

# **New Islay Vessel Port Enabling Works Colonsay Environmental Impact Assessment Screening Report**

November 2022

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

[mottmac.com](http://mottmac.com)

Caledonian Maritime Assets  
Limited

# **New Islay Vessel Port Enabling Works Colonsay Environmental Impact Assessment Screening Report**

November 2022

# Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
01	05/10/22	GC	JC	BR	First Draft

100105612 | P01 | S2 | 105612-MMD-CO-ZZ-NT-G-0003-S2-P01-Colonsay Environmental Impact Assessment Screening Report

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# 1 Introduction

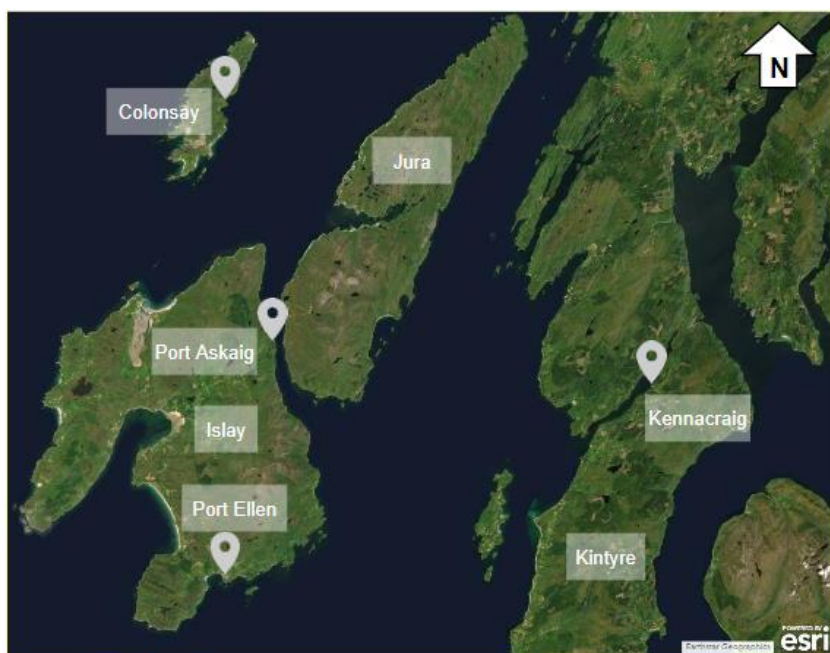
## 1.1 Overview

Mott MacDonald has been commissioned on behalf of Caledonian Maritime Assets Limited (CMAL) to complete an Environmental Impact Assessment (EIA) Screening Report for the proposed works to upgrade Colonsay Ferry Terminal in Scalasaig, hereafter referred to as the “Proposed Development”.

This EIA Screening Report has been prepared as part of a formal request for an EIA Screening Opinion under Regulation 10(1) of the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 to Marine Scotland, the consenting authority.

## 1.2 Project background

CMAL seek to undertake upgrade works at the four terminals (Port Ellen, Kennacraig, Port Askaig and Colonsay (shown in Figure 1-1) on the Islay route prior to the introduction of new vessels, which are planned to be operational around mid-2024.



**Figure 1-1: Terminals on the Islay Ferry Service**

The new vessels are planned to have a larger beam, length, draught and displacement than the current vessels that serve the route, as well as having a hybrid diesel-electric propulsion system. Enabling works to the four terminals are therefore necessary to safely and reliably berth, moor, load and unload the vessels at all four ports together with shore power for charging the vessels at Port Ellen, Kennacraig and Port Askaig.

The focus of this report is the upgrade works at the Colonsay Ferry Terminal centred at National Grid Reference (NGR) NR 39600 94100 in Scalasaig. The Proposed Development would comprise upgrading existing assets (replacement of bollards and fenders), introduction of new gangways and toe protection around existing timber piles, installing new timber piles and dredging works to accommodate new vessels with deeper draught and higher displacement. Further details are outlined in Section 2.

### 1.3 Purpose of this screening request

The purpose of this request is to seek written confirmation from Marine Scotland that the Proposed Development does not constitute an EIA project as defined by the EIA Regulations.

The EIA Regulations form the legislative framework for undertaking EIA for certain projects and define an 'EIA project' as either a 'Schedule 1 works; or Schedule 2 works likely to have significant effects on the environment by virtue of factors such as its nature, size or location.'

The Proposed Development does not meet any of the criteria listed within Schedule 1. As a result, it is not automatically classified as an EIA project and must be considered under Schedule 2.

Schedule 2 developments are those development likely to have significant effects on the environment by virtue of factors such as its nature, size or location. As defined in Regulation 2(1), Schedule 2 developments are those development types described in Column 1 of the table within Schedule 2, and where:

- (a) any part of that development is to be carried out in a sensitive area; or
- (b) any applicable threshold or criterion in the corresponding part of Column 2 of that table is respectively exceeded or met in relation to the works.

With regards to (a), the Proposed Development is located within a 'sensitive area' (within the footprint of the Inner Hebrides and the Minches Special Area of Conservation) as defined in Regulation 2(1) of the EIA Regulations.

With regards to (b), the Proposed Development is considered to fall under:

(g) *Construction of harbours and port installations, including fishing harbours (unless included in schedule 1);* works would be upgrading existing port assets and undertaking dredging work around the existing harbour.

Accordingly, the Proposed Development is considered a Schedule 2 development and therefore must be considered against the Schedule 3 criteria to determine the potential for likely significant impacts.

Schedule 3 provides criteria to assist with determining whether a Schedule 2 development constitutes an EIA Development. These criteria are the characteristics of development, the location of development and the characteristics of the potential impact. The environmental constraints and considerations taken into account in determining the potential for likely significant impacts are outlined in Section 3 and the EIA Screening concluded in Section 4.

In accordance with Part 2/10(2) of the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017, a request for an EIA screening opinion must be accompanied by:

- (a) a description of the location of the proposed works, including a plan sufficient to identify the area in which the works are proposed to be sited;
- (b) a description of the proposed works, including in particular—
  - (i) a list of all of the regulated activities which are proposed;
  - (ii) a description of the physical characteristics of the proposed works and, where relevant, works to be decommissioned; and
  - (iii) a description of the location of the proposed works, with particular regard to the environmental sensitivity of geographical areas likely to be affected;

- (c) a description of the aspects of the environment likely to be significantly affected by the proposed works; and
- (d) a description of any likely significant effects, to the extent of the information available on such effects, of the proposed works on the environment resulting from either, or both, of the following:—
  - (i) the expected residues and emissions and the production of waste, where relevant;
  - (ii) the use of natural resources, in particular soil, land, water and biodiversity.

This information is provided within the subsequent chapters.

This report has been prepared in accordance with the EIA Regulations. Potential impacts may arise from a Proposed Development during the following stages:

- Construction: Impacts that may arise from construction activities of the Proposed Development. Typically, the effects are short term and can generally be managed through the implementation of a Construction Environmental Management Plan (CEMP). Additionally, some impacts during construction may cause permanent effects e.g. excavation and loss of an archaeological feature.
- Operation: Impacts that may result from the operation of the Proposed Development. Typically, the effects are long term for the operational life of the project.

There are no anticipated changes to the operational activities currently undertaken at the terminal following construction of the Proposed Development. Whilst the new vessels will be slightly larger compared to the existing vessel, the appearance of them is not considered to be materially different to that of the existing vessel, and as it will not be a permanent addition to the harbour, no significant landscape or visual amenity impacts during operation are anticipated. Therefore, operational impacts are not considered to be significant and are not considered further in this EIA Screening Report. The EIA Screening Request therefore focuses on construction impacts only.

## 1.4 Structure of this report

This EIA Screening Report is structured as follows:

- Chapter 1: Introduction.
- Chapter 2: Development Proposal.
- Chapter 3: Environmental Considerations.
- Chapter 4: Summary of Environmental Considerations.

## 2 Development proposal

### 2.1 Site location and context

The Proposed Development is located on the east coast of the island of Colonsay in Scalasaig, the Inner Hebrides, Scotland. The existing Colonsay Ferry Terminal is centred at NGR NR 39600 94100 and is located within the small village of Scalasaig. The village comprises of a small residential community and local shops/businesses.

#### 2.1.1 Colonsay Ferry Terminal

The existing pier extends out from the shoreline as a solid causeway. The causeway terminates at the top of the historic slipway. Two separate piers continue, one to the north providing a pedestrian walkway to the main berthing structure (Photo 1).

The southern extension leads to the linkspan (Photo 2). The initial pier is a solid structure with both extended piers formed by concrete decks supported by steel piles.



**Photo 1 – Showing causeway**



**Photo 2 – Showing linkspan**

The pier is fendered on the south side with timber fender piles, with a buckling MV rubber unit fender at the top reacting against the pier. The pier was extended in the late 1980's with the addition of a fendered roundhead at the outer end of the berth structure. The linkspan approach and support structures to the south of the access way were installed at the same time (Photos 3 and 4).





**Photo 3 – Showing South side of pier**



**Photo 4 – Showing timber fendering and roundhead**

Onshore there is a terminal building and a marshalling area for traffic awaiting embarking onto the ferry.

The north side of the pier is fendered with timber fendering and is available for use for non-ferry operations (Photo 5 and 6). The pier is fitted with edge protection in line with the requirements of L148 Safety in Docks: Approved Code of Practice and guidance (ACOP)<sup>1</sup>.



**Photo 5 – Showing North side of pier**



**Photo 6 – Showing berthing for non ferry operations**

There are three different gangways or brows stored on the pier to accommodate passenger embarkation and disembarkation for a series of ferries operated by CalMac Ferries Limited.

A brief inspection of the pier was carried out by Arch Henderson in September 2020<sup>2</sup>. This inspection focussed on understanding the operation of the facility as part of this study, rather than a structural assessment. However, the findings of this inspection were that the pier was in reasonable condition, considering the age of the structure.

During the visit, Arch Henderson noted that works were about to start to repair damaged fenders and timber works at the pier.

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<sup>1</sup> <https://www.hse.gov.uk/pubns/books/l148.htm> (Accessed 12/05/2021)

<sup>2</sup> Colonsay Pier Assessment, 205018 V4, Arch Henderson, June 2021



### 2.1.2 Vessels operating at the pier

The vessels which currently operate on the linkspan berth at Scalasaig are shown in Table 2-1.

**Table 2-1: Summary of vessels currently operating at Scalasaig**

Name	Length (m)	Beam (m)	Max. Draft (m)
Isle of Mull	90.03	15.8	3.18
Clansman	99.0	15.8	3.3
Isle of Arran	84.9	15.8	3.1
Hebridean Isles	85.15	15.8	3.11
Finlaggan	89.8	16.4	3.5

The proposed new Islay Vessel would be 94 m (length), 18.7 m (beam) and 4 m (maximum draft).

## 2.2 The Proposed Development

The Proposed Development would upgrade the ferry terminal to facilitate future accommodation of a new vessel with deeper draught and higher displacement. The new vessel will moor to the existing bollards positioned at the roundhead, along the existing pier and on both the inner and outer lifting dolphins.

The works to accommodate this new type of vessel would comprise the following proposed modifications and alterations:

- Replacement of existing fenders with new.
- Replacement of two bollards at the roundhead from T Head bollards to mushroom bollards.
- Provision of gangways which are to be at least 17m long.
- Installation of existing pile toe protection, likely in the form of concrete filled steel collars with dowels into rock or concrete mattress to replace the overburden on the pile toe.
- New timber piles.
- Dredging to 5.5 m below Chart Datum (CD) in order to maintain at least 1 metre of underkeel clearance. The approximate dredged area would be approximately 4300 m<sup>2</sup> and volume 7000 m<sup>3</sup>.

Further details of the Proposed Development are shown in Scheme Drawings, Appendix A.

Works below the mean high water springs (MHWS) include:

- installation of toe protection.
- installing of new timber piles.
- dredging works.

A marine construction licence application would be applied for prior to undertaking these works. A marine dredging licence will be applied for as part of the dredging works and disposal of dredged material at sea works. It should be noted that this EIA screening request is being submitted in advance of applying for these licences.

### 2.2.1 Replacement of fenders, bollards and provision of gangways

A total of ten MV fenders are to be removed from the roundhead and replaced with new. As with the existing fenders, the new ones may be located partially in the intertidal zone. Replacement

bollards would be installed within the existing roundhead. The provision of gangways would be installed within the existing pier structure and would accommodate passenger embarkation and disembarkation from ferries.

### 2.2.2 Dredging

Dredging works would likely be undertaken by a backhoe dredger. Backhoe dredgers are stationary dredgers with a hydraulic excavator installed on a pontoon. The backhoe dredgers can dredge a wide range of materials very precisely and they operate mainly in shallow and enclosed waters. If required, bedrock would be pre-fractured by drilling and splitting using Cardox (a CO<sub>2</sub> driven hydraulic breaker). Non-explosive blasting methods would be used.

It is currently assumed that the dredged material would be disposed of at sea, however, this is subject to a Best Practicable Environmental Option Assessment (BPEO) to confirm the disposal method which will be finalised following survey investigations. It is anticipated that any disposal at sea would be undertaken at the nearest disposal site. The closest disposal sites are approximately 50km south of the Proposed Development, on the south side of the Island of Islay (Site ID MA035 south of Port Wemyss and Site ID MA030 south of Port Ellen).

### 2.2.3 Timber piling and toe protection

The proposed dredging has the potential to undermine the toes of some of the pier support piles and fender piles. As such toe protection around existing timber piles is required. A potential method of protecting the toes of the piles is to place structural collars around the toes of the piles with dowels into the bedrock below the piles or concrete mattress to replace the overburden on the pile toe. The collar protections would likely be installed prior to any dredging close to the piles

The insulation method for steel collars is likely to be as follows:

- removal of seabed material locally around the pile until sound bedrock is exposed.
- Bedrock is to be prepared to accommodate the steel collar which would act as a permanent formwork and the installation of dowel bars.
- The void between the pile and the steel collar would be infilled with concrete.
- Works for the collars would be carried out by divers.

The insulation method for concrete mattress is likely to be as follows:

- removal of seabed material locally around the pile to anticipated dredge level.
- Fabric formwork is to be positioned around the pile to replicate the lost overburden due to dredging.
- Works for the collars would be carried out by divers.

The installation methodology for timber driven piles is likely to be as follows:

- The pile guide is installed. The pile guide will most likely be a steel frame supported from the existing structure. This is likely to be lifted into place using a crane on the deck.
- The pile is pitched, whereby the pile is lifted vertically and placed into the pile guide by a crane on the deck. A telehandler or excavator may assist in the lifting and positioning of the pile.
- The pile is lowered using the crane. The pile is lowered through the piling gate until the bottom of the pile reaches the seabed level. Under its own self weight, the pile will start to embed into the ground. The crane support is then removed.
- The pile is driven. A vibrohammer, which grips the top of the pile and is supported by an excavator on the deck, is used to drive the piles to the required depth. The vibrohammer is then removed from the pile, and the process is repeated for the next pile.

It is anticipated the timber driven piles for the Colonsay site would take no more than 4 to 5 months to install, although this is dependent on the number of piles being installed and the duration will be confirmed by the contractor once they are appointed.

## 2.3 Construction activities

### 2.3.1 Construction method

Table 2-2 summarises the activities and methods are anticipated for construction of the Proposed Development.

**Table 2-2: Summary of construction methodology**

Construction element	Methodology
Replacement of existing MV fenders with new	Crane, construction operatives and any other equipment (e.g. welding machines where required) will be supported on the existing structure (jetty deck) for access to the fenders.  Materials will comprise fenders (rubber fenders, UHMW-PE panels and stainless steel fixings) and, where required, steel brackets and beams for connection to the existing structure.
Replacement of two bollards at the roundhead from T Head bollards to mushroom bollards	Crane, construction operatives and any other equipment will be supported on the existing structure (jetty deck) for access to the bollards.  Materials will comprise bollards (cast iron or similar. and stainless steel fixings) and, where required, grout.
Provision of gangways which are to be at least 17m long	Crane, construction operatives and any other equipment will be supported on the existing structure (jetty deck) for access to the gangway.  Materials will comprise gangway (aluminium).
Timber piling	Crane, construction operatives and any other equipment will be supported on the existing structure (jetty deck) for access to the timber piling.  Materials will comprise timber piles and, where required, steel brackets and fixings for connection to the existing structure.  Piling would take no more than 4 to 5 months although this is dependent on the number of piles being installed and the duration will be confirmed by the contractor once they are appointed
Installation of pile toe protection, likely in the form of concrete filled steel collars with dowels into rock	Crane, construction operatives (including divers) and any other equipment (e.g. grout or concrete mixing plant where required) will be supported either on the existing structure (jetty deck) for access to the piles or on a floating barge.  Materials will comprise steel collars, fabric formwork, concrete and/or grout infill and, where required, steel dowels into the seabed rock.
Dredging to 5.5m below CD in order to maintain at least 1 metre of underkeel clearance.	Dredging works would be undertaken by a backhoe dredger.  The backhoe dredger is anchored firmly with three spuds. A transport barge is moored alongside the backhoe dredger. The bucket excavates soil in a combined backward and upward movement of the boom, stick and bucket. When the bucket is full, an upward movement of the boom and stick lifts the bucket above the water to start swinging. The filled bucket is positioned above the barge by rotating the excavator on the turntable. The dredged material is discharged into the transport barge. The full barge transports the dredged material to a designated location.

Throughout construction, local access to the ferry terminal, including pedestrian and vehicle access for existing ferry operations would be maintained (see drawing 105612-MMD-CO-ZZ-DR-C-0140, Appendix A).

### 2.3.2 Construction compound

Materials to be used on site would likely be stored within the hardstanding of a temporary site compound, located at NGR NR 39400 94100 within the existing harbour area.

Construction transport is expected to use local roads within the vicinity and it is anticipated that one wagon per week during the construction works would be required. Materials for would be transported via road then ferry.

### 2.3.3 Construction programme

It is anticipated that the construction would start between Q2 2023 and would last approximately 12 -18 months dependant on weather conditions and planned downtime.

Normal working hours are anticipated to take place for 24 hours each day, Monday to Sunday to accommodate dredging works. However, piling works will be restricted to the hours between 08:00-1800 Monday to Friday and 08:00-12:00 Saturday. No piling works would be undertaken on Sunday. Works do not intend to interfere with existing ferry operations with regard to service.

## 3 Environmental considerations

### 3.1 Introduction

The following sections describe the baseline for each environmental topic and considers the likely impacts from the Proposed Development and potential effects and mitigation measures which can be implemented.

### 3.2 Ecology

#### 3.2.1 Baseline sources

Baseline information and data were gathered from the following sources:

- Scotland's Environment Map (Scotland's Environment, visited at <https://www.arcgis.com/apps/MapJournal/index.html?appid=29581665638a4ac99f36100f8e6b28bb> in September 2022);
- Central Dredging Associated (CEDA), Underwater Sound in Relation to Dredging. A CEDA Position Paper. (CEDA, 2011, visited at [https://www.dredging.org/media/ceda/org/documents/Resources/CEDAonline/2011-11\\_ceda\\_positionpaper\\_underwatersound\\_v2.pdf](https://www.dredging.org/media/ceda/org/documents/Resources/CEDAonline/2011-11_ceda_positionpaper_underwatersound_v2.pdf) in September 2022); and
- National Biodiversity Network (NBN) Gateway, (NBN, visited at <https://nbn.org.uk/> in September 2022).

#### 3.2.2 Baseline

For ecology, the study area includes habitat and species receptors within 500 m of the Proposed Development boundary, 5 km for European sites and 1 km for all other designated sites.

##### 3.2.2.1 Designated Sites

#### Special Areas of Conservation (SAC)

The Proposed Development boundary is directly within the footprint of Inner Hebrides and the Minches SAC. This SAC been designated to protect harbour porpoise on the west coast of Scotland. By doing so it contributes to the Scottish, UK and OSPAR Marine Protection Area networks, the conservation of the wider marine environment around Scotland, and progress towards Good Environmental Status within the North-East Atlantic marine region. The main purpose of the Inner Hebrides and the Minches SAC is to contribute to the favourable conservation status of harbour porpoise in the Atlantic Biogeographic Region (Map 1, Appendix B).

Additionally, Loch Fada SAC (same footprint as Loch Fada SSSI) is located approximately 1.6 km north of the Proposed Development boundary).

#### Special Protection Areas (SPA)

The Proposed Development boundary is within 5 km of North Colonsay and Western Cliffs SPA (approximately 1.4 km north east of the Proposed Development boundary) and Oronsay and South Colonsay SPA (approximately 1.4 km south of the Proposed Development boundary). North Colonsay and Western Cliffs SPA covers an area of rocky coast, cliffs, and maritime heath on the island of Colonsay in Argyll, Scotland. It supports the northernmost stable

population of chough (*Pyrrhocorax pyrrhocorax*) in Europe, and is particularly significant to the maintenance of the breeding range of the chough in Britain and Europe. Other qualifying features include assemblages of guillemot (*Uria aalge*) and kittiwake (*Rissa tridactyla*).

Oronsay and South Colonsay SPA covers the southern part of the island of Colonsay and the main part of the adjacent island of Oronsay, in the Inner Hebrides. The area covers a mosaic of habitats including coastal and herb-rich grassland, arable grassland and coastal heath which supports extensive sheep grazing, cattle grazing. A combination of well drained soils, animal dung and washed up seaweed provides good habitats for the different types of invertebrates larvae on which chough feed, while corncrake breed in areas of improved grasslands and use the iris and nettle beds around the fringes of these areas for early and late cover. The qualifying features include chough and corncrake (*Crex crex*).

### Ramsar Sites

There are no Ramsar Sites within 5km of the Proposed Development boundary.

### Site of Special Scientific Interest

There are no Sites of Special Scientific Interest (SSSIs) within 1km of the Proposed Development boundary. The closest sites are Loch Fada SSSI (approximately 1.6 km north of the Proposed Development boundary) and Oronsay and South Colonsay SSSI (approximately 1.4 km south of the Proposed Development boundary).

#### 3.2.2.2 Species and Habitats

The following habitats are within 500 m of the Proposed Development boundary:

- Coastal water;
- Littoral rock and other hard substrata;
- Infralittoral rock
- Infralittoral coarse sediments
- Inland surface waters;
- Temperate shrub heathland;
- Broadleaved deciduous woodland;
- Woodland fringes and clearings and tall forb stands (herbaceous flowering plant);
- Coastal dunes and sandy shores; and
- Transport networks (private roads, publicly accessible and restricted) and other constructed hard-surfaced areas.

The primary habitats within the footprint of the Proposed Development boundary is littoral rock and other hard substrata, infralittoral coarse sediments, coastal waters and constructed hard surfaces around the port.

A data search identified a number of species records within the Proposed Development boundary. Protected species recorded include:

- Common Porpoise; and
- Bottle-nosed Dolphin.

In addition, a review of Hague *et al* (2020)<sup>3</sup> and recent sightings reported by the Hebridean Whale and Dolphin Trust<sup>4</sup> indicate the following protected species also use the waters around the Proposed boundary:

- Short-Beaked Dolphin;
- Minke Whale;
- Grey Seal;
- Harbour Seal; and
- Basking Sharks.

Otters have been reported to be historically present near to Colonsay Ferry Terminal. An otter survey was undertaken by Mott Macdonald Ltd in March 2022 within the surrounding [REDACTED] of the Proposed Development. [REDACTED]

**Table 3-1: Otter survey results**

ID	National Grid Reference	Description
[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]
		[REDACTED]
		[REDACTED]
		[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]
		[REDACTED]
		[REDACTED]
		[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]
		[REDACTED]
		[REDACTED]

No otter shelters were identified within habitats to the north of the existing ferry port; [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

<sup>3</sup> Hague, E.L., Sinclair, R.R. and Sparling, C.E., 2020. Regional baselines for marine mammal knowledge across the North Sea and Atlantic areas of Scottish waters Scottish Marine and Freshwater Science Vol 11 No 12. [online] Scottish Marine and Freshwater Science, <https://doi.org/10.7489/12330-1>.

<sup>4</sup> HWD, 2022. Hebridean Whale & Dolphin Trust » Sightings Map. [online] Available at: <<https://whaletrack.hwdt.org/sightings-map/>>.

