

# Appendices

A.	HRA Process	48
B.	ZOI and Designated Sites	51
C.	Wintering Bird Survey Report	52

# A. HRA Process

## A.1 HRA Process

The requirement for HRA arises in Scotland under The Conservation (Natural Habitats, &c.) Regulations 1994 (the Habitat Regulations<sup>43</sup>). These regulations were amended in 2019<sup>44</sup> by Scottish Ministers after the UK left the European Union. The amendments transferred designated European Sites (Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) sites), previously within the Natura 2000 network into UK National Network

As such existing EU guidance<sup>45</sup> and preceding case law from the European Court of Justice (ECJ)<sup>46 47 48</sup> remains valid as a source of direction and interpretation of the requirements of the legislation, although it should be noted that much case law has now been incorporated into guidance and/or best practice.

Under Regulation 48 of the Habitats Regulations where a plan or project is not directly connected with, or necessary to, the management of a designated site which may give rise to significant effects upon the site, a competent authority must make an assessment of the potential effects on the designated site and its conservation objectives, prior to consent for the plan or project being granted.

The HRA process consists of four stages, each stage being informed by the one preceding, to ensure an iterative and objective assessment. If the conclusion of Stage 1 Screening is that there will be no likely significant effects on any features of a European site, there is no requirement to undertake further stages. Similarly, if the Stage 2 Appropriate Assessment concludes there will be no adverse effect on integrity of the European site, then the assessment is concluded. The HRA stages are summarised below.

### A.1.1 Stage 1: Screening

The purpose of Stage 1 Screening is to assess the possible effects of the Proposed Development, alone or in combination with other projects to determine if these will have Likely Significant Effects (LSE) on any designated sites or their interest features.

During this stage, mitigation measures are not taken into consideration when assessing if the Proposed Development will have LSE. These are taken into account during Stage 2. If the assessment identifies that there are no LSE, HRA stages 2 to 4 are not needed, and the report will conclude at the screening stage.

---

<sup>43</sup> Or where reserved matters are concerned certain provisions of The Conservation of Habitats and Species Regulations 2017 as amended apply. These reserved matters include activities consented under sections 36 or 37 of the Electricity Act 1989; activities consented under the Pipe-lines Act, 1962; matters related to the exploration for, and exploitation of, deposits of oil and natural gas; and matters related to defence of the realm.

<sup>44</sup> The Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019

<sup>45</sup> Managing Natura 2000 Sites - The provisions of Article 6 of the 'Habitats' Directive 92/43/CEE (European Communities 2020)

<sup>46</sup> Landelijke Vereniging tot Behoud van de Waddenzee case/ Nederlandse Vereniging tot Bescherming van Vogels, European Court of Justice, Case C-127/02 'Waddenzee 2002'

<sup>47</sup> Sweetman et al v An Bord Pleanala, European Court of Justice, Case C-258/11 'Sweetman 2011'

<sup>48</sup> People over Wind/Sweetman v Coillte Teorante, European Court of Justice Case C-323/17 'People over Wind 2017'

The information was collected and reviewed in respect of each feature of interest and potential development scales of effect / impact pathways to inform an assessment of any likely significant effects. Key aspects and terms used in this assessment are defined below:

- **Likelihood:** Where an effect was considered to be potentially significant, then the assessment of its occurrence was based on the likelihood of it occurring and not certainty that it would occur. Effects are scoped in unless there was evidence to the contrary demonstrating that they would not occur, e.g., there being no valid pathway, or the absence of the species in that area, at that time.
- **Significance:** The significance of any effect is considered objectively, against the scale and nature of the impact in relation to those of that particular feature or condition and in relation to the extent of that feature or condition over the entire designated site. A significant effect within this assessment is one which, if it occurred, would lead to a decline in the quality or status of the habitats or distribution, abundance, etc. of feature(s) of interest.
- **In combination:** The assessment of in combination effects considers those projects or plans which:
  - Are currently in operation; and
  - Those which are actually proposed – defined by being a valid live planning application, or any referenced with a local plan where there is a strong likelihood of them being undertaken within a reasonable time period, specified within that plan.

To aid discussion within this report, in-combination effects are discussed at the end of Stage 2 to allow consideration of mitigation measures to be in place when considering other projects or plans.

### A.1.2 Stage 2: Appropriate Assessment

If LSE are identified in Stage 1 then a Stage 2 Appropriate Assessment will be undertaken. This assesses the implications of the project on designated sites conservation objectives. The information given must be extensive enough so the competent authority can undertake an Appropriate Assessment. Conservation objectives for the designated site, the conservation status of qualifying features and the potential effects of the project on the designated site must be included. The Stage 2 Appropriate Assessment will also include measures to avoid/mitigate impacts and will outline any residual effects if adverse effects from the project are likely.

### A.1.3 Stage 3: Assessment of Alternative Solutions

If avoidance or mitigation measures identified at Stage 2 are insufficient, then alternative methods will be needed to achieve the survey. This may include a different methodology.

### A.1.4 Stage 4: Imperative Reasons for Overriding Public Interest (IROPI)

In certain cases, there may be no alternative solution that will minimise or avoid impacts on the designated site, the designated site's priority species and/or habitats. In these cases, the outcomes of undertaking the project should consider the environmental or human health/safety benefits that it would bring. Compensatory measures to offset the impact of the project and maintain the integrity of the designated site must be evaluated and implemented prior to works, if IROPI are determined.

The HRA, specifically the detailed appropriate assessment stage, supports a decision by a 'Competent Authority' as to whether a proposed plan or would have an adverse effect on the

“integrity” of a designated site; ODPM<sup>49</sup> infers this to mean “the coherence of the site’s ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified”.

The decision is based upon the implications of a project on the conservation objectives of the site. These objectives set out the physical, chemical and biological thresholds, and limits of activity and disturbance, which must be met to maintain integrity. An adverse effect on integrity (AEOI) is likely to be one that results in a deterioration of conservation status with regard to the qualifying feature(s) for which it was designated.

