

[Redacted]  
Marine Scotland  
Licensing Operations Team  
375 Victoria Road  
ABERDEEN  
AB11 9DB

Our ref 169719/ec/003  
Telephone [Redacted]  
E-mail [Redacted]

Sent by email to: ms.majorprojects@gov.scot

15 August 2018

Dear Sir / Madam

**Request for a Screening Opinion under The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017  
Ardrossan Harbour Improvements**

We write on behalf of our clients, Ardrossan Harbour Company Ltd. (AHCL), with reference to proposed improvements at Ardrossan Harbour.

We therefore request that Marine Scotland, as regulatory authority, formally adopt a screening opinion under Regulation 10 (1) of the above Regulations. In accordance with the requirements of Regulation 10 we have attached an environmental review which describes the nature and purpose of the project, the proposed construction work, a desk-based review of the possible effects on the environment and a site location plan identifying the land to which the proposed development relates.

Should you require further information to assist in this matter please do not hesitate to contact us.

Yours sincerely  
**for EnviroCentre Ltd**

(issued electronically)

[Redacted]  
**Principal Consultant**

[Redacted]  
**Director**

Enc: Ardrossan Harbour Upgrade Environmental Review

CC: North Ayrshire Council (NAC)

## **Ardrossan Terminal Upgrade Environmental Review**



**August 2018**

# Ardrossan Terminal Upgrade

## Environmental Review

Client: Ardrossan Harbour Company Limited

Document number: 8297

Project number: 169719j

Status: For Consultation Prior to Submission

Author: [Redacted]

Reviewer:

Date of issue: 7 August 2018

### Glasgow

Craighall Business Park  
8 Eagle Street  
Glasgow  
G4 9XA  
0141 341 5040  
[info@envirocentre.co.uk](mailto:info@envirocentre.co.uk)  
[www.envirocentre.co.uk](http://www.envirocentre.co.uk)

### Aberdeen

Banchory Business  
Centre  
Burn O'Bennie Road  
Banchory  
AB31 5ZU  
01330 826 596

### Inverness

Alder House  
Cradlehall Business Park  
Inverness  
IV2 5GH  
01463 794 212

### Edinburgh

Suite 114  
Gyleview House  
3 Redheughs Rigg  
Edinburgh  
EH12 9DQ  
0131 516 9530

This report has been prepared by EnviroCentre Limited with all reasonable skill and care, within the terms of the Contract with Ardrossan Harbour Company Limited ("the Client").



## Contents

|     |   |    |
|-----|---|----|
| 1   | Introduction .....                                | 1  |
| 1.1 | Background .....                                  | 1  |
| 1.2 | Scope of Report .....                             | 1  |
| 1.3 | Report Usage .....                                | 1  |
| 2   | Site Setting and Proposed Development .....       | 2  |
| 3   | Environmental Licenses .....                      | 5  |
| 3.1 | Environmental Impact Assessment Regulations ..... | 5  |
| 3.2 | Marine Licence Requirements (Discussion) .....    | 6  |
| 3.3 | Discharges to Water Environment .....             | 7  |
| 4   | Potential Environmental Effects .....             | 8  |
| 5   | Summary of Opinion .....                          | 13 |

## Appendices

- A Drawings

## Tables

|   |   |
|---|---|
| Table 3-1: Interpretation of Schedule 2 .....                           | 6 |
| Table 4-1: Potential Environmental Considerations and Assessments ..... | 9 |

# **1 INTRODUCTION**

## **1.1 Background**

The Ardrossan Ferry Terminal, provides a regular daily service to Brodick on the Isle of Arran. There is also a service to Campbeltown which operates in the summer months. Both services are operated by Caledonian MacBrayne Ferries Ltd (Calmac).

Caledonian Maritime Assets Limited (CMAL) have commissioned a new ferry, the MV Glen Sannox, for the Ardrossan to Brodick ferry route. The new ferry is longer than those that currently berth at Ardrossan (on the Arran Berth) therefore modifications and upgrade of the harbour infrastructure is required. The general location of the proposed works is shown in Drawing No. 169719j-001 (within Appendix A).