### 3.2.3 Potential effects and mitigation

#### 3.2.3.1 Designated Sites

There is likely to be no direct impacts on Loch Fada SSSI/SAC, North Colonsay and Western Cliffs SPA, Oronsay and South Colonsay SPA as these sites are located a sufficient distance away and there are not hydrologically connected. Construction works which involve replacement of fenders or bollards, or installation of new gangways would not impact on ecological receptors within the Inner Hebrides and the Minches SAC as equipment would be supported within the existing pier structure and berth.

There would be potential impacts in relation to timber piling, dredging works and placement of structural collars around the toes of existing piles, which would be undertaken within the Inner Hebrides and the Minches SAC. Construction of the Proposed Development have the potential to affect marine ecology in the immediate vicinity of the Proposed Development footprint in terms of potential habitat loss within the Inner Hebrides and the Minches SAC from timber piling, placement of structural collars and dredging. Additionally, there is potential for impacts in relation to underwater noise.

However, the works are temporary and short term. The placement of structural collars around the toes of the existing piles with dowels into the bedrock below the pile will be carried out by divers. It is not envisaged that underwater noise will have a significant impact upon marine fauna. It should be noted that the existing seabed is already disturbed by existing ferry and other non-ferry boats. The installation of timber piles would take place for a short period of time through vibro-piling methods which generally lower levels of noise and vibration.

In line with the findings of the Central Dredging Association (CEDA) Position Paper, noise associated with dredging and disposal is unlikely to be significant and it is unlikely to cause injury to marine mammals or fish. As a precaution, a European Protected Species (EPS) licence for disturbance to marine mammals will be applied for and the completion of a habitats regulations appraisal to support a marine construction licence. Mitigation measures to minimise disturbance and would be applied (see further details below).

#### 3.2.3.2 Species and Habitats

Habitats including temperate shrub heathland, broadleaved deciduous woodland, woodland fringes and clearing and tall forb stands, inland surface waters, coastal dunes and sandy shores are unlikely to be impacted as they are not directly within the footprint of the Proposed Development boundary where works would take place.

Construction of the Proposed Development (primarily linked to dredging works) have the potential to affect marine ecology in the immediate vicinity of the Proposed Development footprint in terms of potential habitat loss (coastal waters, littoral rock and other hard substrata, infralittoral rock and infralittoral coarse sediments), However, it should be noted that existing footprint areas are heavily disturbed by existing ferry activity in and around the harbour.

[REDACTED]



As such, the follow mitigation measures in relation to ecology would be implemented:

- Prior to construction, an otter and marine mammal checking survey will be undertaken to update the baseline.
- A Species Protection Plan (SPP) which would outline measures to minimise any impacts would be produced as part of the EPS licence application package.
- Toolbox talks will be completed prior to works commencing, as part of a site induction package where all staff are made aware of the potential presence of otters and marine mammals local to the site, their legal protection and mitigation measures to be implemented during the works.
- Marine mammal mitigation would be conducted in accordance with JNCC guidelines during any pilling operations.
- If at any point, an otter or marine mammal is observed passing through the Proposed Development construction works, works should stop until the otter or marine mammal has dispersed from the area.
- Best practice guidance working measures will be used in accordance with SEPA's Guidance for Pollution Prevention. The primary guidance for such activities is SEPA's 'GPP5: Works and maintenance in or near water.'
- To avoid any entrainment/entrapment or harm to otter, excavations should be covered at the end of each day, where deep excavations occur, a mammal ladder should be installed to allow means of escape from the trench.

### 3.3 Archaeology and cultural heritage

#### 3.3.1 Baseline sources

Baseline information and data were gathered from the following sources:

- Datasets of designated heritage assets as held by Historic Environment Scotland (HES) (Historic Environment Scotland, visited at: <https://hesportal.maps.arcgis.com/apps/Viewer/index.html?appid=18d2608ac1284066ba3927312710d16d> in September 2022);
- Datasets of the National Record of the Historic Environment (NRHE), a database of non-designated heritage assets held by HES (Canmore, visited at: <https://canmore.org.uk/site/search/result?view=map&layer=areas> in September 2022); and
- The online PastMap (Available online on Past Map, visited at: <https://www.pastmap.org.uk/map> in September 2022).

#### 3.3.2 Baseline

For Archaeology and Cultural Heritage, the study area includes designated heritage assets within 1 km of the Proposed Development boundary and 500 m for non-designated heritage assets.

##### 3.3.2.1 Designated Sites

There are no World Heritage Sites, Historic Marine Protection Areas, Gardens and Designed Landscapes, Battlefields or Conservation Areas within 1 km of the Proposed Development boundary.

## Listed Buildings

There are six Listed Buildings within 1 km of the Proposed Development (Map 1, Appendix B) which are summarised below:

- Scalasaig Harbour, Port Na Feamainn (Category C, approximately 100 m west of the Proposed Development boundary);
- Colonsay and Oronsay Parish Church, Scalasaig (Category B, approximately 600 m west of the Proposed Development boundary);
- Colonsay Hotel, Scalasaig (Category B, approximately 630 m west of the Proposed Development boundary). 18th century;
- Scalasaig, Smiddy Cottage (Category B, approximately 700 m west of the Proposed Development boundary);
- Scalasaig Farm-House, Scalasaig (Category B, approximately 920 m west of the Proposed Development boundary); and
- Lord Colonsay Monument (Category C, approximately 600 m south west of the Proposed Development boundary).

## Scheduled Monument

There is one Scheduled Monument within 1 km of the Proposed Development boundary. This is Buaile Riabhach, Cairn and Standing Stones, Scalasaig, Colonsay (SM5217) (790 m west of the Proposed Development boundary). It is a D-shaped kerbed cairn, measuring some 3.6 m by 3 m and 0.3 m high, with two standing stones set on the line of the kerb. The larger stone is 2.3 m high and 1.8 m in girth at the base; the smaller stone would be 1.15 m high if it were vertical and is 0.3 m thick and 0.65 m broad. A sword and dagger were excavated from the cairn in 1881 and removed from the site. The scheduled area includes the cairn and standing stones and an area extending for 5 m from the outer face of the kerb.

### 3.3.2.2 Non-designated sites

There are a number of non-designated sites within 500 m of the Proposed Development boundary identified on Canmore (National Record of the Historic Environment) which are summarised below (Map 1, Appendix B).

#### Canmore - Terrestrial Sites

There are twelve terrestrial non-designated heritage assets within 500 m of the Proposed Development boundary. The closest of which is Colonsay, Scalasaig, Scalasaig Harbour (ID: 161285). The remaining assets were greater than 200 m away from the Proposed Development boundary.

#### Canmore – Maritime Sites

There is one maritime non-designated heritage asset within 500 m of the Proposed Development boundary. It is an Unknown, Port an Obain, Shipwreck (ID: 119193) approximately 170 m east of the Proposed Development boundary.

### 3.3.3 Potential effects and mitigation

There are no heritage assets directly within the footprint of the Proposed Development boundary, with the exception of Scalasaig Harbour. However, there is likely to be no physical or setting impacts on assets identified in Section 3.2.2 from works which involve replacement of existing assets or installation of new gangways, timber piles and toe protection on existing timber piles. The existing berth would be similar to existing assets and is in fitting with the existing setting of the area. Additionally, dredging works are not anticipated to take place within the footprint of the maritime non-designated asset which is 170 m away from the Proposed

Development boundary. As such, it is anticipated that there would be no likely significant effects on in relation to Archaeology and Cultural Heritage.

### 3.4 Air quality

#### 3.4.1 Baseline sources

Baseline information and data were gathered from the following sources:

- Google Maps (Google, visited at <https://www.google.co.uk/maps> in September 2022);
- Air Quality Management Areas (AQMA) Interactive Map (Defra, visited at <https://ukair.defra.gov.uk/aqma/maps> in September 2022); and
- Scotland's Environment Map (Scotland's Environment, visited at <https://www.arcgis.com/apps/MapJournal/index.html?appid=29581665638a4ac99f36100f8e6b28bb> in September 2022).

#### 3.4.2 Baseline

For air quality, the study area includes receptors within 300 m of the Proposed Development boundary.

There are no declared AQMAs within the Argyll & Bute Council area.

The Proposed Development is located within an operational harbour. Therefore, it is likely that the harbour activities (people, motor vehicles and ferries/boats) would be the predominant contributor of local sources to ambient air pollution.

Potential receptors of local air quality impacts include:

- Human receptors: The nearest receptors to the Proposed Development boundary are located approximately 200-300 m north and west. This includes the art gallery, the Pantry Store to the west, Colonsay General Store and residential properties to the north just off the B8087, and users of the ferry terminal and sea.
- Ecological receptors: The Inner Hebrides and the Minches SAC (within the footprint of the Proposed Development boundary), Lock Fada SAC (approximately 1.6 km north of the Proposed Development boundary), North Colonsay and Western Cliffs SPA (approximately 1.4 km north east of the Proposed Development boundary) and Oronsay and South Colonsay SPA (approximately 1.4 km south of the Proposed Development boundary). Ecological receptors are discussed in further detail in Section 3.2.

#### 3.4.3 Potential effects and mitigation

During the construction of the Proposed Development, operation of site equipment such as vehicles and machinery is likely to result in emissions of exhaust gases to the atmosphere. Construction works have potential to generate dust, although this is likely to be minimal as there are no excavations planned for the Proposed Development, except for dredging works, which would take place in wet conditions and are unlikely to generate significant levels of dust. Exhaust gas emissions and dust could lead to a deterioration in air quality due to dust and particulate matter emissions, which in turn has the potential to affect human health, particularly around the construction site and access routes.

However, these air quality impacts and consequent impacts on health are considered unlikely to be significant, due to the temporary and short-term nature of construction. These impacts can be mitigated through the application of good practice construction management measures to

control air emissions. Good practice management measures incorporated into a CEMP would include:

- The use of modern equipment and plant, meeting emission control standards;
- The use of dust control methods, such as spraying water to damp down soils and ensuring that excavated material (if any) from works is compacted or covered when stockpiled; and
- Ensuring vehicles entering and leaving sites are covered where appropriate to prevent escape of materials during transport.

Overall, the effects on air quality from construction of the Proposed Development is not expected to be significant with the application of good practice management measures.

### 3.5 Noise and vibration

#### 3.5.1 Baseline sources

Baseline information and data were gathered from the following sources:

- Google Maps (Google, visited at <https://www.google.co.uk/maps> in September 2022); and
- Scotland's Environment Map (Scotland's Environment, visited at <https://www.arcgis.com/apps/MapJournal/index.html?appid=29581665638a4ac99f36100f8e6b28bb> in September 2022).
- New Islay Vessel Port Enabling Works – Noise Baseline Report 2022 (Mott Macdonald, 2022).

#### 3.5.2 Baseline

For noise and vibration, the study area includes human receptors within 300 m of the Proposed Development boundary. It should be noted that for underwater noise, this is primarily related to ecological receptors. Ecological receptors are covered in Section 3.2 Ecology.

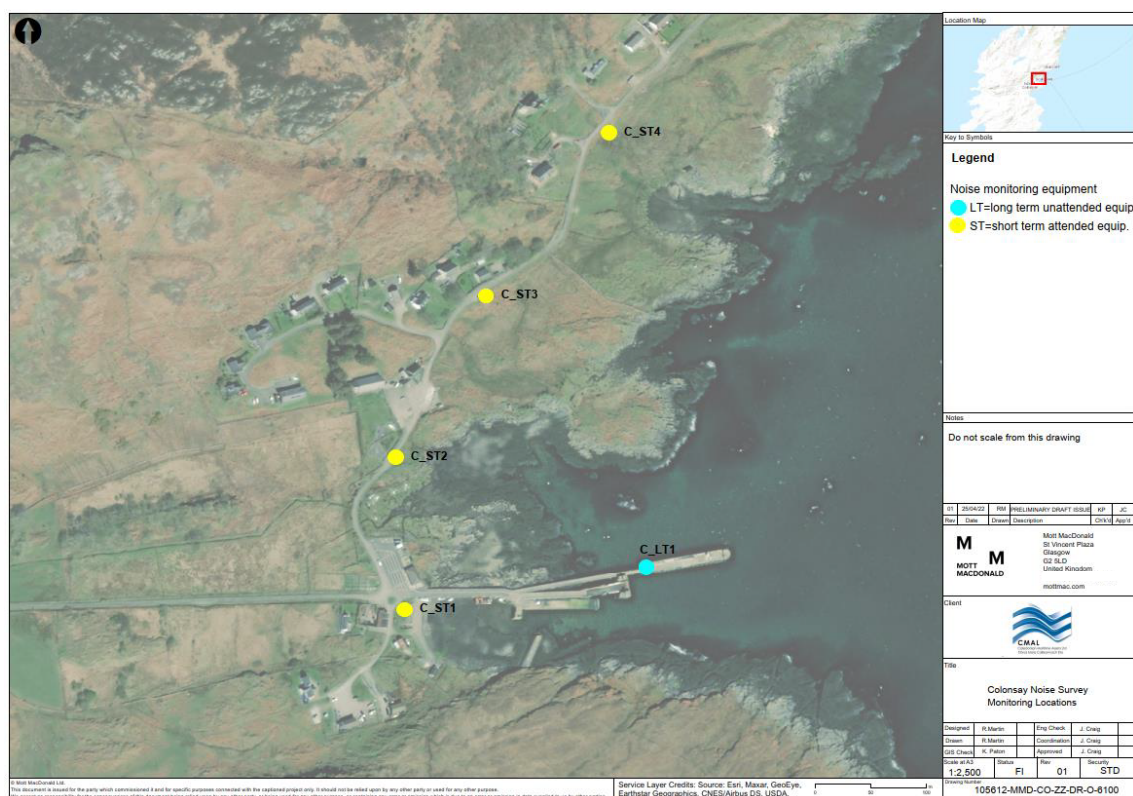
The Proposed Development is not within a noise management area. Baseline noise levels within the area are relatively low, due to the remoteness of the area and low density of people. The main sources of noise include:

- Road traffic noise from local roads;
- Users of Colonsay Ferry Terminal (including motor vehicles and ferries);
- Users of the sea;
- Users of businesses within the local area; and
- Residents within the local area.

Noise surveys were undertaken in May 2022<sup>5</sup> at measurement locations shown in Figure 3-1. F

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<sup>5</sup> New Islay Vessel Port Enabling Works – Noise Baseline Report 2022



**Figure 3-1 Colonsay noise measurement locations**

The results are summarised in Section 3.5.2.1 and 3.5.2.2 below.

### 3.5.2.1 Short term

The results of the attended short term 15-minute measurement samples are shown in Table 3-2.

At C\_ST1 and C\_ST2, construction work (material being dumped) with occasional road traffic noise from local road (including tractor with trailer to move construction spoil) dominated the noise climate. At C\_ST1 when the CalMac ferry arrives then this became the dominant noise source.

At C\_ST3 and C\_ST4, birds, wind and construction work (cutting of hill side, excavators, rock hammering, tractor with trailer to move spoil) with occasional road traffic noise from local road dominated the noise climate. At C\_ST3 CalMac ferry publica address system (h18.55) and operational noise from the terminal were clearly audible.

**Table 3-2 Summary of free field C\_STs data**

Location	Date	Start time	L <sub>Aeq,15min</sub> dB	L <sub>Amax,15min</sub> dB	L <sub>A10,15min</sub> dB	L <sub>A90,15min</sub> dB
C_ST1	11/05/2022	14:56	52	73	55	39
	11/05/2022	18:44	51	70	54	39
	11/05/2022	18:59*	53	71	57	44
	12/05/2022	11:41 <sup>#</sup>	57	74	61	47
C_ST2	11/05/2022	14:39	57	78	57	42
	11/05/2022	18:26	57	79	54	39
	12/05/2022	11:24 <sup>#</sup>	58	71	61	48
C_ST3	11/05/2022	15:04	50	69	50	35
	11/05/2022	18:43*	50	73	50	37
	12/05/2022	11:41 <sup>#</sup>	58	70	61	50
C_ST4	11/05/2022	14:42	47	69	49	38
	11/05/2022	18:23	51	76	45	32

12/05/2022	11:21 <sup>#</sup>	54	73	56	45
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\* CalMac ferry arriving or leaving included in the measurement; # strong and gusty wind

### 3.5.2.2 Long term

Position C\_LT1 was located in the east area of CalMac Colonsay ferry terminal in Scalasaig, Isle of Colonsay PA61 7YW, on the pier by the docking point for the ferry. PE\_LT1 is approx. 270 m east of the nearest residential receptor nearby The Old Waiting Room Gallery, Balnahard Farmhouse, Isle of Colonsay, PA61 7YR. Other residential properties are to the north and south. Local roads run to the north and the west. A residential and small business construction site is active approx. 360 m south-west and approx. 330 m north-west of C\_LT1; a local resident reported that works started in September 2021 and are unlikely to be finished by the end of 2022.

Waves on pier piles and wind dominated the noise climate. Table 3-3 presents the data collected at LT2. Figure 3-2 shows the time history.

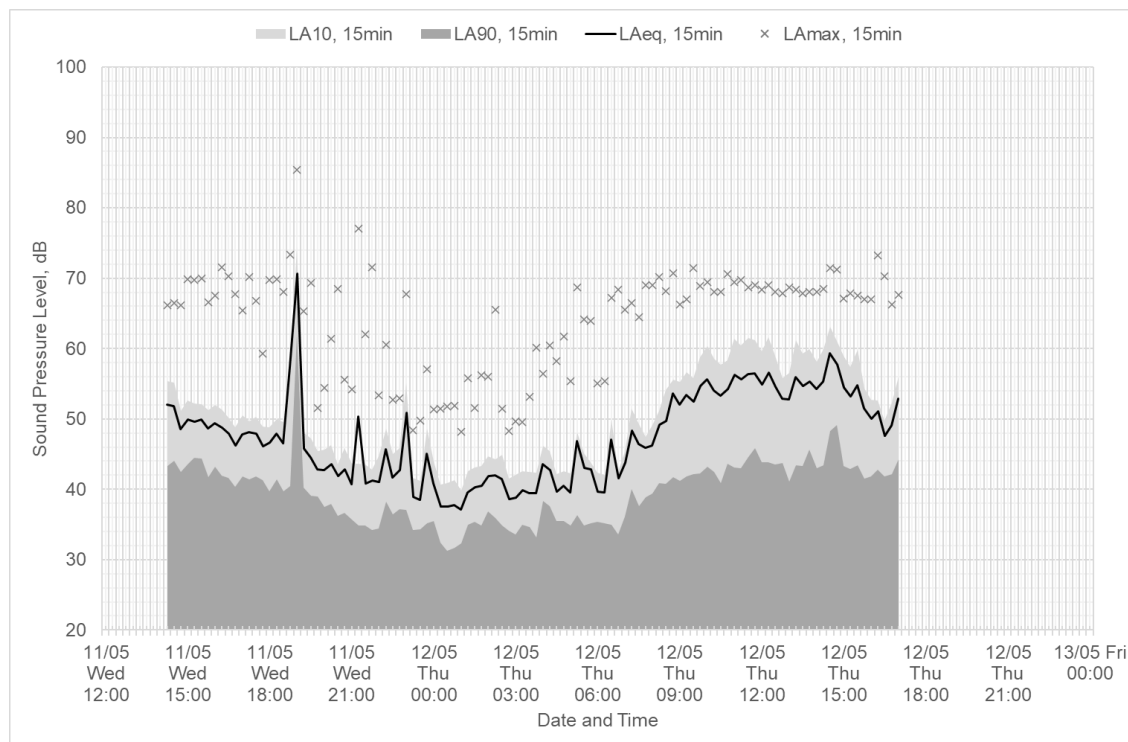
C\_LT1 was installed on 11 May 2022 h14:05 and collected on 12 May 2022 h17:17. According to the summer ferry timetable<sup>9</sup>, a total of 2 ferries arrived and left Colonsay during the survey period on 11 May 2022 h19:00 (A) and h19:15 (D).

**Table 3-3 Summary of free field C\_LT1 data**

Date	BS 5228 assessment - weekdays			BS 4142 assessment			
	L <sub>Aeq,12h</sub> daytime dB	L <sub>Aeq,4h</sub> evening time dB	L <sub>Aeq,8h</sub> night time dB	L <sub>A90,1h</sub> daytime dB	L <sub>A90,15min</sub> night time dB	L <sub>Aeq,16h</sub> daytime dB	L <sub>Aeq,8h</sub> night-time dB
11/05/2022	50 <sup>A</sup>	59	42	42 <sup>C</sup>	35	56 <sup>C</sup>	42
12/05/2022	54 <sup>B</sup>	---	---	42 <sup>B</sup>	---	54 <sup>B</sup>	---

partial periods: <sup>A</sup> 5h, <sup>B</sup> 10h, <sup>C</sup> 9h

**Figure 3-2 C\_LT1 plot of results**





Potential receptors of local noise impacts include:

- Human receptors: The nearest receptors to the Proposed Development boundary are located approximately 200 – 300 m north and west. This includes the art gallery and the Pantry Store to the west, Colonsay General Store and residential properties to the north, just off the B8087 and users of the ferry terminal and sea.
- Ecological receptors: The Inner Hebrides and the Minches SAC (within the footprint of the Proposed Development boundary), Lock Fada SAC (approximately 1.6 km north of the Proposed Development boundary), North Colonsay and Western Cliffs SPA (approximately 1.4 km north east of the Proposed Development boundary) and Oronsay and South Colonsay SPA (approximately 1.4 km south of the Proposed Development boundary). Ecological receptors are discussed in further detail in Section 3.2.

### 3.5.3 Potential effects and mitigation

Construction of the Proposed Development has the potential to affect marine ecology in the immediate vicinity of the development footprint in terms of habitat loss within the SAC from dredging; and in the wider area in terms of underwater noise via the placement of structural collars around the toes of the piles with dowels into the bedrock below the existing pile, installing of new timber piles and dredging. This is further expanded upon in Ecology, Section 3.2 and not further discussed in this section. As such, this section focuses upon human receptors.

British Standard BS5228-2:2009+A1:2014 entitled 'Code of practice for noise and vibration control on construction and open sites – Part 1: Noise' provides empirical noise levels from various types of construction activity and provides a methodology for calculating and assessing the potential impact of construction noise.

BS5228-1 does not define specific criteria to determine the significance of noise impacts; however, it provides methods for assessing construction noise impacts. In order to determine the potential for significant change, Method 2 called the 5 dB(A) Change method from Annex E has been applied for this assessment. This method states the following:

*"Noise levels generated by site activities are deemed to be potentially significant if the total noise (pre-construction ambient plus site noise) exceeds the pre-construction ambient noise by 5 dB or more, subject to lower cut-off values of 65 dB, 55 dB and 45 dB  $L_{Aeq, T}$  from site noise alone, for the daytime, evening and night-time periods, respectively; and a duration of one month or more, unless works of a shorter duration are likely to result in significant effect."*

These criteria are general applicable to the following resources:

1. Residential buildings;
2. Hotels and hostels;
3. Buildings and religious use;
4. Buildings in educational use; and
5. Buildings in health and/or community use.

The baseline noise survey shows that ambient noise levels at all locations near the Colonsay ferry terminal are relatively low and therefore construction noise is likely to result in more than a 5dBA change in noise level at most residential locations nearby. The potential for significant impact is therefore largely dependent on whether the lower cut-off values of 65 dB, 55 dB and 45 dB  $L_{Aeq, T}$  from site noise alone, for the daytime, evening and night-time periods, respectively are exceeded.

Construction works to replace fenders, bollards and provision of gangways are unlikely to generate significant levels of noise, with the primary source of noise being operation of site

equipment and presence of construction workers. Noise generated is likely to be minimal and unlikely to be noisier than existing noise generated from operation of the ferry terminal.

During construction there is potential for noise and vibration impacts during dredging and installing new timber piles and toe protection around existing timber piles on nearby human receptors identified in Section 3.4.2.

However, during piling noise levels at the nearest residential receptors would be up to 62dB  $L_{Aeq,T}$ . Therefore, provided piling is limited to daytime (07:00-19:00) no significant impact is expected. During dredging by backhoe predicted noise levels at the nearest residential receptors would be up to 43dBA. Dredging by this method may be conducted 24hrs per day.

