Kennacraig Ferry Terminal

Habitats Regulations Appraisal

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Caledonian Maritime Assets Limited

Kennacraig Ferry Terminal

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1. Introduction

1.1 Project Background

Caledonian Maritime Assets Limited (CMAL) (hereafter referred to as 'the Applicant') is in the process of procuring a new vessel for the existing ferry route between Kennacraig and Port Ellen.

Kennacraig to Islay is currently a two vessel service and while MV Finlaggan entered service in 2011, the second vessel on the route is beyond its design life and due for replacement. The design of the new vessel is also intended to better accommodate the freight traffic on the route, which is a sizeable component of the traffic carried on the service.

This new vessel will have an increased depth into the water column compared to existing vessels on the route. The anticipated dimensions of the new vessel are as follows – note that all measurements stated in this document are approximate:

- Beam: 18.7m (an increase of approximately 2.4m compared to the existing vessel, MV Finlaggan);
- Length: 95m (an increase of approximately 5m compared to the existing vessel, MV Finlaggan); and
- Draught: 3.8m (an increase of approximately 0.4m compared to the existing vessel, MV Finlaggan).

The new vessel will use less fuel for the same length of journey (improving efficiency), thereby improving environmental and economic performance. To accommodate the safe passage of the new vessel into the port and to provide a deeper berth, dredging and other associated enabling works, such as new retaining walls along the perimeter of the quayside, are required to be undertaken around the existing terminal pier at Kennacraig (hereafter referred to as 'the Proposed Development'). The Proposed Development is located within the harbour area around the existing Kennacraig Ferry Terminal. Construction of two new piled strongpoints within the footprint of the existing pier and replacement of the existing fenders with parallel motion fenders is also required as the displacement of the new vessel is larger than the current vessel's.

Jacobs UK Limited (hereafter referred to as Jacobs) has been appointed by the Applicant to assist with the consenting process for the Proposed Development. This report presents the findings of the Habitats Regulations Appraisal (HRA) which has been undertaken in relation to the design of the Proposed Development based on information currently available. HRA is a multi-stage process which determines likely significant effects and assesses adverse impacts on the integrity of European/Ramsar sites.

1.2 The Bern Convention, Habitats Directive, Habitats Regulations and European/Ramsar Sites

The Habitats Regulations (Conservation (Natural Habitats, &c.) Regulations 1994) translated the European Union Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive[1]) into UK legislation to protect sites that are internationally important for threatened habitats and species (European sites), and to create a legal framework for species requiring strict protection.

The Habitats Regulations have been amended in Scotland, most recently in 2019 as a result of the UK leaving the EU (Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019). This latest amendment ensures that the requirements of the Habitats Directive and the Birds Directive (European Union Council Directive 2009/147/EC) continue to be relevant to the management of European sites, so that the sites are protected and that they continue to operate as originally intended.

European sites are Special Protection Areas (SPAs) (classified under the Birds Directive) and Special Areas of Conservation (SACs) (classified under the Habitats Directive) and form part of an international network of

[1] The Habitats Directive was adopted in 1992 by the European Community (as was) as the Community's response to the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention).

protected sites. Prior to leaving the EU Scotland's sites contributed to the Natura network and now form part of the Emerald Network[2], spanning Europe and into Africa. Domestically they are known as the UK site network.

Whilst not a European site designation, wetland sites designated under the Convention on Wetlands of International Importance, known as Ramsar sites, are also relevant as they are afforded the same level of protection as European sites under domestic policy and treated in the same way as the UK site network. Most Ramsar sites in Scotland are either designated SPAs or SACs although not always sharing the same qualifying interests (NatureScot, 2021a).

This HRA is presented under the aegis of Regulation 48 of the Habitats Regulations, which transposes the requirements of Article 6(3) of the Habitats Directive.

The Habitats Regulations continue to require that an Appropriate Assessment (AA) be undertaken by a Competent Authority where any plan or project not directly connected with or necessary to the management of the European/Ramsar site (i.e. a SAC or SPA, or candidate or potential SAC/SPA, or a Ramsar site), is likely to have a significant effect either individually or in combination with other plans or projects. HRA refers to the process that provides the Competent Authority with the information to enable them to make an AA determination, which is done on the basis of whether or not there is an adverse effect on site integrity (AESI). The HRA provides data concerning site integrity, and the AA must be undertaken '*in view of the site's conservation objectives*'. With respect to this HRA, the Competent Authority will be Marine Scotland.

1.3 The Habitats Regulations Appraisal (HRA) Process

The HRA process establishes whether the proposal:

- is directly connected with or necessary for site management for nature conservation;
- is likely to have a significant effect on the site; and
- will adversely affect the site's integrity.

If the assessment cannot ascertain that the proposal would not adversely affect site integrity, a consideration of alternative solutions is required. If no alternative solutions are available, a proposal may be carried out for Imperative Reasons of Overriding Public Interest (IROPI) as indicated by Article 49 of the Habitats Regulations. As stated in Article 53 of the Habitats Regulations, where this is the case compensatory measures must be secured to ensure that the overall coherence of the site network is protected. The four stages of the HRA process are as follows:

- Stage One: Screening;
- Stage Two: Appropriate Assessment;
- Stage Three: Assessment of alternative solutions; and
- Stage Four: Assessment where no alternative solutions exist and where adverse impacts remain (IROPI).

Diagram 1 (European Commission, 2001) provides a schematic representation of the HRA process. However, following the UK's exit from the EU, Articles 6(3) and 6(4) of the Habitats Directive are replaced by Articles 48 and 49 of the Habitats Regulations, and references to the Commission should be understood as the Scottish Ministers.

[2] The Emerald Network was launched by the Council of Europe as part of its work under the Bern Convention.