## **1.2 Scope of Report**

This report considers the applicability of the EIA Regulations and other potential licences required to the currently proposed redevelopment of Ardrossan Harbour, and has also been prepared to support the request for a screening opinion from Regulators.

The proposed works, as we understand them, are summarised in Section 2 of this report. Section 3 considers the general potential applicability of the 'EIA Regulations' and other possible environmental related licence requirements, with Section 4 summarising our opinion on potential environmental effects of the development. Our conclusions are provided in the final Section 5.

## **1.3 Report Usage**

The information and recommendations contained within this report have been prepared in the specific context stated above and should not be utilised in any other context without prior written permission from EnviroCentre.

If this report is to be submitted for regulatory approval more than 12 months following the report date, it is recommended that it is referred to EnviroCentre for review to ensure that any relevant changes in data, best practice, guidance or legislation in the intervening period are integrated into an updated version of the report.

EnviroCentre accept no liability for use of the report for purposes other than those for which it was originally provided, or where EnviroCentre have confirmed it is appropriate for the new context.

## 2 SITE SETTING AND PROPOSED DEVELOPMENT

In order to accommodate the operation of CMAL's new longer vessel, which will operate from the Calmac/Arran Berth, modifications to the existing berth at Ardrossan are required along with re-configured shore based infrastructure. The current layout of the harbour is shown in Figure 1, with the proposed realignment shown in Figure 2.

