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Tarbert Ferry Terminal Development

EIA Screening Request

Prepared by Redacted

Checked by Redacted

June 2017

Affric Reference: 39/TO1

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1 Introduction

A development of the Tarbert Ferry Terminal on the south-east coast of the Isle of Harris is proposed by Caledonian Maritime Assets Limited (CMAL), in order to accommodate a new larger ferry that has been procured by this organisation. The development will involve both marine construction and dredging works below Mean High Water Springs (MHWS), as well as construction works above Mean Low Water Springs (MLWS). A Marine Licence will be applied for to consent the works to be conducted below MHWS.

Works above MLWS will be consented under the Lochmaddy and East Loch Tarbert (Improvement of Piers &c.) Confirmation Act 1984 ('1984 Act') which grants permission to CMAL to provide and improve the facilities of the Tarbert Ferry Terminal. However, the current port limits do not include the entire footprint of the development, and as such a Harbour Revision Order (HRO) will be applied for from Transport Scotland, in order to update the development rights granted by the 1984 Act, to include the proposed works area.

Assuming the HRO is granted, the works will be exempt from Town and Country Planning (Scotland) Act 1997, under the provisions of the Harbours Act 1964 (as amended) ('Harbours Act').

A formal Screening Opinion is requested from Marine Scotland under regulation 10(1) of the Marine Works (Environmental Impact Assessment (EIA)) Regulations 2017 ('EIA Regulations'); to determine whether an EIA will be required to support the Marine Licence application for the proposed development of the Tarbert Ferry Terminal.

A formal screening opinion request is also made to Transport Scotland, according to Schedule 3, Paragraph 4 of the Harbours Act; to determine whether an EIA will be required to support the application for the HRO which will update the 1984 Act, to include the proposed works.

This report provides the information requested under Section 10 of the EIA Regulations, in order assist in the consideration of these requests, and inform the corresponding screening opinion:

- A description of the location of the proposed works.
- A description of the proposed works.
- A description of the location of the proposed works, including the environmental sensitivity of geographical areas likely to be affected.
- A description of the aspects of the environment likely to be significantly affected by the proposed works.
- A description of any likely significant effects.
- A description of any features of the proposed works or proposed measures envisaged to avoid or prevent significant adverse effects on the environment.

It is not considered that the proposed Tarbert Ferry Terminal Development constitutes a Schedule 1 Development, as defined the regulations. However, the total footprint of the proposed development is approximately 1.6Ha, and as such is likely to be classified as a Schedule 2 Development and may require an EIA, subject to an assessment against Schedule 3 of the EIA Regulations.

It should be noted that if both Marine Scotland and Transport Scotland determine that an EIA is required to support both the Marine Licence application, and the HRO; it is proposed that a single EIA will be undertaken of the whole process and a corresponding EIA Report produced, that fulfils the requirement of both parties.

2 Location

Tarbert is located on the south-east coast of the Isle of Harris and has a grid reference centre point of NG 15766 99848 (Figure 39.03). Tarbert is the main community on the Island of Harris. The ferries that utilise this terminal provide the shortest link between Harris and Uig on Skye which has road links to the Scottish Mainland. The harbour is situated to the south of the main village.

Tarbert falls within the boundaries of the Comhairle nan Eilean Siar (CnES). The development is delineated in Figure 1973-906.

3 Characteristics of Development

The Tarbert Ferry Terminal development comprises of the following main components (Figure 1973-905);

- Pier and dredging works
- Marshalling area and reclamation
- Linkspan and Terminal Upgrade

3.1 Project Phases

3.1.1 Construction

3.1.1.1 Pier Extension and Reconstruction

Prior to works to the pier commencing a temporary fendering system will be installed to allow berthing of the ferry throughout the works. Steel piles will be installed into the underlying rockhead, which will then be tied back to the existing structure to form a steelwork frame. Pneumatic fenders will be attached to the temporary steel framework frame. Following the completion of the permanent works, the temporary fendering system will be removed.