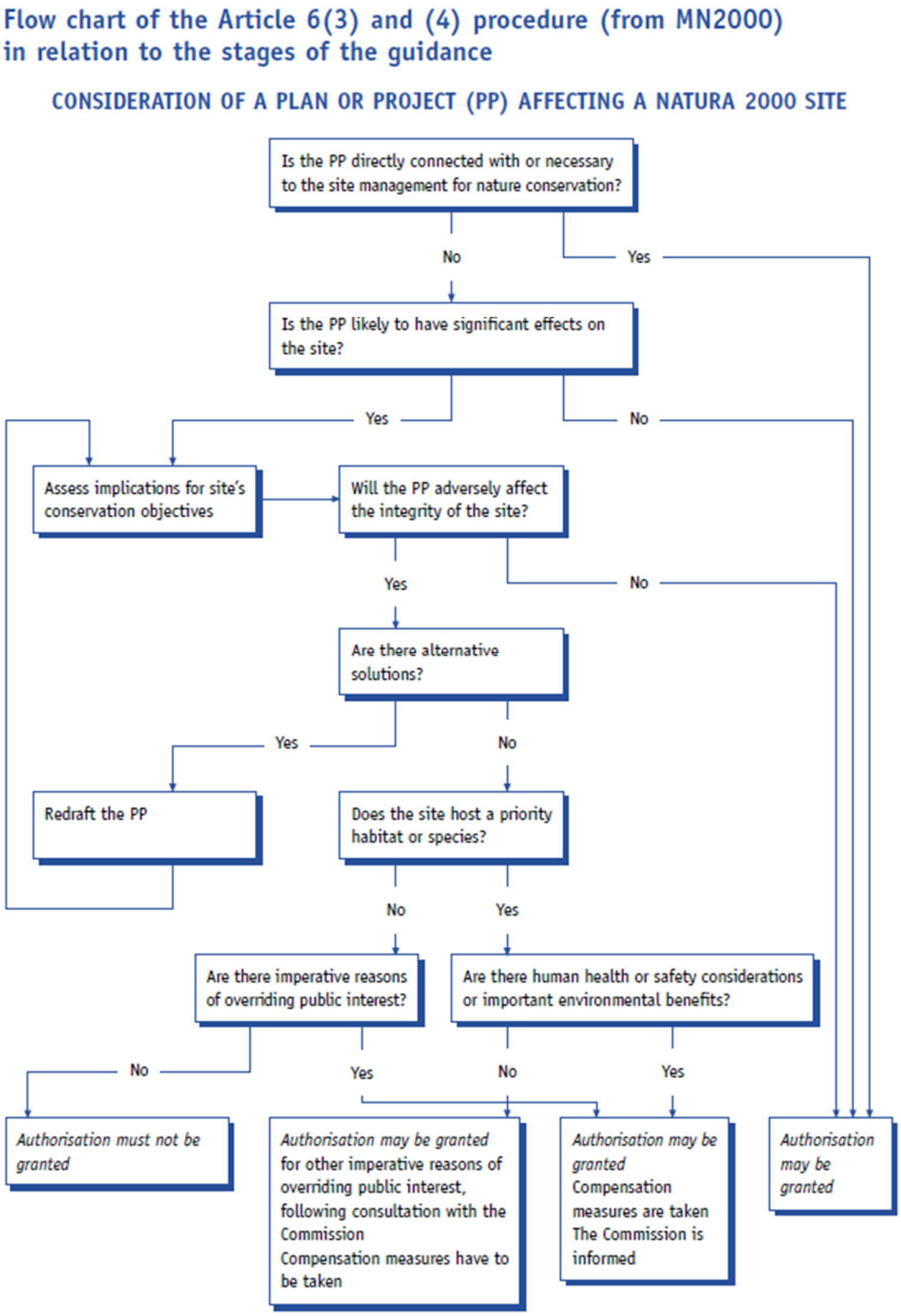


Diagram 1: The HRA process (source: European Commission, 2001)

1.3.1 Stage One: Screening

Screening identifies the likely effects on a European/Ramsar site from a project or plan and considers whether these effects are likely to be significant.

The screening assessment is a test of the 'likelihood' of effects occurring rather than a 'certainty' of effects occurring. In accordance with the Waddenzee Judgement [ECJ case C-127/02], a Likely Significant Effect (LSE) is one that cannot be ruled out on the basis of objective information. This is underpinned by the precautionary principle which is enshrined in law in the Habitats Directive, and the test of something as being '*beyond reasonable scientific doubt*', as presented in the Waddenzee Judgement. Paragraph 49 of the same judgement adds '*…where a plan or project… is likely to undermine the site's conservation objectives, it must be considered likely to have a significant effect on that site. The assessment of that risk must be made in the light inter alia of the characteristics and specific environmental conditions of the site concerned by such a plan or project*'.

The People over Wind and Sweetman ruling [ECJ case C-323/17] rules out from consideration at the screening stage any measures embedded in a plan or project designed to avoid or mitigate potentially harmful impacts on the European site. The court ruled that '*…it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site*'. The ruling requires competent authorities to, at the HRA screening stage, distinguish clearly between mitigation measures specifically designed to avoid or reduce harmful impacts on the European site, and those which are not related to the integrity of the European site. Should there be a need for measures to be specifically designed to avoid or reduce impacts on the European site, the HRA should proceed to Stage Two.

1.3.2 Stage Two: Appropriate Assessment (AA)

If the Stage One Screening process determines that the project or plan is associated with impacts which are 'likely to have a significant effect' upon a European/Ramsar site, the HRA proceeds to Stage Two.

An AA considers the effect of the project or plan, either alone or in combination with other projects or plans, on the integrity of the European/Ramsar site, with respect to the site's structure and function, and its conservation objectives. Under the provisions of Article 48 of the Habitats Regulations, the objective is to ascertain that the integrity of the site will not be adversely affected.

Site integrity is defined as '*the coherent sum of the site's ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and/or populations of species for which the site is designated*'(European Commission, 2019). The decision as to whether a site is adversely affected focuses on and is limited to the conservation objectives for the site (European Commission, 2019).

In carrying out an AA, mitigation measures, aimed at minimising or avoiding the negative effect of a plan or project during its operation or after its completion, may be considered as an integral part of the plan or project (European Commission, 2019). The Competent Authority has to be certain that the mitigation proposed would reduce/avoid the negative effects of the plan or project. It must be clear, therefore, what the mitigation measures are, how they would reduce or avoid the effects, and the details of how and by whom they would be implemented/managed and the timescale involved. In addition, the mitigation measures would require monitoring and enforcement, and procedures to rectify effects where measures have not been successful.

1.3.3 Stage Three: Alternative Solutions

Stage Three is the process which examines alternative ways of achieving the objectives of the project or plan, whilst avoiding AESI of the European/Ramsar site. Guidance (European Commission, 2007) indicates that all alternatives have to be analysed. This could involve alternative locations, different scales or designs of development, or alternative processes.

1.3.4 Stage Four: Assessment Where no Alternative Solutions Exist and Where Adverse Impacts Remain (Imperative Reasons of Overriding Public Interest (IROPI))

Where no alternative solutions exist and where adverse effects remain as a result of the project or plan, an assessment is undertaken of the IROPI to determine whether a project or plan should proceed. Where it is determined that there are IROPI it would be necessary to design, implement, manage and monitor compensation measures.

1.3.5 Guidance

In undertaking this HRA the following guidance was referred to:

- Assessing Connectivity with Special Protection Areas (SPAs) (SNH[3], 2016a);
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission, 2001);
- Communication from the Commission on the Precautionary Principle (European Commission, 2000);
- Guidelines on the Implementation of the Birds and Habitats Directives in Estuaries and Coastal Zones with particular attention port development and dredging (European Commission, 2011);
- Habitats Regulations Appraisal of Plans: Guidance for Plan-making Bodies in Scotland, Version 3.0 January 2015 (David Tyldesley and Associates, 2015);
- Legislative Requirements for European Sites (NatureScot, undated); and
- Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (European Commission, 2019).

1.3.6 Structure of this Report

This HRA fulfils the requirements of Article 48 of the Habitats Regulations and covers the first two stages of the HRA process: Stage One (Screening) and Stage Two (Appropriate Assessment).

No requirement was found to progress to Stages Three (Alternative Solutions) and Four (IROPI).

[3] Note that Scotland's nature agency, NatureScot, was known as Scottish Natural Heritage (SNH) prior to August 2020. Within this document, all references to the organisation in the text and documents cited are provided with the name appropriate to the time at which the document was published or communication received, however the organisations are one and the same.

2. Description of Proposed Development

2.1 Site Location and Context

The Proposed Development is located on a small island off the coast of West Loch Tarbert, at the existing Kennacraig Terminal (National Grid Reference NR 818 625) in Argyll, as shown on Figure 1 and Figure 2.

Kennacraig Ferry Terminal has an associated marshalling area to the south of the main building with an access road leading on to the A83 which runs perpendicular to the terminal. The nearest residential properties are located within Kennacraig, approximately 600m south-east of the Proposed Development.

2.2 Summary of Proposed Development Elements

The works primarily consist of the following:

- dredging of the areas indicated in the drawings (see Figure 1), from -4.6m Chart Datum (CD) to -5.5m CD. It is estimated approximately 9,300m^3 of material will be dredged[4];
- construction of a new anchored combi wall along the length of the landward structures. A combi wall consists of tubular steel king piles with sheet piles acting as an infill between the king piles;
- replacement of the existing MV Fender units with parallel motion fenders attached directly to the existing dolphin structures;
- construction of two strongpoints formed of a reinforced concrete cap supported on tubular steel piles; and
- installation of fender piles along the length of the infill pier between the inner and middle berthing dolphin.

