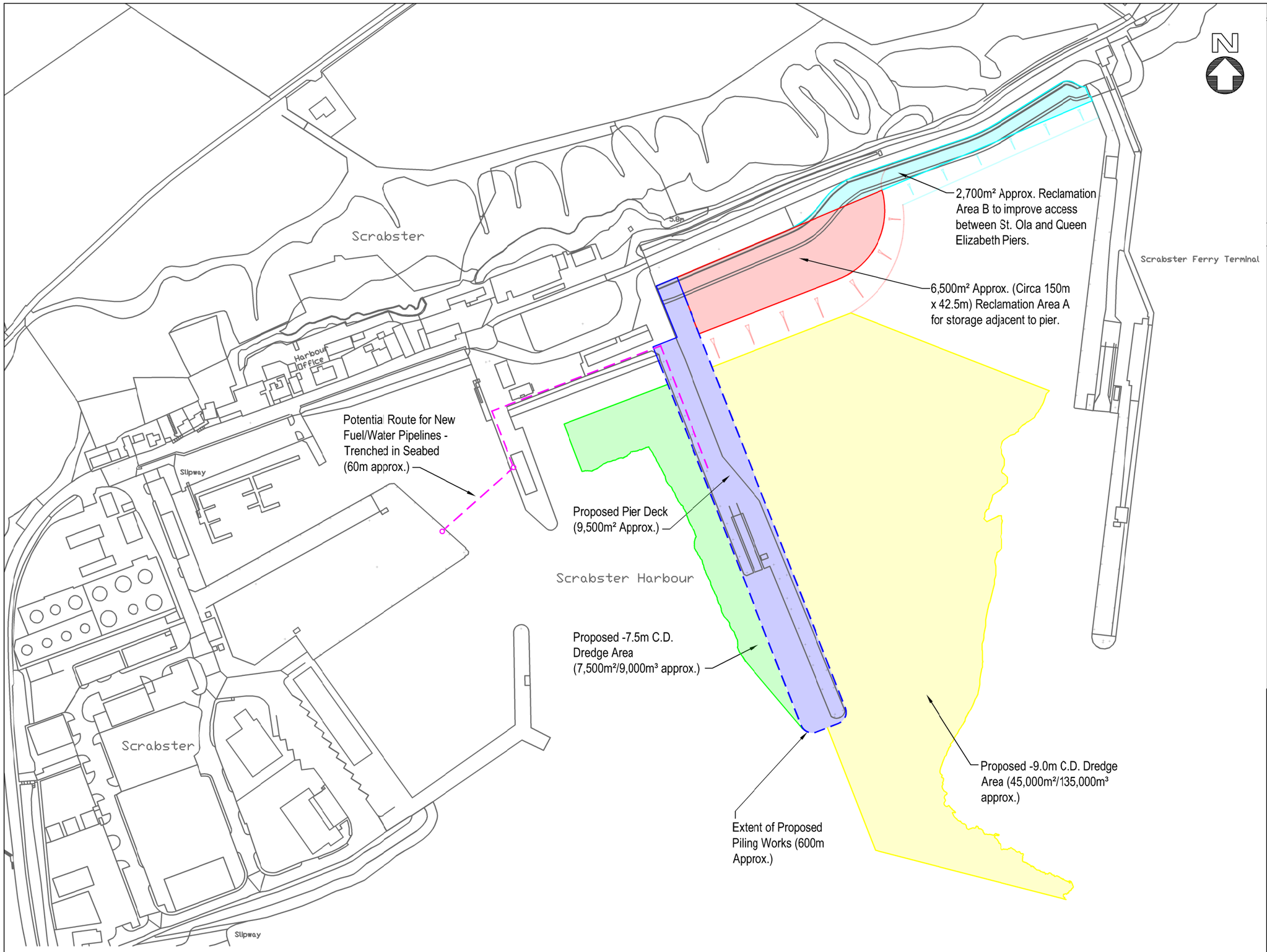
APPENDIX 1.3 PROPOSED LIST OF CONSULTEES

It is proposed that the following list of organisations shall be consulted as part of EIA for the proposed renovation of St. Ola Pier. This list has been drawn up in consultation with the Marine Planning & Policy team of Marine Scotland.

Note that additional organisations or individuals may also be consulted.