Figure 1: Existing Layout

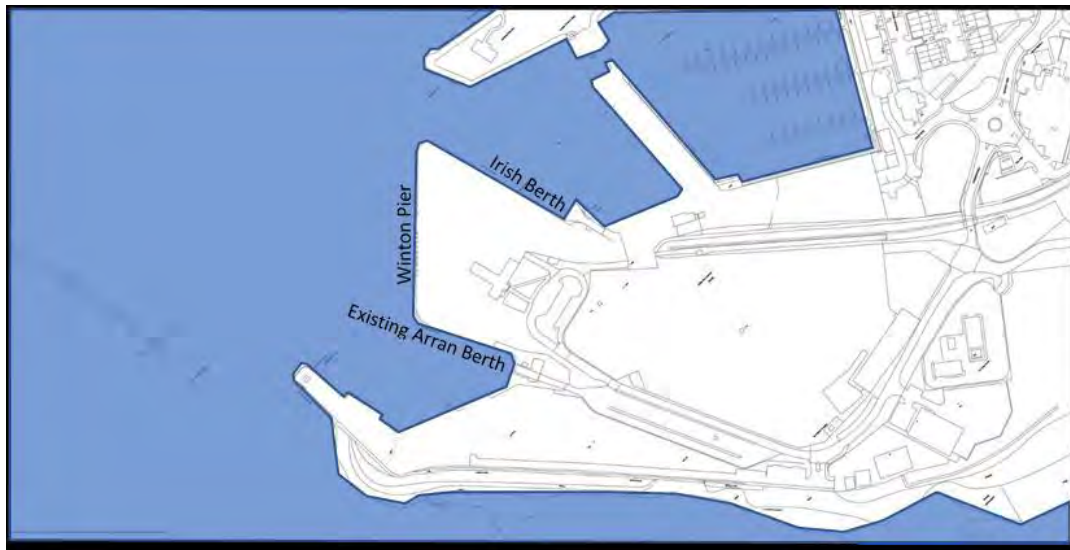
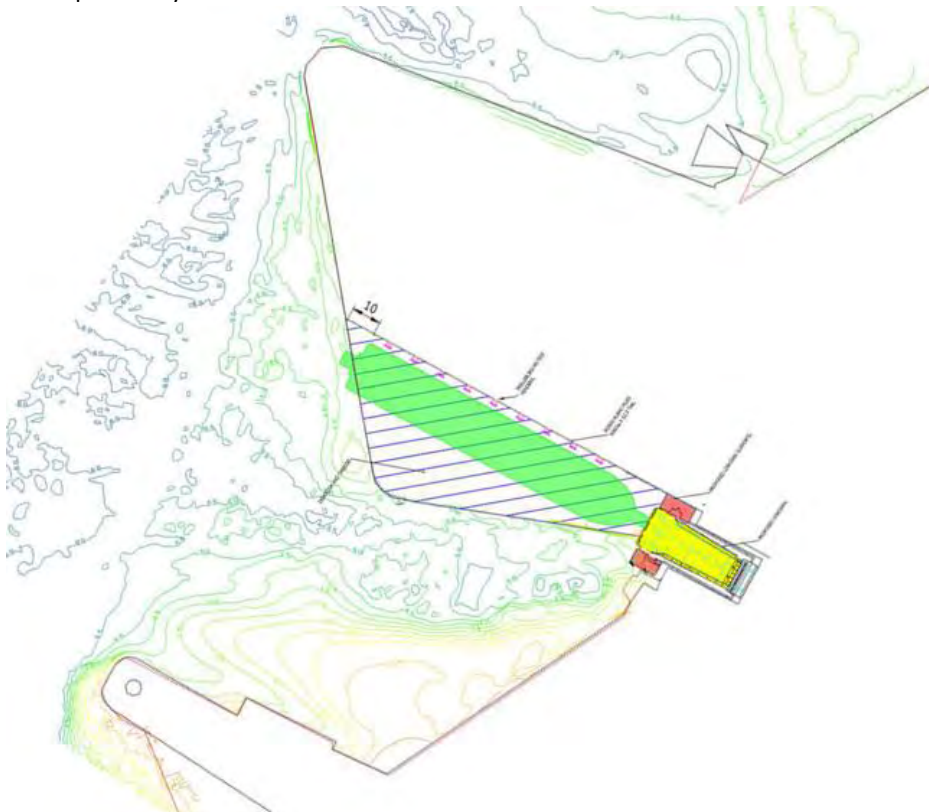
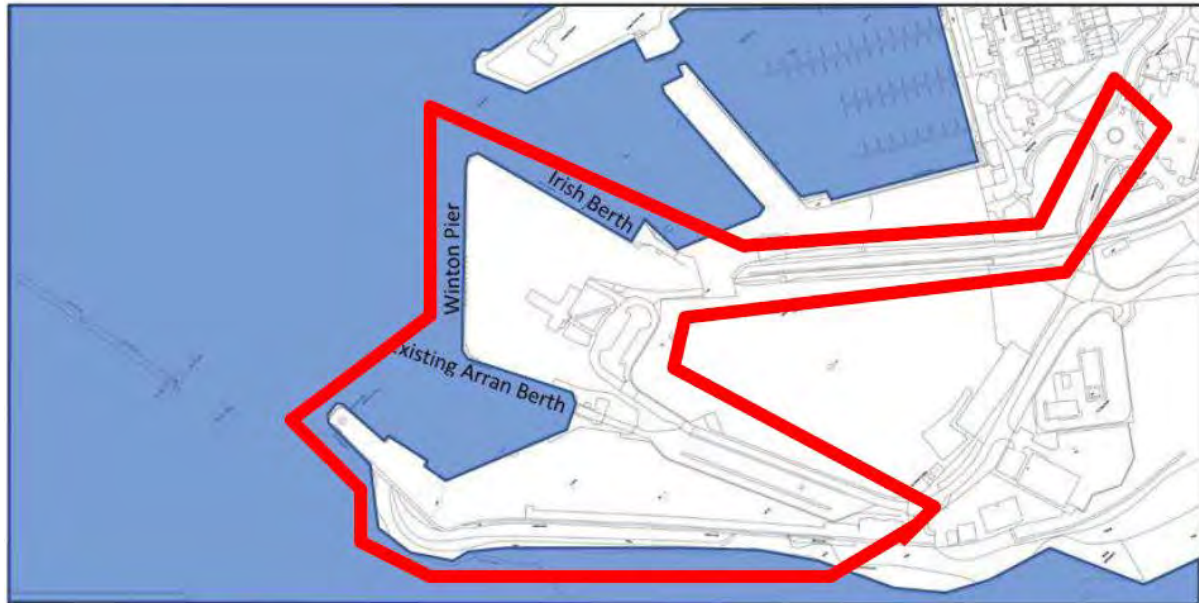