2.3 The Proposed Development – Construction

The Proposed Development works would need to take cognisance of the continued operation of the port, where Calmac Ferries Ltd. operate a daily ferry service from Kennacraig to Port Ellen, and a less frequent service from Kennacraig to Colonsay.

2.3.1 Methods

Dredging

The dredging elements of the works, demarcated in Figure 1, will be carried out by marine-based plant. It is estimated that 9,150m^3 of soft (soil) and 150m^3 of hard (rock) material would be dredged. To better quantify the exact volume of rock material requiring dredging, a geophysical survey will be recommended to assess the rock profile.

The dredging method will be determined by the contractor. It is expected that the soft material will be plough dredged, however another method of dredging may be used for the soft material, in which case the dredged material would most likely be disposed of at a sea disposal site subject to a licence from Marine Scotland. Plough dredging does not require a separate disposal site; rather, the material is moved around the seabed from high areas to low areas but material will also be put into suspension in the water column and dispersed by currents.

It is assumed that the rock which is dredged will be disposed of offsite, either at a sea disposal site or landfill, as determined by the findings of a Best Practicable Environmental Option Assessment (BPEO) and subject to a licence from Marine Scotland.

[4] Wet Tonnage for soft material = 19,530 te, based on 2.1te/m3

Under no circumstances would any material be deposited within any European/Ramsar site. Should disposal arrangements differ from the above, additional HRA would be required to confirm the absence of significant effects on European/Ramsar sites.

The rock may need to be pre-fractured by drilling and splitting using Cardox, a pressurised blasting system using carbon dioxide. Explosives would only be used as a last resort. The use of explosives will only occur if the Contractor has reasonably demonstrated that other methods such as Cardox and predrilling are not suitable and all necessary precautions are in place to protect property, people and wildlife. If explosives are required, a noise and vibration impact assessment will be undertaken to assess and mitigate the potential impacts of blasting, as well as having an appropriate Method Statement/Risk Assessment in place. This HRA assumes that no explosives are required, and should this subsequently change, reassessment would be required.

Wall Construction

Construction of the combi wall will involve the installation of a temporary piling gate and a temporary casing at each tubular steel king pile location. A socket will then be drilled through the temporary casing into the rock and filled with concrete before the tubular steel king pile is placed in the socket.

Once the concrete has reached sufficient strength the casing can be removed. Steel sheet piles will then be driven between the tubular king piles. The space between the new and existing walls will be filled with an imported granular fill up to anchor level. Once the fill reaches this level inclined rock anchors will be installed at each king pile location.

When the anchors have reached sufficient strength, the remaining backfill is added. A concrete cope will be cast at the top of the steel wall.

Piling works may be a combination of land-based plant and marine-based plant.

Fendering Works

The fender work will involve the removal of existing MV fender units from the concrete dolphins and the removal of four steel fender piles on the infill pier between the Inner and Middle Dolphins (Figure 1).

The fenders on the dolphins will be replaced by parallel motion fenders which compromise a rubber fender unit, steel facing panel and miscellaneous steelwork. The fender piles will be replaced by six fender piles at new positions along the length of the infill pier. The fender piles will be driven to rock.

To support the new fender piles, two strongpoints formed of a reinforced concrete cap supported on tubular steel piles, are required within the footprint of the infill pier. This will involve the removal of sections of the existing concrete deck to create an opening in the pier to allow the construction of the strongpoints. It is envisaged that a cut would be formed at the end of each section of deck which would allow it to be lifted out in one or two pieces.

The concrete cap for the strongpoint will be supported on tubular steel piles which will be driven to bedrock. This will require the installation of a temporary piling gate to support and guide the piles during driving. Once installed, a precast concrete shell will be positioned on top of the piles and the shell filled with concrete. Following this, rock anchors will be installed through the piles by drilling into the rock. The anchors would be lifted into position and then grouted into the rock. The remainder of the concrete will be poured for the concrete cap.

All the fender works will be undertaken by a marine-based plant, most likely involving a crane barge.

2.3.2 Programme

It is envisaged the construction programme will last approximately 36 weeks, with the anticipated programme of works below. Note that activities will overlap. It is anticipated that works would start in 2022, with the works

completed during 2023. The new ferry would begin operation at some point beyond this date. A construction start date has not been determined and therefore it cannot be established at what time of year the works may take place.

Dredging
- Dredging – 7 weeks

Wall Construction
- Installing piles – 18 weeks
- Installing anchors – 11 weeks
- Backfilling new wall – 13 weeks
- Concrete for wall cope (including curing time) – 14 weeks

Fender Works
- Installation of parallel motion fenders – 8 weeks
- Strongpoint piles – 4 weeks
- Strongpoint rock anchor – 4 weeks
- Strongpoint concrete works – 5 weeks
- Fender piles – 6 weeks

As part of mitigation required for the Proposed Development and irrespective of any impacts on European/Ramsar sites or requirements associated with HRA, a Construction Environmental Management Plan (CEMP) will be developed and implemented for the duration of construction works. In accordance with relevant standards and guidance, it will outline best practice measures to avoid significant air quality, noise, water environment and ecological impacts. As part of the CEMP, an Ecological Management Plan will be developed and implemented, this will include measures to minimise the dispersal of seabed sediments into the water column. Best practice guidelines will be followed at all times during construction.

A marine construction licence and a dredging licence will be required to undertake the works and would be obtained from Marine Scotland. Dredging works have happened periodically at this location, with the most recent dredging operations being capital dredging of approximately 0.4m, which took place in 2011.

2.4 The Proposed Development – Operation

The Proposed Development will allow free passage of the new vessel between Kennacraig and Port Ellen. All activities required to achieve this are associated with construction. The operation of the new vessel itself between the two terminals is not considered within the scope of the Proposed Development, and there are no other anticipated changes to operations following construction of the Proposed Development.

Therefore, no operational impacts have been identified and are not considered further in this HRA Screening, which focuses on construction impacts only.

3. Stage One (Screening)

3.1 Introduction

This section details the Stage One Screening of the HRA process.

The Proposed Development is not directly connected with, or essential for, the management of any European or Ramsar site.

3.2 European Sites with Potential Effects from the Proposed Development

Guidance dictates that all European/Ramsar sites, and their qualifying interests, which have the potential to be affected by a plan or project should be considered as part of the HRA process. For the assessment of the Proposed Development, relevant European and Ramsar sites were identified by looking for potential source-receptor pathways. The Proposed Development is located within the Sound of Gigha SPA, which was recently designated in December 2020. Three additional sites with potential relevance to the Proposed Development were identified, shown on Figure 2, all within 10km of the site, which is considered appropriate to the scale and nature of the Proposed Development, and taking into account connectivity and relevant receptors. The sites are:

- Sound of Gigha SPA (NatureScot, 2021b)
- Tarbert Woods SAC (NatureScot, 2021c);
- Knapdale Lochs SPA (NatureScot, 2021d); and
- Inner Hebrides and the Minches SAC (NatureScot, 2021e).

Qualifying interests, conservation objectives and pressures on feature condition are presented in Table 1 below (all information taken from NatureScot SiteLink).