Association of Salmon Fishery Boards
Community Councils
Crown Estate Scotland
Defence Infrastructure Organisation
Fishery Office
Health and Safety Executive
Historic Environment Scotland
Inshore Fishery Group
Internal Marine Scotland Advisers
Local Authority
Local Rivers Association
Marine Safety Forum
Maritime Coastguard Organisation
Northern Lighthouse Board
Royal Yachting Association
Scottish Environment Protection Agency
Scottish Fishermen's Federation
Scottish Fishermen's Organisation
Scottish Natural Heritage
Scottish Water
Scottish Wildlife Trust
Transport Scotland
UK Chamber of Shipping
Visit Scotland
Whale and Dolphin Conservation Society

APPENDIX 2.1 PREFERRED LAYOUT DRAWING



NOTES

1. Verifying Dimensions.
   The contractor shall verify dimensions against such other drawings or site conditions as pertain to this part of the work.
2. Existing Services.
   Any information concerning the location of existing services indicated on this drawing is intended for general guidance only. It shall be the responsibility of the contractor to determine and verify the exact horizontal and vertical alignment of all cables, pipes, etc. (both underground and overhead) before work commences.
3. Issue of Drawings.
   Hard copies, dwf and pdf will form a controlled issue of the drawing. All other formats (dwg, dxf etc.) are deemed to be an uncontrolled issue and any work carried out based on these files is at the recipients own risk. RPS will not accept any responsibility for any errors arising from the use of these files, either by human error by the recipient, listing of un-dimensioned measurements, compatibility issues with the recipient's software, and any errors arising when these files are used to aid the recipients drawing production, or setting out on site.
4. DATUM: Chart Datum

LEGEND

- Proposed Reclamation Area A - Potential Additional Cargo Storage
- Proposed Reclamation Area B - Improvement to Access to Queen Elizabeth Pier for Queuing Vehicles
- Proposed Pier Deck Area after Refurbishment
- Proposed -9.0m C.D. Dredge Area
- Proposed -7.5m C.D. Dredge Area
- Potential Route for New Fuel/Water Pipeline (Shown indicatively)
- Extent of Proposed Piled Quay Wall (600m long approx.)

rev	amendments	drawn date	checked date

RPS
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F +44 (0) 28 90 668286
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

Client: Scrabster Harbour Trust

Project: St. Ola Pier Refurbishment

Title: Preferred Layout

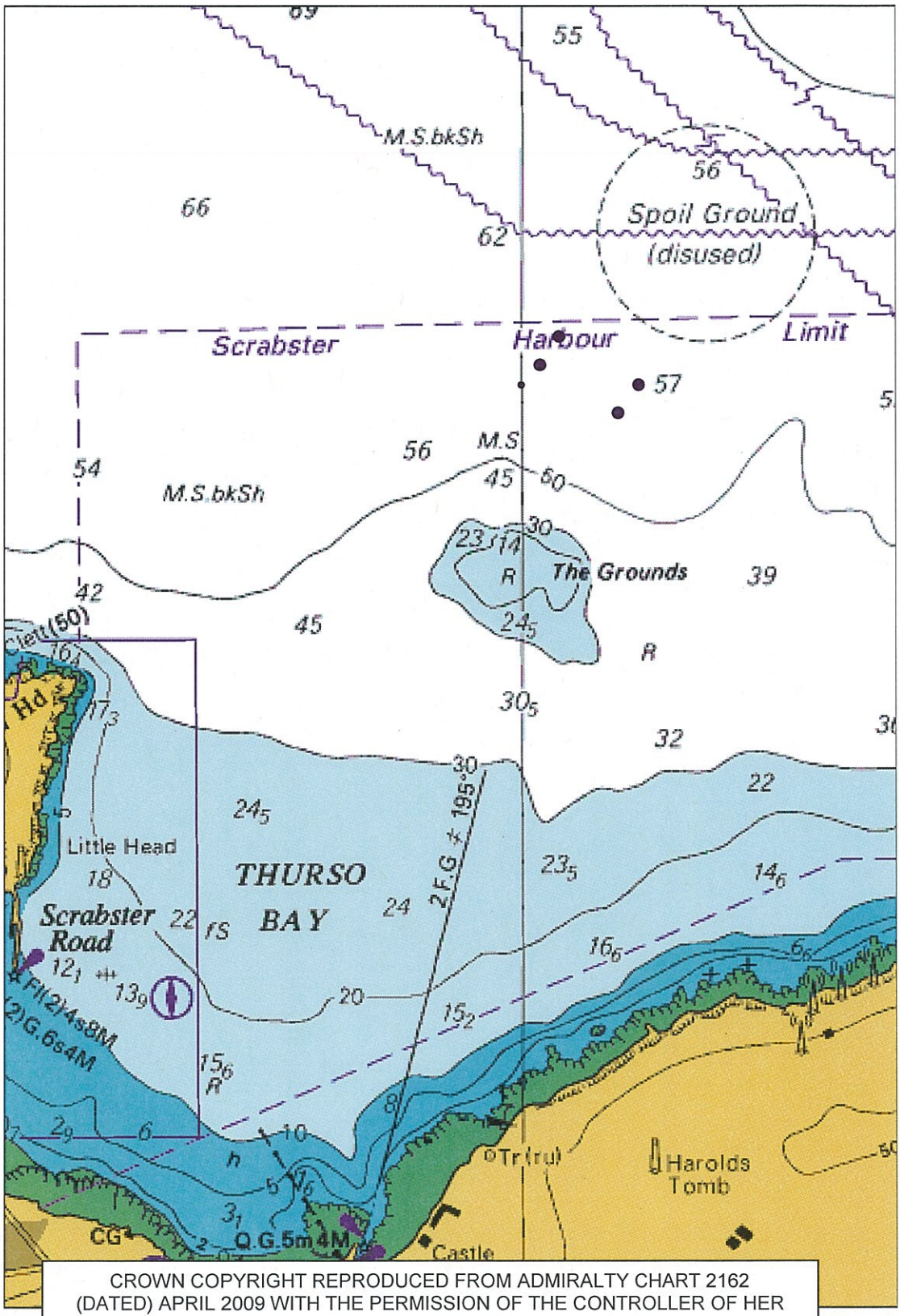
Drawing Status	Sheet Size	Drawing Scale
Preliminary	A3	1:2500