Figure 2: Proposed Layout of New berth



The works fall within two groups, firstly the landside improvement works for the ferry terminal infrastructure, and secondly the works to form the new berth. These are hereafter referred to as the 'landside infrastructure works' and 'quay improvement works' although they are both part of the same overall project. The overall envelope for all the works is shown in Figure 3.

Figure 3: Proposed Project Area (Landside Infrastructure and Quay Improvement Works)



### Landside Infrastructure Works

The main elements of the land based works comprise the following:

- New Ferry Terminal Building including retention/modification to existing Building;
- Re-developed Marshalling Areas;
- Re-developed Car Park;
- Site Infrastructure (Road Access/Services/etc);
- External Work and Public Realm including Town Centre Connections; and
- Signage and User Information.

### Quay Improvement Works

The key works to develop the new realigned berth are expected to include the elements described in the bullet points below. We have noted in *italics* the general location of each activity relative to the land or water environment:

- Installation of new sheet piled quay wall within the existing quay environment (*installed through existing platform and therefore land based*);
- Demolition and removal of the existing linkspan and supporting structures (*over water*);
- Installation of a new linkspan, and construction of new supporting structures (*over water and on land\**);
- Land based excavation of existing quay area, behind existing quay wall for the most part. However the existing quay frontage will need to be breached as excavations are ongoing and progressively removed in parallel with the infill being removed (*land based removal of material that is currently land area to the same depth as the existing adjacent seabed*); and



- Various fit out activities for the new quay wall (fendering and associated berthing infrastructure) (*over water/land based*).

*\* Detailed design development work will seek to avoid marine environment works where possible. One fundamental principle applies to the new linkspan. While Figure 2 above appears to show a very small footprint of the linkspan on the seabed, the detailed design principle will be to avoid any footprint on the seabed by finding a suitable configuration for further recessing the linkspan.*

With regard to the works adjacent to, or in, the water environment it is evident therefore that:

- The main construction works will only take place on land or adjacent to the water environment not on the seabed (new linkspan detailed design to avoid, as far as practicable, any construction footprint on the existing seabed);
- Removal of existing quay infill will be in contact with the water environment so that it does not collapse due to water pressure from the seaward side. However, the removal of the infill will not directly impact the existing seabed and will create new seabed area; and
- Minor refurbishment for existing infrastructure over and in the water environment but not on the seabed.



### 3 ENVIRONMENTAL LICENSES

This section considers the applicability of the EIA Regulations to the development works proposed as well as the requirement for marine licencing and water environment discharge licences.

#### 3.1 Environmental Impact Assessment Regulations

The primary legislation relating to potential environmental impact of development projects is split between works above and below Mean High Water Springs and is implemented by the relevant Local Authority and Marine Scotland respectively:

- The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017; and
- The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

For projects which fall within Schedule 1 of these Regulations the developments are automatically considered an EIA Project. If the works fall within Schedule 2 they may be considered as an EIA Project if they are likely to have significant effects on the environment by virtue of factors such as their nature, size and location. The above regulations are hereafter referred to collectively as the EIA Regulations.

Schedules 1 and 2 within both of the above pieces of legislation are the same. We have reviewed the development proposals against the Schedules and have provided below our opinion on the applicability of the individual paragraphs to the works proposed.