The existing pier will be extended to the south east of the current structure, this will require driving steel piles into the underlying rock head. A steelwork bracing frame will then be installed to tie the piles together, before the deck is formed from precast reinforced concrete beams and slab, topped with a reinforced concrete slab which will be poured in situ. The existing concrete dolphins will be broken down to the level of the new deck, and tied into the new reinforced concrete slab. Bollards, surface drainage, lighting and power will be installed.

The existing pier will also be reconstructed to accommodate the extension and new fendering system. This will involve breaking out the edge of the existing reinforced concrete deck before installation a new reinforced concrete deck, and quay edge over the existing structure. New steel piles will also be installed into the underlying rock head. New bollards, surface drainage, lighting and power will also be installed to the existing pier.

The current waiting room of the existing Terminal Building will need to be demolished in order to accommodate these works. To compensate for this the existing terminal will be extended to the North of its existing footprint, into the area currently utilised as CalMac Ferries Limited staff parking.

A new fendering system will be installed by driving piles into the underlying rock head. The sleeve mounted fenders will then be installed over the fender piles and grouted up. Fendering will be connected to the pier structure.

3.1.1.2 Dredging

Dredging will be undertaken to allow for vessel manoeuvres at the harbour. The dredge material is expected to be a mixture of seabed material and underlying rockhead. Dredged spoil, if suitable, will be utilised to contribute to the infill material for the reclamation works.

Previous ground investigations indicate that the dredged material will be exclusively granular seabed sediments, consisting of coarse sand to coarse gravel. It is therefore anticipated that backhoe or suction dredging will be utilised to perform these works.

A small volume of rock may need to be removed from the area between the linkspan and existing pier. This would be completed by pneumatic breaker or diver works.

3.1.1.3 Marshalling Area and Reclamation

The marshalling area will be extended and tied into the existing marshalling area and linkspan approach. This will include rock armouring to protect the seaward edges, and infilling to reclaim and re-profile the area; dredged spoil may be utilised as the infill material. The area will be bituminised to sustain the increase in personnel and vehicle traffic. This work will also include improvements to supporting infrastructure such as surface drainage including appropriate oil and silt interceptors, lighting and, power.

The existing sub-station will be upgraded to a larger sub-station. This process may require additional cabling, ducting and infrastructure works.

A new 10t water tank is also proposed to buffer water bunkering operations by the vessel, including all necessary pumps, standby pump, pipework and control systems.

3.1.1.4 Linkspan and Terminal Upgrade

The Linkspan and Terminal Upgrade work will be undertaken in the long term (~15-20 years) after the completion of previous works detailed in Sections 3.1.11 – 3.1.1.3. This will include an upgrade to the existing terminal building to accommodate an increase in ferry passengers. A new linkspan will provide an upgraded disabled access compliant passenger access system and associated civil, electrical and mechanical requirements.

3.1.2 Operation

As the project is a replacement and extension of an existing ferry terminal significant change in operation from the current conditions are not expected. The new ferry will be working a similar timetable and route. This upgrade is proposed to allow for the berthing and operation of a larger ferry which means there will be a potential increase in personnel and cars utilising the terminal and ferry.

The upgraded marshalling yard will be capable of handling the increase in traffic. Once the fendering, pier and substation are replaced/upgraded minimal operational changes are expected.

It is likely that maintenance dredging will be required during operation, in order to maintain the required depth alongside the berth.

3.1.3 Demolition/Reinstatement

A degree of demolition of the existing fendering, pier and dolphin structures is required to facilitate the proposed works. The volumes of demolished material will be minimised through design. However, where required, it is anticipated that the affected infrastructure will be removed and where possible recycled.

As a lifeline ferry service, there are no future plans to discontinue use of this site. Therefore, it is not considered necessary to plan for demolition and reinstatement works for closure of this site.

4 Known Sensitivities

4.1 Designated Sites

Table 1 details the Statutory Nature Conservation Designations Sites of Special Scientific Interest (SSSI), Special Protection Area (SPA), proposed Special Protection Area (pSPA), Special Area of Conservation (SAC) and Ramsar sites within 20km of the proposed development.

Table 1: Statutory Nature Conservation Designations within 20km of the Development Site [17].