The works are temporary and short term. To minimise noise, the placement of structural collars around the toes of the existing piles with dowels into the bedrock below the pile will be carried out by divers it is not envisaged that underwater noise will have a significant impact on human receptors.

To manage noise and vibration, a CEMP will be in place throughout the works which would outline best practices to ensure noisy works are minimised as far as practicable. It is therefore anticipated that short-term construction impacts on noise receptors would be reduced by adopting the mitigation measures to be included in the CEMP:

- A scheme of noise monitoring would be agreed with the Environmental Health Officer, and noise limits will be contained within the CEMP. The contractor would develop and implement a Construction Noise Management Plan to meet these requirements.
- Providing notification to the nearest residents and businesses of likely commencement of piling works at least one week in advance.
- The normal hours of working (for activities other than piling) are anticipated to be between 24 hours Monday to Sunday. However, piling works will be restricted to the hours between 08:00-1800 Monday to Friday and 08:00-12:00 Saturday. No piling works would be undertaken on Sunday. Consent to work during these hours would be done in consultation with Argyll and Bute Council, the Project Manager and the Ferry Operator.
- Switching off plant and equipment when not in use and safe to do so.

As such, with the above measures in place during construction, residual effects on noise receptors are not considered significant.

## 3.6 Water environment

### 3.6.1 Baseline sources

Baseline information and data were gathered from the following sources:

- Scottish Environment Protection Agency (SEPA) Flood Map (SEPA, visited at <https://map.sepa.org.uk/floodmap/map.htm> in September 2022);
- SEPA Flood Risk and Land Use Vulnerability Guidance (SEPA, 2018, visited at <https://www.sepa.org.uk/media/143416/land-use-vulnerability-guidance.pdf> in September 2022); and
- Scotland's Environment Map (Scotland's Environment, visited at <https://www.arcgis.com/apps/MapJournal/index.html?appid=29581665638a4ac99f36100f8e6b28bb> in September 2022).



### 3.6.2 Baseline

There are no Bathing Waters, Shellfish Water Protected Areas, or Marine Planning Zones within the 1 km of the Proposed Development boundary.

#### 3.6.2.1 Flood Risk

##### Coastal Flooding

SEPA flood maps indicate that the Proposed Development is located within an area where each year there is a 10% chance of flooding from coastal sources.

##### River Flooding

There is no specific likelihood of river flooding identified for this area but as the SEPA maps do not include estimates of flooding from watercourses with catchments under 3 km<sup>2</sup> in area, there could still be localised effects from flooding in some places.

##### Surface Water Flooding

There is no specific likelihood of surface water flooding identified for this area but there could still be localised effects from flooding in some places.

#### 3.6.2.2 Groundwater

The Proposed Development is partially within the footprint of Colonsay groundwater (ID: 150496) which is monitored and classified by SEPA as good overall.

#### 3.6.2.3 Coastal Water

The Proposed Development is located within the footprint of Colonsay coastal water body (ID: 200053) which is 308.6 km<sup>2</sup> in area, and monitored and classified by SEPA as good overall. This water body overlaps a number of ecological designated sites, however the most relevant to the Proposed Development is Inner Hebrides and the Minches SAC which is within the footprint of the Proposed Development boundary (further details in Ecology, Section 3.2).

### 3.6.3 Potential effects and mitigation

#### 3.6.3.1 Flood Risk

Construction works would involve replacement of fenders and bollards or provision of gangways, toe protection around existing timber piles within the existing berth site, new timber piles and dredging works. It should be noted that the Proposed Development is a Water Compatible Use as defined within SEPA's Flood Risk and Land Use Vulnerability Guidance (LUPS-GU24 v.4) and land use with such a classification in an area with a 10% chance of flooding each year is considered to be generally suitable for development by SEPA. Construction activities are unlikely to impact flood risk or the coastal or ground waters in the area. It is therefore considered that a flood risk assessment is not required.

#### 3.6.3.2 Ground Water

Given works involve replacement of existing assets or installation of gangways, toe protection around existing timber piles, new timber piles and dredging off shore, it is unlikely that groundwater would be impacted by construction of the Proposed Development.

#### 3.6.3.3 Coastal Water

During dredging works, there is a risk of mobilisation and release of contaminants within dredged materials. Dredged material obtained and removed would be tested and disposed of

appropriately in accordance with good practice outlined within a CEMP and under marine construction and dredging licences. Any effect on water or sediment quality is not anticipated to be significant, given that the contractor will adhere to good practice and management measures. These measures would reduce the risk and likelihood of releasing materials and pollutants into the marine environment and control any released sediment through operation of a silt boom. It is considered that any increases in dissolved pollutants above background levels would be highly localised and temporary in nature. Furthermore, samples would be taken to support the BPEO and Marine Construction and Dredging Licence which would inform the required mitigation requirements. The dredging area makes up less than 1.4% of the Colonsay Coastal water body (ID:200053) therefore any effects are anticipated to be localised in nature.

It is not anticipated that there will be any alteration to the tidal currents and wave as a result of the Proposed Development. The Proposed Development is centred around dredging the sea floor to a level of -5.5m below CD from on average 4.5m below CD to accommodate the new vessel.

### 3.7 Landscape and visual amenity

#### 3.7.1 Baseline sources

Baseline information and data were gathered from the following sources:

- NatureScot Coastal Character Map (Nature Scot (formerly Scottish National Heritage, 2010 (visited at <https://www.nature.scot/doc/national-coastal-character-map> in September 2022);
- NatureScot digital map of national landscape character assessment.(NatureScot, visited at: <https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map> in September 2022); and
- NatureScot Landscape Character Assessment (NatureScot (formerly Scottish National Heritage), 2019) (visited at <https://www.nature.scot/sites/default/files/LCA/LCT%20354%20-%20Farmed%20and%20Settled%20Voes%20and%20Sounds%20-%20final%20pdf.pdf> in September 2022).

#### 3.7.2 Baseline

For landscape and visual amenity, the study area includes receptors within 1 km of the Proposed Development boundary.

#### Landscape and Seascape

The Proposed Development and onshore areas are within Landscape Character Type 49: Island Mixed Farmland. Key characteristics include:

- Undulating, uneven landform with rocky outcrops on the lower margins of the upland moor;
- Indented rocky coastline with some small sandy bays;
- Diverse patchy mix of moorland, grassland, peaty marsh and woodland;
- Typically geometric field, divided by broken stone walls on upper slopes and wire fences or straight drainage ditches on glen floor;
- Some conifer plantations and deciduous woodland associated with larger farms and estate on sheltered glen slopes;
- Many scattered small settlements and isolated farms and cottages; and
- Archaeological sites.

The off-shore Coastal Character Type around Colonsay is Type 13, Low Rocky Island Coasts. Physical characteristics include generally low rocky coastline, rising to cliffs in places. Moorland,

either rocky, 'stepped' or boggy, tends to back a narrow sparsely settled open coastal fringe, usually some crofting and few settlements. Views of open Atlantic Ocean in the main with dramatic mountain backdrops and fragmented island coastlines.

### Visual Amenity

There are no National Scenic Areas or National Parks within the footprint of the Proposed Development or wider study area.

The nearest visual receptors to the Proposed Development boundary are located approximately 200 -300 m north and west. This includes the art gallery, the Pantry Store to the west, Colonsay General Store and residential properties to the north just off the B8087 and users of the ferry terminal and sea.

#### 3.7.3 Potential effects and mitigation

The Proposed Development would involve the replacement of bollards fenders and installation of gangways, new timber piles and toe protection around existing timber piles, located immediately within the existing berth which is owned and operated by Caledonian Maritime Assets Ltd. The dredge and pile collars would not be visible to residential and business receptors. The works would not change the key landscape or seascape features of this area.

There is likely to be impacts on visual amenity during construction, due to the presence of construction machinery and other equipment. However, the impacts are likely to be minor and short-term. When construction is complete, the replaced assets would look similar to the existing assets and in keeping with the existing environment. As such no significant effects are anticipated in relation to landscape and visual amenity.

### 3.8 Population and human health

#### 3.8.1 Baseline sources

Baseline information and data were gathered from the following sources:

- Google Maps (Google, visited at <https://www.google.co.uk/maps> in September 2022); and
- Scotland's Environment Map (Scotland's Environment, visited at <https://www.arcgis.com/apps/MapJournal/index.html?appid=29581665638a4ac99f36100f8e6b28bb> in September 2022).

#### 3.8.2 Baseline

The nearest receptors to the Proposed Development are located approximately 200 -300 m north and west. This includes the art gallery, the Pantry Store to the west, Colonsay General Store and residential properties to the north just off the B8087 and users of the ferry terminal and sea.

#### 3.8.3 Potential effects and mitigation

During construction of the Proposed Development, there is likely to be some disruption to people who live, work or use facilities within the area from the presence of site equipment, meaning increased noise, changes to local air quality and changes to visual amenity (see Air Quality (Section 3.3), Noise and Vibration (Section 3.4) and Landscape and Visual Amenity (Section 3.6). Access to the ferry terminal for pedestrians, cyclists and vehicles would remain open at all times during construction works. Overall, the impacts from disruption would be minimal, temporary and short-term and can be managed through good practice measures outlined in a CEMP (see specific measures outlined in other environmental topic sections). As such, disruption impacts to human receptors are not anticipated to be significant.

### 3.9 Waste

#### 3.9.1 Potential effects and mitigation

The current volumes of waste generated or material consumption from the Proposed Development are likely to be limited to dredged material (9287 m<sup>3</sup>) and a small number of assets which would be replaced. The volumes of waste generated, and materials required are anticipated to be relatively small.

Dredged material obtained and removed would be tested and disposed of appropriately in accordance with good practice, outlined within a CEMP and under a marine construction and dredging licence. These options would be reviewed within a BPEO.

A Site Waste Management Plan (SWMP) would be prepared to ensure adequate measures for waste management are in place prior to and during construction. Measures would include:

- Workers would ensure that all debris, material, and water is removed from the containment with any waste material removed from the site by licensed waste carriers.
- The Contractor would comply with all relevant waste legislation in relation to waste handling, storage, transport and disposal (e.g. The Waste Framework Directive) and with all required licences or exemptions in place where appropriate.

Overall, there are no significant effects anticipated, as waste produced for the Proposed Development is minimal and would be managed through a SWMP.

### 3.10 Material assets

#### 3.10.1 Baseline sources

Baseline information and data were gathered from the following sources:

- Google Maps (Google, visited at <https://www.google.co.uk/maps> in September 2022).

#### 3.10.2 Baseline

Material assets within 500 m of the Proposed Scheme boundary include:

- Colonsay Ferry Terminal; and
- Local roads/access roads.

#### 3.10.3 Potential effects and mitigation

The construction of the Proposed Development would utilise material assets (access roads and areas of the existing pier). Access to the ferry terminal for pedestrian and vehicles would remain open at all times during the works, as such disruption impacts on usage and functioning of these material assets would be minimal. Accordingly, no significant effects are anticipated in relation to material assets.

### 3.11 Climate change

#### 3.11.1 Baseline sources

Baseline information and data were gathered from the following sources:

- Scottish Government Website (Scottish Government, visited at: <https://www.gov.scot/policies/climate-change/reducing-emissions/> in September 2022);

- Argyll and Bute Council Website (Argyll and Bute Council, visited at <https://www.argyll-bute.gov.uk/climate-change> in September 2022); and
- Met Office Climate Projections data (CP18) (Met Office, visited at: <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/data/index> in September 2022).

### 3.11.2 Baseline

Carbon emissions are identified as a primary cause of climate change as they contribute to increased levels of greenhouse gases in the atmosphere.

The Climate Change (Scotland) Act 2009 requires us to act and contribute to carbon emissions reduction targets and to climate change adaptation. The ambition of Scotland's emissions reduction target is to be net zero by 2045. There is also an interim target of a 75% reduction in emissions by 2030, relative to 1990 levels of carbon dioxide, methane and nitrous oxide and 1995 levels of hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride.

Scotland's Climate Change Plan is a statutory delivery plan for meeting Scotland's reduction targets which is published at least every 5 years. The latest update in December 2020 sets out a pathway to meeting Scotland's emission reduction targets over the period to 2032.

Climate change over the next few decades, is likely to mean wetter winters and hotter drier summers in the UK, with sea level continuing to rise.

### 3.11.3 Potential effects and mitigation

In relation to greenhouse gases, carbon emissions from the Proposed Development during construction are expected to be limited to transport movements (including transport of materials), running of machinery and embodied carbon of construction materials.

It is considered that the Proposed Development would not result in a significant effect upon climate given the nature of the development. Embodied carbon emissions from construction materials (e.g. new structural collars around existing timber piles, timber piles, bollards and gangways) are expected to be very low, given the Proposed Development is small scale. The main source of carbon emissions is likely to be from use of new material, dredging works and transportation of dredge materials off site.

Any increase in emissions from construction works is likely to be negligible, and pollution and emissions control during construction would be discussed within a detailed CEMP (as identified in Air Quality, Section 3.3).

In relation to vulnerability to climate change of the Proposed Development the key risk relates to future flood risk. However, as discussed within the Water Environment Section 3.5, the Proposed Development is a water compatible site and activities involve replacement of existing assets (bollards and fenders) and installation of new gangways, toe protection around existing timber piles and dredging. As the Proposed Development is a water compatible site the vulnerability of the ferry terminal to future increased flood risk and sea level rise due to climate change is considered to be low.

## 3.12 Major accidents

### 3.12.1 Baseline

The existing ferry terminal is operational and is not a high-risk development site (e.g. no risk of using dangerous equipment, materials or chemicals) for major accidents during its day to day

functioning. There are no existing high-risk development sites or potential external hazards within the vicinity of the ferry terminal.

### 3.12.2 Potential effects and mitigation

Construction of the Proposed Development is unlikely to result in a major accident due to the nature of the works which comprise of repairs and improvements of a ferry terminal (which is already existing) and dredging to accommodate larger vessels. It does not interact with any sources of external hazards which may be vulnerable to a major accident.

Overall, due to the nature of the works Proposed Development is unlikely to be at risk / be a risk of a major accident. The Proposed Scheme may have some beneficial impacts and improve safety for users of the terminal through replacement of existing fenders around the pier. As such, the construction of the Proposed Development has a low likelihood to give rise to major accidents.

## 3.13 In-combination and cumulative effects

### 3.13.1 Baseline sources

Baseline information and data were gathered from the following sources:

- Argyll and Bute Council Planning Portal (Argyll and Bute Council, visited at: <https://www.argyll-bute.gov.uk/planning-and-environment/find-and-comment-planning-applications> in September 2022.

### 3.13.2 Baseline

#### 3.13.2.1 In-combination

In-combination effects can be described as the inter-relationships of different environmental disciplines impacts on a single receptor from the Proposed Development.

#### 3.13.2.2 Cumulative effects

Cumulative effects can be described as the interactions and combined effects of the Proposed Development with other reasonably foreseeable developments on a single receptor.

A search of planning applications and marine licence applications within 1 km of the Proposed Development boundary within the last two years was undertaken on 27 September 2022. The following notable developments were identified:

- Land West Of Hazel Cottage (Plots 5, 6, 12) Scalasaig Isle Of Colonsay Argyll And Bute (Reference 22/00815/PP): Erection of 6 dwellinghouses and 3 houses of multiple occupation, formation of vehicular access and installation of sewage treatment system (approximately 280 m west of the Proposed Development); and
- Land East Of 1 And 2 Colonsay Business Units Dunoran Scalasaig Isle Of Colonsay Argyll And Bute (Reference: 21/00107/PP). Erection of 2 business units (Class 4) (approximately 230 m north west of the Proposed Development).

### 3.13.3 Potential effects and mitigation

There is potential for in-combination effects which would likely to relate to ecology, air quality, noise and visual amenity impacts on receptors within the study area. However, given the nature of the works which are temporary and short-term and would be managed through implementation of a CEMP it is unlikely that in-combination effects would be significant.

There is potential for cumulative effects with other developments identified in Section 3.12.2. However, these developments are small scale (new dwellings and new business units) which are of a sufficient distance away. Given the nature of the works for the Proposed Development, it is unlikely that any cumulative effects would be significant.

As identified in Section 1.3, the Proposed Development is considered a Schedule 2 development and therefore must be considered against the Schedule 3 criteria to determine the potential for likely significant impacts. Schedule 3 provides criteria to assist with determining whether a Schedule 2 development constitutes an EIA Development. These criteria are the characteristics of development, the location of development and the characteristics of the potential impact. The environmental constraints and considerations taken into account in determining the potential for likely significant impacts are outlined Table 4-1 below provides a summary of potential effects and mitigation proposed for each environmental topic. Overall, it is considered that there would be no likely significant effects for all topics in relation to construction of the Proposed Development with appropriate mitigation in place. As such, it is considered that a Statutory EIA is not required for the Proposed Development.

Environmental Topic	Key Receptors	Summary of Potential Effects and Mitigation	Significant Effects Likely?
Ecology	<p>Inner Hebrides and the Minches SAC (within the footprint of the Proposed Development boundary).</p> <p>Littoral rock and other hard substrata and coastal waters</p>	<p>There is likely to be no impacts on ecological receptors in relation to replacement of fenders and bollards or installation of new gangways.</p> <p>There would be potential impacts on ecological receptors (habitats, otter, marine mammals and Inner Hebrides and the Minches SAC) in relation to timber piling, dredging works and placement of structural collars around the toes of existing piles.</p> <p>[REDACTED],</p> <p>[REDACTED]</p> <p>[REDACTED] There is potential for noise disturbance impacts on otter and marine mammals within the Inner Hebrides and Minches SAC due to timber piling, dredging and placement of structural collars. However, the works are temporary and short term. Noise from placement of structural collars would be minimised through the use of divers. Works would be undertaken under an EPS licence (otter and marine mammal) and the following measures:</p> <ul style="list-style-type: none"> <li>● Pre-construction otter and marine mammal checking survey is undertaken.</li> <li>● A Species Protection Plan is produced and implemented prior to and during construction.</li> </ul>	<p>No, with the exception of possible impacts to marine mammals and Inner Hebrides and the Minches SAC, however, it is considered that this would be best managed through the habitats regulations assessment (HRA) process and marine licence application, rather than requiring an EIA.</p>



Environmental Topic	Key Receptors	Summary of Potential Effects and Mitigation	Significant Effects Likely?
		<ul style="list-style-type: none"> <li>Marine mammal mitigation would be conducted in accordance with JNCC guidelines during any pilling operations.</li> <li>Toolbox talks are completed prior to works commencing.</li> <li>If at any point an otter or marine mammal is observed passing through, the Proposed Scheme construction works are stopped until the otter or marine mammal has dispersed.</li> <li>Best practice guidance working measures is applied.</li> <li>Excavations are covered at the end of each day and where deep excavations occur, a mammal ladder is installed.</li> </ul>	
Archaeology and Cultural Heritage	<p>Six Listed Buildings (closest approximately 100m west of the Proposed Development boundary).</p> <p>One Scheduled Monument (approximately 790 m west of the Proposed Development boundary).</p> <p>Closest non-designated assets:</p> <ul style="list-style-type: none"> <li>Colonsay, Scalasaig, Scalasaig Harbour (ID: 161285), approximately 90 m west of the Proposed Development boundary</li> <li>Unknown, Port an Obain, Shipwreck (ID: 119193) approximately 170 m east of the Proposed Scheme boundary.</li> </ul>	<p>There are no assets directly within the footprint of the Proposed Development boundary. There is likely to be no direct or setting impacts on assets in relation to works which involve replacement of existing assets or installation of new gangways, timber piles and toe protection on existing timber piles. The existing berth would be similar to existing assets and is in fitting with the exiting setting of the area. Additionally, dredging works are not anticipated to take place within the footprint of the maritime non-designated asset which is 170 m from the Proposed Development boundary. As such, it is anticipated that there would be no likely significant effects on Archaeology and Cultural Heritage.</p>	No
Air Quality	<p>Residential and business receptors 200-300 m north and west. Users of the ferry terminal and sea.</p>	<p>Operation of site equipment such as vehicles and machinery is likely to result in emissions of exhaust gases to the atmosphere and there is potential to generate dust, although this is likely to be minimal as there are no excavations planned for the Proposed Development, except for dredging works, which would take</p>	No

Environmental Topic	Key Receptors	Summary of Potential Effects and Mitigation	Significant Effects Likely?
	Inner Hebrides and the Minches SAC (within the footprint of the Proposed Development boundary)	<p>place in wet conditions (meaning lower likelihood of generating dust).</p> <p>However, these air quality impacts and consequent impacts on health are considered unlikely to be significant, due to the temporary and short-term nature of construction. These impacts can be mitigated through the application of good practice construction management measures to control air emissions incorporated into a CEMP. This would include:</p> <ul style="list-style-type: none"> <li>• The use of modern equipment and plant, meeting emission control standards;</li> <li>• The use of dust control methods, such as spraying water to damp down soils and ensuring that excavated material (if any) from works is compacted or covered when stockpiled; and</li> <li>• Ensuring vehicles entering and leaving sites are covered where appropriate to prevent escape of materials during transport.</li> </ul> <p>Overall, the effects on air quality is not expected to be significant with the application of good practice management measures.</p>	
Noise and Vibration	<p>Residential and business receptors 200-300 m north and west. Users of the ferry terminal and sea.</p> <p>Inner Hebrides and the Minches SAC (within the footprint of the Proposed Development boundary)</p>	<p>Construction works to replace fenders, bollards and provision of gangways are unlikely to generate significant levels of noise, with the primary source of noise being operation of site equipment and presence of construction workers.</p> <p>During construction there is potential for noise and vibration impacts to ecological receptors during dredging and installing new timber piles and toe protection around existing timber piles. To minimise noise, placement of structural collars around the toes of the existing piles with dowels into the bedrock below the pile will be carried out by divers.</p> <p>A CEMP will be in place throughout the works which would outline best practices to ensure noisy works are minimised as far as practicable. Measures would include:</p> <ul style="list-style-type: none"> <li>• A scheme of noise monitoring would be agreed with the Environmental Health Officer, and noise limits will be contained within the CEMP. The contractor would develop</li> </ul>	No

Environmental Topic	Key Receptors	Summary of Potential Effects and Mitigation	Significant Effects Likely?
		<p>and implement a Noise Management Plan to meet these requirements.</p> <ul style="list-style-type: none"> <li>● Providing notification to the nearest residents and businesses of likely commencement of piling works at least one week in advance</li> <li>● The normal hours of working (for activities other than piling) are anticipated to be between 24 hours Monday to Sunday. However, piling works will be restricted to the hours between 08:00-1800 Monday to Friday and 08:00-12:00 Saturday. No piling works would be undertaken on Sunday. Consent to work during these hours would be done in consultation with Argyll and Bute Council, CMAL and the Ferry Operator.</li> <li>● Switching off plant and equipment when not in use and safe to do so.</li> </ul> <p>Overall, the effects on air quality is not expected to be significant with the application of good practice management measures.</p>	
Water Environment	Colonsay coastal water body (ID: 200053) Colonsay groundwater (ID: 150496)	<p>The Proposed Development is a water compatible site, and construction activities are unlikely to impact flood risk or the coastal or surface water in the area. Given works involve replacement of existing assets or installation of gangways, toe protection around existing timber piles, new timber piles and dredging, it is unlikely that groundwater would be affected by construction of the Proposed Development.</p> <p>During dredging works, there is a risk of mobilisation and release of contaminants within dredged materials. Dredged material obtained and removed would be tested and disposed of appropriately in accordance with good practice outlined within a CEMP and under a marine dredging licence.</p> <p>Any effect on water or sediment quality is not anticipated to be significant, given that the contractor will adhere to good practice and management measures that will reduce the risk and likelihood of releasing materials and pollutants in the marine environment and control any released sediment through operation of a silt boom.</p>	No