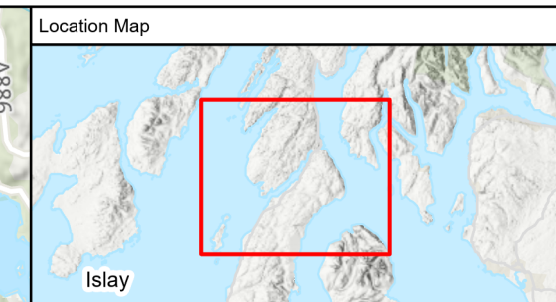
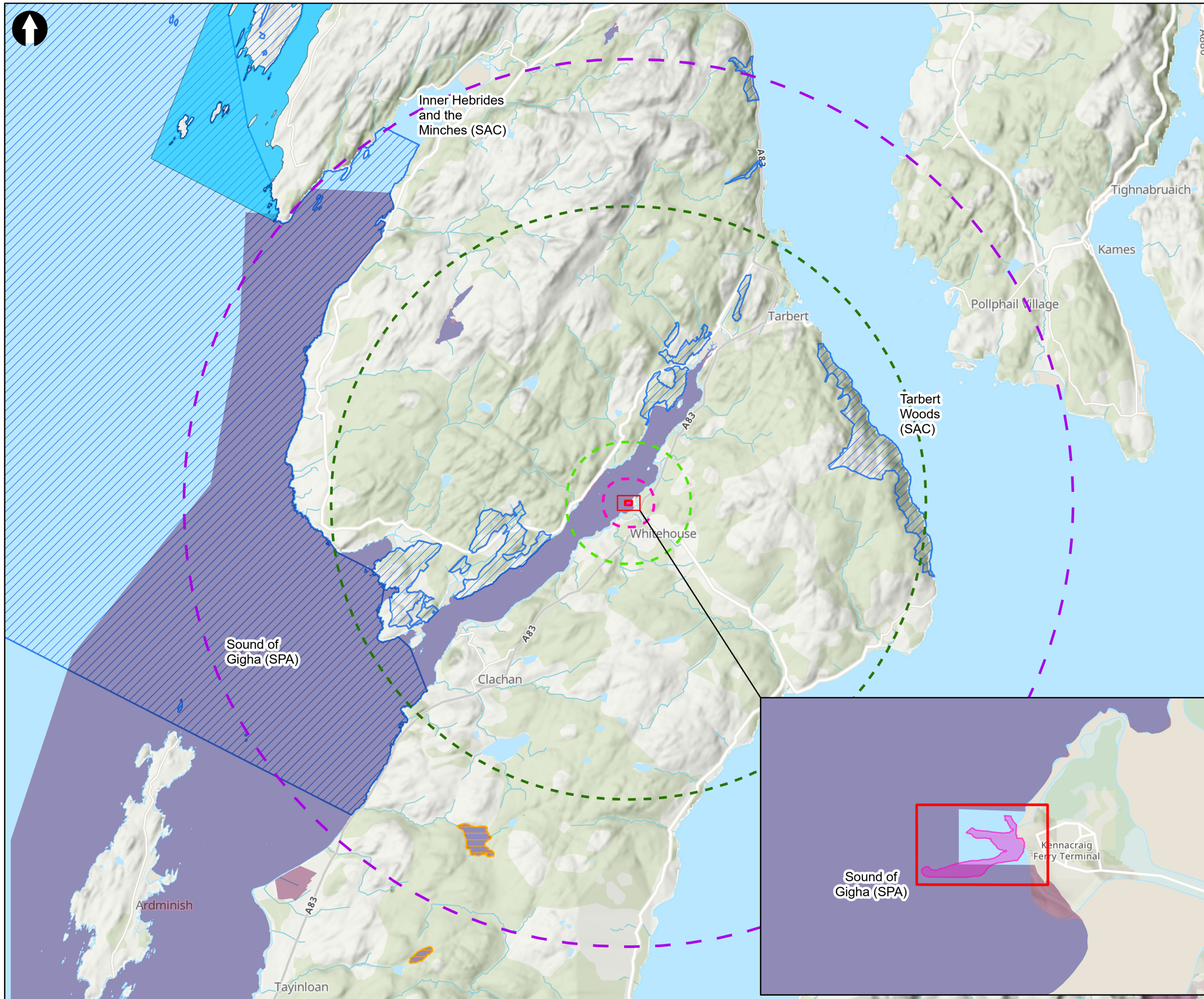
The assessment of effects on designated sites applies a precautionary principle, if any doubt exists as to the effect of projects (considering any necessary mitigation measures), then ‘no adverse effect on integrity’ cannot be concluded. In this situation alternative solutions must be sought. Where feasible alternatives do not exist then the project can only proceed on the basis of IROPI. This must be agreed by the Secretary of State and compensatory measures to offset damage/loss and to maintain the overall coherence of the European Site (including the wider UK National Network it resides in) must be secured and ecologically functional in advance of the damage.

---

<sup>49</sup> ODPM, 2005. Government Circular: Biodiversity and Geological Conservation-Statutory Obligations and Their Impact Within the Planning System 1 Office of the Deputy Prime Minister. Office of the Deputy Prime Minister Circular, 06/2005.

## **B. ZOI and Designated Sites**





**Key to Symbols**

- Indicative site boundary
- Dredging area
- 750m buffer - bird species sensitive to visual presence
- 2km buffer - designated site
- 10km buffer - hydrologically connected
- 15km buffer - JNCC pin pile effective deterrence range for cetaceans
- Marine protected area
- Ramsar site
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)

**Notes**

**Source**  
Contains SNH information licensed under the Open Government Licence v3.0.

**Service Layer Credits**  
Contains OS data © Crown Copyright and database right 2022  
Contains data from OS Zoomstack, Contains OS data © Crown Copyright and database right 2019

Rev	Date	Drawn	Description	Ch'k'd	App'd
01	17/02/2023	CD	For Information	IS	MT

**M M**  
**MOTT MACDONALD**

St Vincent Plaza  
319 St Vincent Street  
Glasgow G2 5LD  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com

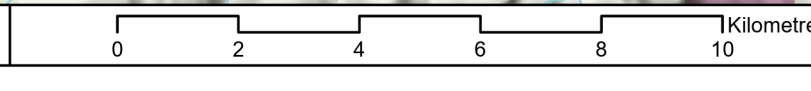
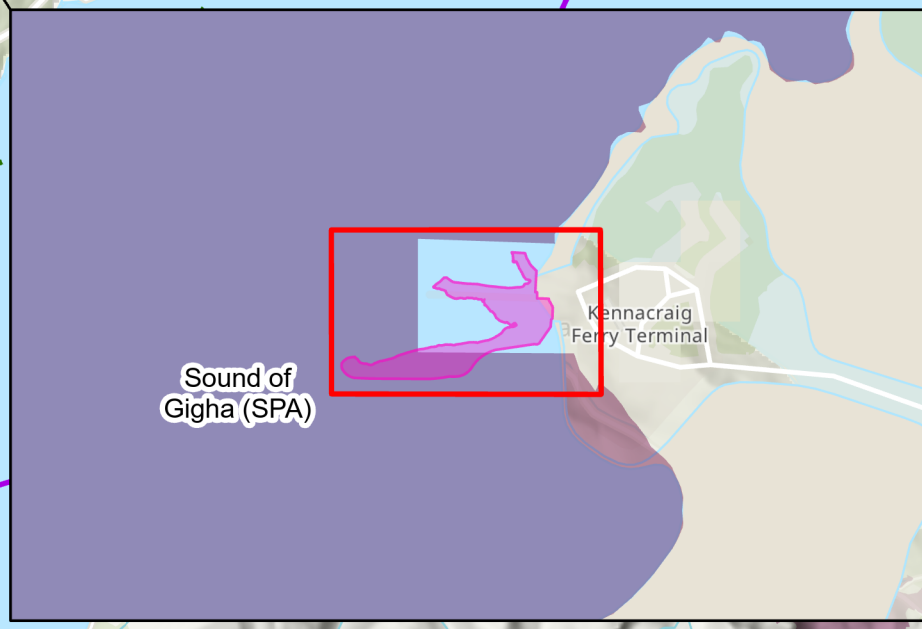
**Client**