Drawing Number	Rev
M0727-RPS-00-XX-DR-C-0020	-

Project Leader	Drawn By	Date	Initial Review
D.O'L.	E.H.	27/06/18	-

APPENDIX 2.2 LOCATION OF SEA DISPOSAL SITE

SCRABSTER HARBOUR TRUST: DISPOSAL OF DREDGINGS FROM SCRABSTER HARBOUR – Stornoway Spoil Ground	
Disposal site:	Within the area bounded by joining the points: 58° 38.22'N 003° 29.82'W 58° 38.10'N 003° 29.44'W 58° 38.03'N 003° 29.54'W 58° 38.15'N 003° 29.91'W



APPENDIX 11.1 OPERATIONAL WASTE AND LANDFILL SITES

Table A11.1: Capacity of Currently Authorised Landfills

Permit or Licence Number	Operator Organisation	National Grid Reference	Site Activity	Licenced Waste Type	Total Waste Handled 2015 (tonnes)		
					Waste Inputs to Site	Waste Treated/ Recovered on Site	Waste Outputs from Site
PPC/A/1004266	Iberdrola SA	NT 00301 85615	Landfill	Industrial	327,522.00	-	366.00
PPC/A/1098705	Inland Engineering Services	NS 72235 52450	Landfill	Inert	1,127.48	-	0.00
PPC/A/1004362	William Thompson & Son Ltd	NS 43800 75200	Landfill	Inert	92,464.00	-	-
PPC/A/1008856	Chap Quarries (Aberdeen) Ltd	NO 80400 97900	Landfill	Inert	17,001.96	-	-
PPC/A/1008876	D Geddes (Contractors) Ltd	NO 60011 48394	Landfill	Inert	881.00	-	-
PPC/A/1008878	D Geddes (Contractors) Ltd	NO 49251 34415	Landfill	Inert	21,503.00	-	0.00
PPC/A/1008879	D Geddes (Contractors) Ltd	NO 69690 60916	Landfill	Inert	3,136.00	-	-
PPC/A/1008926	Tayside Contracts	NO 62066 52627	Landfill	Inert	3,274.88	-	-
PPC/A/1009964	Geddes Group Limited	NO 61550 49850	Landfill	Inert	869.26	-	-
PPC/A/1010715	Orkney Islands Council	HY 50446 08439	Landfill	Inert	2,950.60	-	-
PPC/A/1024099	John Gunn & Sons Ltd	ND 32243 57145	Landfill	Inert	4,718.19	2,192.83	565.42
PPC/A/1036720	WH Malcolm Ltd	NS 41797 69501	Landfill	Inert	230,005.70	-	-
PPC/A/1004252	Scottish Water Contracting	NS 76910 83242	Landfill	Industrial / Inert	3,236.20	-	-
PPC/E/0020086	Avondale Environmental Ltd	NS 95274 78708	Landfill	Commercial / Industrial / Special	33,115.71	-	3,652.00
PPC/A/1010943	William Hamilton & Sons (Contractors) Ltd	NS 77647 46445	Landfill / Composting	Commercial / Industrial / Inert	111,747.00	83,307.00	32.62
PPC/A/1008691	Joss (Aberdeen) Limited	NJ 90940 14330	Landfill / Other treatment	Inert	82,793.00	42,623.00	-
PPC/A/1008881	J Fairburn & Sons	NT 97678 57018	Landfill / Other treatment	Inert	37,518.50	2,687.00	-
PPC/A/1008897	Levenseat Ltd	NT 02963 59857	Landfill / Other treatment	Industrial / Inert	284.96	-	0.00