Site	Designation	Distance Direction	Feature Category/Feature
North Harris	SSSI SAC	5.5km NW	Designated for Bryophyte assemblage (Non-vascular plants), Subalpine wet heath (Upland Habitat). Acidic scree, Alpine and subalpine heaths, Blanket Bog, Depressions on peat substrates, Dry heaths, Montane acid grassland, Plants in crevices on acid rocks and Wet heathland with cross-leaved heath (Upland Habitat), Acid peat-stained lakes and ponds and Clear water lake or lochs with aquatic vegetation and poor to moderate nutrient levels (freshwater habitats), Otter (<i>Lutra lutra</i>) (Mammals (<i>except marine</i>)), Atlantic Salmon (<i>Salmo salar</i>) (Fish).
North Harris Mountains	SPA	5.5km NW	Golden Eagle (<i>Aquila chrysaetos</i>) breeding (Birds)
Luskentyre Banks and Saltings	SSSI	6km SW	Designated for its Coastal Geomorphology (Earth Sciences), Dystrophic and oligotrophic lochs (Freshwater habitats), Machair, Saltmarsh and Sand Dunes (Coast), Sandflats (Marine including marine mammals), Breeding bird assemblage (Birds) and Upland assemblage (Upland Habitat).
Inner Hebrides and the minches	pSAC	8.5km SE	Designated for Harbour porpoise (<i>Phocoena phocoena</i>) (Marine)
Lewis Peatlands	SPA Ramsar	13 km N	Designated for Breeding Birds, Black throated diver (<i>Gavia arctica</i>) breeding, Red throated diver (<i>Gavia stellata</i>), Golden Eagle (<i>Aquila chrysaetos</i>), Dunlin (<i>Calidris alpine schinzii</i>), Golden plover (<i>Pluvialis apricaria</i>), Greenshank (<i>Tringa nebularia</i>), Merlin (<i>Falco columbarius</i>) Breeding bird assemblage, Dunlin (<i>Calidris alpine schinzii</i>) (Birds), Blanket Bog (Upland habitat)
Northton Bay	SSSI	16km WSW	Breeding bird assemblage (Birds), Machair, Saltmarsh and Sand Dunes (Coast), Sandflats, Saline Lagoon (Marine including marine mammals), Mineralogy of Scotland (Earth Sciences) and Transition saltmarsh (Wetlands).

4.2 Biodiversity – Terrestrial

European otters (*Lutra lutra*) have been identified in and around Tarbert [11], and are afforded protection under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). There are 108 species of birds recognised recorded as utilising the area within a 5km radius of the site [11].

4.3 Biodiversity – Marine

The waters around the Isle of Harris and the Outer Hebrides are utilised by numerous marine mammal species, including both cetaceans and seals, marine mammals are protected under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Eight species of cetacean are regularly encountered in the region and a further three species occur less frequently [15]. In addition, breeding populations of both grey (*Halichoreus grypus*), and common seals (*Phoca vitulina*) are present in the Outer Hebrides [16].

Various fish species are likely to be located in the waters surrounding the Tarbert Ferry Terminal. Otters (Section 4.2) may be found within the marine environment as well as the terrestrial environment.

Limited information on the benthic ecology within the area means that the sensitivity of this is unknown. As such, this has been considered as a sensitivity during this screening report.

4.4 People

The nearest property to the site is the Hotel Hebrides which is situated 20 m immediately to the north. There is a small collection of residential properties within a 100 m to the north-east. There are community facilities to the north and west including; the Bank of Scotland, Tourist Information, Community Centre and the main street which has a collection of businesses at the east end. These are all within 150 m of the site. There are two residential properties to the south east on the south side of East Loch Tarbert that overlook the existing quay. These are 200 m and 250 m away, respectively.

5 Potential Effects

5.1 Construction

Table 2 provides a description of the likely effects resulting from the proposed construction of Tarbert Ferry Terminal upgrade on the environment resulting from the use of natural resources and the expected residues and emissions. Additionally, it outlines the sensitivities as detailed in Section 4 and proposes mitigation measures for any effects that could have a potential impact on the environment.