##### Schedule 1

The only Paragraph that could have been considered applicable to the development is Paragraph 8 (2) below:

*‘Trading ports, piers for loading and unloading connected to land and outside ports (excluding ferry piers) which can take vessels of over 1,350 tonnes’.*

However the definition excludes ferry piers which this development relates to. Therefore the development is not considered to be Schedule 1 development.

##### Schedule 2

Two paragraphs within Schedule 2 (Paragraphs 10 (g), and (m)) could be construed as being applicable to the development, these are defined in the table below (in italics) along with the relevant thresholds. Our opinion is also provided therein.

**Table 3-1: Interpretation of Schedule 2**

| Para. | Description of development   | Applicable thresholds / criteria                | Opinion  |
|-------|--|---|--|
|       | <b>Infrastructure projects</b>   |   |  |
| 10(g) | <i>Construction of harbours and port installations, including fishing harbours (unless included in Schedule 1)</i>   | <i>The area of the works exceeds 1 hectare.</i> | When the landside and quay improvement works are considered together as one project they will be over 1Ha in extent and therefore in our opinion they could be considered to fall under this sub-category of Schedule 2.   |
| 10(m) | <i>Coastal work to combat erosion and maritime works capable of altering the coast through the construction, for example, of dykes, moles, jetties and other sea defence works, excluding the maintenance and reconstruction of such works</i> | <i>All development/<br/>All Works.</i>          | The development proposed takes place within the inner harbour area and does not include any of the features noted in the description. The development provides no coastal work or erosion protection function capable of altering the coastline. Therefore in our opinion the development does not fall under this sub-category of Schedule 2. |

Where a development falls under Schedule 2 of the EIA Regulations, the decision as to whether or not the project is an EIA Project is based upon the factors described in Schedule 3 of the EIA Regulations and the potential for the development to have significant effects on the environment.

### 3.2 Marine Licence Requirements (Discussion)

A Marine Licence from the Scottish Ministers is required if organisations intend on carrying out certain acts in the Scottish marine area (i.e. below the mean high water springs mark). These acts can include:

- The deposit of substances or objects into the sea or onto the sea bed;
- The removal of substances or objects from the sea bed;
- Construction, alteration and improvement works;
- Dredging; and
- The deposit or use of explosives.

The landside infrastructure works described above clearly do not require any marine licencing.

The potential requirement for licencing for the Marine Works needs to be discussed in relation to the two aspects below:

1. Removal of old linkspan and provision of new linkspan in different orientation; and
2. Removal of the 'wedge' of existing land to form the new quay wall (as shown in Figure 2).

#### Linkspan Works

The detailed design principle is to avoid any footprint of the new linkspan on the existing seabed. On completion of detailed design the finalised designs will be consulted upon with Marine Scotland. If detailed design of the linkspan avoids any footprint on the existing seabed then a Marine Licence should not be required.

### **Removal of Existing Land for Form New Quay**

There are two elements to be removed, the current quay wall and the existing land area (ground) behind it as shown in Figure 2 (both after the installation of the new quay wall). Neither of these activities require the deposition of material on the seabed or removal of material from the existing seabed.

However, if the existing land area is extracted first, there is potential for the existing quay wall to collapse as a result of differential pressure as the fill is removed. Therefore it is envisaged that the existing outer quay wall would progressively be removed as the land based excavations advanced albeit affording a degree of protection and shelter to the excavations throughout the works and necessitating temporary contact with the sea.

These works therefore do not appear to require a Marine Licence. The project will in effect create a new area of seabed rather than alter the existing seabed.

### **3.3 Discharges to Water Environment**

If there is a requirement for new or modified surface water drainage and discharge(s) from areas of hardstanding, the Scottish Environment Protection Agency (SEPA) should be consulted with regards to whether or not a consent is required under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (the 'Controlled Activities Regulations' or CAR). CAR will be used by SEPA as the primary route to ensure the requirements of both the Shellfish Waters Directive and the Water Framework Directive are met.