Permit or Licence Number	Operator Organisation	National Grid Reference	Site Activity	Licenced Waste Type	Total Waste Handled 2015 (tonnes)		
					Waste Inputs to Site	Waste Treated/ Recovered on Site	Waste Outputs from Site
PPC/A/1003207	Drem Landfill Limited	NT 53093 80009	Landfill / Transfer station	Industrial / Inert	18,787.52	6,479.52	7,604.52
PPC/A/1003159	Charles River Laboratories Preclinical Services Edinburgh Ltd	NT 40500 71100	Incineration	Industrial	376.82	-	-
PPC/A/1017440	SLG Technology Ltd	NS 39467 64508	Incineration	Industrial	9,536.00	-	-
PPC/E/0020004	Borders General Hospital NHS Trust	NT 53400 33800	Incineration	Special	494.38	-	-
WML/N/0050300	Scottish Agricultural College	ND 09577 66599	Incineration	Industrial	16.62	-	0.62
PPC/A/1003170	EPR Scotland Limited	NT 19013 98111	Co-incineration	Commercial / Industrial	121,182.00	-	4,924.95
PPC/A/1011415	E.ON UK Renewables Limited	NY 12159 85043	Co-incineration	Industrial	69,206.14	-	-
PPC/A/1096556	RWE Markinch Limited	NO 28000 01600	Co-incineration	Commercial / Industrial	240,971.29	-	11,443.13
WML/W/0220256	The Coach House Trust	NS 59680 72440	Composting	Commercial	21,422.26	20,662.82	3,678.66
WML/L/1031536	Scottish Water	NM 48739 55652	Composting / Other treatment	Industrial	380.00	380.00	505.07
PPC/A/1000166	National Oilwell Varco UK Ltd	NJ 95039 05387	Other treatment	Industrial / Special	19,447.39	19,447.39	19,987.28
PPC/A/1003203	Veolia Es (UK) Limited	HU 46823 44192	Other treatment	Commercial / Industrial / Special	2,940.97	-	1,604.21
PPC/A/1004470	Augean Treatment Limited	NS 47326 64922	Other treatment	Commercial / Industrial / Special / Inert	17,403.40	7,740.37	7,478.52
PPC/A/1004491	Clearwater 2010 Limited	NS 61414 63752	Other treatment	Commercial / Industrial / Special	12,102.30	6,177.03	12,615.15
PPC/A/1008834	Calachem Limited	NS 91675 81406	Other treatment	Industrial / Other special	151,272.94	151,272.94	2,598.27
PPC/A/1012479	Ayr Environmental Services Operations Ltd	NS 33970 35954	Other treatment	Industrial	73,019.00	275,470.00	35,502.00
PPC/A/1016807	William Tracey Limited	NS 47611 64726	Other treatment	Commercial /	15,837.71	13,546.84	7,614.12