Environmental Topic	Key Receptors	Summary of Potential Effects and Mitigation	Significant Effects Likely?
Landscape and Visual Amenity	Landscape Character Type 49: Island Mixed Farmland. Coastal Character Type around Colonsay is Type 13, Low Rocky Island Coasts. Residential and business receptors 200-300 m north and west. Users of the ferry terminal and sea.	There is likely to be visual amenity impacts during construction, due to the presence of construction machinery and other equipment. However, the impacts are likely to be minor and short-term. When complete, the replaced assets would look similar to the existing assets in keeping with the existing environment.  The dredge and pile collars would not be visible to local receptors. The works would not undermine the key environmental features of this area of land and seascape.  As such no significant effects are anticipated in relation to landscape and visual amenity.	No
Population and Human Health	Residential and business receptors 200-300 m north and west. Users of the ferry terminal and sea.	There is likely to be some disruption to people from the presence of site equipment, meaning increased noise, changes to air quality and changes to visual amenity. However, the disruption impacts would be minimal, temporary and short-term. These impacts can be managed through good practice measures outlined in a CEMP. Ferries would operate as normal during the construction works. As such, disruption impacts to human receptors are not anticipated to be significant.	No
Waste	The primary source of waste would come from dredged material and removal of old assets.	The volumes of waste generated, and materials consumed are anticipated to be relatively small. Dredged material obtained and removed would be tested and disposed of appropriately in accordance good practice outline within a CEMP and under a marine and dredging licence. A Site Waste Management Plan would be prepared to ensure adequate measures for waste management are in place. No significant effects are anticipated in relation to waste.	No
Material Assets	Colonsay Ferry Terminal; and Local roads/access roads.	Access to the ferry terminal for pedestrian and vehicles would remain open at all times during the works, as such disruption impacts on usage and functioning of these material assets would be minimal. No significant effects are anticipated in relation to material assets.	No
Climate Change	Scalasaig/Scotland	In relation to greenhouse gases, carbon emissions from the Proposed Development are expected to be low and limited to transport movements, running of machinery and embodied carbon of construction materials.	No

Environmental Topic	Key Receptors	Summary of Potential Effects and Mitigation	Significant Effects Likely?
		<p>The Proposed Development would not result in a significant effect upon climate given the nature of the development. Embodied carbon emissions from construction materials are expected to be very low, given the Proposed Development is small scale.</p> <p>As the Proposed Development is a water compatible site the vulnerability of the ferry terminal to future increased flood risk and sea level rise due to climate change is considered to be low.</p>	
Major Accidents	Colonsay	<p>Construction of the Proposed Development is unlikely to result in a major accident due to the nature the works which involve repairs and improvements of a ferry terminal (which is already existing) and dredging to accommodate larger vessels. It does not interact with any sources of external hazards which may be vulnerable to a major accident.</p> <p>No significant effects are anticipated in relation to major accidents.</p>	No
Cumulative Effects	Two minor developments (6 dwellinghouses and two business units).	<p>There is potential for cumulative effects with other developments. However, these developments are small scale and are of a sufficient distance away that given the nature of the works for the Proposed Development, it is unlikely that any cumulative effects would be significant.</p>	No

## **A. Appendix A – Proposed Development Drawings**



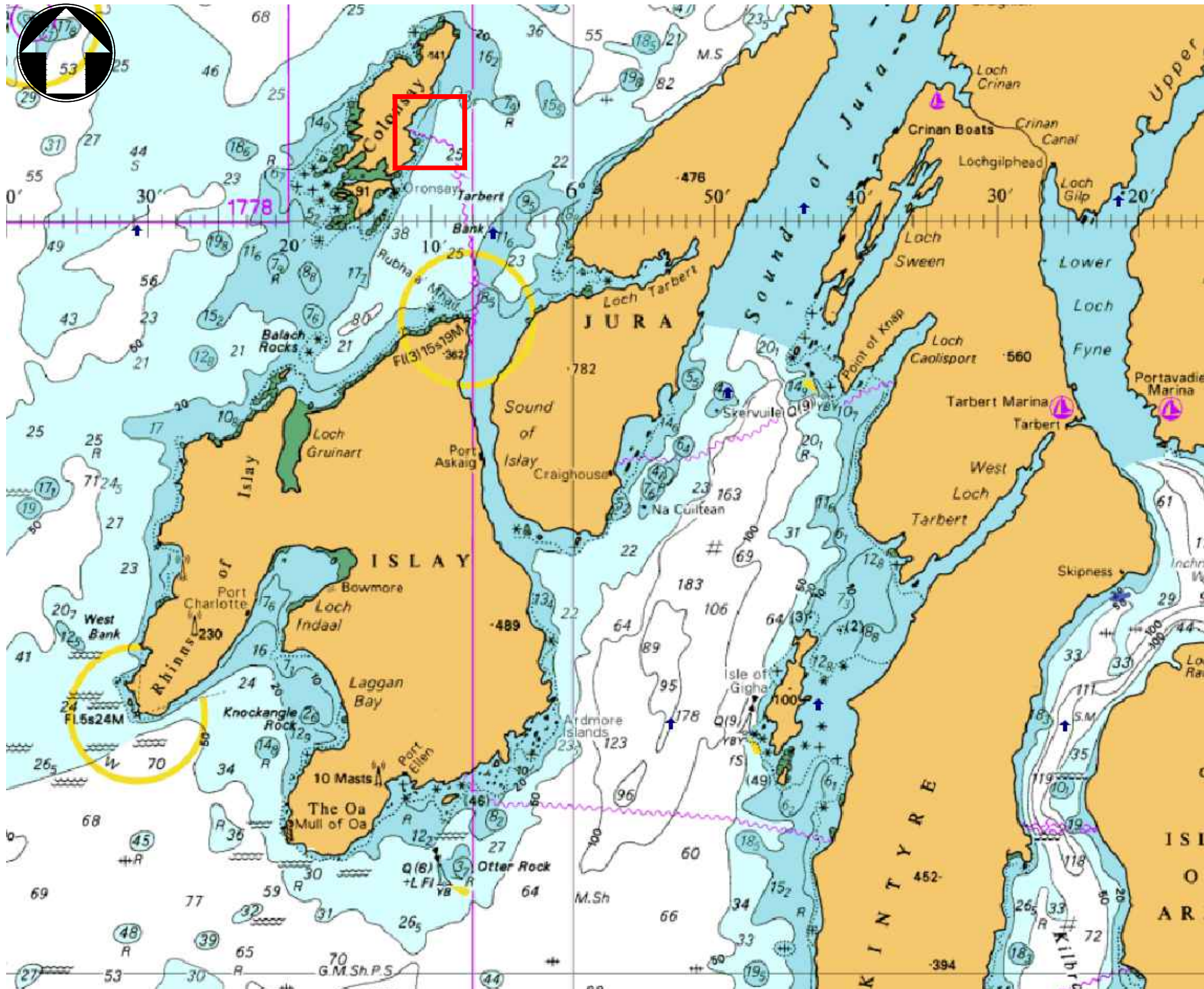


Figure 1 - Islay Admiralty Chart  
Scale NTS

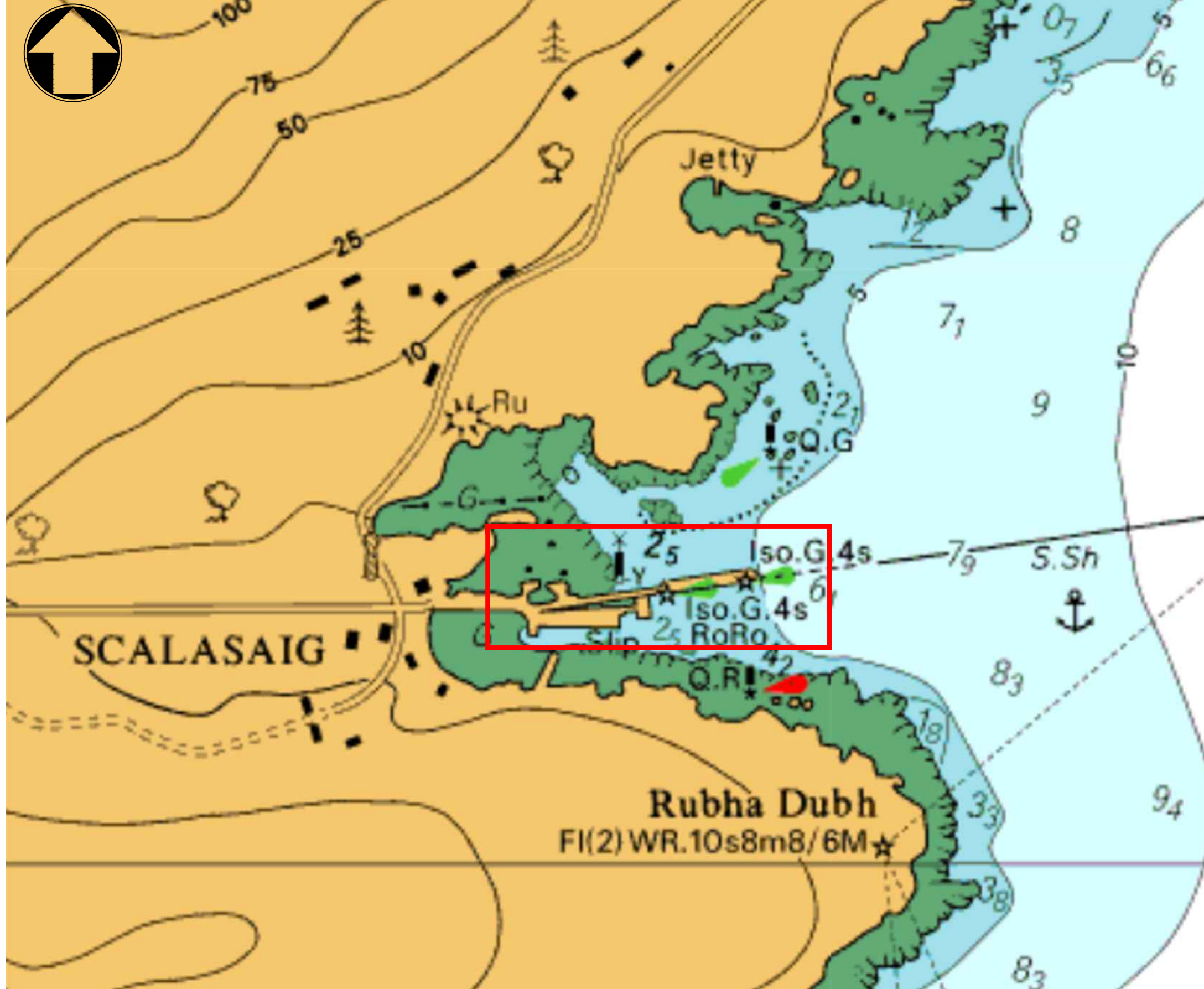


Figure 2 - Colonsay Admiralty Chart  
Scale NTS

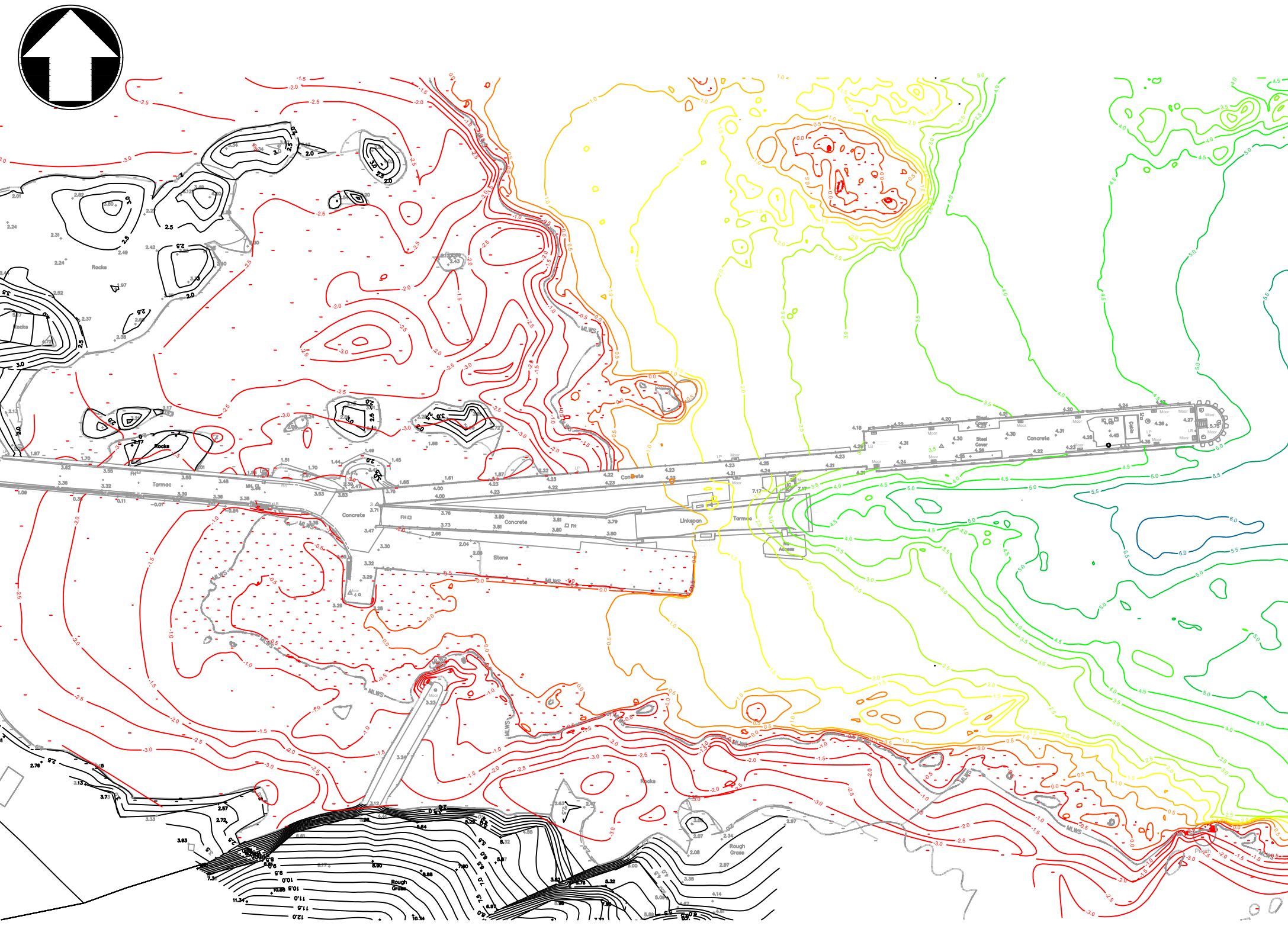


Figure 3 - Colonsay Location Layout  
Scale 1:1000

## New Islay Vessel Port Enabling Works - Colonsay Detailed Design

Drawing Title	Drawing Reference
<b>Introductions - (0100)</b>	
Location Plan & Drawing list	105612-MMD-CO-ZZ-DR-C-0010
General Notes	105612-MMD-CO-ZZ-DR-C-0011
<b>Background - (0100)</b>	
Exploratory Hole Location Plan	105612-MMD-CO-ZZ-DR-C-0100
Bathy	105612-MMD-CO-ZZ-DR-C-0110
Topo	105612-MMD-CO-ZZ-DR-C-0120
Existing Surfaces	105612-MMD-CO-ZZ-DR-C-0130
Boundaries & Interfaces	105612-MMD-PE-ZZ-DR-C-0140
Existing Structures	105612-MMD-PE-ZZ-DR-C-0150
<b>Demolition - (0200)</b>	
<b>Civil General - (1000)</b>	
<b>Dredging - (1100)</b>	
<b>Vessel Fit - (2XXX)</b>	
<b>Quay Furniture - (3000)</b>	
<b>Fendering - (3100)</b>	
<b>Mooring - (3200)</b>	

<b>Ladders - (3300)</b>	
<b>Shore Power Foundation - (3400)</b>	

- Notes
- All chainages are in metres.
  - All dimensions in millimetres unless noted otherwise.
  - All levels in metres relative to Chart Datum (mCD) unless noted otherwise.
  - DO NOT SCALE. Follow written dimensions only.
  - The Client accepts no liability for the accuracy of the topographical & bathymetrical information provided
  - The Contractor shall verify all dimensions, elevations, coordinates, and site conditions prior to execution.

Key to symbols

Reference drawings

Work In Progress

P02	11/10/2022	LM	Preliminary Information	BR	CO
P01	16/06/2022	JB	Preliminary Information	BR	CO
Rev	Date	Drawn	Description	Ch'kd	App'd

Status Stamp FOR INFORMATION

**MOTT MACDONALD**

St Vincent Plaza  
319 St Vincent Street  
Glasgow, G2 5LD  
United Kingdom

W mottmac.com

Client

Caledonian Maritime Assets Limited  
Municipal Buildings  
Fore Street  
Port Glasgow  
PA14 5EQ

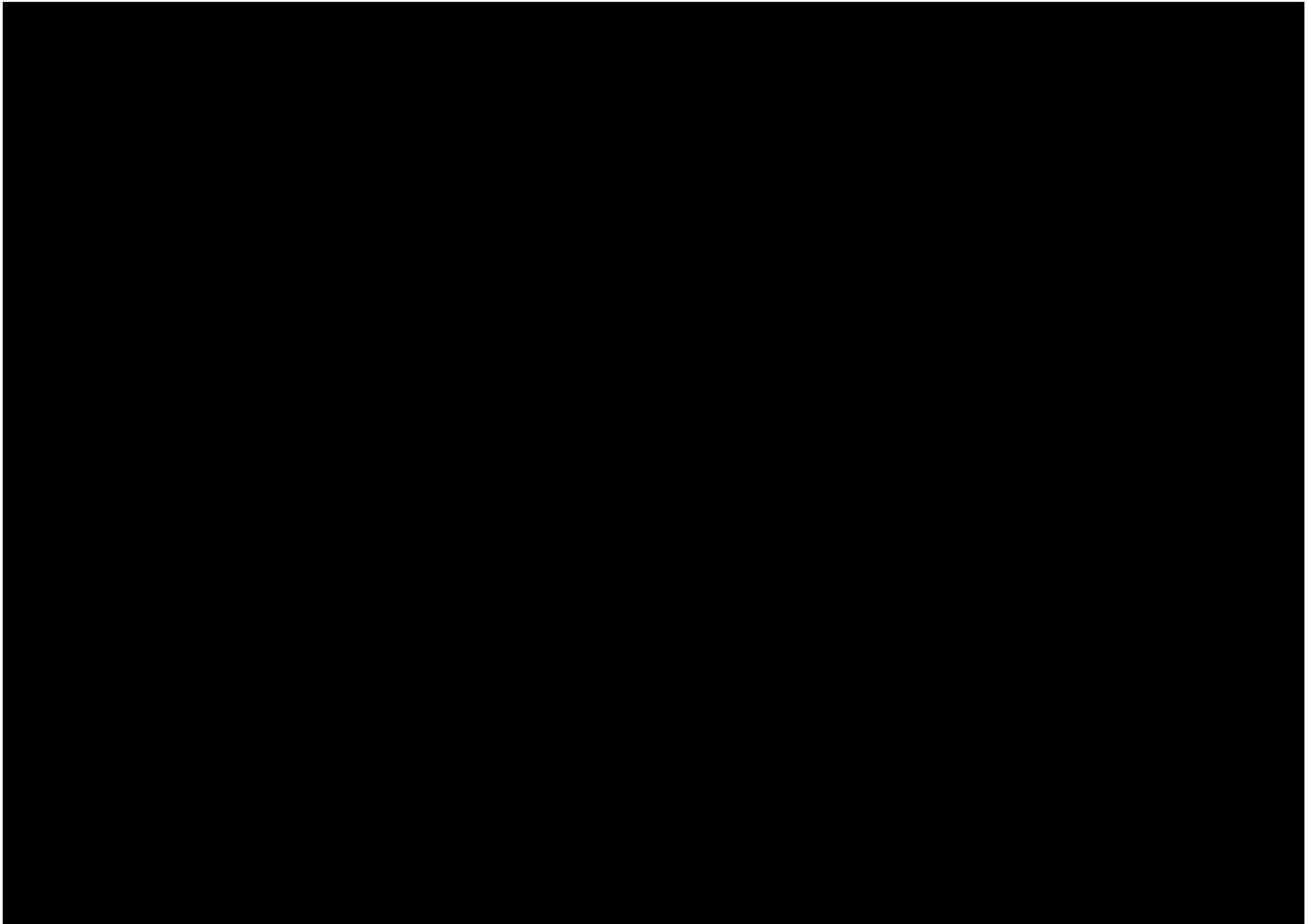
CMAL  
Caledonian Maritime Assets Ltd  
319 St Vincent Street Glasgow G2 5LD

Title

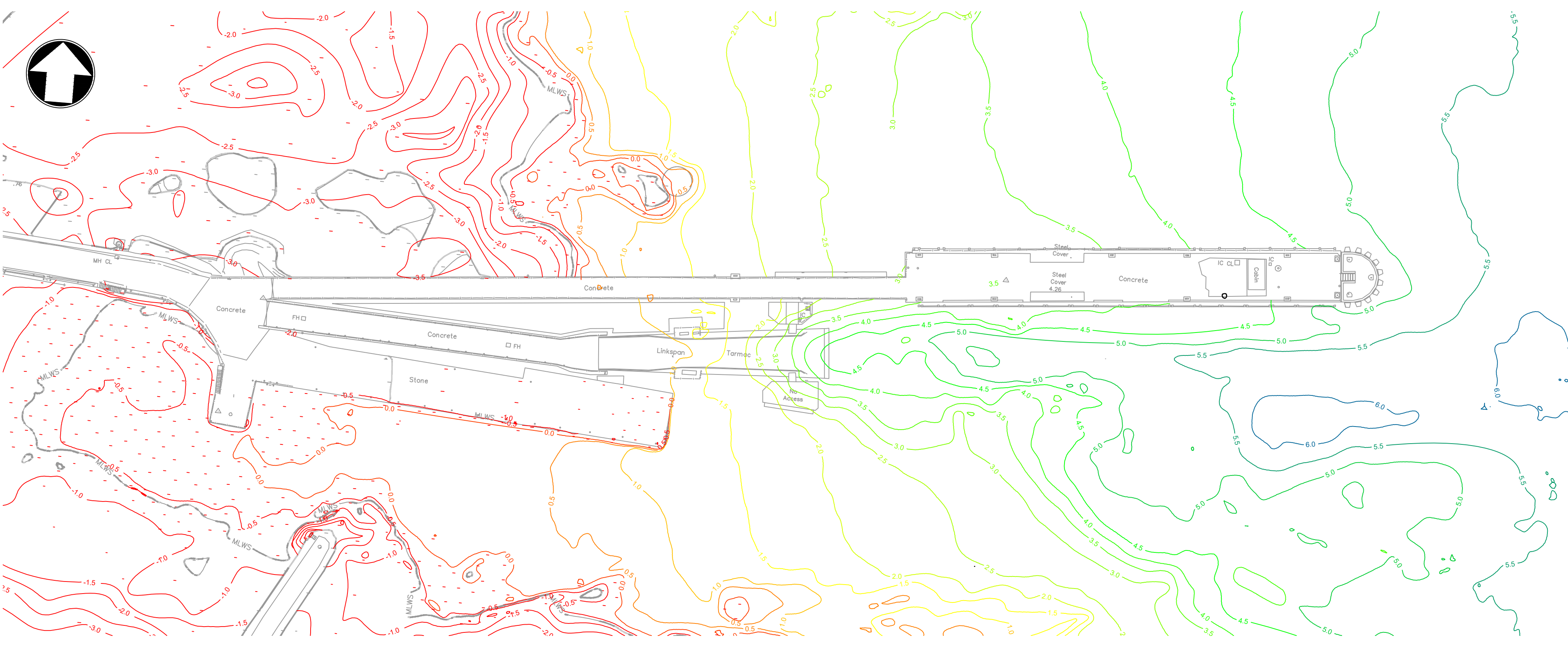
New Islay Vessel Port Enabling Works  
Colonsay  
Location Plan and Drawing List

Designed	B. Radcliffe	BR	Eng check	B. Radcliffe	BR
Drawn	J. Brown	JB	Coordination	G. Mather	GM
Dwg check	G. Mather	GM	Approved	M. Ross	MR
MMD Project Number	105612	Scale at A1	As Shown	Security	STD
Suitability Description	Work In Progress	Suit. Code	S0	Rev	P02
Drawing Number	105612-MMD-CO-ZZ-DR-C-0010				