We are not aware of any new discharges being proposed. However the Contractor should be aware of the requirements of the above Regulations and ensure compliance with them and SEPA's general good practice guidance that accompanies those regulations for working in or near water.

## **4 POTENTIAL ENVIRONMENTAL EFFECTS**

Within Section 3 of this document we have noted that the totality of the development could be considered to fall under paragraph 10 (g) of Schedule 2 of the EIA Regulations.

Within Table 4-1 below we have provided an opinion (by topic area) on the potential effects of the development on the environment, mitigation that could be applied, and the potential for significant effects on the environment.

**Table 4-1: Potential Environmental Considerations and Assessments**

| Topic Area        | Potential Impact  | Potentially Significant Effect?   | Potential Mitigation (if Required)   | Additional assessments or work required?                                 | Significant effects following Mitigation? |
|-------------------|---|---|--|--|---|
| Soils             | Potential contamination or other deleterious material requiring disposal or pollution prevention measures       | Yes   | <ul style="list-style-type: none"> <li>Suitable investigation, inspection and testing of excavated materials to ensure appropriate disposal or re-use routes are utilised and protection of workforce and neighbours.</li> </ul>   | Yes, Site Investigation required prior to construction works commencing. | No  |
| Water Environment | Marine environment impacts through release of suspended solids and associated impacts on fish or marine mammals | Unlikely as scale of excavation area is small compared to receiving environment.  | <ul style="list-style-type: none"> <li>Suitable control of excavations.</li> <li>Old quay wall kept in place as far as practicable to protect excavations, although being progressively removed at the same time.</li> <li>Contractors to produce method statements to protect the water environment during construction activities.</li> <li>Adherence by Contractor to SEPA CAR guidance<sup>1</sup> and legislation.</li> </ul> | Method Statements from Contractors.                                      | No  |
| Water Environment | Impacts on benthic communities/sea bed from disturbance.  | No. The seabed in the vicinity of the linkspan and existing quay is already subject to maintenance dredging and severe prop wash. In the event the linkspan footprint does extend onto the existing seabed, it is considered to be insignificant due to the relatively small area it will impact. | <ul style="list-style-type: none"> <li>Control of excavations;</li> <li>Contractors Method Statements.</li> </ul>  | Method Statements from Contractors.                                      | No  |

<sup>1</sup> The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended): A Practical Guide A practical guide to the regulations, Version 7.6 June 2017

| Topic Area                        | Potential Impact                                   | Potentially Significant Effect? | Potential Mitigation (if Required)   | Additional assessments or work required?  | Significant effects following Mitigation? |
|-----------------------------------|--|---------------------------------|--|---|---|
| Water Environment                 | Marine environment contamination - concrete        | Possibly                        | <ul style="list-style-type: none"> <li>Contractors to produce method statements to protect the water environment during construction activities.</li> <li>Well shuttered pours of concrete.</li> </ul>   | Method Statements from Contractors.   | No  |
| Ecology (Terrestrial and Birds)   | Open excavations and construction activity         | Not expected                    | <ul style="list-style-type: none"> <li>Covering of any manhole type features to prevent trapping of mammals/otters (although unlikely).</li> <li>General caution and awareness of presence of wildlife by Contractor.</li> <li>Water environment protection is considered the key mitigation for ecology in the area.</li> </ul> | <p><b>Likely.</b> An ecological walkover and inspection would likely be required and would be recommended.</p> <p><b>Yes.</b> A pre-construction bird survey will be required if works are to commence during the breeding bird season.</p> | No  |
| Marine Ecology (underwater noise) | Underwater noise impact on fish or marine mammals. | Not expected                    | <ul style="list-style-type: none"> <li>Piling carried out on land area only, prior to excavation of soils so no piling in full open water expected;</li> <li>Limit as far as possible duration of works.</li> </ul>  | <p><b>Possibly.</b> If open water piling was envisaged at all an assessment of the potential effect on marine mammals would be required. As no open water piling is proposed then no further assessment is anticipated.</p>                 | No  |