**CMAL**  
Caledonian Maritime Assets Ltd  
Stòras Mara Còlleannach Eò

**Title**  
New Islay Vessel Port Enabling Works  
Kennacraig  
Zol and Designated Sites

Designed	IS/CD	Check	I Sartori
Drawn	C Donald	Coordination	I Sartori
GIS Check	T Graham	Approved	M Thompson
Scale at A3	Status	Rev	Security
1:125,000	INF	01	STD



Drawing Number  
100105612-MMD-00-KG-DR-Y-0009

## C. Wintering Bird Survey Report

A large teal graphic element on the left side of the page. It consists of a large triangle pointing downwards, which is partially cut off by a horizontal line. Below this line is a vertical rectangle that is also partially cut off by a diagonal line sloping downwards from the top-left corner to the right side.

# **New Islay Vessel Port Enabling Works**

Kennacraig Ferry Terminal Wintering Bird  
Baseline Report

March 2023



This page left intentionally blank for pagination.

Mott MacDonald  
St Vincent Plaza  
319 St Vincent Street  
Glasgow G2 5LD  
United Kingdom

T +44 (0)141 222 4500  
mottmac.com

# **New Islay Vessel Port Enabling Works**

**Kennacraig Ferry Terminal Wintering Bird  
Baseline Report**

March 2023

# Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	20.03.22	R Forrester	T Folland	C McPake	For issue

**Document reference:** 105612 |

**Information class:** Standard

---

This document is issued for the party which commissioned it and for specific purposes connected with the above-captioned project only. It should not be relied upon by any other party or used for any other purpose.

We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party which commissioned it.

---

# Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Background	1
1.2	Project Description	1
1.3	Purpose of this report	2
1.4	Legislation and Planning Policy	2
1.4.1	Habitats Regulations Appraisal	2
1.4.2	The biodiversity duty	3
1.4.3	National planning framework	3
<b>2</b>	<b>Methodology</b>	<b>5</b>
2.1	Desk Study	5
2.2	Field Surveys	5
2.2.1	Survey Area	5
2.2.2	Winter Wetland Bird Survey Methods	5
2.3	Data Analysis	7
2.3.1	Species Threshold Levels	7
2.4	Limitations	7
2.4.1	Desk Study	7
2.4.2	Field Surveys	8
<b>3</b>	<b>Results</b>	<b>9</b>
3.1	Desk Study	9
3.2	Field Surveys	9
3.2.1	Winter Bird Surveys	9
3.2.2	SPA Qualifying Features	9
3.2.3	Scottish Biodiversity List (SBL) Species	10
3.2.4	LBAP Species	11
3.2.5	IUCN threatened species (Great Britain)	11
<b>4</b>	<b>Conclusions</b>	<b>13</b>
<b>5</b>	<b>References</b>	<b>14</b>
<b>A.</b>	<b>Survey Area and Noise Disturbance Map</b>	<b>15</b>
<b>B.</b>	<b>Desk Study Data</b>	<b>16</b>
<b>C.</b>	<b>Survey Data</b>	<b>17</b>

## D. SPA Species Distribution Maps 19

### Tables

Table 2.1: Wintering bird survey metadata	7
Table 2.2: SPA qualifying species, 5yr mean winter peaks and 1% threshold	7

### Figures

Figure 1.1: Location of Kennacraig Ferry Terminal	1
Figure 1.2: Location of Kennacraig Ferry Terminal in relation to Sound of Gigha SPA	2
Figure 2.1: Survey area and noise disturbance buffer zones	<b>Error! Bookmark not defined.</b>
Figure 2.2: Winter Bird Survey 2022/23 Vantage Point (VP) locations	6

### Tables – Appendices

Table B.1: Argyll Bird Club records of SPA qualifying species at Kennacraig Ferry Terminal	16
Table C.2: All species recorded during 2022/23 winter bird surveys	17



# 1 Introduction

## 1.1 Background

Mott MacDonald Limited has been commissioned by Caledonian Maritime Assets Limited (CMAL) to conduct wintering bird surveys at Kennacraig Ferry Terminal.

Kennacraig Ferry Terminal is located at National Grid Reference (NGR) NR 81759 62531, on West Loch Tarbert, 5 miles southwest of Tarbert on the Kintyre peninsula, Argyll and Bute, as shown in **Figure 1.1**.

**Figure 1.1: Location of Kennacraig Ferry Terminal**



Source: Ordnance Survey Maps: Accessed March 2023

## 1.2 Project Description

To facilitate the future accommodation of a new, larger vessels (with deeper draught and higher displacement) at Kennacraig Ferry Terminal, the following upgrading and enabling works are planned:

- Upgrading of existing fenders including breaking concrete at one location.
- Construction of toe protection to support secant pile walls.
- Construction of piled wall.
- Installation of new vessel shore power and connections.

- Modification to the existing fixed ramp within the ferry terminal.
- Fabrication and erection of steel grillage at infill pier.
- Dredging of the seabed by backhoe dredger and barge. Area to be dredged will be approximately 6,894m<sup>3</sup> and will be confined within coordinates reported below.

Works are estimated to start in March 2024 and finish in May 2024.