Permit or Licence Number	Operator Organisation	National Grid Reference	Site Activity	Licenced Waste Type	Total Waste Handled 2015 (tonnes)		
					Waste Inputs to Site	Waste Treated/ Recovered on Site	Waste Outputs from Site
				Industrial / Special / Special asbestos			
PPC/A/1016835	OSS Group Ltd	NS 70349 62528	Other treatment	Commercial / Industrial / Special	3,605.84	-	2,352.50
PPC/A/1017062	The Oil and Pipelines Agency	NS 24611 89966	Other treatment	Industrial / Special	3,022.30	3,024.00	22.30
PPC/A/1019535	Healthcare Environmental Services Ltd	NS 86459 60822	Other treatment	Commercial / Industrial / Special	12,738.67	11,855.00	12,738.67
PPC/A/1023330	Total Waste Management Alliance Limited	HU 43320 48141	Other treatment	Industrial	4,576.00	-	3,695.97
PPC/A/1035666	Baker Hughes Limited	NK 11600 44200	Other treatment	Industrial / Special	13,057.10	11,918.81	9,787.13
PPC/A/1036676	Dundas Chemical Company (MOSSPARK) Ltd	NS 79773 59797	Other treatment	Industrial	-	-	-
PPC/A/1038071	Augean North Sea Services Limited	NJ 95557 05891	Other treatment	Industrial / Special	17,617.38	16,781.90	17,066.48
PPC/A/1068337	Mitchell Thomson, Robslee Drive, Giffnock	NS 55608 59618	Other treatment	Special	9,283.20	9,283.20	318.40
PPC/A/1098369	Taylors Industrial Services Limited	NJ 95197 05559	Other treatment	Industrial	26,298.80	-	26,298.80
PPC/A/1103677	Augean North Sea Services Limited	HU 47130 44450	Other treatment	Commercial / Industrial / Special	209.19	49.10	34.82
PPC/A/1107786	Enviroco Limited	NJ 94960 05580	Other treatment	Industrial / Special	7,612.42	-	6,577.18
PPC/W/0020001	SMW Ltd	NS 67227 61990	Other treatment	Industrial	2,325,652.83	2,325,652.83	51,958.27
PPC/W/0020064	Dundas Chemical Company	NY 00293 75486	Other treatment	Industrial	-	-	-
WML/E/0020156	C S Clean Systems Uk	NT 06553 68863	Other treatment	Commercial /	4.18	-	10.00

Permit or Licence Number	Operator Organisation	National Grid Reference	Site Activity	Licenced Waste Type	Total Waste Handled 2015 (tonnes)		
					Waste Inputs to Site	Waste Treated/ Recovered on Site	Waste Outputs from Site
				Industrial			
WML/L/1018845	ILM Highland	NH 64795 69150	Other treatment	Special	2,001.00	128.00	1,791.00
WML/L/1022346	Alisrose Limited	NK 13920 45830	Other treatment	Industrial	97,723.00	97,723.00	145.00
WML/L/1023905	Grant Construction Services (Fife) Ltd	NT 15553 83968	Other treatment	Industrial	419.52	419.52	24.00
WML/L/1078194	Scottish Water	NR 30820 59220	Other treatment	Industrial	470.00	470.00	505.07
WML/L/1085597	Scottish Borders Council	NT 78735 53102	Other treatment	Industrial	1,117.48	-	558.72
WML/L/1085598	Scottish Borders Council	NT 51906 36039	Other treatment	Industrial	1,923.39	-	1,312.82
WML/L/1087243	Midlothian Council Road Services	NT 33560 63360	Other treatment	Industrial	-	-	-
WML/L/1099346	Doocey Recycling Limited	NS 61270 62200	Other treatment	Commercial	42,033.60	42,033.95	62,640.01
WML/L/1101353	SAUR Services Glasgow Ltd	NS 47521 71046	Other treatment	Industrial	1,869.09	1,869.09	1,869.09
WML/L/1117120	Viridor Waste Management Ltd	NS 79700 60820	Other treatment	Commercial	123,990.17	117,860.00	18,327.09
WML/W/0000124	Scottish Water	NS 53619 66287	Other treatment	Industrial	170,739.39	170,739.39	355.24
WML/W/0020117	Plastic Technology Services Ltd	NX 94420 75000	Other treatment	Commercial / Industrial	9,289.00	8,327.00	178.00
WML/W/0020162	Scottish Water	NS 55767 20527	Other treatment	Industrial	22,733.97	22,733.97	3,678.02
WML/W/0020167	Glasgow City Council	NS 63950 66020	Other treatment	Commercial	9,660.00	-	2,415.00
WML/W/0220085	Scottish Water	NS 19054 00016	Other treatment	Industrial	10,914.12	10,914.12	2,497.01
WML/W/0220109	Cannon Hygiene Ltd	NS 69144 56389	Other treatment	Special	172.55	-	196.42
WML/L/1123155	SERCO Limited	NS 46649 34837	Other treatment	Industrial	235.54	235.54	235.54