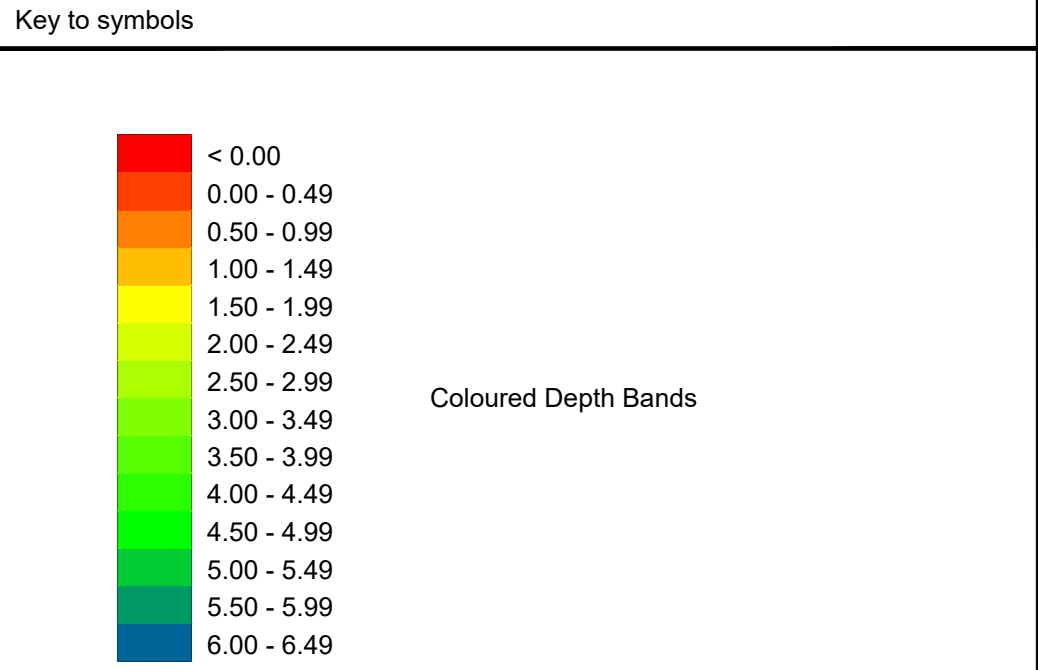






Bathymetric Survey Data  
Scale 1:500

- Notes
1. All chainages are in metres.
  2. All dimensions in millimetres unless noted otherwise.
  3. All levels in metres relative to Chart Datum (mCD) unless noted otherwise.
  4. DO NOT SCALE. Follow written dimensions only.
  5. The Client accepts no liability for the accuracy of the topographical & bathymetric information provided
  6. The Contractor shall verify all dimensions, elevations, coordinates, and site conditions prior to execution.
  7. For general notes refer to drawing 105612-MMD-CO-ZZ-0011



Reference drawings

External Drawings:	Scalasaig Colonsay Topographical Survey 2012
A4900_05_1	Scalasaig Colonsay Bathymetric Survey 2015
A5390_2014-2015_19	

Work In Progress

P01	11/10/2022	LM	Preliminary Information	BR	CO
Rev	Date	Drawn	Description	Ch'k'd	App'd

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MACDONALD

St Vincent Plaza

319 St Vincent Street

Glasgow, G2 5LD

United Kingdom

W mottmac.com

Client

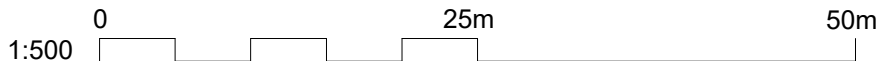
Caledonian Maritime Assets Limited  
Municipal Buildings  
Fore Street  
Port Glasgow  
PA14 5EQ

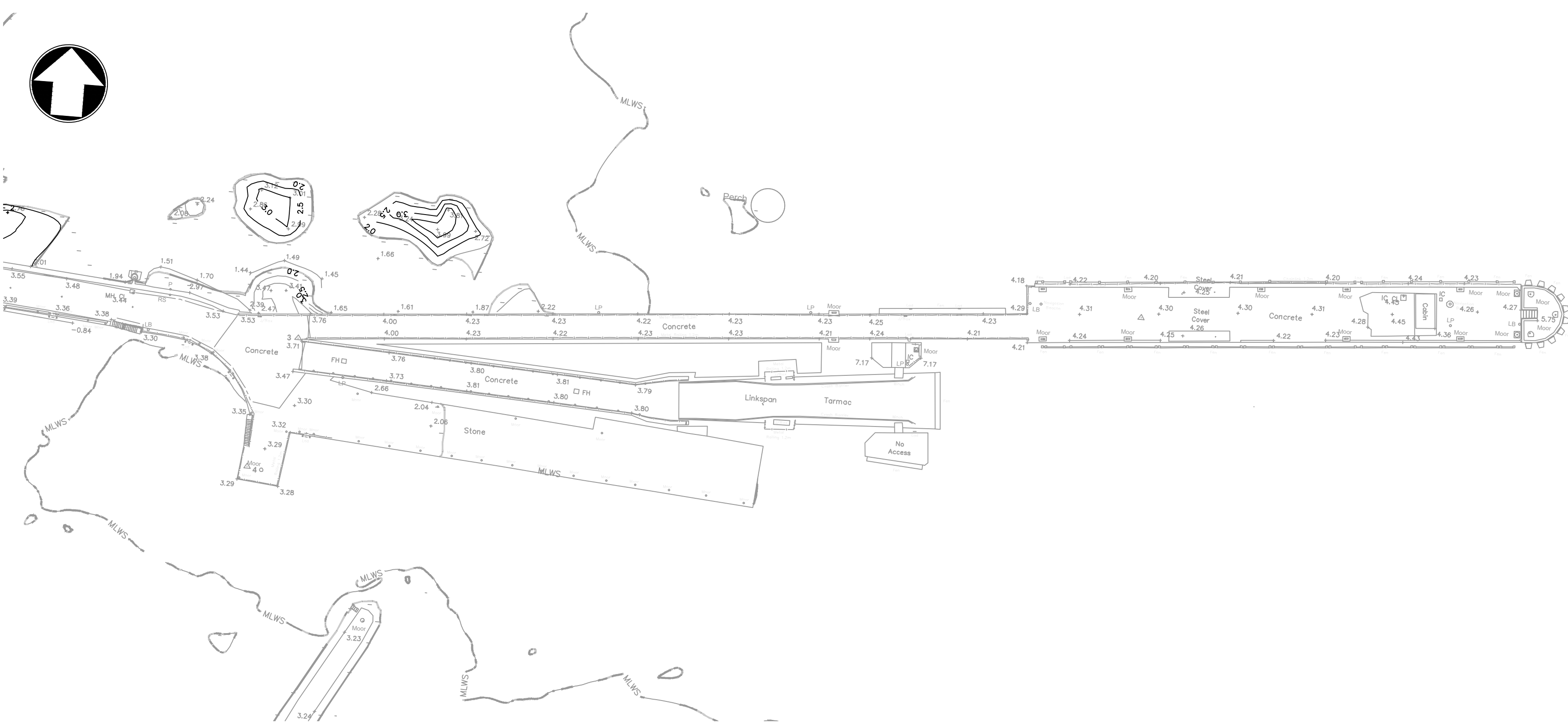
CMAL  
Caledonian Maritime Assets Ltd  
319 St Vincent Street Glasgow G2 5LD

Title

New Islay Vessel Port Enabling Works  
Colonsay  
Bathy

Designed	B. Radcliffe	BR	Eng check	B. Radcliffe	BR
Drawn	L. Marini	LM	Coordination	G. Mather	GM
Dwg check	G. Mather	GM	Approved	M. Ross	MR
MMD Project Number	105612	Scale at A1	1:500	Security	STD
Suitability Description	Suitable For Information	Suit. Code	S2	Rev	P01
Drawing Number	105612-MMD-CO-ZZ-DR-C-0110				





Topographical Survey  
Data  
Scale 1:500

- Notes
1. All chainages are in metres.
  2. All dimensions in millimetres unless noted otherwise.
  3. All levels in metres relative to Chart Datum (mCD) unless noted otherwise.
  4. DO NOT SCALE. Follow written dimensions only.
  5. The Client accepts no liability for the accuracy of the topographical & bathymetrical information provided
  6. The Contractor shall verify all dimensions, elevations, coordinates, and site conditions prior to execution.
  7. For general notes refer to drawing 105612-MMD-CO-ZZ-0011

Key to symbols

Reference drawings

External Drawings:  
A4900\_05\_1 Scalasaig Colonsay Topographical Survey 2012  
A5390\_2014-2015\_19 Scalasaig Colonsay Bathymetric Survey 2015

Work In Progress

P02	11/10/2022	LM	Preliminary Information	BR	CO
Rev	Date	Drawn	Description	Ch'k'd	App'd

Status Stamp FOR INFORMATION

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319 St Vincent Street  
Glasgow, G2 5LD  
United Kingdom

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Client

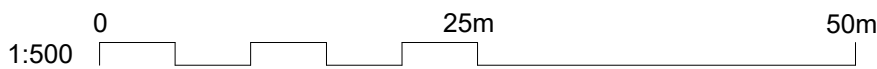
Caledonian Maritime Assets Limited  
Municipal Buildings  
Fore Street  
Port Glasgow  
PA14 5EQ



CMAL  
Caledonian Maritime Assets Ltd  
50 Grosvenor Gardens  
London W1K 3AG

Title  
New Islay Vessel Port Enabling Works  
Colonsay  
Topo

Designed	B. Radcliffe	BR	Eng check	B. Radcliffe	BR
Drawn	L. Marini	LM	Coordination	G. Mather	GM
Dwg check	G. Mather	GM	Approved	M. Ross	MR
MMD Project Number	105612	Scale at A1	As Indicated	Security	STD
Suitability Description	Suitable For Information				Suit. Code S2
Drawing Number	105612-MMD-CO-ZZ-DR-C-0120				Rev P01



Data not yet received

Notes

Key to symbols

Reference drawings

P02	11/10/2022	LM	Preliminary Information	BR	CO
Rev	Date	Drawn	Description	Ch'k'd	App'd

Status Stamp

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St Vincent Plaza  
319 St Vincent Street  
Glasgow, G2 5LD  
United Kingdom

W mottmac.com

Client

Caledonian Maritime Assets Limited  
Municipal Buildings  
Fore Street  
Port Glasgow  
PA14 5EQ

Title

New Islay Vessel Port Enabling Works  
Colonsay  
Existing Surfaces

Designed	B. Radcliffe	BR	Eng check	B. Radcliffe	BR
Drawn	J. Brown	JB	Coordination	G. Mather	GM
Dwg check	G. Mather	GM	Approved	M. Ross	MR
MMD Project Number	105612	Scale at A1	As Indicated	Security	STD
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Suitable For Information				S2	
Drawing Number				Rev	
105612-MMD-CO-ZZ-DR-C-0130				P01	