### 1.3 Purpose of this report

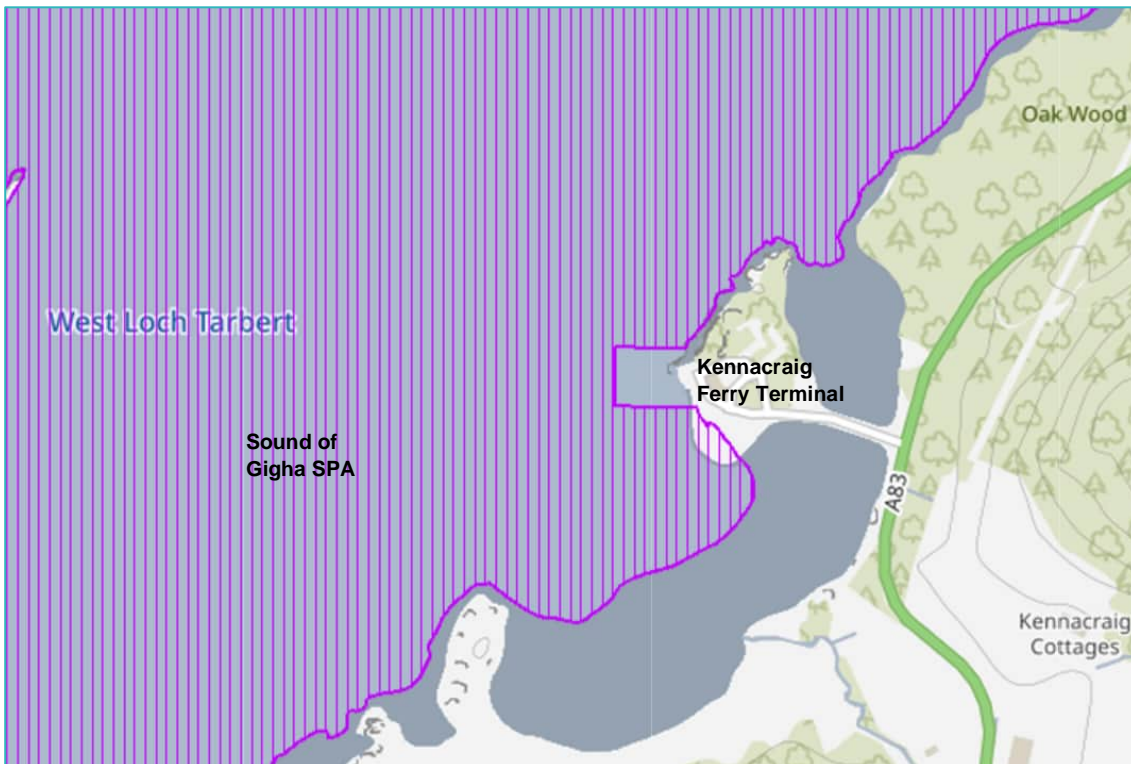
This report establishes the baseline for wintering birds for the purposes of the Habitats Regulations Appraisal (HRA) and to help inform the competent authority with regards to discharging their biodiversity duty and national planning policy with respect to biodiversity (ie wintering birds).

### 1.4 Legislation and Planning Policy

#### 1.4.1 Habitats Regulations Appraisal

Sound of Gigha (Special Protection Area (SPA) is located on the west coast of the Kintyre peninsula and is centred around the island of Gigha. It extends from Machrihanish Bay in the south to the entrance of Loch Caolisport off Knapdale to the north and includes West Loch Tarbert and the waters surrounding Kennacraig Ferry Terminal, see **Figure 1.2**

**Figure 1.2: Location of Kennacraig Ferry Terminal in relation to Sound of Gigha SPA**



Source: [SiteLink \(nature.scot\)](#)

The requirement for HRA arises in Scotland under The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) (*the Habitat Regulations*). Under Regulation 48 of the Habitats Regulations where a plan or project is not directly connected with, or necessary to, the management of a designated site which may give rise to significant effects upon the site, a competent authority, in this case, Argyll and Bute Council must make an assessment of the potential effects on the designated site and its conservation objectives.

The site qualifies under **Article 4.1** (of EC Directive 79/409 on the Conservation of Wild Birds) by regularly supporting a wintering population of European importance of the following Annex 1 species:

- Great northern diver *Gavia immer* (for the years 2004/05 to 2007/08) a mean peak annual wintering population of 505 individuals (20.2% of the GB population).
- Slavonian grebe *Podiceps auritus* (for the years 2008/09 to 2012/13) a mean peak annual wintering population of 37 individuals (3.4% of GB population).

The site further qualifies under **Article 4.2** by regularly supporting populations of European importance of the following migratory species:

- Common eider *Somateria mollissima* (for the years 2004/05 to 2007/08) a mean peak annual wintering population of 1,295 individuals (2.2% of the GB population).
- Red-breasted merganser *Mergus serrator* (for the years 2004/05 to 2007/08) a mean peak annual wintering population of 117 individuals (1.4% of the GB Population).

#### 1.4.2 The biodiversity duty

The local authority biodiversity duty in Scotland is a legal requirement that requires local authorities to conserve and enhance biodiversity in their area. The duty is set out in the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2011. Under the duty, local authorities are required to:

- Prepare and publish a biodiversity duty report that sets out how they will conserve and enhance biodiversity in their area.
- Take biodiversity into account when carrying out their functions, including planning, land management, and procurement.
- Promote public awareness and understanding of biodiversity and encourage public participation in biodiversity conservation.
- Work in partnership with other organizations, including communities, to conserve and enhance biodiversity.
- Report on their progress in fulfilling the duty in their annual reports.

#### 1.4.3 National planning framework

National Planning Policy 4 (NPP4) is a planning policy document published by the Scottish Government that provides guidance on planning for natural heritage. The policy aims to ensure that development takes place in a way that protects and enhances Scotland's natural heritage, including its wildlife, habitats, and landscapes.

NPP4 outlines the following key principles for protecting natural heritage:

- Development should avoid significant adverse impacts on natural heritage assets and should aim to enhance or maintain them wherever possible.
- Where development is proposed in or near sensitive natural heritage areas, it should be accompanied by an assessment of its potential impacts.

- Development that has a significant impact on natural heritage should only be permitted if there are no reasonable alternatives and if the benefits of the development outweigh the harm.
- Planning authorities should work with developers to identify opportunities for enhancing natural heritage as part of development proposals.
- Planning authorities should use spatial planning to identify and protect areas of particular natural heritage importance.

## 2 Methodology

### 2.1 Desk Study

A request was made to the Argyll Bird Club for the provision of recent bird records for all species (2017-2021) from within 2km of Kennacraig Ferry Terminal.

### 2.2 Field Surveys

#### 2.2.1 Survey Area

The survey area for the 2022/23 winter bird surveys was designed to capture all intertidal and open water habitat within a set radius of the planned works at Kennacraig Ferry Terminal and was devised in accordance with the *Waterbird Disturbance Mitigation Toolkit: Informing Estuarine Planning & Construction Projects* N Cutts K Hemingway & J Spencer Version 3.2, March 2013.

The size of the survey area is based on the assumption that the Zone of Influence (ZoI) of the planned works (piling and dredging), in relation to noise disturbance impacts to wintering waterbirds, may extend up to 430m from the works at the ferry terminal as shown in detail in **Appendix A**.

Noise levels below 55dBLAeq are considered 'unlikely to cause response in bird using the fronting intertidal area'. A noise level of below 72dBLAeq but above 55dBLAeq is considered to be the range in which 'moderate noise disturbance is typified' for some birds.