Table A11.2: Waste Sites Capacity

Permit or Licence Number	Operator Organisation	National Grid Reference	Site Activity	Licenced Waste Type	Total Waste Handled 2015 (tonnes)		
					Waste Inputs to Site	Waste Treated/ Recovered on Site	Waste Outputs from Site
PPC/A/1004266	Iberdrola SA	NT 00301 85615	Landfill	Industrial	327,522.00	-	366.00
PPC/A/1098705	Inland Engineering Services	NS 72235 52450	Landfill	Inert	1,127.48	-	0.00
PPC/A/1004362	William Thompson & Son Ltd	NS 43800 75200	Landfill	Inert	92,464.00	-	-
PPC/A/1008856	Chap Quarries (Aberdeen) Ltd	NO 80400 97900	Landfill	Inert	17,001.96	-	-
PPC/A/1008876	D Geddes (Contractors) Ltd	NO 60011 48394	Landfill	Inert	881.00	-	-
PPC/A/1008878	D Geddes (Contractors) Ltd	NO 49251 34415	Landfill	Inert	21,503.00	-	0.00
PPC/A/1008879	D Geddes (Contractors) Ltd	NO 69690 60916	Landfill	Inert	3,136.00	-	-
PPC/A/1008926	Tayside Contracts	NO 62066 52627	Landfill	Inert	3,274.88	-	-
PPC/A/1009964	Geddes Group Limited	NO 61550 49850	Landfill	Inert	869.26	-	-
PPC/A/1010715	Orkney Islands Council	HY 50446 08439	Landfill	Inert	2,950.60	-	-
PPC/A/1024099	John Gunn & Sons Ltd	ND 32243 57145	Landfill	Inert	4,718.19	2,192.83	565.42
PPC/A/1036720	WH Malcolm Ltd	NS 41797 69501	Landfill	Inert	230,005.70	-	-
PPC/A/1004252	Scottish Water Contracting	NS 76910 83242	Landfill	Industrial / Inert	3,236.20	-	-
PPC/E/0020086	Avondale Environmental Ltd	NS 95274 78708	Landfill	Commercial / Industrial / Special	33,115.71	-	3,652.00
PPC/A/1010943	William Hamilton & Sons (Contractors) Ltd	NS 77647 46445	Landfill / Composting	Commercial / Industrial / Inert	111,747.00	83,307.00	32.62
PPC/A/1008691	Joss (Aberdeen) Limited	NJ 90940 14330	Landfill / Other treatment	Inert	82,793.00	42,623.00	-
PPC/A/1008881	J Fairburn & Sons	NT 97678 57018	Landfill / Other treatment	Inert	37,518.50	2,687.00	-
PPC/A/1008897	Levenseat Ltd	NT 02963 59857	Landfill / Other treatment	Industrial / Inert	284.96	-	0.00
PPC/A/1003207	Drem Landfill Limited	NT 53093 80009	Landfill / Transfer station	Industrial / Inert	18,787.52	6,479.52	7,604.52

Permit or Licence Number	Operator Organisation	National Grid Reference	Site Activity	Licenced Waste Type	Total Waste Handled 2015 (tonnes)		
					Waste Inputs to Site	Waste Treated/ Recovered on Site	Waste Outputs from Site
PPC/A/1003159	Charles River Laboratories Preclinical Services Edinburgh Ltd	NT 40500 71100	Incineration	Industrial	376.82	-	-
PPC/A/1017440	SLG Technology Ltd	NS 39467 64508	Incineration	Industrial	9,536.00	-	-
PPC/E/0020004	Borders General Hospital NHS Trust	NT 53400 33800	Incineration	Special	494.38	-	-
WML/N/0050300	Scottish Agricultural College	ND 09577 66599	Incineration	Industrial	16.62	-	0.62
PPC/A/1003170	EPR Scotland Limited	NT 19013 98111	Co-incineration	Commercial / Industrial	121,182.00	-	4,924.95
PPC/A/1011415	E.ON UK Renewables Limited	NY 12159 85043	Co-incineration	Industrial	69,206.14	-	-
PPC/A/1096556	RWE Markinch Limited	NO 28000 01600	Co-incineration	Commercial / Industrial	240,971.29	-	11,443.13
WML/W/0220256	The Coach House Trust	NS 59680 72440	Composting	Commercial	21,422.26	20,662.82	3,678.66
WML/L/1031536	Scottish Water	NM 48739 55652	Composting / Other treatment	Industrial	380.00	380.00	505.07
PPC/A/1000166	National Oilwell Varco UK Ltd	NJ 95039 05387	Other treatment	Industrial / Special	19,447.39	19,447.39	19,987.28
PPC/A/1003203	Veolia Es (UK) Limited	HU 46823 44192	Other treatment	Commercial / Industrial / Special	2,940.97	-	1,604.21
PPC/A/1004470	Augean Treatment Limited	NS 47326 64922	Other treatment	Commercial / Industrial / Special / Inert	17,403.40	7,740.37	7,478.52
PPC/A/1004491	Clearwater 2010 Limited	NS 61414 63752	Other treatment	Commercial / Industrial / Special	12,102.30	6,177.03	12,615.15
PPC/A/1008834	Calachem Limited	NS 91675 81406	Other treatment	Industrial / Other special	151,272.94	151,272.94	2,598.27
PPC/A/1012479	Ayr Environmental Services Operations Ltd	NS 33970 35954	Other treatment	Industrial	73,019.00	275,470.00	35,502.00
PPC/A/1016807	William Tracey Limited	NS 47611 64726	Other treatment	Commercial / Industrial / Special / Special	15,837.71	13,546.84	7,614.12