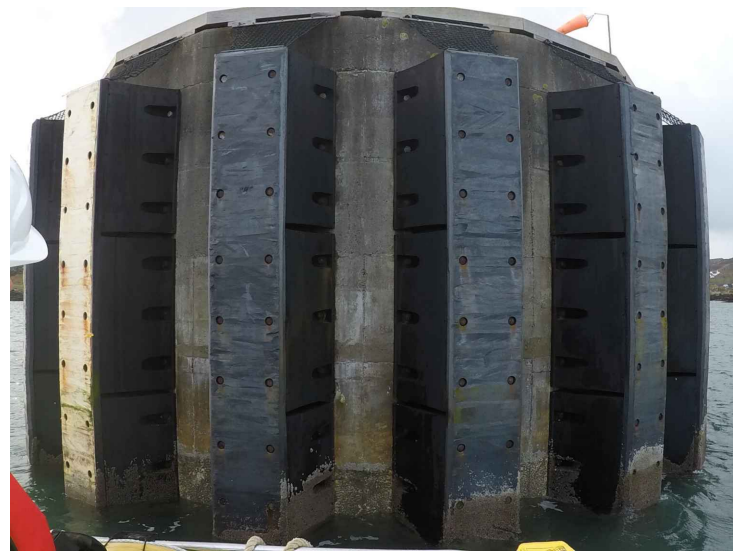


Image 1  
Roundhead

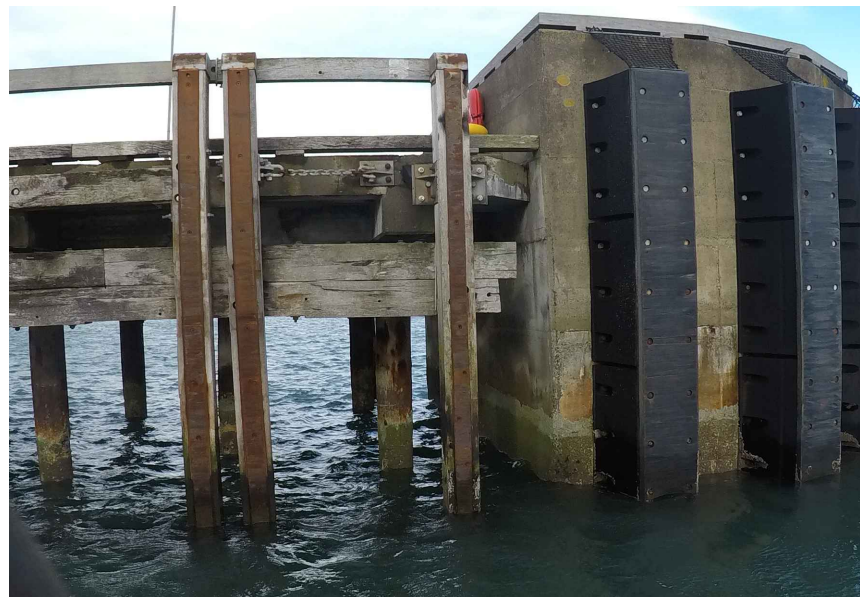


Image 2  
Roundhead

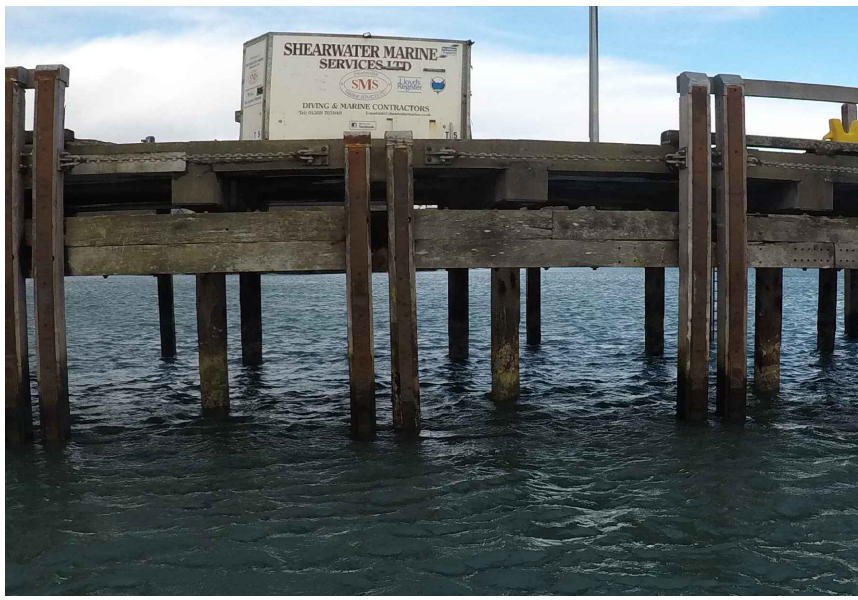


Image 3  
South face of Pier

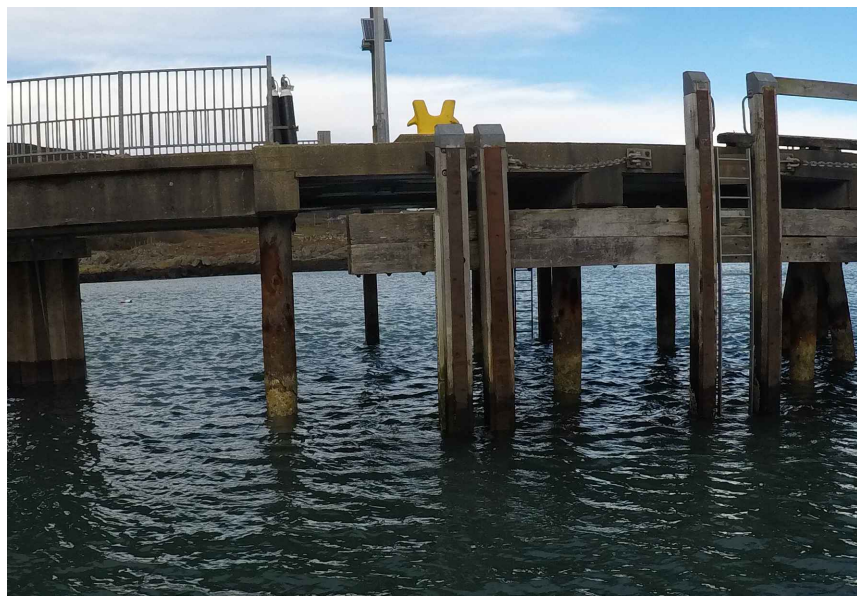


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Approach Pier

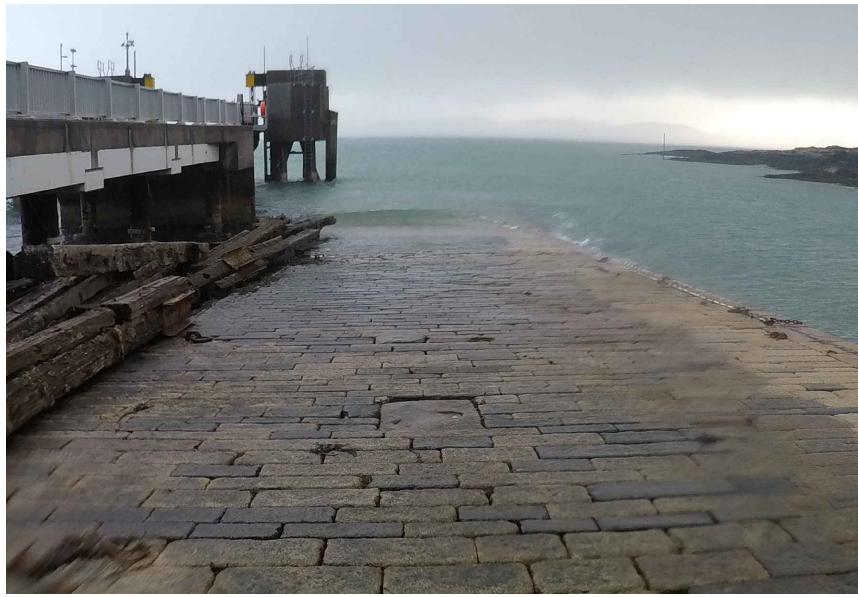


Image 14  
Slipway

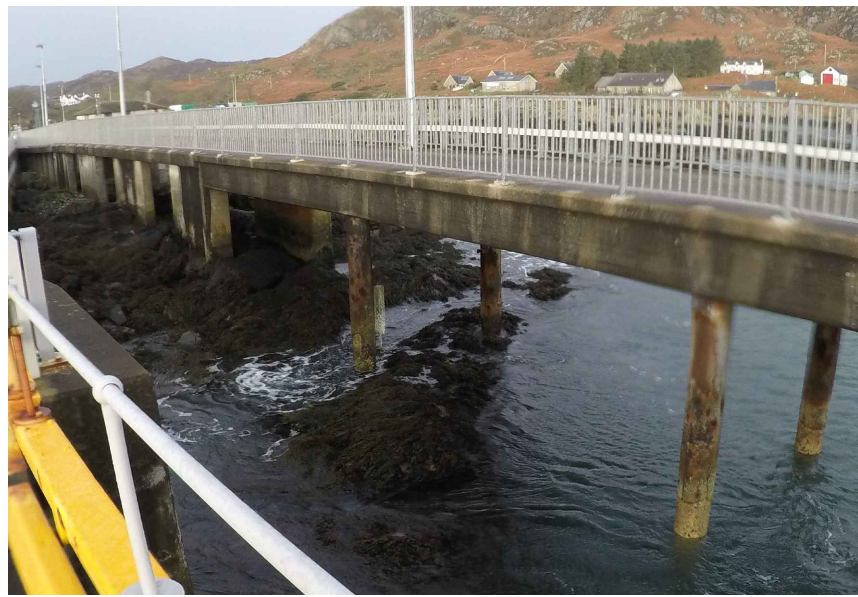


Image 13  
Approach Pier

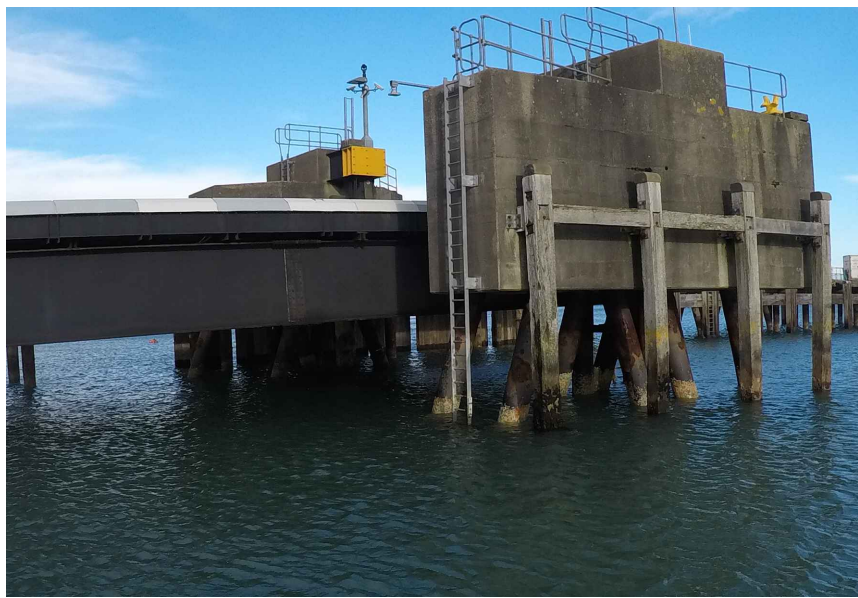


Image 12  
South Lifting Dolphins

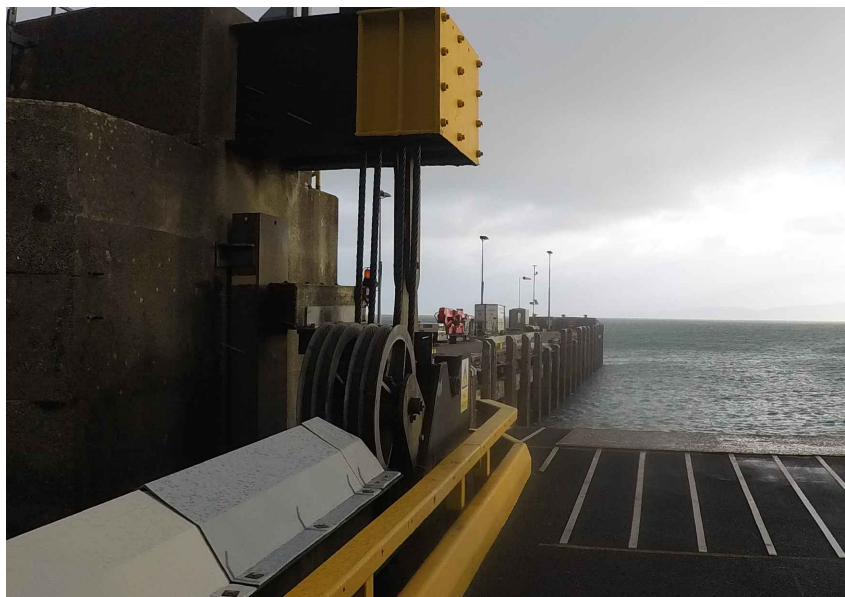


Image 11  
Linkspan Winch

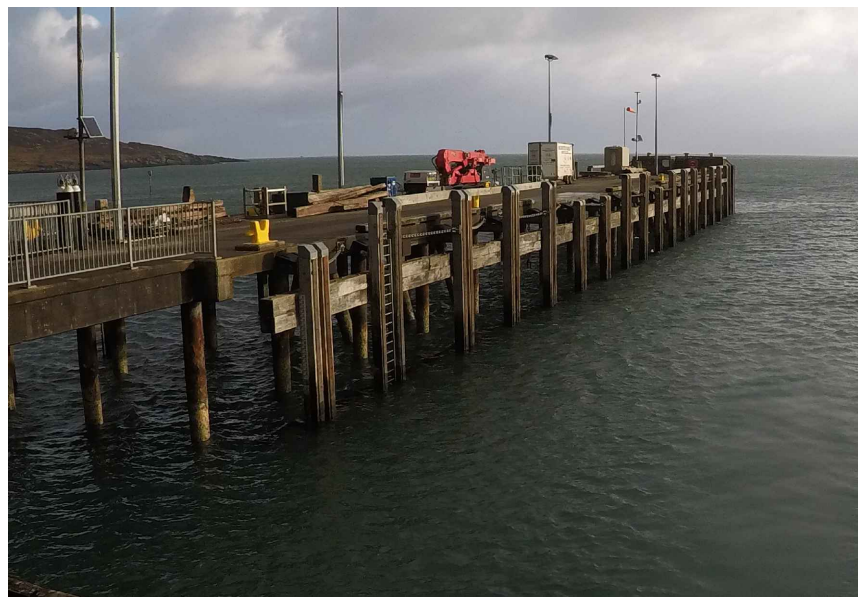


Image 10  
Pier

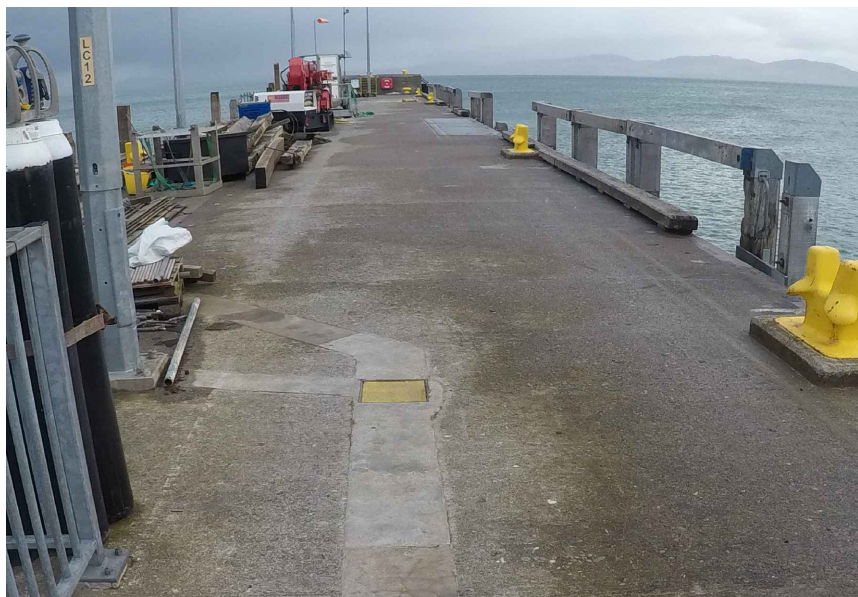


Image 9  
Pier

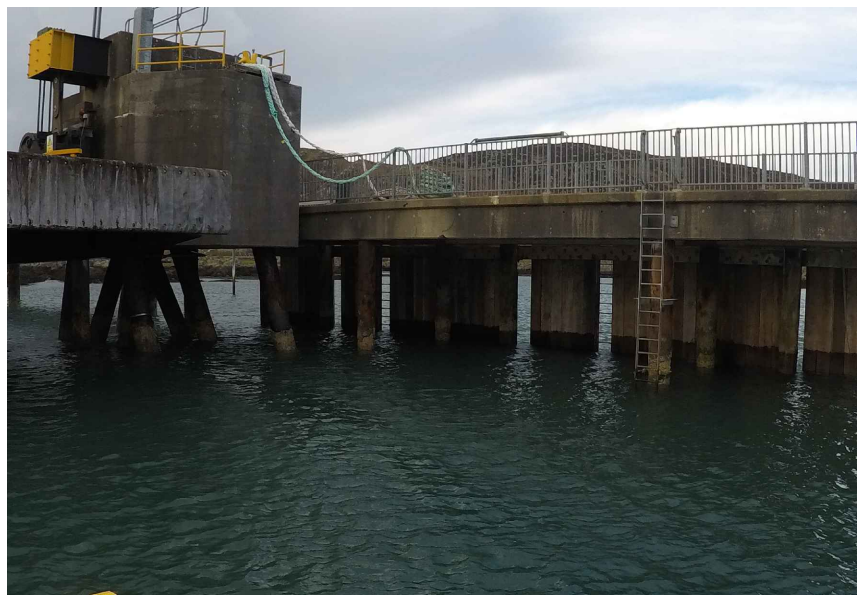


Image 5  
North Lifting Dolphin and Pier



Image 6  
South Lifting Dolphin

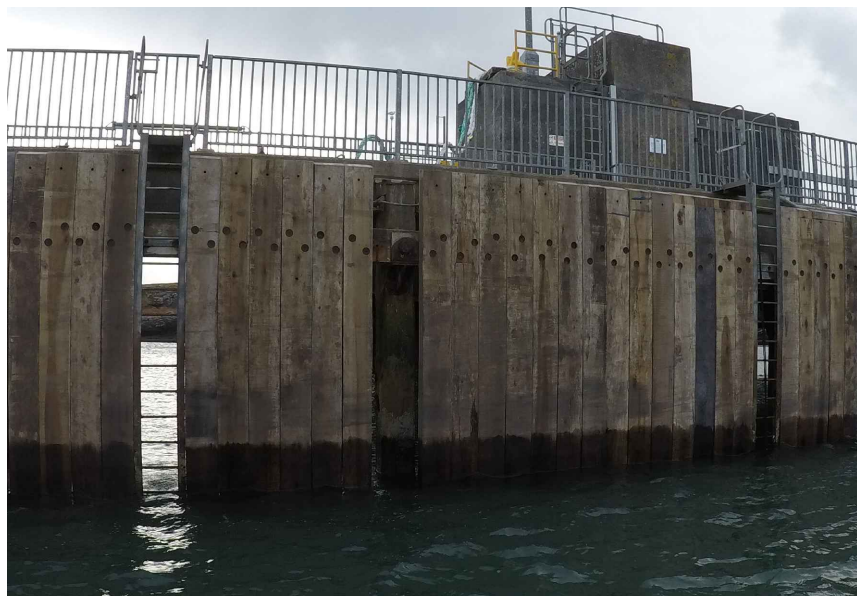
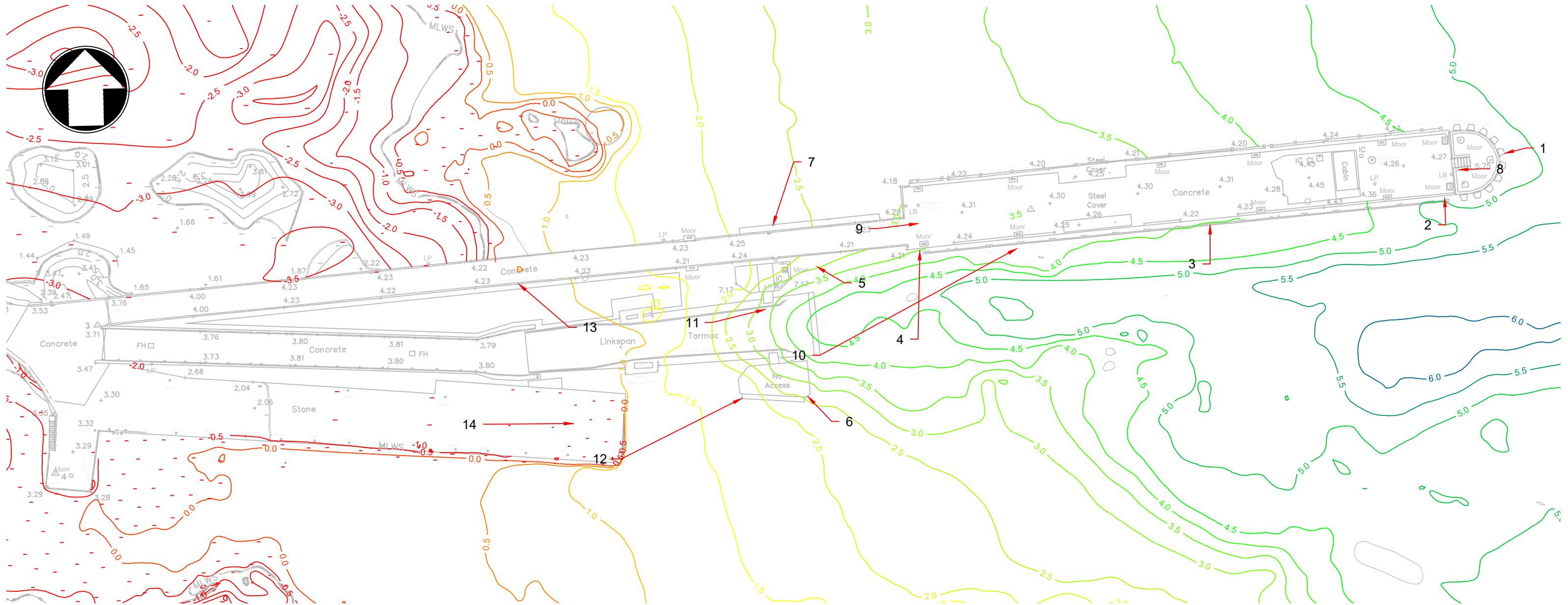


Image 7  
Wave screen on Approach Pier



Image 8  
Pier



Plan View of Colonsay  
Scale 1:500

- Notes
- Arrows indicate direction of corresponding photograph.
  - Photographs taken January 2022

Key to symbols

Reference drawings

Topographical Survey File: A5390\_2014-2015\_19 Dated 11.06.15  
Bathymetric Survey File: A5390\_2014-2015\_19 Dated 11.06.15

Work In Progress

P02	12.10.2022	LM	Preliminary Information	BR	CO
P01	16.06.2022	JB	Preliminary Information	BR	
Rev	Date	Drawn	Description	Ch'kd	App'd

Status Stamp

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319 St Vincent Street  
Glasgow, G2 5LD  
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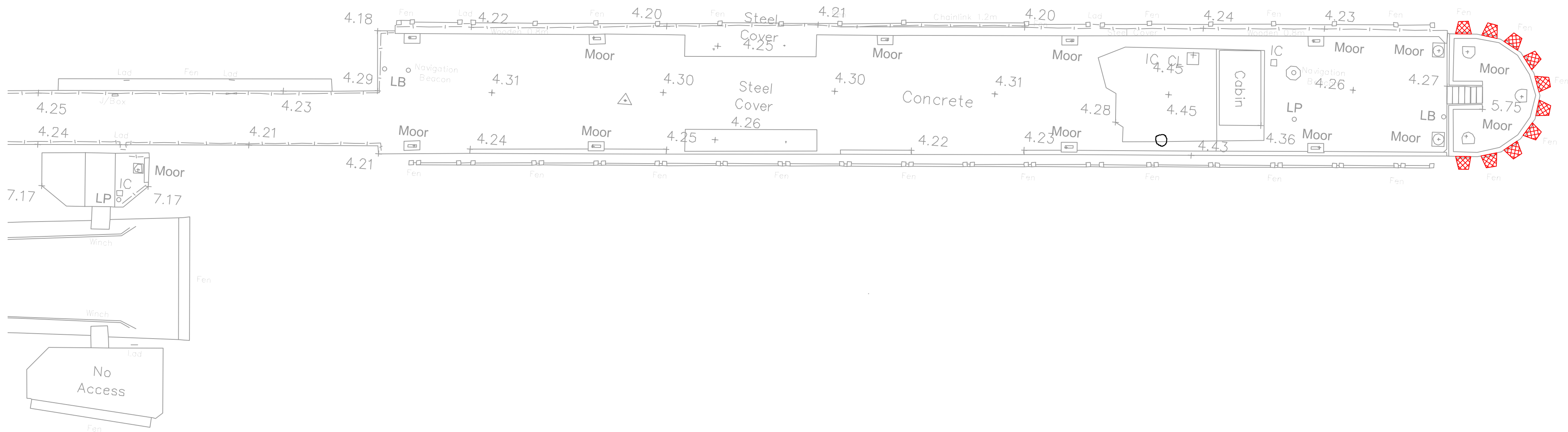
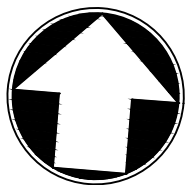


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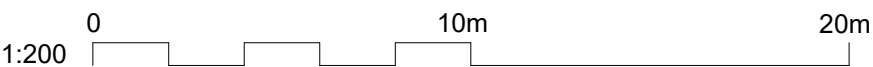
New Islay Vessel Port Enabling Works  
Colonsay  
Existing Photos

Designed	B. Radcliffe	BR	Eng check	B. Radcliffe	BR
Drawn	J. Brown	JB	Coordination	G. Mather	GM
Dwg check	G. Mather	GM	Approved	M. Ross	MR
MMD Project Number	105612	Scale at A1	AS STATED	Security	STD
Suitability Description	Work In Progress			Suit. Code	S0
Drawing Number	105612-MMD-CO-ZZ-DR-C-0150			Rev	P02





Demolition Plan  
Scale 1:200



- Notes
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  6. All chainages are in metres.
  7. All dimensions in millimetres unless noted otherwise.
  8. All levels in metres relative to Ordnance Datum (m ODN) unless noted otherwise.

Key to symbols

 Extent of Demolition

Reference drawings

Work In Progress

P02	12/10/22	RM	Preliminary Information	FH	CO
P01	05/10/22	CC	Preliminary Information	FH	CO
Rev	Date	Drawn	Description	Ch'k'd	App'd

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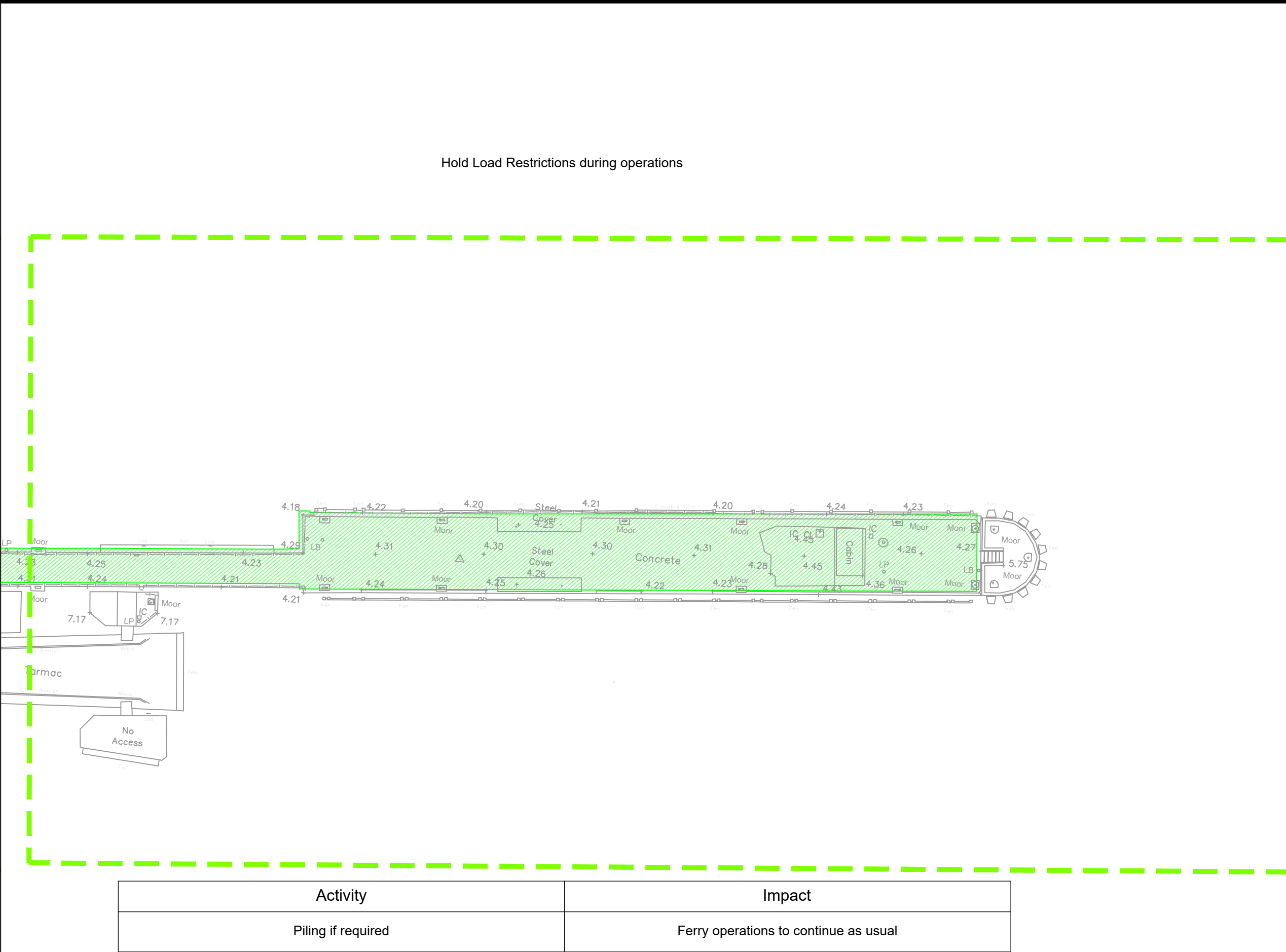
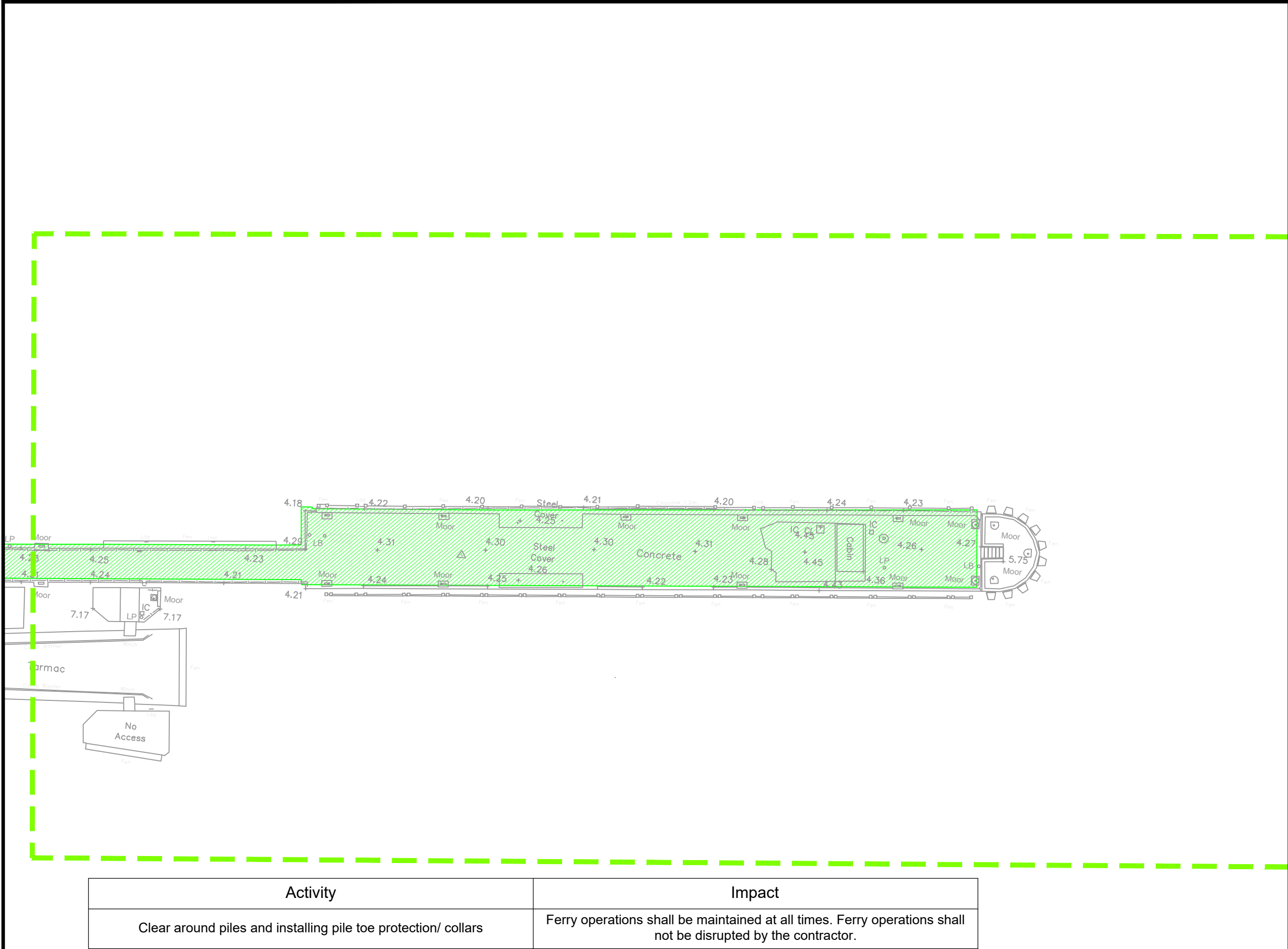
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PA14 5EQ



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50 Grosvenor Gardens  
London W1C 2PL

Title  
New Islay Vessel Port Enabling Works  
Colonsay  
General Arrangement Demolition

Designed	F. Hogg	FH	Eng check	B. Radcliffe	BAR
Drawn	C. Campbell	CC	Coordination	G. Mather	GM
Dwg check	G. Mather	GM	Approved	C. Ohi	CO
MMD Project Number	105612	Scale at A1 1:200	Security	STD	
Suitability Description	Work In Progress	Suit. Code	S0		
Drawing Number	105612-MMD-CO-ZZ-DR-C-0200	Rev	P01		



- Notes
- These drawings are indicative only and are subject to design development.
  - All dimensions in millimetres unless noted otherwise.
  - All bathymetric levels in metres relative to Chart Datum (mCD) unless noted otherwise.
  - All topographical levels in metres relative to Chart Datum (mCD) unless noted otherwise.
  - DO NOT SCALE. Follow written dimensions only.
  - The Client accepts no liability for the accuracy of the topographical & bathymetrical information provided
  - The Contractor shall verify all dimensions, elevations, coordinates, and site conditions prior to execution.
  - For general notes refer to drawing 105612-MMD-XXXXX-0001
  - This drawing shall be read in conjunction with the scope
  - The Project Manager shall be notified immediately of any discrepancy encountered on site.
  - Unless noted otherwise access for ferry operations shall be maintained at all times. Ferry operations shall not be disrupted by the contractor

Key to symbols

- DA - Dredging Area\*
- CW - Contractors Working Area 1\*
- SC - Contractors Site Compound & Materials Storage
- Local Access to be Maintained Throughout Works
- Pedestrian and Vehicle Access for Ferry Operations to be Maintained Clear