The distance from the construction noise source to the 72dBLAeq and 55dBLAeq noise contours has been calculated based on the following Sound Power Levels and on the acoustically 'Hard Ground' (water is acoustically hard) distance adjustment provided by F.1 of BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 1: Noise:

- Vibro driven sheet piles (88dBA at 10m).
- Dredging by Backhoe (69dBA at 10m).
- Dredging by Cutter Suction Dredge (84dBA at 10m).
- Vibro driven Timber Piles (88dBA at 10m).
- Augured Concrete Piles (80dBA at 10m).

#### 2.2.2 Winter Wetland Bird Survey Methods

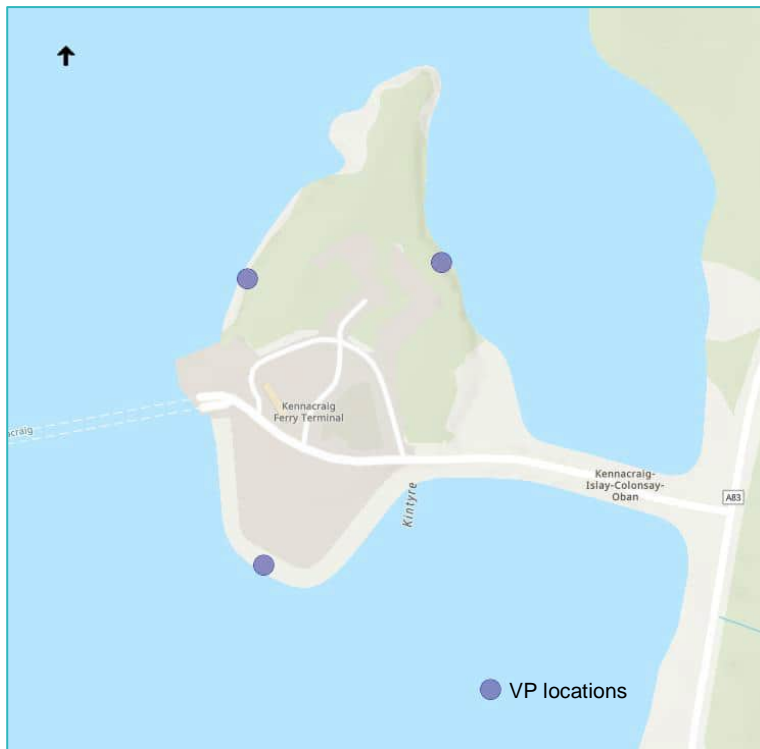
The 2022/23 surveys used an adapted WeBS (Wetland Bird Surveys) methodology as described by Gilbert *et al* (1998). Surveys were conducted twice monthly across the core winter period of November 2022 to February 2023.

Due to the propensity of some species to regularly move between the bays to the north and south of the ferry terminal, a survey strategy was devised that combined short duration vantage point (VP) counts (see **Figure 2.2**), with a walkover survey (along a pre-determined route between the VP locations) to ensure full coverage of the survey area whilst minimising the risk of the double or under counting of birds.



Surveyors followed the 'look- see' method per Bibby *et al.* (2000), and recorded all incidences of waterbirds<sup>1</sup>, their numbers and locations, within the survey area. Birds present beyond the survey area were recorded only when they could be confidently identified.

**Figure 2.1: Winter Bird Survey 2022/23 Vantage Point (VP) locations**



Source: Contains OS data © Crown Copyright and database right 2020

Surveys were undertaken across a range of tidal states, and the starting point of each walkover survey and the direction walked was reversed on alternate visits to avoid potential temporal recording bias (per Marchant, 1983).

In order to maintain a relatively consistent ability to detect winter bird activity, the surveys were conducted where practicable in optimal or near optimal conditions and avoided periods of heavy rain and/or strong wind.

The survey dates, start/finish times and tide and weather conditions for each survey are presented in **Table 2.1**.

---

<sup>1</sup> As defined by Wetland International (Rose and Scott, 1997), includes divers, grebes, cormorants, heron, swans, geese, ducks, rails, waders, gulls and terns.

**Table 2.1: Wintering bird survey metadata**

Survey number	Survey date	Start / finish time (24hr)	Low tide time (24hr)	High tide time (24hr)	Tidal state rising ↑ or falling ↓	Wind speed/direction (Beaufort Scale)	Cloud cover (Oktas)	Precipitation
1	22.11.22	09.00 – 12.00	08.36	14.34	↑	3 S - SE	3/8	Dry
2	28.11.22	10.00 – 13.00	13.20	18.48	↓	3 SW	8/8	Light rain
3	12.12.22	10.00 – 13.00	12.46	18.19	↓	1 N	6/8	Dry
4	19.12.22	09.00 – 12.00	06.06	12.22	↑	4 S - SW	3/8	Dry
5	13.01.23	10.00 – 13.00	14.08	19.42	↓	3 W - SW	4/8	Dry
6	31.01.23	09.00 – 12.00	05.59	12.37	↑	5 S - SW	7/8	Light rain
7	08.02.23	12.00 – 15.00	12.12	17.50	↑	4 W - SW	4/8	Dry
8	16.02.23	11.00 – 14.00	06.13	12.54	↑ ↓	3 W - SW	8/8	Dry

## 2.3 Data Analysis

### 2.3.1 Species Threshold Levels

In order to provide the HRA with quantitative thresholds of significance, the mean<sup>2</sup> peak counts of SPA qualifying features recorded across all 2022/23 survey visits were calculated and assessed against a threshold of 1% of the peak winter count numbers (of SPA species) at the time of designation (**Table 2.2**).

**Table 2.2: SPA qualifying feature, 5yr mean winter peaks and 1% threshold**

SPA Qualifying Feature	SPA 5yr mean winter peaks (no. of individuals)	1% threshold (no. of individuals)
Great northern diver	505	5
Slavonian grebe	37	3.7
Red-breasted merganser	117	1.1
Eider	1,295	12.9

## 2.4 Limitations

### 2.4.1 Desk Study

Together with a data request to the Argyll Bird Club, Wetland Bird Survey (WeBS) data was also sought from the British Trust for Ornithology (BTO), and annual peak counts data for West Loch Tarbert from the 2019/20 WeBS report was received. However, the data provided was very limited, with the last counts being undertaken between 2011/12 – 2015/16. The data included records from the entire West Loch Tarbert which made the extraction of data relevant to the survey area and potential zone of influence of the works impossible, hence these records have not been used in this report.

The records provided by the Argyll Bird Club, although more specific to Kennacraig Ferry Terminal, do not represent a full and complete species list for the area and the absence of a

<sup>2</sup> sum of peak monthly counts divided by the number of survey visits.

species or habitat record does not prove it is not present. Records are not often collected as a result of systematic surveys and therefore geographic, temporal (annual and seasonal) and species coverage is not often representative. However, these records combined with field survey data provide a good understanding of bird species and numbers likely to be present within the Zol of the planned works during the winter and which may potentially be impacted by the works.

#### 2.4.2 Field Surveys

The field results presented in this report are a snapshot of the current wintering community within the survey area during November – December 2022 and January - February 2023.