Permit or Licence Number	Operator Organisation	National Grid Reference	Site Activity	Licenced Waste Type	Total Waste Handled 2015 (tonnes)		
					Waste Inputs to Site	Waste Treated/ Recovered on Site	Waste Outputs from Site
				asbestos			
PPC/A/1016835	OSS Group Ltd	NS 70349 62528	Other treatment	Commercial / Industrial / Special	3,605.84	-	2,352.50
PPC/A/1017062	The Oil and Pipelines Agency	NS 24611 89966	Other treatment	Industrial / Special	3,022.30	3,024.00	22.30
PPC/A/1019535	Healthcare Environmental Services Ltd	NS 86459 60822	Other treatment	Commercial / Industrial / Special	12,738.67	11,855.00	12,738.67
PPC/A/1023330	Total Waste Management Alliance Limited	HU 43320 48141	Other treatment	Industrial	4,576.00	-	3,695.97
PPC/A/1035666	Baker Hughes Limited	NK 11600 44200	Other treatment	Industrial / Special	13,057.10	11,918.81	9,787.13
PPC/A/1036676	Dundas Chemical Company (MOSSPARK) Ltd	NS 79773 59797	Other treatment	Industrial	-	-	-
PPC/A/1038071	Augean North Sea Services Limited	NJ 95557 05891	Other treatment	Industrial / Special	17,617.38	16,781.90	17,066.48
PPC/A/1068337	Mitchell Thomson, Robslee Drive, Giffnock	NS 55608 59618	Other treatment	Special	9,283.20	9,283.20	318.40
PPC/A/1098369	Taylors Industrial Services Limited	NJ 95197 05559	Other treatment	Industrial	26,298.80	-	26,298.80
PPC/A/1103677	Augean North Sea Services Limited	HU 47130 44450	Other treatment	Commercial / Industrial / Special	209.19	49.10	34.82
PPC/A/1107786	Enviroco Limited	NJ 94960 05580	Other treatment	Industrial / Special	7,612.42	-	6,577.18
PPC/W/0020001	SMW Ltd	NS 67227 61990	Other treatment	Industrial	2,325,652.83	2,325,652.83	51,958.27
PPC/W/0020064	Dundas Chemical Company	NY 00293 75486	Other treatment	Industrial	-	-	-
WML/E/0020156	C S Clean Systems Uk	NT 06553 68863	Other treatment	Commercial / Industrial	4.18	-	10.00
WML/L/1018845	ILM Highland	NH 64795 69150	Other treatment	Special	2,001.00	128.00	1,791.00