| Topic Area                        | Potential Impact                                       | Potentially Significant Effect?                       | Potential Mitigation (if Required)  | Additional assessments or work required?                 | Significant effects following Mitigation?                           |
|-----------------------------------|--|---|---|--|---|
| Airborne Noise                    | Piling noise and other construction noise              | Possible although temporary                           | <ul style="list-style-type: none"> <li>The works are relatively small in scale however liaison with the local community regarding timing of works would be good practice and piling activities should be carried out in normal working hours.</li> <li>Minimise duration of works as far as possible.</li> <li>Use appropriate plant and include noise attenuated plant where practicable (particularly generators etc).</li> <li>Piling works are temporary and the as built operating facility will function much the same as it currently does (no significant change).</li> </ul> | Method statements should be prepared by the Contractors. | <b>Temporary effects possible. No long term significant change.</b> |
| Air Quality                       | Dust emissions   | Possible  | <ul style="list-style-type: none"> <li>Works have the potential to emit dust during excavations and construction and therefore good practice should be applied by the Contractor to avoid nuisance dust emissions from site.</li> </ul>   | Method statement from Contractor required.               | <b>No</b>   |
| Landscape                         | Re-configuration of harbour                            | Not expected.   | <ul style="list-style-type: none"> <li>Works are fairly limited in size generally and not readily observable except at great distance and from a very limited area (northwest).</li> </ul>  | <b>No.</b> Not expected.                                 | <b>No</b>   |
| Archaeology and Cultural Heritage | Re-configuration of harbour and associated excavations | Unlikely as this area is historically reclaimed land. | <ul style="list-style-type: none"> <li>Watching brief by suitably qualified person/firm.</li> </ul>   | <b>No.</b> Not expected.                                 | <b>No</b>   |



| Topic Area       | Potential Impact                    | Potentially Significant Effect?  | Potential Mitigation (if Required)                              | Additional assessments or work required? | Significant effects following Mitigation? |
|------------------|-------------------------------------|--|---|--|---|
| Designated Sites | Negative effect on a protected area | No.<br>The only protected area within 1km of the site is the Ardrossan to Saltcoats Coast Site of Special Scientific Interest (SSSI) which is designated for Carboniferous - Permian Igneous features. All other designated sites within 1-5km have no obvious direct or indirect linkage subject to water environment and ecology protection described above. | <ul style="list-style-type: none"> <li>None required</li> </ul> | No                                       | No  |

## **5 SUMMARY OF OPINION**

Within Section 3 of this document we have noted that the totality of the development could be considered to fall under paragraph 10 (g) of Schedule 2 of the EIA Regulations.