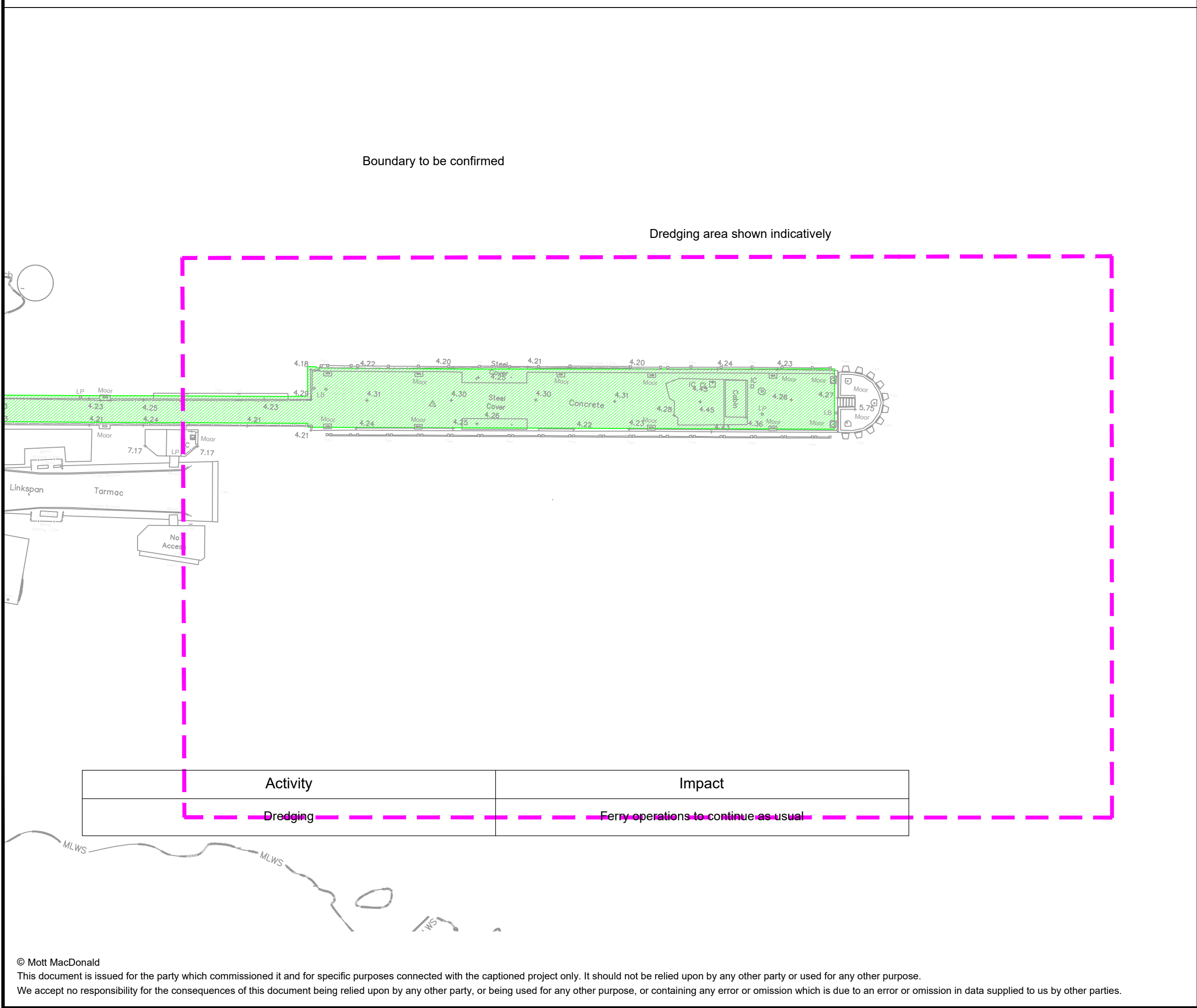
CONSTRUCTION SEQUENCE SHOWN IS PROPOSED IN ORDER TO MINIMISE DOWNTIME OF THE BERTH. CONTRACTOR MAY PROPOSE ALTERNATIVE SEQUENCE FOR REVIEW BY EMPLOYER

Reference drawings

Topographical Survey  
Reference: A5390\_2014-2015\_19  
Date of Survey: 11.06.15

Bathymetric Survey  
Reference: A5390\_2014-2015\_19  
Date of Survey: 11.06.15

Work In Progress



P02	12.10.2022	LM	WIP	BR	CO
P01	16.06.2022	JB	Preliminary Information	BAR	
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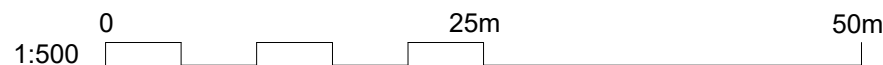
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Glasgow City Council

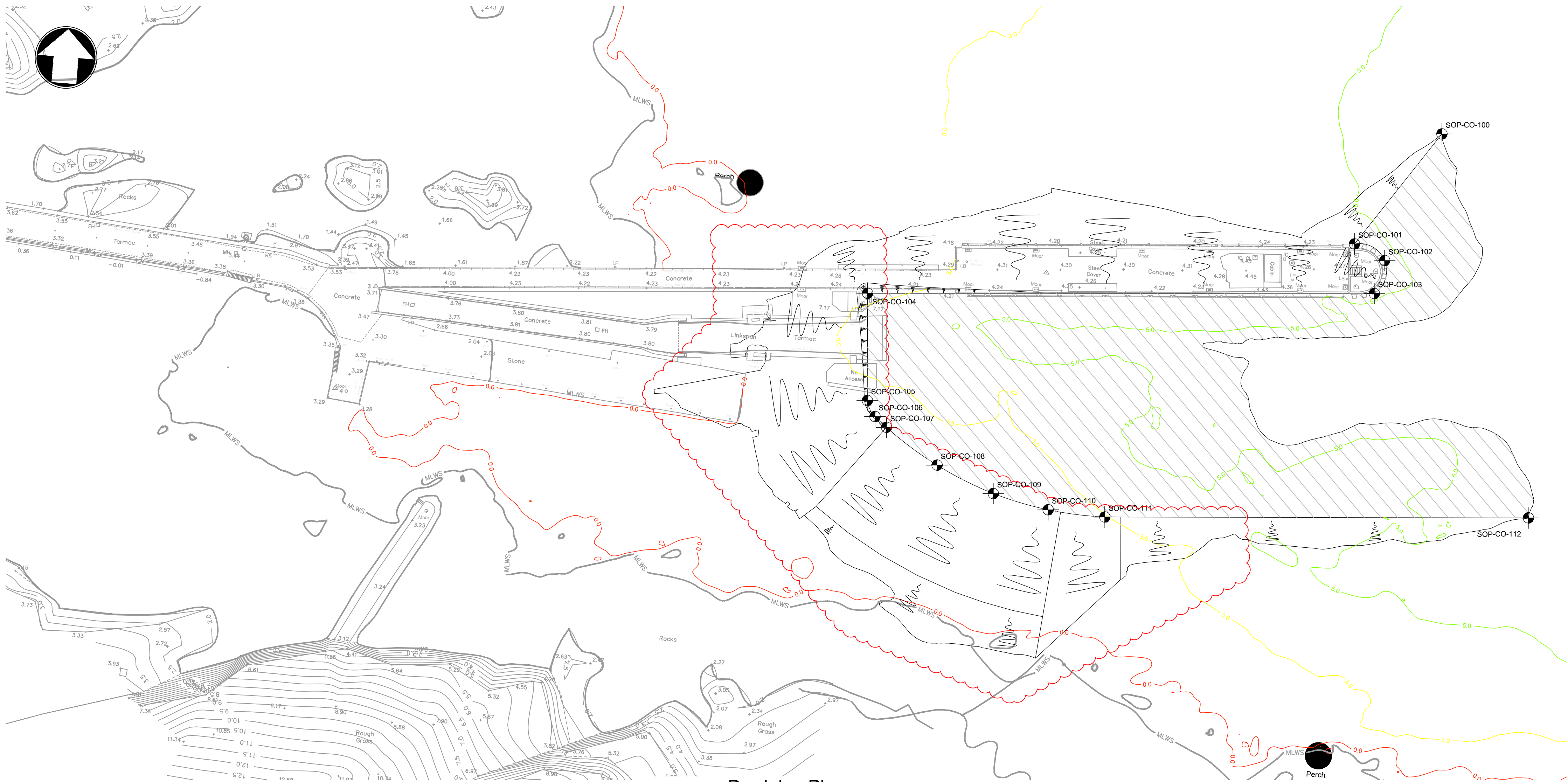
Title

New Islay Vessel Port Enabling Works  
Colonsay  
General Arrangement  
Construction Sequence

Designed	B. Radcliffe	BR	Eng check	B. Radcliffe	BR
Drawn	J. Brown	JB	Coordination	G. Mather	GM
Dwg check	G. Mather	GM	Approved	M. Ross	MR
MMD Project Number	105612	Scale at A1	1:500	Security	STD
Suitability Description	Work In Progress	Suit. Code	S0	Rev	P02
Drawing Number	105612-MMD-CO-ZZ-DR-C-1020				







Dredge depth (CD)	Area (m²)	*Volume (m³)
-5.5m	4253	9287
*Volumes also include the volume of material removed to create the slopes		

Dredging Setting Out		
Setting Out Point	Easting	Northing
SOP-CO-100	139733.2678	694149.2260
SOP-CO-101	139718.5230	694127.1660
SOP-CO-102	139724.4523	694124.4944
SOP-CO-103	139723.0165	694118.1515
SOP-CO-104	139627.6272	694110.3385
SOP-CO-105	139629.2457	694090.1394
SOP-CO-106	139630.9303	694087.2440
SOP-CO-107	139633.2687	694085.3934
SOP-CO-108	139643.3624	694079.0642
SOP-CO-109	139654.4042	694074.5897
SOP-CO-110	139664.9655	694072.3775
SOP-CO-111	139675.7454	694071.8987
SOP-CO-112	139755.4875	694078.2883

- Notes
1. All chainages are in metres.
  2. All dimensions in millimetres unless noted otherwise.
  3. All levels in metres relative to Chart Datum (mCD) unless noted otherwise.
  4. DO NOT SCALE. Follow written dimensions only.
  5. The Client accepts no liability for the accuracy of the topographical & bathymetrical information provided
  6. The Contractor shall verify all dimensions, elevations, coordinates, and site conditions prior to execution.
  7. For general notes refer to drawing 105612-MMD-(\*\*)-ZZ-0011 (\*\*) denotes field 3 Volume or system varies per project site PA,PE,CO & KE

- Key to symbols
- Area to be Dredged to -5.5m C.D.
  - SOP-CO-100 -5.5m C.D. Dredge Area Setting Out Point
  - 5.0 -5.0m C.D. Contour

Reference drawings

For Bathymetric Survey Information refer to "A5390\_2014 - 2015\_19\_Scalasaig".

Work In Progress

P01	11.10.22	CC	Work in Progress		
Rev	Date	Drawn	Description	Ch'k'd	App'd

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319 St Vincent Street  
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United Kingdom

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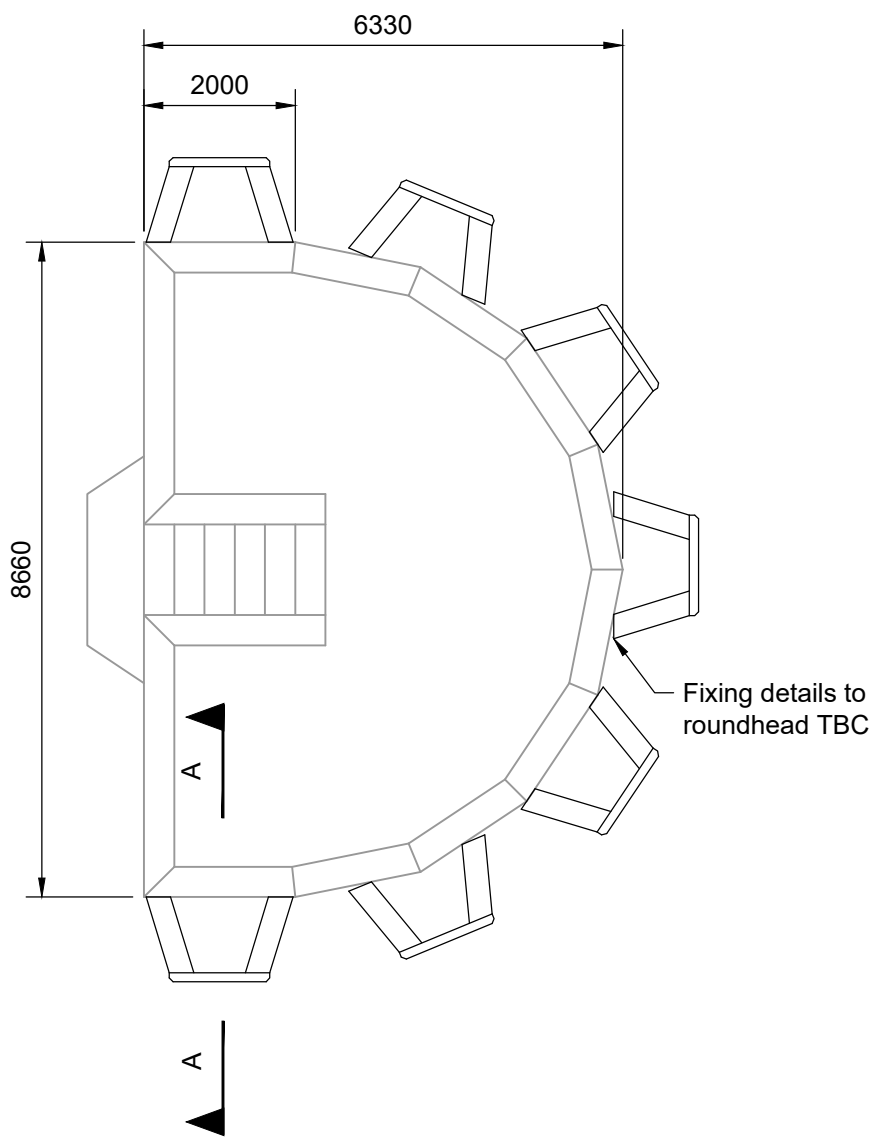
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Stornoway Colonsay & Barra

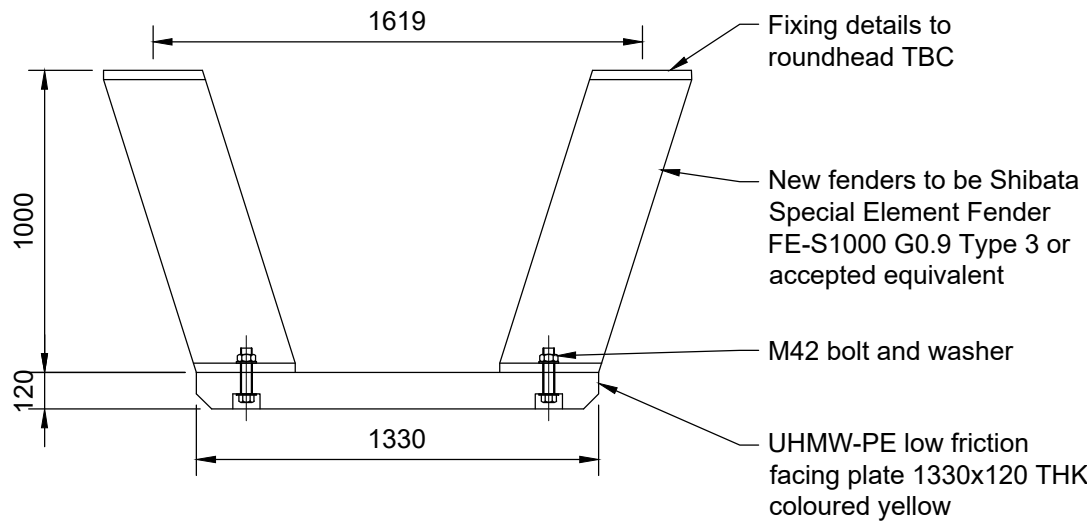
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New Islay Vessel Port Enabling Works  
Port Ellen  
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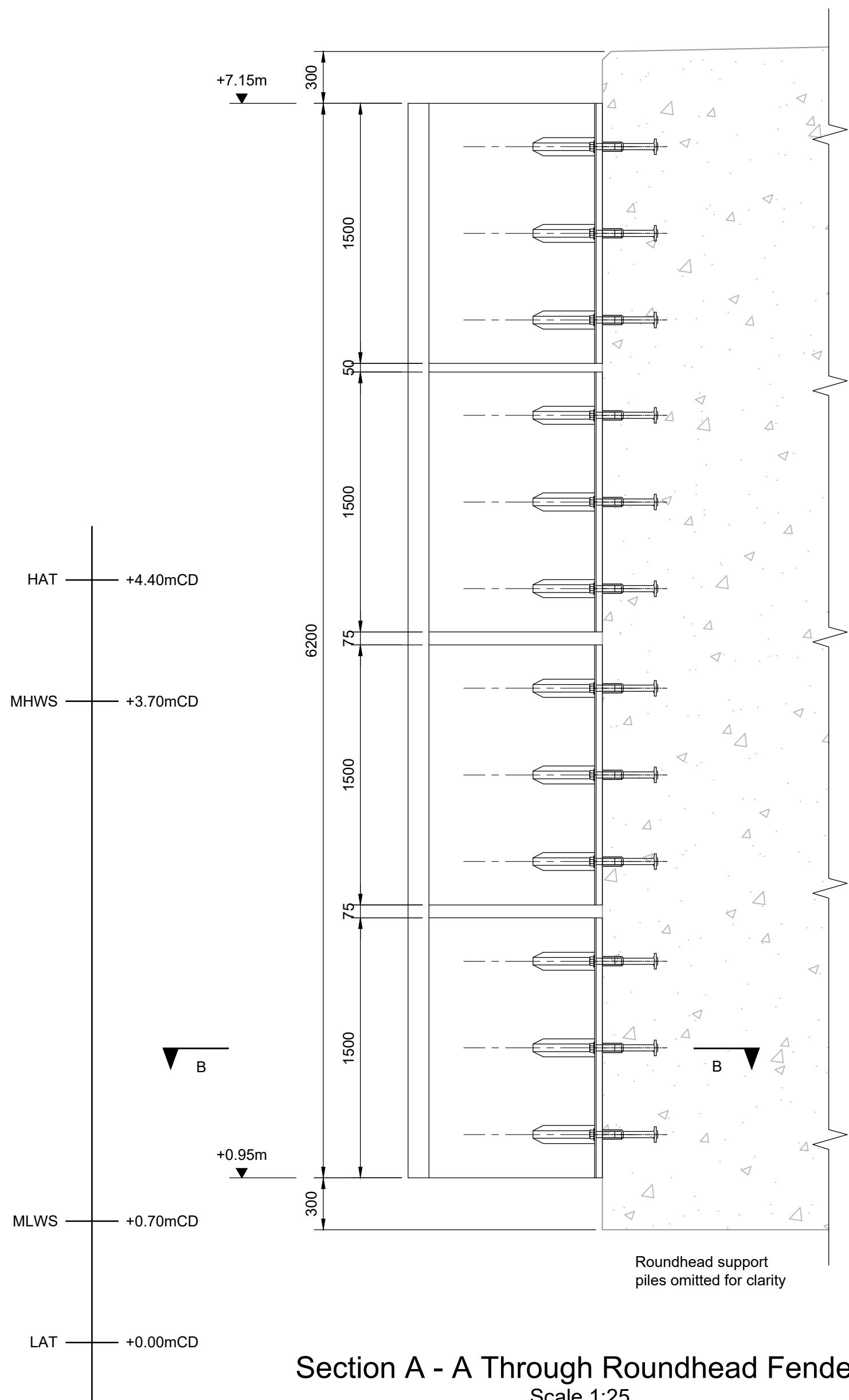
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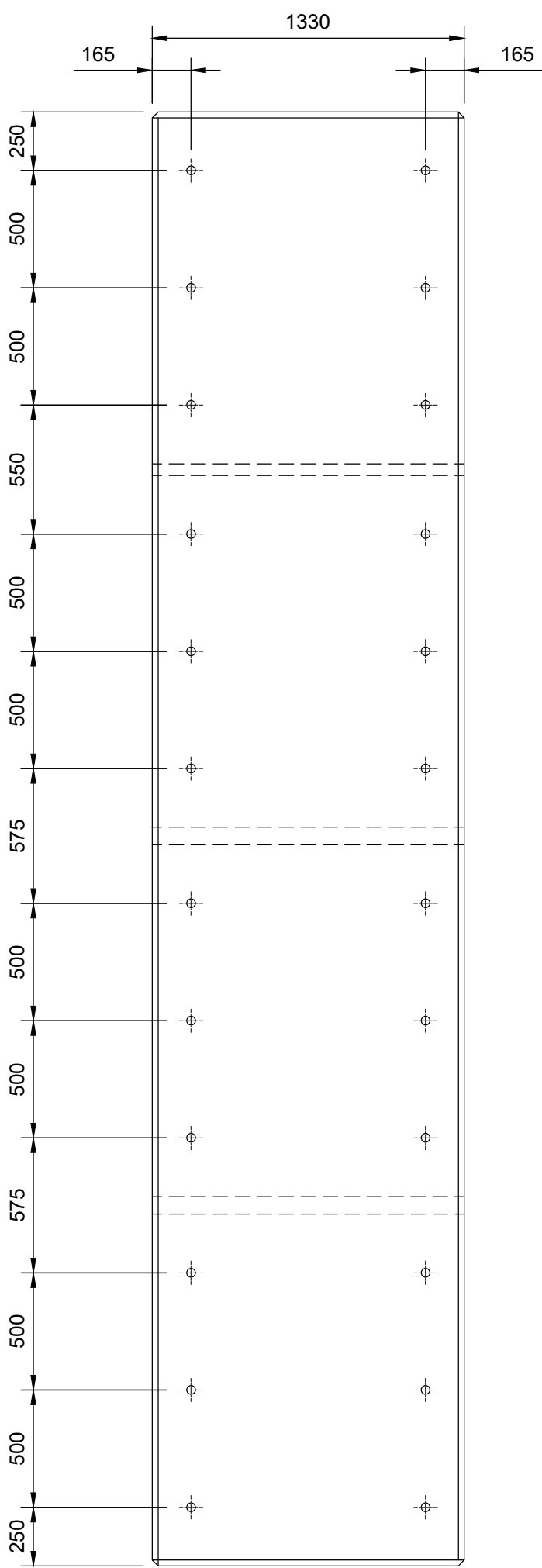
Plan on Roundhead  
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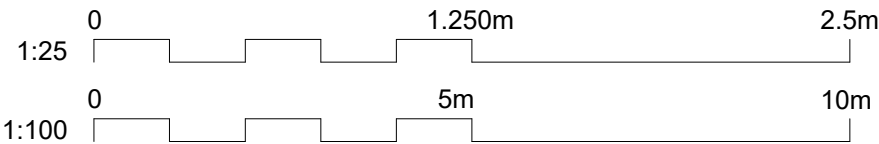
Section B - B  
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Section A - A Through Roundhead Fender  
Scale 1:25

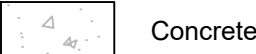


Elevation on Fender  
Scale - 1:25



- Notes
- All chainages are in metres.
  - All dimensions in millimetres unless noted otherwise.
  - All levels in metres relative to Chart Datum (mCD) unless noted otherwise.
  - DO NOT SCALE. Follow written dimensions only.
  - The Client accepts no liability for the accuracy of the topographical & bathymetrical information provided
  - The Contractor shall verify all dimensions, elevations, coordinates, and site conditions prior to execution.
  - For general notes refer to drawing 105612-MMD-(\*\*)-ZZ-0011  
(\*\*) denotes field 3 Volume or system varies per project site PA,PE,CO & KE

Key to symbols



Concrete

Reference drawings

Work In Progress

P02	12/10/22	RM	Preliminary Information	FH	CO
P01	05/10/22	RG	Preliminary Information	FH	CO
Rev	Date	Drawn	Description	Ch'k'd	App'd

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MOTT  
MACDONALD

St Vincent Plaza  
319 St Vincent Street  
Glasgow, G2 5LD  
United Kingdom

W mottmac.com

Client

Caledonian Maritime Assets Limited  
Municipal Buildings  
Fore Street  
Port Glasgow  
PA14 5EQ



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Caledonian Maritime Assets Ltd  
50 Grosvenor Gardens  
London W1C 2PL

Title  
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Colonsay  
Roundhead Proposed Fender Details