Permit or Licence Number	Operator Organisation	National Grid Reference	Site Activity	Licenced Waste Type	Total Waste Handled 2015 (tonnes)		
					Waste Inputs to Site	Waste Treated/ Recovered on Site	Waste Outputs from Site
WML/L/1022346	Alisrose Limited	NK 13920 45830	Other treatment	Industrial	97,723.00	97,723.00	145.00
WML/L/1023905	Grant Construction Services (Fife) Ltd	NT 15553 83968	Other treatment	Industrial	419.52	419.52	24.00
WML/L/1078194	Scottish Water	NR 30820 59220	Other treatment	Industrial	470.00	470.00	505.07
WML/L/1085597	Scottish Borders Council	NT 78735 53102	Other treatment	Industrial	1,117.48	-	558.72
WML/L/1085598	Scottish Borders Council	NT 51906 36039	Other treatment	Industrial	1,923.39	-	1,312.82
WML/L/1087243	Midlothian Council Road Services	NT 33560 63360	Other treatment	Industrial	-	-	-
WML/L/1099346	Doocey Recycling Limited	NS 61270 62200	Other treatment	Commercial	42,033.60	42,033.95	62,640.01
WML/L/1101353	SAUR Services Glasgow Ltd	NS 47521 71046	Other treatment	Industrial	1,869.09	1,869.09	1,869.09
WML/L/1117120	Viridor Waste Management Ltd	NS 79700 60820	Other treatment	Commercial	123,990.17	117,860.00	18,327.09
WML/W/0000124	Scottish Water	NS 53619 66287	Other treatment	Industrial	170,739.39	170,739.39	355.24
WML/W/0020117	Plastic Technology Services Ltd	NX 94420 75000	Other treatment	Commercial / Industrial	9,289.00	8,327.00	178.00
WML/W/0020162	Scottish Water	NS 55767 20527	Other treatment	Industrial	22,733.97	22,733.97	3,678.02
WML/W/0020167	Glasgow City Council	NS 63950 66020	Other treatment	Commercial	9,660.00	-	2,415.00
WML/W/0220085	Scottish Water	NS 19054 00016	Other treatment	Industrial	10,914.12	10,914.12	2,497.01
WML/W/0220109	Cannon Hygiene Ltd	NS 69144 56389	Other treatment	Special	172.55	-	196.42
WML/L/1123155	SERCO Limited	NS 46649 34837	Other treatment	Industrial	235.54	235.54	235.54

Appendix 13.1 Correspondence with Highland Council Historic Environment Team

[Redacted]

From: [Redacted]
Sent: 19 June 2018 11:59
To: [Redacted]
Subject: [EXT] RE: Scoping for refurbishment of St Ola Pier, Scrabster

Hi [Redacted]

Scoping for refurbishment of St Ola Pier, Scrabster

I can confirm that I agree with your justification for scoping out the cultural heritage aspect in this case. I don't believe that anything additional to the summary presented in your email is required with regard to this proposal.

Apologies for the delay in the response. Please let me know if you ned anything further on this case.

kind regards
[Redacted]

[Redacted] |Archaeologist|Environmental Advice & Consultancy Team
Highland Council |Development & Infrastructure|Glenurquhart Road, Inverness, IV3 5NX| [redacted]
HER|Historic Environment Record|http://her.highland.gov.uk

From: [Redacted]
Sent: 07 June 2018 15:09
To: [Redacted]
Subject: Scoping for refurbishment of St Ola Pier, Scrabster

Hello Both,

Hope this finds you well.

I am currently preparing the cultural heritage element of the scoping report for the proposed refurbishment of St Ola's Pier, Scrabster. A positive screening opinion was issued for the proposal in March 2018. Having reviewed the designation information, HER data and historic maps I would suggest that cultural heritage could be scoped out of the EIA as there does not appear to be any potential for significant effects to arise. I have briefly summarised my reasoning below. Please could you review and let me know if you are content for cultural heritage to be scoped out, if you require more information to advise or if there are potential significant effects in your opinion?

Setting Impacts
The proposed development involves the refurbishment of an existing modern pier, dredging and reclamation of a small area to the east of St Ola Pier. The refurbished pier will be wider than at present, but in the context of a busy harbour this will represent a barely perceptible change in the setting of the listed buildings in the harbour.

Physical impacts
There are HER entries for St Ola Pier (built 1972) and the navigation light at its end. However the pier is modern and has no cultural significance. Therefore I would not consider that it represents a heritage asset.

The proposed development's construction footprint is restricted to St Ola Pier, the seabed and areas reclaimed in the late 20th or early 21st century. Whilst there is some potential for submerged early prehistoric remains to be present in Thurso Bay, given the size of the dredging area, this potential must be considered negligible. Therefore there is negligible potential for terrestrial archaeology to be affected.

No maritime losses are known in the dredge or reclamation areas. There are numerous losses recorded in the harbour and bay, the exact location of which is unknown and some may have occurred in the harbour itself. However, the harbour has seen intensive use since it was established in the 19th century and hence obstructions on the sea bed are likely to have been investigated and removed or dispersed. This is particularly the case in respect of the dredge areas which lie in those parts of the harbour built to serve modern ferries.

No marine losses are recorded in the dumping ground. The dumping area has been used previously for this purpose, during the construction of the Queen Elizabeth Pier.

If you require any further information or would like to discuss further, please do not hesitate to get in touch.

Many thanks,

[Redacted]

[Redacted]

Associate Director
Direct Dial: [redacted]
Mobile: [redacted]
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