Table 1: European Sites to be Included in Stage One (Screening)

Qualifying Interests/Criteria	Condition Assessment (Date)	Conservation Objectives	Site Description	Identified Pressures
Sound of Gigha SPA – NatureScot Site Code 10486, EU Site Code UK9020318 (NatureScot, 2021b; SNH, 2016b)				
Eider (*Somateria mollissima*), non-breeding Great northern diver (*Gavia immer*), non-breeding Red-breasted merganser (*Mergus serrator*), non-breeding Slavonian grebe (*Podiceps auritus*), non-breeding	Condition not assessed	Draft conservation objectives[5]: To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, subject to natural change, thus ensuring that the integrity of the site is maintained in the long-term and it continues to make an appropriate contribution to achieving the aims of the Birds Directive for each of the qualifying species. This contribution will be achieved through delivering the following objectives for each of the site's qualifying features: a) avoid significant mortality, injury and disturbance of the qualifying features, so that the distribution of the species and ability to use the site are maintained in the long-term; b) to maintain the habitats and food resources of the qualifying features in favourable condition.	The Sound of Gigha SPA covers 36326.83ha and includes the area of the Proposed Development. The site is centred around the island of Gigha, extending from Machrihanish Bay in the south to the entrance of Loch Caolisport off Knapdale to the North, including West Loch Tarbert. The area has a complex bathymetry, and also varies greatly in exposure to prevailing winds and Atlantic waves. There are many rocks and skerries as well as small sheltered bays around Gigha itself, and Gigha Sound is scoured by north-south channels. Offshore, the sediments are a mixture of mud, sand and gravel while the very sheltered waters of West Loch Tarbert overlie soft mud sediment. This complexity in physical conditions provides for a locally diverse range of habitats and associated marine fauna which in turn support notable populations of wintering waterfowl.	None identified
Tarbert Woods SAC - NatureScot Site Code 8390, EU Site Code UK0030286 (NatureScot, 2021c; Joint Nature Conservation Committee (JNCC), 2021)				
Western acidic oak woodland	Unfavourable recovering (November 2008)	To avoid deterioration of the qualifying habitat thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and To ensure for the qualifying habitat that the following are maintained in the long term: ▪ extent of the habitat on site;	Tarbert Woods SAC covers 1576.29ha and the closest sections are located 2.7km north and 2.9km southwest of the Proposed Development. It comprises a large, fragmented coastal strip of broadleaved woodland, designated for its stands of old sessile oak woods with *Ilex* and *Blechnum*, and considered to be	Invasive species

[5] Finalised conservation objectives are not available on the NatureScot Sitelink tool as at April 2021.

Qualifying Interests/Criteria	Condition Assessment (Date)	Conservation Objectives	Site Description	Identified Pressures
		▪ distribution of the habitat within site; ▪ structure and function of the habitat; ▪ processes supporting the habitat; ▪ distribution of typical species of the habitat; ▪ viability of typical species as components of the habitat; and ▪ no significant disturbance of typical species of the habitat.	one of the best of its kind in the UK. The habitat is important for oceanic bryophyte communities; amongst the 180 bryophyte species recorded are 47 Atlantic species.	
Knapdale Lochs SPA - NatureScot Site Code 8520, EU Site Code UK9003301 (NatureScot, 2021d)				
Black-throated diver (*Gavia arctica*), breeding	Unfavourable Declining (August 2014)	To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long term: ▪ population of the species as a viable component of the site; ▪ distribution of the species within site; ▪ distribution and extent of habitats supporting the species; ▪ structure, function and supporting processes of habitats supporting the species; and ▪ no significant disturbance of the species.	Knapdale Lochs SPA covers 113.86ha and the closest section is located 8.0km northwest of the Proposed Development. It comprises four small oligotrophic and mesotrophic lochs in the Knapdale area of Argyll and Bute. These are namely Loch Clachaig, Dubh Loch, Loch Fuar-Bheinne, and Loch nan Torran, of which the latter is the closest to the Proposed Development and also the largest of the four. They are the southernmost regular black-throated diver territories in Britain, and the most southwesterly in Europe. They are also productive territories; from 1986 to 1998, Knapdale Lochs SPA produced an average of 0.35 fledged chicks per pair per year in comparison with a national average of 0.29 chicks. The combination of a large population size, high productivity and a location at the edge of the European range make this an extremely valuable site. As at 2001, Knapdale Lochs SPA was the ninth most important site for the species in Britain.	Water management

Qualifying Interests/Criteria	Condition Assessment (Date)	Conservation Objectives	Site Description	Identified Pressures
Inner Hebrides and the Minches SAC - NatureScot Site Code 10508, EU Site Code UK0030393 (NatureScot, 2021e; NatureScot, 2020)				
Harbour porpoise (*Phocoena phocoena*)	Favourable Maintained (2018[6])	1. To ensure that the Inner Hebrides and the Minches SAC continues to make an appropriate contribution to harbour porpoise remaining at favourable conservation status. 2. To ensure for harbour porpoise within the context of environmental changes, that the integrity of the Inner Hebrides and the Minches SAC is maintained through 2a, 2b and 2c: 2a. Harbour porpoise within the Inner Hebrides and the Minches are not at significant risk from injury or killing. 2b. The distribution of harbour porpoise throughout the site is maintained by avoiding significant disturbance. 2c. The condition of supporting habitats and the availability of prey for harbour porpoise are maintained.	Inner Hebrides and the Minches SAC covers 1,381,391.37ha and at its closest point is located 8.9km southwest of the Proposed Development. Part of the SAC is also designated as Loch Sunart to the Sound of Jura Marine Protected Area (MPA), but not the area closest to the Proposed Development. The SAC is the second largest protected area for harbour porpoise in Europe and the only one for harbour porpoise in Scotland. It provides protection to approximately 32% of the harbour porpoise population found on the west coast of Scotland and contains the highest density of harbour porpoise in Scotland. The site's diverse and complex marine habitats also support other cetaceans such as minke whale (*Balaenoptera acutorostrata*) and Risso's dolphin (*Grampus griseus*).	None identified

[6] NatureScot (2021b) indicates December 2016

3.3 Screening Assessment

The construction phase of the Proposed Development as described in Section 2 (Description of Proposed Development) could result in a variety of potential impacts which could directly or indirectly affect the identified European sites including:

- loss and/or fragmentation of supporting habitat (temporary or permanent);
- changes in air quality as a result of construction machinery and vessels;
- changes in water quality as a result of construction vessels or accidental spillage;
- sedimentation and release of contaminants as a result of piling and/or dredging;
- mortality or injury of animals as a result of collision with construction vessels; and
- disturbance in the form of noise, vibration, and lighting.

The potential impacts were used to identify LSEs on the European sites in terms of the sites' conservation objectives. The screening process considered:

- potential for effects pathways between the site and the Proposed Development during construction; and
- the ecological characteristics of the qualifying interests, taking into consideration the sites' conservation objectives.

Should changes in water quality and air quality occur during construction, these have the potential to result in indirect effects on qualifying interests of the European sites. However, best practice measures which are intrinsic to the project as designed and which will be captured through the CEMP, will mitigate any potential changes in water quality and air quality.

The CEMP will include, amongst other plans, a pollution control and response plan and an oil spill contingency plan, and will detail additional measures such as the requirement to adhere to Pollution Prevention Guidelines and Guidance for Pollution Prevention (NetRegs, 2021). Measures relating to air quality will include: the requirement for all plant, vehicles and vessels to meet good industry standards and be powered off when not in use; the use of dust suppression during dry conditions; and the implementation of wheel-washing and speed restrictions on site. Changes in water quality and air quality are therefore not considered to differ significantly from the existing conditions and have not been considered further within this HRA.