Although efforts were made to capture and survey during a variety of tidal states, temporal constraints relating to the short length of winter days and requirement to survey in suitable weather conditions, resulted in inevitable gaps in the tidal cycle.

## 3 Results

### 3.1 Desk Study

A species list containing records of 86 species was returned from the Argyll Bird Club. The data set included records of SPA qualifying features including red-breasted merganser, eider and notably Slavonian grebe which was not recorded during the 2022/23 surveys. Records relevant to this report have been extracted and are presented in **Table B.1** in **Appendix B**.

### 3.2 Field Surveys

#### 3.2.1 Winter Bird Surveys

In summary, a total of 27 species of waterbird was recorded during the 2022/23 winter bird surveys at Kennacraig Ferry Terminal. A full species list is provided in **Table C.1** in **Appendix C**.

Records of species for which there are statutory instruments governing their protection and a duty to conserve and/or are considered of conservation importance (herein referred to collectively as 'notable species') include the following (note that some species are cited in more than one statutory and conservation categories):

- Three Sound of Gigha SPA qualifying features (great northern diver, red-throated merganser, and eider)
- Five Scottish Biodiversity List species (SBL).
- 11 species where the IUCN2<sup>3</sup> non-breeding population assessment is Endangered or Vulnerable.
- Four Argyll and Bute Local Biodiversity Action Plan priority species.

#### 3.2.2 SPA Qualifying Features

Peak counts of SPA qualifying features across all survey visits are presented in **Table 3.1** and discussed individually below, and an assessment of the significance of these numbers is provided in **Table 3.2**.

##### 3.2.2.1 Great northern diver

Great northern diver was recorded within the survey area on all but one of the survey visits and across all months (November-February). Observations were limited to 1 – 2 individuals, with a peak count of three birds in early January 2023 (Visit 5). A mean peak count of 1.5 individuals was calculated from observations across all survey visits, which is below the 1% significance threshold of five birds.

All observations were of foraging individuals in areas of deep water to the west of the ferry terminal, with individuals regularly observed foraging/diving within 50m of the existing jetty (and within the planned dredging areas) when vacant of ferry vessels. Avoidance of the areas around the jetty was noted during ferry movements and/or when ferries were docked with engines running.

---

<sup>3</sup> Stanbury, A., and Eaton. M. *et al.* 2021)

### 3.2.2.2 Red-breasted merganser

Red-breasted merganser was recorded within the survey area on all survey visits and across all months (November-February). Observations ranged from pairs of birds to small groups, with a peak count of 14 birds recorded in November 2022 (Visit 1). A mean of peak counts of 5.75 individuals (4.9% of SPA population) was calculated from observations across all survey visits, which is above the 1% significance threshold of 1.1 birds.

Foraging/diving behaviour was regularly observed in the shallow waters of the bay to the south of the ferry terminal, and regular movements of birds the bay and the open water habitats to the west and north of the jetty were noted, with groups often swimming under the jetty when vacant of ferry vessels. Avoidance of the areas around the jetty was noted during ferry movements and/or when ferries were docked with engines running, with birds often taking to the wing to traverse the jetty area.

### 3.2.2.3 Slavonian grebe

No Slavonian grebe were recorded within the survey area during the 2022/23 winter surveys. However, the desk study data provided by the Argyll Bird Club has provided records of the species presence at Kennacraig Ferry Terminal, with up to six individuals recorded in March 2019. If present within the survey area, six individuals would comprise 16.2% of the estimated SPA population of only 37 individuals.

### 3.2.2.4 Eider

Eider was only recorded within the survey area on a single survey visit (Visit 7, early February 2023) with an observation of two male birds loafing on a rocky outcrop at the northern tip of Eilean Ceann na Creige. The desk study has provided records of similarly low numbers of the species at the ferry terminal, with a peak count of four individuals recorded in November 2021. This would represent only 0.3% of the cited SPA population of 1,295 individuals.

## 3.2.3 Scottish Biodiversity List (SBL) Species

As well as great northern diver, four other species listed on the SBL were recorded during the 2022/23 surveys. These are, red-throated diver *Gavia stellata*, curlew *Numenius arquata*, black-headed gull *Chroicocephalus ridibundus*, and herring gull *Larus argentatus*.

### 3.2.3.1 Red-throated diver

Red-throated diver was recorded only on a single survey visit (Visit 2, late November 2022) with an observation of a single individual, foraging/diving on the edge of the survey area to the north-west of the ferry terminal.

### 3.2.3.2 Curlew

Curlew was recorded within the survey area on all survey visits and across all months (November-February). Observations ranged from single birds to small groups, with a peak count of 18 birds recorded in January 2023 (Visit 6). Foraging behaviour was observed in the intertidal bays to the north and south of the ferry terminal, with regular movements of birds between these areas. High tide roosting was observed around the mouth of the Redhouse Burn, on the southern edge of the survey area.

### 3.2.3.3 Black-headed gull

Black-headed gull was recorded within the survey area on all survey visits and across all months (November-February). Observations ranged from single birds to small groups, with a



peak count of 13 birds recorded in January 2023 (Visit 6). Although not exclusively, the majority of observations related to foraging individuals within the bays to the north and south of the ferry terminal, with regular movements of birds between these areas, or roosting/loafing birds around the mouth of the Redhouse Burn, on the southern edge of the survey area.

#### 3.2.3.4 Herring gull

Herring gull was recorded within the survey area on all survey visits and across all months (November-February). Observations ranged from single birds to small groups, with a peak count of nine birds (adults and juveniles) recorded in January 2023 (Visit 6). Birds were often recorded on the wing, loafing on open water or on ferry terminal infrastructure (buildings, jetty, marshalling area etc), or otherwise foraging within the bays to the north and south of the ferry terminal.

#### 3.2.4 LBAP Species

In addition to curlew, herring gull and red-throated diver (discussed above), redshank *Tringa totanus* was also recorded within the survey area on all survey visits and across all months (November-February). Observations ranged from single birds to small groups, with a peak count of seven birds recorded in late December 2022 (Visit 4). Foraging behaviour was observed in the intertidal bays to the north and south of the ferry terminal, with regular movements of birds between these areas. High tide roosting was observed around the mouth of the Redhouse Burn, on the southern edge of the survey area.

#### 3.2.5 IUCN threatened species (Great Britain)

Of the 27 species recorded during the 2022/23 winter bird surveys, the non-breeding (n-br) populations of 11 of these species have been assessed by the IUCN<sup>4</sup> as either Endangered (EN) or Vulnerable (VU) in Great Britain.