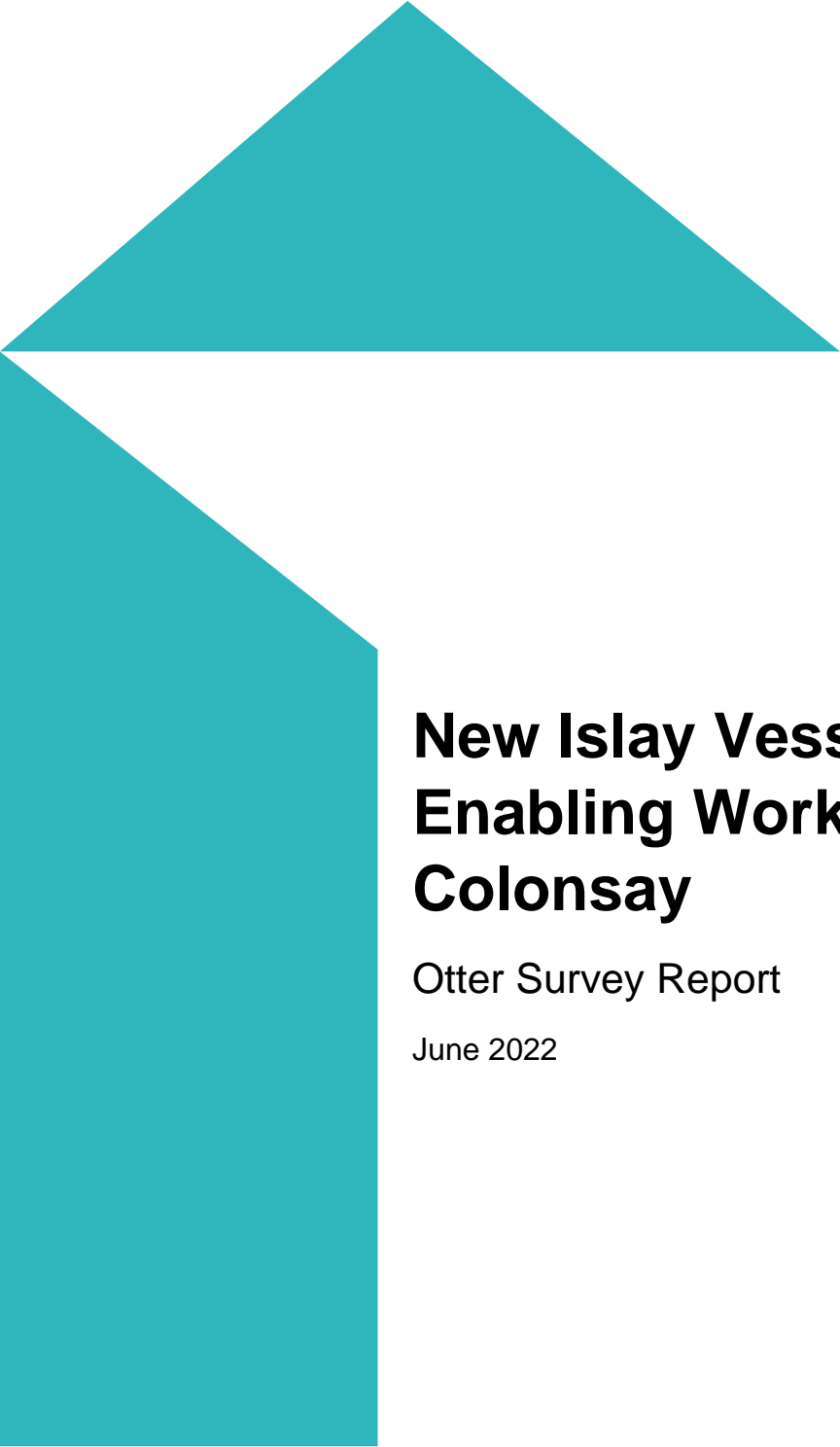
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Drawn	R. Gatheral	RG	Coordination	G. Mather	GM
Dwg check	G. Mather	GM	Approved	C. Ohi	CO
MMD Project Number	105612	Scale at A1	As Indicated	Security	STD
Suitability Description	Work In Progress	Suit. Code	S0	Rev	P01
Drawing Number	105612-MMD-CO-ZZ-DR-C-3050				



## B. Appendix B Maps

## C. Appendix C Environmental Reports

### C.1.1.1 [New Islay Vessel Port Enabling Works Colonsay Otter Survey Report](#)




# **New Islay Vessel Port Enabling Works Colonsay**

Otter Survey Report

June 2022

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

  
mottmac.com

Caledonian Maritime Assets  
Ltd.

# **New Islay Vessel Port Enabling Works Colonsay**

## **Otter Survey Report**

June 2022

# Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
P01	06.06.22	RC	KM	JC	First Issue

**Document reference:** 105612 | MMD-CO-ZZ-RP-O-0001-S2-P01

**Information class:** Standard

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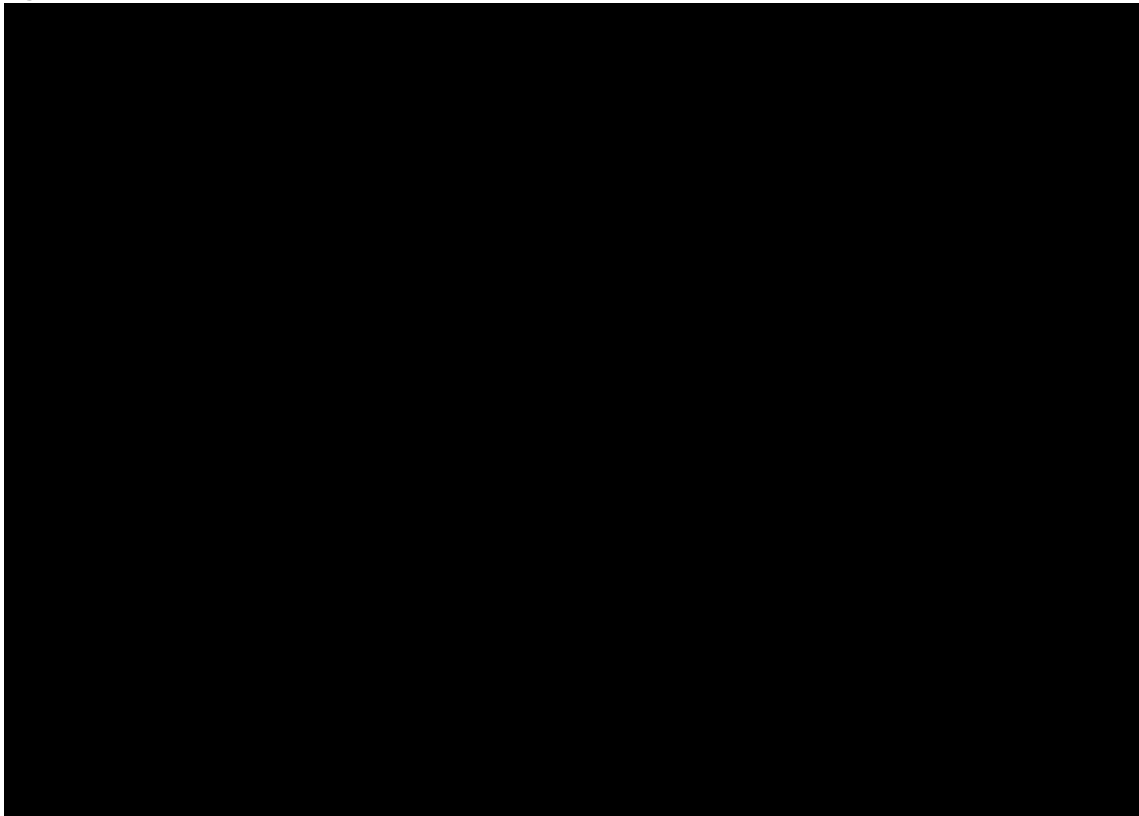
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# 1 Introduction

## 1.1 Background

Mott MacDonald Ltd. was commissioned by Caledonian Maritime Assets Ltd. to undertake a European otter (*Lutra lutra*) survey at Colonsay Port, Scalasaig, to support the proposed vessel enabling project. [REDACTED]

Figure 1.1: Site Location



Source: Open-source OS Mapping (accessed March 2022)

## 1.2 Proposed Works

### 1.2.1 Investigation Works

To support the proposed vessel enabling project, a programme of investigation works will be undertaken, provisionally comprising of three (3 no.) boreholes and three (3 no.) seabed samples, as shown in Drawing: 105612-MMD-CO-ZZ-DR-C-0100 in **Appendix A**.

Additionally, a bathymetric and sub-bottom profiling survey via boat access will be carried out to measure the depth of the seabed, together with mapping any underwater features, within the vicinity of the existing pier.

---

<sup>1</sup> NGR: National Grid Reference



### 1.2.2 Vessel Enabling Works

The proposed vessel enabling works design will be informed by the investigation works, as described above in **Section 1.2.1**.

At the time of writing, the scope of works is to modify the existing ferry terminal to accommodate new vessels which are currently under construction. The proposed works to the site, as shown in Drawing: 105612-MMD-CO-ZZ-DR-C-0140 **Appendix B** includes:

- Retaining the existing roundhead fenders;
- Potentially widening of UHMW panels to reduce hull pressures;
- Installation of new MV fenders/steel frame arrangement below the deck of the existing pier structure; and,
- Dredging of the seabed proximal to the ferry terminal (to the south of the existing pier).

At this time, it is anticipated that the works programme will be undertaken between 2023/2024.

### 1.3 Legislative Context

Otters are protected by the EC Habitats Directive, which is transposed into domestic law through the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland). The latter is referred to as 'the Habitats Regulations'. Under the Habitats Regulations, otters are classed as "European Protected Species" and therefore given the highest level of species protection. In summary, it is illegal to:

- Deliberately or recklessly kill, injure or take (capture) an otter;
- Deliberately or recklessly disturb or harass an otter; and
- Damage, destroy or obstruct access to a breeding site or resting place of an otter (i.e. an otter shelter).

## 2 Methodology

### 2.1 Desk Study

To support the otter surveys, a desk-based assessment was carried out to identify existing historical records of otter. This comprised a search of commercially available records of otter on the National Biodiversity Network (NBN) Atlas database<sup>2</sup>.

No biological data was requested from the Argyll Biological Record Centre (ABReC).

### 2.2 Study Area and Zone of Influence (Zoi)

Current guidance recommends that all ecological features that occur within the Zone of Influence (Zoi) for a proposed development are investigated<sup>3</sup>. This includes those ecological receptors which may be directly affected by the proposed works or those outside of the works footprint, but which could be indirectly affected by works (e.g. by disturbance impacts).

The otter survey comprised a thorough search of habitats [REDACTED]. The otter survey was undertaken in line with industry standard survey guidance and methodology (Chanin P, 2003a,b).

### 2.3 Otter Survey

The otter survey was undertaken on the 29<sup>th</sup> March 2022 by Mott MacDonald ecologists Robert Clisham and Kirsty McConnell. Robert has a NatureScot survey licence for otter (Licence No. 138361) and is highly experienced in otter surveys, licencing and mitigation.

Field signs indicative of otter that were searched for included:

- Individual otters;
- Otter shelters (e.g. holts, hovers, couches);
- Spraints (i.e. otter faeces);
- Footprints and paths;
- Scratches on rocks and other substrate; and,
- Feeding remains.

Within this report otter rest sites / places of shelter were classified as the following: *Natal Holt*: A den which is used by females to give birth and raise young until they are mobile and leave the rest site (usually around three months). *Holt*: a feature which is fully enclosed providing maximum shelter from the elements. *Hover*: a feature which provides more limited cover from the elements such as under a ledge or overhang. *Couch*: an occasional rest site found above ground generally within tall vegetation or within scrub.

### 2.4 Survey Constraints and Limitations

Access around the rocky shorelines immediately abutting the sea was restricted due to health and safety risks associated with the extremely slippery conditions on rocks due to the presence of extensive marine algae growth (e.g. seaweed).

---

<sup>2</sup> <https://spatial.nbnatlas.org/>

<sup>3</sup> IEEM (2018) Guidelines on Ecological Impact Assessments in the UK.

## 3 Survey Results

### 3.1 Statutory and Non-Statutory Designated Sites

An inspection of the NatureScot Sitelink Map<sup>4</sup> confirmed the site does not reside within a statutory or non-statutory designated area where otter represents a qualifying interest.

The nearest designation comprises marine habitats to the immediate east of the site, which form the Inner Hebrides and the Minches Special Area of Conservation (SAC). The SAC is designated due to the presence of harbour porpoise (*Phocoena phocoena*).

### 3.2 Historical Otter Records

An inspection of commercially available historical records of otter was undertaken in April 2022.

[REDACTED]

[REDACTED]

---

<sup>4</sup> <https://sitelink.nature.scot/map>

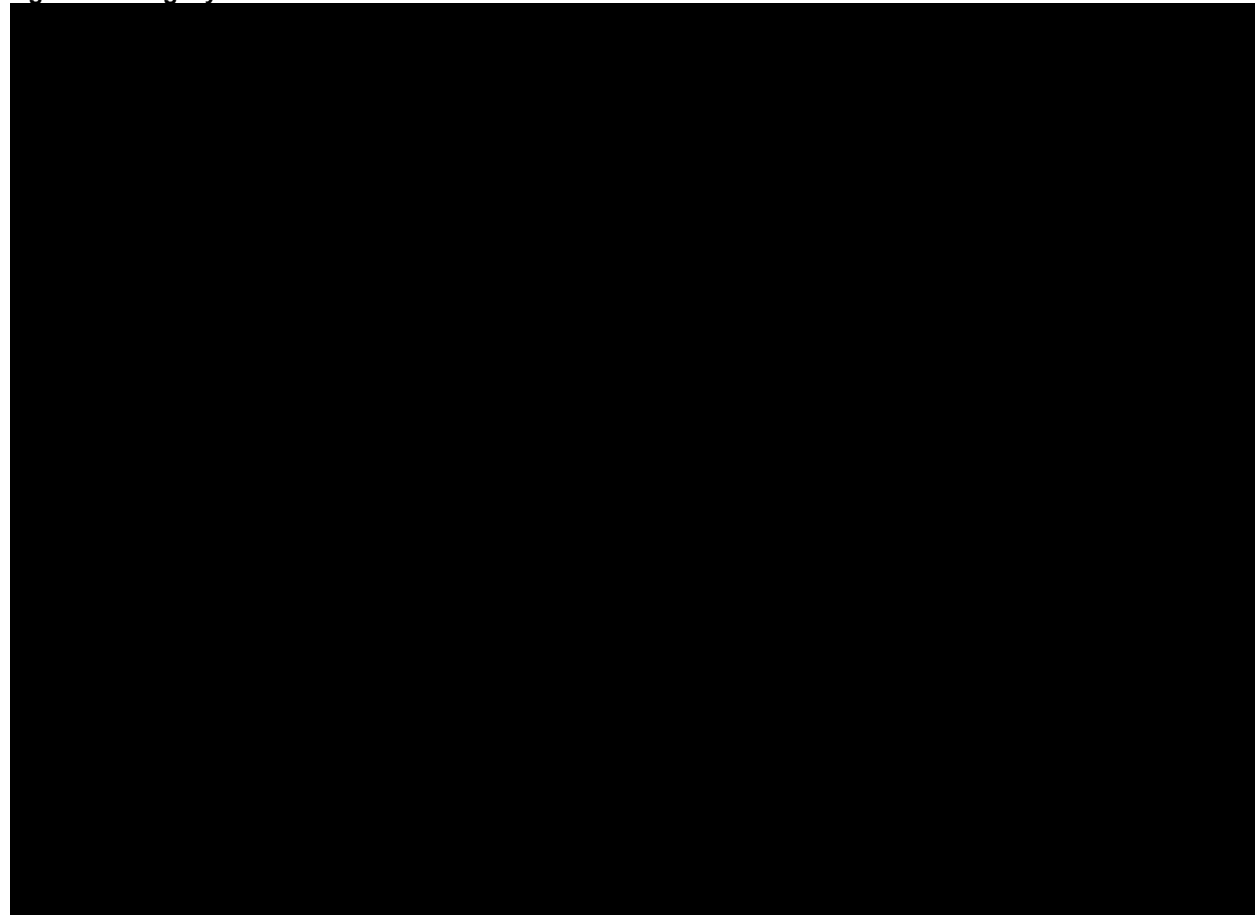
### 3.3 Otter Survey Results

As noted, an otter survey was undertaken [REDACTED] [REDACTED]  
[REDACTED] The results of the otter survey are shown within the *Otter Survey Results* Map in **Appendix C**.

Habitats at and surrounding the site remain highly suitable to support European otter, which live both inland and along coastlines. Otter territories along coastlines are generally much smaller than their riverine counterparts because of the abundance of fish and crustacean prey. However, they must regularly clean to keep their fur free of salt using freshwater for it to remain effective as insulation, therefore, often are located within the vicinity of a freshwater watercourse/waterbody<sup>5</sup>.



**Figure 3.2: Legally Protected Otter Shelters and 30m Buffer Zones**



**Source:** MML (2022)

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<sup>5</sup> [Otter](#) | NatureScot (accessed April 2022)

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### 3.4 Conclusions

[REDACTED]

With regards to disturbance, NatureScot European Protected Species (EPS) criteria for otters, distances within which work is likely to cause disturbance to otter and therefore a licence include:

- 30m for active non-breeding holt / den or couch / lying up site / hover,
- 100m for high noise / vibration activities such as pile driving or blasting for active non-breeding holt / den or couch / lying up site / hover.
- 200m for any confirmed and in use breeding sites / natal holt.

[REDACTED]

[REDACTED]

[REDACTED]

Therefore, to minimise the risk to otters, their shelters and habitats, recommendations are provided in **Section 4** of this report.



## 4 Recommendations and Mitigation

### 4.1 General Recommendations

The following recommendations are provided to support the project programme, including both investigation works and subsequent vessel enabling works:

- Prior to the vessel enabling works construction programme, anticipated to commence in 2023/2024, it is recommended an otter checking survey is undertaken to update the baseline for this species, and significantly, confirm presence/absence of any new legally protected otter shelters within the zone of influence of the proposed works.
- If there is any uncertainty regarding the locations of otter constraints (e.g. shelters), licence requirements or implementing mitigation in relation to otter, it is recommended an ecologist is consulted prior to works commencing.

### 4.2 European Protected Species Licence

[REDACTED]

- [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]
  - To support the EPS Licence application, a Species Protection Plan (SPP) should be produced as part of the licence application package. This document will demonstrate a thorough impact assessment and provide a detailed otter protection plan incorporating mitigation measures and appropriate working methods specific to the planned works.

### 4.3 Precautionary Mitigation

To minimise the risk to otters and their habitats throughout the work programmes, the following general precautionary mitigation is recommended:

- Toolbox talks should be completed prior to works commencing as part of a site induction package, where all staff will be made aware of the potential presence of otters local to the site, their legal protection and mitigation measures to be implemented during the works.
- If at any point an otter is observed passing through the site, works should stop until the otter has dispersed from the area.
- [REDACTED]  
[REDACTED]
- To negate potential impacts to watercourses, best practice guidance working methods are recommended, where all construction activities adjacent to water should be conducted in

accordance with SEPA's Guidance for Pollution Prevention. The primary guidance for such activities is SEPA's 'GPP 5: Works and maintenance in or near water'.

- To avoid entrainment/entrapment or harm to otter, excavations should be covered at the end of each day, where deep excavations occur a mammal ladder should be installed to allow means of escape from the trench.

## 5 References

CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.

Chanin P (2003a) *Ecology of the European Otter*. Conserving Natura 2000 Rivers, Ecology Series No. 10. English Nature, Peterborough.

Chanin P (2003b) *Monitoring the Otter Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No 10. English Nature, Peterborough.

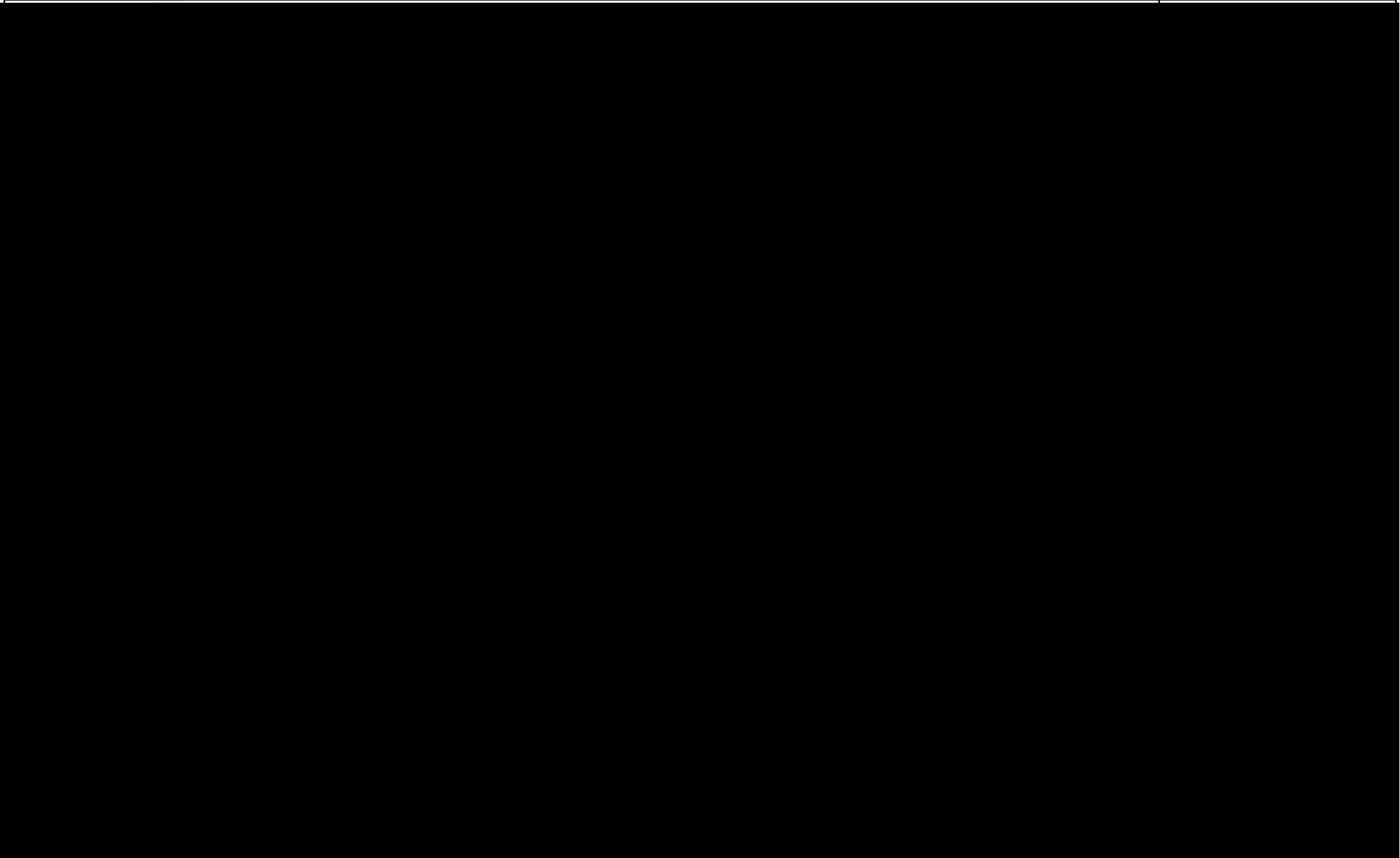
# Appendices

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## A. Proposed Investigation Works



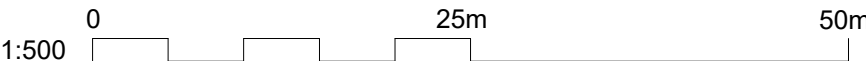
## **B. Proposed Vessel Enabling Works**



Onshore Area Plan  
Scale 1:500

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03 - N/A
DEMOLITION: 04 - N/A
FUTURE ANTICIPATED WORK: 05 - N/A



Designed	B. Radcliffe	BR	Eng check	B. Radcliffe	BR
Drawn	J. Brown	JB	Coordination	G. Mather	GM
Dwg check	G. Mather	GM	Approved	M. Ross	MR
MMD Project Number		Scale at A1			Security
105612		As Indicated			STD
Suitability Description					Suit. Code
Suitable For Information					S2
Drawing Number					Rev
105612-MMD-CO-ZZ-DR-C-0140					P01



# C. Otter Survey Results Map