The potential impact sources identified have been considered with respect to each of the European sites, the findings of which are presented in Table 2

Table 2: Screening Assessment

Conservation Objectives	Distance/Connectivity to Proposed Development	Qualifying Interests	Potential Effects and Commentary	Screening Conclusion
Sound of Gigha SPA - NatureScot Site Code 10486, EU Site Code UK9020318 (NatureScot, 2021b; SNH, 2016b)				
Draft conservation objectives[7]: To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, subject to natural change, thus ensuring that the integrity of the site is maintained in the long-term and it continues to make an appropriate contribution to achieving the aims of the Birds Directive for each of the qualifying species. This contribution will be achieved through delivering the following objectives for each of the site's qualifying features: a) avoid significant mortality, injury and disturbance of the qualifying features, so that the distribution of the species and ability to use the site are maintained in the long-term; b) to maintain the habitats and food resources of the qualifying features in favourable condition.	The Sound of Gigha SPA covers 36326.83ha and includes the area of the Proposed Development.	Eider, non-breeding Great northern diver, non-breeding Red-breasted merganser, non-breeding Slavonian grebe, non-breeding	The SPA is centred around Gigha and its rocks and skerries with sheltered bays and shallow waters, which support a large diversity of habitats and prey species for the qualifying interests. West Loch Tarbert, within which the Proposed Development is located, is generally comparatively lower value habitat than elsewhere in the SPA, however birds of all four species do use the area at low densities. Great northern diver is a winter visitor to Scottish seas, spending their breeding season in the Arctic. Slavonian grebe too is present on coastal waters in Scotland over winter only. Eider and red-breasted merganser are resident in the SPA throughout the year. There is potential for the modification of the benthic habitats from piling and dredging, and the disturbance from noise and lighting to result in LSEs for the qualifying interests of the SPA.	Potential for LSE during construction identified. AA (HRA Stage Two) is required.
Tarbert Woods SAC - NatureScot Site Code 8390, EU Site Code UK0030286 (NatureScot, 2021c; JNCC, 2021)				
To avoid deterioration of the qualifying habitat thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and To ensure for the qualifying habitat that the following are maintained in the long term: ▪ extent of the habitat on site;	The closest sections are located 2.7km north and 2.9km southwest of the Proposed Development.	Western acidic oak woodland	There would be no direct or indirect loss of habitat at this site. The designated features at the site are not sensitive to noise, vibration or lighting disturbance. Due to the nature and scale of the proposed works and the distance from the SAC resulting in a lack of credible effects pathways, the possibility of LSE on the conservation objectives of Tarbert Woods SAC can be excluded.	No potential for LSE during construction. AA (HRA Stage Two) is not required.

[7] Finalised conservation objectives are not available on the NatureScot Sitelink tool as at April 2021.

Conservation Objectives	Distance/Connectivity to Proposed Development	Qualifying Interests	Potential Effects and Commentary	Screening Conclusion
▪ distribution of the habitat within site; ▪ structure and function of the habitat; ▪ processes supporting the habitat; ▪ distribution of typical species of the habitat; ▪ viability of typical species as components of the habitat; and ▪ no significant disturbance of typical species of the habitat.				
Knapdale Lochs SPA - NatureScot Site Code 8520, EU Site Code UK9003301 (NatureScot, 2021d)				
To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long term: ▪ population of the species as a viable component of the site; ▪ distribution of the species within site; ▪ distribution and extent of habitats supporting the species; ▪ structure, function and supporting processes of habitats supporting the species; and ▪ no significant disturbance of the species.	The closest section is located 8.0km northwest of the Proposed Development.	Black-throated diver, breeding	Black-throated diver is easily disturbed when breeding (Royal Society for the Protection of Birds (RSPB), 2021), however the Knapdale Lochs are sufficiently distant (8.0km) from the Proposed Development that there is no potential for disturbance of birds breeding in the SPA. Foraging distances of black-throated diver during the breeding season are likely to be less than 10km (SNH, 2016a). West Loch Tarbert may therefore be used to a limited extent for foraging by black-throated diver from the Knapdale Lochs during the breeding season. The area may also be used after breeding and/or during the winter when the birds disperse to coastal areas from their breeding sites. Sheltered waters are sought at this time but this habitat is widely available along the west coast of Scotland. Birds foraging in the waters around Kennacraig, either during the breeding season or during the winter months, are likely to be habituated to anthropogenic disturbance, and as such are considered unlikely to be significantly impacted by construction work, although birds may avoid the immediate Kennacraig area during particularly disturbing construction activities. However, black-throated diver is a highly mobile species and given the extent of suitable habitat along the west coast of Scotland, any impacts to the species resulting from localised disturbance in West Loch Tarbert are considered to be imperceptible.	No potential for LSE during construction. AA (HRA Stage Two) is not required.

Conservation Objectives	Distance/Connectivity to Proposed Development	Qualifying Interests	Potential Effects and Commentary	Screening Conclusion
			It is therefore considered that the possibility of LSE on the conservation objectives of Knapdale Lochs SPA can be excluded.	
Inner Hebrides and the Minches SAC - NatureScot Site Code 10508, EU Site Code UK0030393 (NatureScot, 2020; NatureScot, 2021e)				
1. To ensure that the Inner Hebrides and the Minches SAC continues to make an appropriate contribution to harbour porpoise remaining at favourable conservation status. 2. To ensure for harbour porpoise within the context of environmental changes, that the integrity of the Inner Hebrides and the Minches SAC is maintained through 2a, 2b and 2c: 2a. Harbour porpoise within the Inner Hebrides and the Minches are not at significant risk from injury or killing. 2b. The distribution of harbour porpoise throughout the site is maintained by avoiding significant disturbance. 2c. The condition of supporting habitats and the availability of prey for harbour porpoise are maintained.	Located 8.9km southwest of the Proposed Development at its closest point.	Harbour porpoise	Harbour porpoises are routinely observed off the west coast of Scotland and animals sometimes enter West Loch Tarbert. No records are listed between 9 Sep 2020 and 14 April 2021 on the Seawatch Foundation sightings portal[8]. On the Hebridean Whale and Dolphin Trust records map[9], the most recent record within West Loch Tarbert is of four harbour porpoise from September 2019, although the locational information does not appear to be accurate. Given the narrow width of the loch (minimum 0.65km), shallow depth and presence of sea traffic (including the ferry which runs several times a day), and the rarity of sightings West Loch Tarbert is not considered key supporting habitat to the SAC population. Harbour porpoises are present in the SAC throughout the year, with May to August being important for breeding and calving, and are assumed to potentially be present within adjoining waters including West Loch Tarbert year round too albeit in small numbers. The *Conservation Objectives and Advice to Support Management* (NatureScot, 2020) states that four pressures on harbour porpoise are: removal of non-target and target species (i.e. entanglement, and removal of their prey species); contaminants (e.g. through effects on water quality and bioaccumulation); underwater noise; and death or injury by collision (primarily in relation to fast moving vessels). Harbour porpoise are sensitive to noise disturbance and responses can be physiological and/or behavioural, depending on the duration and scale over which the disturbance occurs. A study of the effects of subtidal impact piling on marine mammals in the Moray Firth found that the zone with the potential to cause auditory damage to cetaceans was up to 100m around the piling activity (1.8m diameter tubular steel piles). A strong behavioural response could potentially be elicited in	Potential for LSE during construction identified. AA (HRA Stage Two) is required.