- Eider (EN)
- Herring gull (EN)
- Great black-backed gull *Larus marinus* (EN)
- Shelduck *Tadorna Tadorna* (VU)
- Mallard *Anas platyrhynchos* (VU)
- Goldeneye *Bucephala clangula* (VU)
- Red-breasted merganser
- Oystercatcher *Haematopus ostralegus* (VU)
- Common snipe *Gallinago gallinago* (VU)
- Greenshank *Tringa nebularia* (VU)
- Black-headed gull (VU)

---

<sup>4</sup> The second IUCN Regional Red List review of extinction risk for Great Britain. (Stanbury, A., and Eaton. M. *et al.* 2021)

**Table 3.1: SPA Qualifying features recorded during the 2022/23 wintering bird surveys**

Species	Peak Counts								Mean Count
	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6	Visit 7	Visit 8	
Great northern diver	2	1	1	2	3	1	2	0	1.5
Slavonian grebe	0	0	0	0	0	0	0	0	0
Red-breasted merganser	14	6	9	5	2	3	5	2	5.75
Eider	0	0	0	0	0	0	2	0	0.25

**Table 3.2: Assessment of significance of counts of SPA qualifying features**

SPA Qualifying Feature	SPA Mean Winter Peak	1% Species Threshold	Mean Peak 2022/23 Winter Surveys	Peak Count 2017-2021 Desk Study data	% of SPA Population	Conclusion (significant / not significant)
Great northern diver	505	5	1.5	-	0.3	Not significant
Slavonian grebe	37	3.7	0	6	16.2	Significant
Red-breasted merganser	117	1.1	5.75	-	4.9	Significant
Eider	1,295	12.9	2	-	0.15	Not significant

## 4 Conclusions

The winter bird surveys and desk study have confirmed the presence of the following SPA qualifying features within the zone of influence of the proposed project at Kennacraig Ferry Terminal:

- Great northern diver.
- Red-breasted merganser.
- Slavonian grebe.
- Eider.

Using the 1% threshold level as a quantitative measure of the likely presence of significant numbers of SPA qualifying features within the survey area, two species, red-breasted merganser (4.9%) and Slavonian grebe (16.2%), have been assessed as being present in *significant* numbers.

Additionally, the following notable species are likely to occur regularly within the zone of influence of the proposed project and should be given consideration in planning:

- Shelduck (VU).
- Mallard (VU).
- Goldeneye (VU).
- Red-throated diver (SBL).
- Curlew (SBL, LBAP) .
- Oystercatcher (VU).
- Common snipe (VU).
- Greenshank (VU).
- Herring gull (SBL, EN, LBAP).
- Great black-backed gull (EN).
- Black-headed gull (SBL, VU).

## 5 References

Bibby, C.J., Burgess, N.D. and Hill, D.A. (2000) *Bird Census Techniques: 2nd Edition*. London: Academic Press.

Cutts, N., Hemingway, K. and Spencer, J. (2013) *Waterbird Disturbance Mitigation Toolkit: Informing Estuarine Planning & Construction Projects Version 3.2, March 2013*. Available at: [https://www.tide-toolbox.eu/tidetools/waterbird\\_disturbance\\_mitigation\\_toolkit/](https://www.tide-toolbox.eu/tidetools/waterbird_disturbance_mitigation_toolkit/) (Accessed 14 March 2023).

Gilbert, G., Gibbons, D.W. and Evans, J. (2011) *Bird Monitoring Methods: a manual of techniques for key UK species*. Sandy: RSPB.

Marchant, J.H., 1983. Common Birds Census Instructions. Tring: British Trust for Ornithology.

Rose, P.M. & Scott, D.A. 1997. Waterfowl Population Estimates - Second Edition. Wetlands International Publ. 44, Wageningen, The Netherlands.

Stanbury, A., and Eaton, M. *et al.* (2021) The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114 • December 2021 • 723–747

## A. Survey Area and Noise Disturbance Map





Key to Symbols

- Site boundary
- 7m buffer (72dB  $L_{Aeq,T}$  Contour - High Level Disturbance Stimuli)
- 50m buffer (55dB  $L_{Aeq,T}$  Contour - Moderate Disturbance Stimuli)
- 65m buffer (72dB  $L_{Aeq,T}$  Contour - High Level Disturbance Stimuli)
- 430m buffer (55dB  $L_{Aeq,T}$  Contour - Moderate Disturbance Stimuli)

Notes

Source:  
Noise buffers produced by Mott MacDonald, 2023.

Service Layer Credits  
Maxar, Microsoft, Contains OS data © Crown Copyright and database right 2022  
Contains data from OS Zoomstack, Contains OS data © Crown Copyright and database right 2019

Rev	Date	Drawn	Description	Ch'k'd	App'd
01	17/03/2023	CD	For Information	RF	CM

**M** **M**  
**MOTT** **MACDONALD**

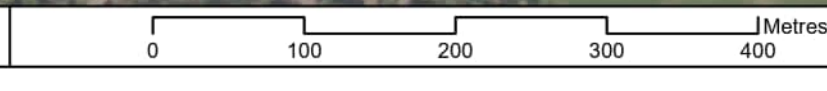
St Vincent Plaza  
319 St Vincent Street  
Glasgow G2 5LD  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com



Title

New Islay Vessel Port Enabling Works  
Kennacraig Winter Bird Survey  
Appendix A  
Survey Area and Noise Disturbance Buffers

Designed	R Forrester	Check	R Forrester
Drawn	C Donald	Coordination	R Forrester
GIS Check	T Graham	Approved	C McPake
Scale at A3	Status	Rev	Security
1:5,000	INF	01	STD



## B. Desk Study Data

**Table B.1: Argyll Bird Club records of SPA qualifying features at Kennacraig Ferry Terminal**

Species	Scientific Name	Date	Grid ref	Count
Eider	<i>Somateria mollissima</i>	19/10/2021	NR8162	3
Eider	<i>Somateria mollissima</i>	06/11/2021	NR8162	4
Red-breasted Merganser	<i>Mergus serrator</i>	10/09/2019	NR8262	Present
Red-breasted Merganser	<i>Mergus serrator</i>	05/02/2020	NR8162	6
Red-breasted Merganser	<i>Mergus serrator</i>	05/03/2020	NR8162	15
Red-breasted Merganser	<i>Mergus serrator</i>	17/10/2021	NR8162	Present
Red-breasted Merganser	<i>Mergus serrator</i>	19/10/2021	NR8162	3
Red-breasted Merganser	<i>Mergus serrator</i>	22/10/2021	NR8162	12
Red-breasted Merganser	<i>Mergus serrator</i>	31/10/2021	NR8162	7
Red-breasted Merganser	<i>Mergus serrator</i>	15/11/2021	NR8162	3
Slavonian Grebe	<i>Podiceps auritus</i>	01/03/2019	NR8162	6
Slavonian Grebe	<i>Podiceps auritus</i>	04/01/2020	NR8162	2