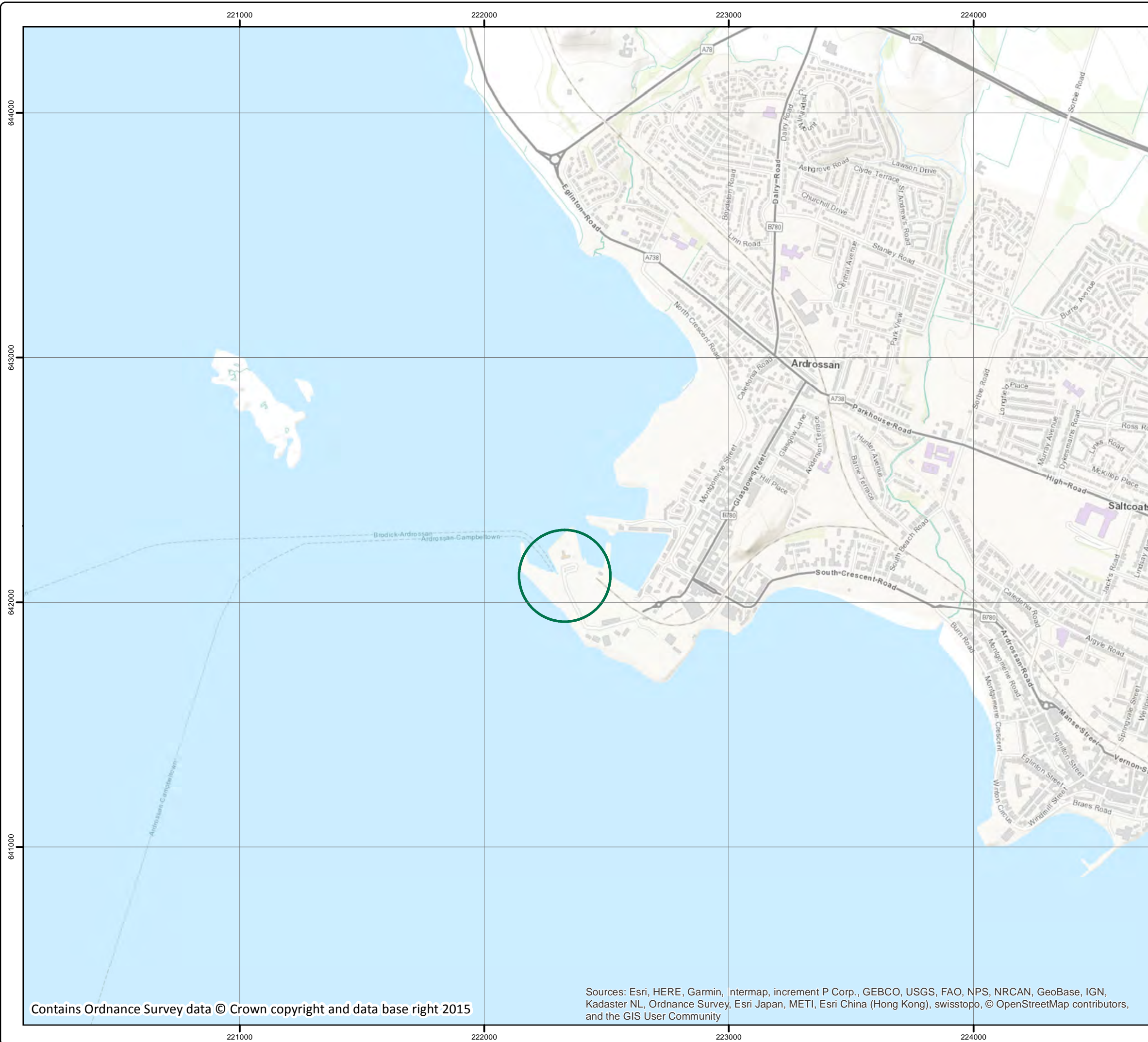
We have also considered the potential for the development to result in significant adverse effects on the environment with, and without, mitigation in place (as summarised in Table 4-1). Given the relatively small scale of development, its location, the method of construction and the availability of fairly standard construction mitigation we do not consider this project likely to result in significant adverse effects on the environment provided mitigation measures noted in Table 4-1 are adopted.

We therefore recommend that a Construction Environmental Management Document (CEMD) taking into account the mitigation noted in Table 4-1 as a minimum, be prepared for the development. The CEMD should be populated and developed with the Contractor prior to works commencing on site.

Note: over and above the requirements of the EIA Regulations the project could require a marine construction licence and this will need to be further consulted upon with Marine Scotland as the designs evolve.

## **APPENDICES**

## **A      DRAWINGS**



Contains Ordnance Survey data © Crown copyright and data base right 2015

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Legend

General Location of Works

Do not scale this map

Client

Ardrossan Harbour Company Ltd

Project

Ardrossan Harbour

Title

Site Location Plan

Status

Final

Drawing No.

169719-001

Revision

Scale

1:15,000

A3

Date

02 August 2018

Drawn

Checked

Approved

[Redacted]

[Redacted]

[Redacted]

ENVIRO

Craighall Business Park, Eagle Street, Glasgow, G4 9XA  
Tel: 0141 341 5040  
Fax: 0141 341 5045