[8] https://www.seawatchfoundation.org.uk/recentsightings/ Search on 20/04/21 within South-West Scotland and Inner Hebrides region.
[9] https://whaletrack.hwdt.org/sightings-map/ Search on 20/04/2021

Conservation Objectives	Distance/Connectivity to Proposed Development	Qualifying Interests	Potential Effects and Commentary	Screening Conclusion
			harbour porpoise up to 20km away, and a weaker response up to 70km away (Bailey et al., 2010). The construction of the Proposed Development therefore has potential to cause disturbance to harbour porpoise.	

3.4 Screening Conclusion

Based on the construction method as outlined in Section 2.3, the Proposed Development has potential for LSEs on two European sites: the Sound of Gigha SPA, and Inner Hebrides and the Minches SAC, as identified in Table 2. An AA (HRA Stage Two) is therefore required for these sites.

No LSEs on the conservation objectives of Tarbert Woods SAC or Knapdale Lochs SPA were identified from the Proposed Development. This was due either to the lack of effects pathways or because impacts of the Proposed Development would be imperceptible such that there would be no LSE. There is therefore no requirement to carry any of the sites forward for further assessment, and no requirement for further consideration of the sites in combination with other plans and projects.

Should the construction method be revised to require the use of explosives as part of the construction methodology, it is recommended that the potential for LSEs on European/Ramsar sites is re-screened in order to assess whether or not this remains the case.

Similarly, this HRA has been written on the basis of either plough dredging being used, or another method of dredging whereby the dredged material disposal arrangements are one of: (i) retention within the harbour site, within the remit of the existing operating licence; (ii) disposed at sea in a designated disposal site under a licence from Marine Scotland or (iii) disposal at a land-based facility, also under an appropriate licence. The disposal method would be in line with the findings of a BPEO. Should one of these scenarios not be the case, the potential for LSEs on European/Ramsar sites should be reassessed.

4. Stage Two (Appropriate Assessment)

4.1 Introduction

This section forms the Stage Two (AA) of the HRA process which was identified as required in Stage One (Screening) for the Sound of Gigha SPA, and Inner Hebrides and the Minches SAC. The AA considers the effect of the project or plan, either alone or in combination with other projects or plans, on the integrity of a European/Ramsar site, with respect to the site's structure and function, and its conservation objectives. Where applicable, it details the measures required to protect the conservation objectives and integrity of the site.

4.2 Assessment of Inner Hebrides and the Minches SAC

4.2.1 Loss or Fragmentation of Supporting Habitat (Temporary or Permanent)

Although West Loch Tarbert is not part of the SAC, the screening assessment established that small numbers of harbour porpoise may use the loch, suggesting that the area may be supporting habitat for the species. Dredging and deposition of material around the harbour will alter the benthic habitats in the dredged and dispersal areas.

Within the SAC (8.9km from the Proposed Development), the variety of sediments within the site and the prey species they support provide a productive foraging area for harbour porpoise (NatureScot, 2020). By contrast, the quality of foraging habitat within West Loch Tarbert is likely to be poorer. Furthermore, the number of harbour porpoise sightings in the loch is low and West Loch Tarbert is not considered key supporting habitat to the SAC population. The area affected by the Proposed Development is very small within the context of West Loch Tarbert, the wider Sound of Jura and the vast Inner Hebrides and the Minches SAC, and as such would not have an adverse effect on conservation objective 2c, the condition of supporting habitats and the availability of prey.

4.2.2 Sedimentation and Release of Contaminants

Sediment disturbance during the placement of each new pile and removal of existing piles will be highly localised with remobilised sediment dispersing quickly during mid-tide and resettlement occurring in adjacent areas on the slack tides. Given the physical characteristics of the seabed at the Proposed Development, the localised disturbance of sediment is not anticipated to result in any significant change to the topography or substrata and it is envisaged to be of low significant impact and temporary in nature while piling activities occur. As such there is considered to be no adverse effect on conservation objective 2c, the condition of supporting habitats and the availability of prey for harbour porpoise.

There is potential for release of pollutants due to the dredging and disturbance of the seabed. Given the scale of the receiving waters and the comparatively small area over which dredging would occur, it is considered that any increases in dissolved pollutants above background levels would be highly localised, temporary and minimal, quickly dispersing through the water column and with no resulting significant effects on harbour porpoise prey or habitat.

Whilst dredging and associated sedimentation may limit the availability and quality of prey to a certain extent close to the area of works, a JNCC report (Ransijn et al., 2019) found that large amounts of prey are available both within and outside the SAC boundary. Therefore, based on the spatial and temporal scale over which activities will occur, no significant impacts are expected on the harbour porpoise, their prey or habitats.

4.2.3 Mortality or Injury of Animals as a Result of Collision with Construction Vessels

Due to the regular vessel movements associated with the ferry terminal, harbour porpoise are unlikely to be routinely close to these areas and as such, the potential for collision is considered low. Any animals which are in the harbour area will likely be habituated to vessel movements. In addition, vessels associated with dredging and construction of the new anchored combi wall and fendering works will be exclusively slow-moving and as such pose minimal collision threat.

4.2.4 Disturbance – Noise, Vibration, and Lighting

Underwater noise-producing activities, in particular piling and dredging, have the potential to cause disturbance and/or physical injury to marine mammals. As noted in Section 2.3, this HRA assumes that there is no requirement for explosives. Works are expected to be conducted primarily during the day, with any night work requiring additional consent, and no percussive piling will take place at night unless there is an urgent commercial need. Any such night works would only take place in agreement with Argyll and Bute Council.

As noted above, harbour porpoise responses to noise can be physiological and/or behavioural and vary depending on the duration and scale over which the disturbance occurs, with indicative disturbance distances for cetaceans being up to 100m for auditory damage, up to 20km for a strong behavioural response, and a weaker response up to 70km (Bailey et al., 2010).

The construction period is 36 weeks, of which a minimum 18 weeks will comprising piling, and 7 weeks is dredging, and the two may overlap. Piling is likely to be the most disturbing to harbour porpoise. The activities will be restricted to the area around the ferry terminal shown in Figure 1 although noise and vibration may be experienced outwith this area.

The noise and vibration generated by construction of the Proposed Development will be temporary, intermittent, and in the context of the existing operational ferry terminal and other vessel movements. The source will be a distance of 8.9km from the SAC, however due to the size of the response distance, a weak behavioural response of animals within the SAC may result. Given the extent of available suitable habitat, and range of the species, a significant response is likely to be minor.

For animals outwith the SAC, nearer to the proposed development, works may elicit a more significant disturbance response, although the numbers of animals likely to be effected will be low and in the context of some habituation to background noise.

The Conservation Objectives and Advice to Support Management (SNH, 2019) states that significant disturbance "*should be interpreted to mean disturbance that affects the integrity of the site through alteration of the distribution of harbour porpoise within the SAC such that recovery cannot be expected or effects can be considered long term. The effects of plans or projects that last beyond the average generation time of harbour porpoise are more likely to constitute significant disturbance and to have an impact on site integrity*." As such noise arising from construction of the Proposed Development is not considered to constitute an adverse effect in relation to the conservation objectives of the SAC.

In respect of lighting disturbance, as works are expected to be conducted primarily during the day and the terminal itself is already well-lit, there will be only limited requirement of lighting, for any night works and some evening/morning during winter if required. As such, lighting will be for relatively short periods and focussed on particular work areas. It would therefore only be experienced by a small number of animals which might be present in the harbour area; as previously indicated the likely presence of harbour porpoise within the Kennacraig area is low. Lighting will therefore not give rise to significant effects on harbour porpoise in respect of the conservation objectives of the SAC.