## C. Survey Data

**Table C.1: All species recorded during 2022/23 winter bird surveys**

Common name	Scientific name	SPA Qualifying Feature	Scottish Biodiversity List	Annex 1	LBAP	IUCN2 non-breeding (n-br) population assessment <sup>5</sup>	Birds of Conservation Concern 5
Mute swan	<i>Cygnus olor</i>					LC	Green
Shelduck	<i>Tadorna tadorna</i>					VU	Green
Wigeon	<i>Anas penelope</i>					NT	Amber
Mallard	<i>Anas platyrhynchos</i>					VU	Amber
Teal	<i>Anas crecca</i>					LC	Amber
<b>Eider</b>	<b><i>Somateria mollissima</i></b>	✓				EN	Amber
Long-tailed duck	<i>Clangula clangula</i>					NT	Red
Goldeneye	<i>Bucephala clangula</i>					VU	Red
<b>Red-breasted merganser</b>	<b><i>Mergus serrator</i></b>	✓				VU	Amber
Goosander	<i>Mergus merganser</i>					LC	Green
Red-throated diver	<i>Gavia stellata</i>		✓	✓	✓	LC	Green
<b>Great northern diver</b>	<b><i>Gavia immer</i></b>	✓	✓	✓		LC	Amber
Cormorant	<i>Phalacrocorax carbo</i>					LC	Green
Shag	<i>Phalacrocorax aristotelis</i>					EN*	Red
Grey heron	<i>Ardea cinerea</i>					LC	Green
Little grebe	<i>Tachybaptus ruficollis</i>					LC	Green
Little egret	<i>Egretta garzetta</i>			✓		LC	Green

<sup>5</sup> Abbreviations IUCN threat status categories: CR (Critically Endangered); EN (Endangered); VU (Vulnerable); NT (Near-Threatened); LC (Least Concern); DD (Data Deficient); NE (Not Evaluated); n-br (non-breeding) \*species assessment.

Common name	Scientific name	SPA Qualifying Feature	Scottish Biodiversity List	Annex 1	LBAP	IUCN2 non-breeding (n-br) population assessment <sup>5</sup>	Birds of Conservation Concern 5
Oystercatcher	<i>Haematopus ostralegus</i>					VU	Amber
Snipe	<i>Gallinago gallinago</i>					VU	Amber
Curlew	<i>Numenius arquata</i>		✓		✓	EN*	Red
Greenshank	<i>Tringa nebularia</i>					VU	Amber
Redshank	<i>Tringa totanus</i>				✓	NT	Amber
Black-headed gull	<i>Chroicocephalus ridibundus</i>		✓			VU	Amber
Common gull	<i>Larus canus</i>					LC	Amber
Great black-backed gull	<i>Larus marinus</i>					EN	Amber
Herring gull	<i>Larus argentatus</i>		✓		✓	EN	Red
Black guillemot	<i>Cepphus grylle</i>					LC*	Amber

## D. SPA Species Distribution Maps





**Key to Symbols**

- Site boundary
- 7m buffer (72dB L<sub>Aeq,T</sub> Contour - High Level Disturbance Stimuli)
- 50m buffer (55dB L<sub>Aeq,T</sub> Contour - Moderate Disturbance Stimuli)
- 65m buffer (72dB L<sub>Aeq,T</sub> Contour - High Level Disturbance Stimuli)
- 430m buffer (55dB L<sub>Aeq,T</sub> Contour - Moderate Disturbance Stimuli)
- November survey 1
- November survey 2
- December survey 1
- December survey 2
- January survey 1
- January survey 2
- February survey 1

**Notes**

Source:  
Noise buffers produced by Mott MacDonald, 2023.

Service Layer Credits  
Maxar, Microsoft, Contains OS data © Crown Copyright and database right 2022  
Contains data from OS Zoomstack, Contains OS data © Crown Copyright and database right 2019

Rev	Date	Drawn	Description	Ch'k'd	App'd
01	17/03/2023	CD	For Information	RF	CM

**MOTT MACDONALD**

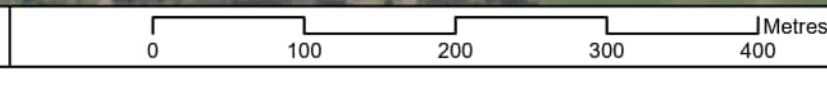
St Vincent Plaza  
319 St Vincent Street  
Glasgow G2 5LD  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com



**Title**

New Islay Vessel Port Enabling Works  
Kennacraig Winter Bird Survey  
Appendix D  
Great Northern Diver Observations

Designed	R Forrester	Check	R Forrester
Draw'n	C Donald	Coordination	R Forrester
GIS Check	T Graham	Approved	C McPake
Scale at A3	Status	Rev	Security
1:5,000	INF	01	STD



Drawing Number  
100105612-MMD-00-KG-DR-Y-0011





**Key to Symbols**

- Site boundary
- 7m buffer (72dB L<sub>Aeq,T</sub> Contour - High Level Disturbance Stimuli)
- 50m buffer (55dB L<sub>Aeq,T</sub> Contour - Moderate Disturbance Stimuli)
- 65m buffer (72dB L<sub>Aeq,T</sub> Contour - High Level Disturbance Stimuli)
- 430m buffer (55dB L<sub>Aeq,T</sub> Contour - Moderate Disturbance Stimuli)
- November survey 1
- November survey 2
- December survey 1
- December survey 2
- January survey 1
- January survey 2
- February survey 1
- February survey 2

**Notes**

Source:  
Noise buffers produced by Mott MacDonald, 2023.

Service Layer Credits  
Maxar, Microsoft, Contains OS data © Crown Copyright and database right 2022  
Contains data from OS Zoomstack, Contains OS data © Crown Copyright and database right 2019

Rev	Date	Drawn	Description	Ch'k'd	App'd
01	17/03/2023	CD	For Information	RF	CM

**MOTT MACDONALD**

St Vincent Plaza  
319 St Vincent Street  
Glasgow G2 5LD  
United Kingdom  
T +44 (0)20 8774 2000  
W mottmac.com

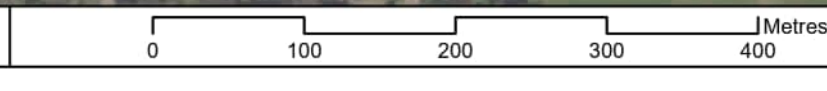


**Title**

New Islay Vessel Port Enabling Works  
Kennacraig Winter Bird Survey  
Appendix D  
Red-Breasted Merganser Observations

Designed	R Forrester	Check	R Forrester
Drawn	C Donald	Coordination	R Forrester
GIS Check	T Graham	Approved	C McPake
Scale at A3	Status	Rev	Security
1:5,000	INF	01	STD

© Mott MacDonald Ltd.  
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.  
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.



Drawing Number  
100105612-MMD-00-KG-DR-Y-0012