There is potential for temporary noise and visual disturbance from vessels associated with the movement of materials during dredging and piling. However, as these vessels are slow-moving and present for limited durations only disturbance is considered to be both temporary, and no greater than that posed by other vessels in the area. On a precautionary basis, the mitigation set out in Section 4.2.5 is proposed to ensure that no adverse effect on site integrity occurs in relation to disturbance of harbour porpoise.

4.2.5 Mitigation

To address the potential for noise and vibration disturbance to harbour porpoise, the Contractor will employ a 'soft-start' to all noisy activities to avoid sudden and unexpected disturbance during construction. Each time the activity is started up after a period of inactivity, the noise levels will be gradually increased over a period of 30 minutes to allow marine mammals to move away from the disturbance.

4.3 Assessment of Sound of Gigha SPA

4.3.1 Loss or Fragmentation of Supporting Habitat (Temporary or Permanent)

Whilst the majority of the Proposed Development is located outside the boundary of the Sound of Gigha SPA, 0.6ha of the dredging and dredge side slope areas falls within the designated site. This comprises 0.002% of the SPA habitat. Dredging within and adjacent to the SPA will alter the benthic habitats and is considered short-term temporary habitat loss totalling 1.05ha.

Great northern divers and mergansers feed on a wide variety of fish that are associated with a range of seabed substrates. Species can include haddock, cod, herring, sprats and gurnard along with smaller species such as sand-eels, pipefish, gobies, flatfish and butterfish. Great northern divers also feed opportunistically on small crustaceans. Eiders feed on molluscs and small crustaceans, favouring mussels particularly. Slavonian grebes take fish and invertebrates. All four species forage by surface diving, although the great northern diver feeds at much greater depths (SNH, 2016c). As such, they are sensitive to removal of crustacean and/or fish associated with dredging, and also to abrasion of supporting seabed habitats caused by dredging, and smothering caused by dredge spoil disposals. The disturbance of benthic material and associated disturbance of the water column is likely to result in a short-term decrease in prey availability in the dredged area.

The Advice to Support Management document (SNH, 2016b) identifies dredging and new development at ports and harbours including Kennacraig as activities considered likely to affect the qualifying features. Areas which are already subject to periodic maintenance dredging are acknowledged likely to be of limited foraging value due to regular disturbance. Approximately 0.4ha of the proposed dredging area was dredged in 2011. However, given the period of time lapsed, it is likely that benthic habitats in this area have undergone some recovery.

The density of great northern divers at Kennacraig is relatively low: 0.5-1 bird/km^2, compared with 2 or more birds/km^2 between Gigha and the mouth of West Loch Tarbert (SNH, 2016c). For eider the distribution is 1-2 birds/km^2, compared with 8 or more birds/km^2 northeast of Gigha (SNH, 2016c). For red-breasted merganser the density of 1-3 birds/km^2 at Kennacraig is relatively high, with the highest density within the SPA identified 5km southwest of Kennacraig, within West Loch Tarbert (3 or more birds/km^2) (SNH, 2016c). Distribution for Slavonian grebe is not provided. Important aggregations of great northern diver and red-breasted merganser have been identified within the area around Kennacraig (SNH, 2016b), although these are unlikely to be associated with the harbour area.

Within West Loch Tarbert, and especially around the harbour area, the quality of foraging habitat is likely to be poorer than within the wider SPA due to the presence of the existing harbour and associated anthropogenic activity, including past dredging, and likely locally poorer water quality. The area affected is small within the context of West Loch Tarbert and the wider Sound of Gigha SPA. No adverse effect on site integrity is

predicted in respect of avoiding deterioration of the habitats of the qualifying species, and maintenance of the habitats and food resources of the qualifying features in favourable condition.

4.3.2 Sedimentation and release of contaminants

As noted in Section 4.2.2, sediment disturbance during the placement of each new pile and removal of existing piles will be highly localised and is not anticipated to result in any significant change to the topography or substrata. It is envisaged to be an impact of low significance and temporary in nature while dredging and piling activities occur.

There is potential for release of pollutants due to the dredging and disturbance of the seabed. Given the scale of the receiving waters and the comparatively small area over which dredging would occur, it is considered that any increases in dissolved pollutants above background levels would be highly localised, temporary and minimal, quickly dispersing through the water column and with no resulting significant effects on the prey species of the qualifying interests, namely fish, crustaceans and molluscs.

4.3.3 Mortality or Injury of Birds as a Result of Collision with Construction Vessels

Due to the regular vessel movements associated with the ferry terminal, birds are unlikely to be routinely loafing or foraging in these areas and as such the potential for collision is considered low. Any birds which are in the harbour area will likely be habituated to vessel movements. In addition, vessels associated with dredging and construction of the new anchored combi wall and fendering works will be exclusively slow-moving and as such pose minimal collision threat. Eider moult periodically and when they do so, are unable to fly for about a month. During this period their ability to avoid moving vessels will be reduced, however if any animals are present in the area they are still likely to be able to avoid vessels of a size and speed likely to be required for works of this nature, and as such no significant effect is predicted.

4.3.4 Disturbance - Noise, Vibration, and Lighting

Noise-producing activities, in particular piling and dredging, have the potential to cause disturbance to birds within and adjacent to parts of the SPA. No piling or fendering works will take place within the SPA boundary, although some dredging will. As noted in Section 2.3, this HRA assumes that there is no requirement for explosives as part of the dredging.

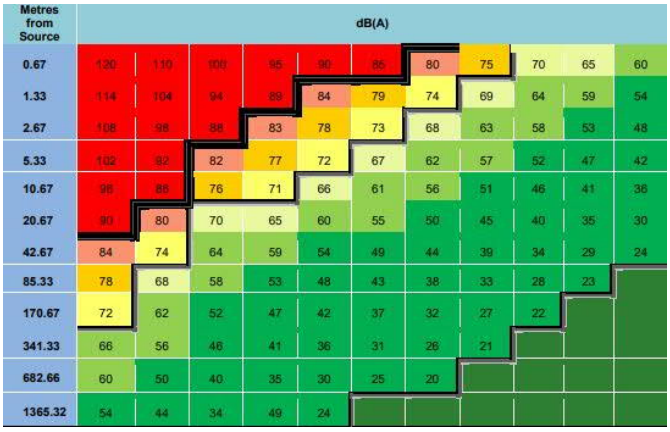
The construction period is 36 weeks, of which a minimum 18 weeks will comprising piling, and 7 weeks is dredging, and the two may overlap. Works are expected to be conducted primarily during the day, with any night work requiring additional consent, and no percussive piling will take place at night unless there is an urgent commercial need and in in agreement with Argyll and Bute Council. As noted above, a construction start date has not been determined and therefore it cannot be established at what time of year the works may take place.

It is noted that the SPA is designated for wintering birds. Based on the likely duration of works (approximately 9 months), it is unlikely that works can be programmed exclusively outside winter although it may be possible for certain items to be.

The noise and vibration generated by construction of the Proposed Development will be in the context of the existing operational ferry terminal and other vessel movements, and temporary and intermittent in nature. Specific noise levels of the plant required is not available but noise attenuation is achieved over a relatively short distance (Diagram 2), so any potential for significant disturbance from noise will be limited to birds within close proximity of the works area. Based on the approximate distributions identified in Section 4.3.1 above, only very small numbers of birds are likely to be within the works area, and will be able to move out of

the area for the duration of noisy activities. It is noted that for eider, in addition to being temporarily flightless, the moulting period also restricts birds' diving abilities and results in increased reliance on feeding in shallow waters such as those in West Loch Tarbert, and is generally energetically expensive period associated with higher levels of stress for the birds (Denhard et al., 2020). Although unable to fly, moulting eider would still be able to swim away from the small area potentially effected by disturbing noise relatively quickly, however noisy works during the moulting period may constitute an additional stressor for a small number of birds.

Diagram 2: Attenuation of noise with distance from source (Cutts et al., 2013)



Based on the wide availability of alternative habitat and the likely habituation of birds within West Loch Tarbert to background noise, that arising from construction of the Proposed Development will not constitute an adverse effect on site integrity. However, to reduce the size of any localised effect, particularly in relation to moulting eider and red-breasted merganser, for which West Loch Tarbert is of higher relative importance, mitigation is proposed in Section 4.3.5.

In respect of lighting disturbance, as works are expected to be conducted primarily during the day, there will be only limited requirement for lighting, for any night works and some evening/morning during winter if required. As such, lighting will be for relatively short periods and focussed on particular work areas, and in any case would only be experienced by the small number of birds which may be present in the harbour area. Moreover, these birds will be habituated to a degree lighting as the harbour and associated infrastructure are normally well lit. Lighting will therefore not give rise to significant effects on qualifying interests in respect of the conservation objectives of the SPA.

4.3.5 Mitigation

To address the potential for noise and vibration disturbance to qualifying interests of the SPA, the Contractor will employ a 'soft-start' to all noisy activities to avoid sudden and unexpected disturbance during construction. Each time the activity is started up after a period of inactivity, the noise levels will be gradually increased over a period of 30 minutes to allow birds to move away from the disturbance.

4.4 Appropriate Assessment Conclusion

Detailed assessment of the implications from the Proposed Development on the Inner Hebrides and the Minches SAC and Sound of Gigha SPA concluded their conservation objectives would not be compromised and there would be no AESI if the required mitigation is implemented.

5. In-Combination Assessment

5.1 Introduction

Article 48 of the Habitats Regulations requires that Appropriate Assessments of projects should include a consideration of other plans or projects which could affect site integrity in combination with the proposal under assessment.

Following screening, LSEs from the Proposed Development were identified for the Inner Hebrides and the Minches SAC and Sound of Gigha SPA. This section of the report describes the in-combination assessment that has been undertaken to identify whether there are any other plans and projects which could affect the integrity of these European sites in combination with the Proposed Development.

5.2 Approach to Assessment

Based on the scale and nature of works and the sensitivity of harbour porpoise to noise, 20km from Kennacraig along the coast (and excluding schemes on the Loch Fyne side of West Tarbert) was assessed as being an appropriate search area for plans or projects with the potential to cause in-combination adverse effects on the Inner Hebrides and the Minches SAC or Sound of Gigha SPA with the Proposed Development.

A search was undertaken on 12 April 2021 for consented or pending projects and plans within a two-year period of the search date, using the Argyll and Bute mapping tool on the planning portal (Argyll and Bute Council, 2021). The following exclusions applied to the search to identify relevant proposals for inclusion within the assessment:

- householder applications for improvements/extensions;
- local commercial and business applications for minor improvement works and alterations;
- change of use (where external building work is not required);
- applications for advertisement consent;
- consultation applications;
- enforcement actions; and
- applications that have been withdrawn.

5.3 Results

The only schemes identified are considered to have no identified pathways for effects with the Proposed Development, for example: formation of forest tracks; forest design plans; small-scale construction such as one or two dwellings or holiday lodges.

One currently undecided application (20/01342/PP) seeks to vary a condition of the existing planning permission for Corran Farm Quarry, Clachan to increase output sales tonnage from the existing hard rock quarry, from 15,000 tonnes to 45,000 tonnes. The site is located 6km southwest of the Proposed Development. SNH were consulted at the time of the original application, and no concerns were raised. Based on the information available there is no identified potential for in-combination effects with this or any other identified application.

6. Summary and Conclusions

6.1 Screening

Relevant European and Ramsar sites were selected by identifying ecological connectivity and the potential effects pathways from the project. Four sites were identified to be considered within the screening: Sound of Gigha SPA; Tarbert Woods SAC; Knapdale Lochs SPA; and Inner Hebrides and the Minches SAC.

Through screening, it was concluded that the Proposed Development has the potential to result in LSEs on qualifying features of the Sound of Gigha SPA and Inner Hebrides and the Minches SAC, therefore there was a requirement to progress to AA for those sites. No LSEs were identified on the remaining two sites.

6.2 Appropriate Assessment

It was identified that mitigation is necessary to safeguard the conservation objectives of harbour porpoise and four bird species, through prevention of significant disturbance from noise and vibration associated with the works (notably piling and dredging). A soft-start process is therefore recommended. This measure will also contribute to safeguarding the conversation of other ecological receptors.

With mitigation in place it is concluded that there will be no implications for the conservation objectives of the any European/Ramsar site, either alone or in combination with other plans and projects.

Although a precautionary approach has been taken in relation to the assessment, the Contractor may have need to amend elements of the work, for example modified methods or programme. If elements of the Proposed Development do change in nature or timing then a Not Environmentally Worse Than assessment will be undertaken by the Contractor, and NatureScot and/or Marine Scotland (as appropriate) will be consulted to confirm the protection of European and Ramsar sites is assured and that the conclusions of the HRA remain valid.

7. References

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Appendix A. - Figures

Notes:

1. Do not scale from this drawing.
2. All levels to chart datum.
3. All measurements are in mm unless noted otherwise.

Key:

- -5.5m CD proposed dredge area
- Sound of Gigha Special Protection Area (SPA)
- Dredge side slopes
- Proposed works boundary
- Proposed retaining wall

Rev	Rev. Date	Purpose of revision	Drawn	Checkd	Rev'd	Apprv'd
0	03/06/2021	First issue	CT1	EC1	SC1	PM

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Client: CMAL

Project: PORT ELLEN & KENNACRAIG OUTLINE DESIGN STUDY

Drawing title: KENNACRAIG PROPOSED WORKS GENERAL ARRANGEMENT

Drawing status: FOR INFORMATION

Scale	1:500 @ A1	DO NOT SCALE
Jacobs No.	B2383700	Rev 0
Client no.		

Drawing number: B2383700-KE-Fig 1

M:\Projects\B2383700 Port Ellen & Kennacraig Outline Design Study\1100 Design & Engineering\1102 Drawings\01 Preliminary\B2383700-KE-Fig 1 Rev 0 - Kennacraig - Sound of Gigha SPA.dwg - 03/06/2021 11:36:46 - Paper - GM024629

Knapdale Lochs SPA

Tarbert Woods SAC

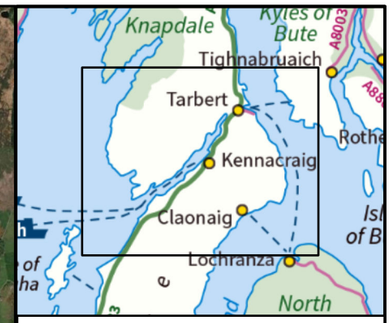
Tarbert Woods SAC

Tarbert Woods SAC

Sound of Gigha SPA

Inner Hebrides and the Minches SAC

N



Legend

- Project Boundary
- Proposed Retaining Wall
- Dredge Side Slopes
- Dredge Area

European/International Sites

- Special Protection Areas (SPA)
- Special Areas of Conservation (SAC)

0 1.5 3 6 9 12 Kilometres

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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
0	APR 21	For Information	GIS1	EC4	EC6	PM

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Client

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Project

Kennacraig Ferry Terminal

Drawing Title

Habitats Regulations Appraisal
European/International Sites
Sheet 1 of 1

Drawing Status	DRAFT
Scale @A3	1:85,000 **DO NOT SCALE**
Jacobs No.	B2395000
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Drawing Number

Figure 2