Table 2: Construction Effects and Sensitivities

	Sensitivities (Section 4)	Source	Potential Effect (no mitigation)	Proposed mitigation
Use of Natural Resources				
Use of Material (eg steel)	None	Construction of infrastructure	YES	Efficient use of resources
Use of Land and Soil	None	Infill material (dredge and fill) Aggregate Concrete/tarmac	NO	No mitigation required
Use of Water	None	Construction water requirements	NO	No mitigation required
Biodiversity / Land-Take	Biodiversity – Land Biodiversity - Marine	Removal of habitat Clearing flora	YES	Environmental survey will be conducted to identify sensitive habitats and species, to allow appropriate mitigation to be identified.
Residues and Emissions				
In-Air Noise and Vibration	People Biodiversity - Land	Plant and vessel movements Piling	YES	Works conducted in line with current practice for noise and vibration control on construction and open sites [2]. Use of a vibrating hammer instead of pneumatic impact hammer where possible.
Under Water Noise and Vibration	Biodiversity - Marine	Piling Dredging Plant and vessel movements	YES	Marine mammal observation and/or Passive acoustic monitoring protocols; aligned to

	Sensitivities (Section 4)	Source	Potential Effect (no mitigation)	Proposed mitigation
				Joint Nature Conservation Committee (JNCC) guidelines [10]. Use of a vibrating hammer instead of pneumatic impact hammer where possible.
Air Emission - Dust	People Biodiversity - Land	Material handling and storage Cleared areas Plant movements	YES	Dust Management in line with existing guidelines [8,9].
Air Emission - GHG and Climate Change	None	Plant and vessel movements Electricity use Intrinsic material use	YES	New more efficient substation installed. Plant and vehicles well maintained. Optimised material usage.
Emission to Marine Water	Biodiversity - Marine	Sedimentation from dredging and piling Risk of unplanned emission resulting from: <ul style="list-style-type: none"> • Oil/ fuel storage and handling • Silt water run off • Waste materials • Concrete and cement use 	YES	Use of precast concrete where possible. Works conducted in line with standard best practice and existing guidelines – <ul style="list-style-type: none"> • Storage and handling [4,5,6,7,8,12,13] • Waste management [1,8] • Surface water management [4,6,8] • Cement management [8] • Dredging [1]
Emission to Land	Biodiversity - Land	Risk of unplanned emission resulting from: <ul style="list-style-type: none"> • Oil/ fuel storage and handling • Cement washings • Silt water run off • Waste materials 	YES	Works conducted in line with standard best practice and existing guidelines – <ul style="list-style-type: none"> • Storage and handling [4,5,6,7,8,12,13] • Waste management [8] • Surface water management [4,6,8] • Cement management [8]
Emission to Surface Water Bodies	None	Risk of unplanned emission resulting from: <ul style="list-style-type: none"> • Oil/ fuel storage and handling • Cement washings • Silt water run off • Waste materials 	NO	No mitigation required

	Sensitivities (Section 4)	Source	Potential Effect (no mitigation)	Proposed mitigation
Light Emissions	Biodiversity – Land Biodiversity - Marine	Plant vessel lights Light for construction	YES	Standard best practice in line with existing guidelines on lighting [3,14] and nuisance management [8].

Terrestrial species (including otters) and the various species of birds that utilising the area may be impacted by the land take, in-air noise, dust emissions, emissions to land such as unplanned releases and light emissions. These impacts will be reduced through aligning practices with:

- Code of practice for noise and vibration control on construction and open sites: British Standards (BS) 5228-1:2009 [BS Institute, 2008].
- Working at construction and demolition sites: Pollution Prevention Guidance (PPG) 6 [Environmental Agency, Northern Ireland Environmental Agency (NIEA) & Scottish Environmental Protection Agency (SEPA), 2012].
- Guidance on the assessment of dust from demolition and construction [Institute of Air Quality Management (IAQM), 2016].
- Coastal and Marine Environmental Site Guide (C584) [Budd, John, Simm & Wilkinson, 2003].
- Safe Storage and disposal of used oils: PPG8 [Environment and Heritage Service, SEPA & Environment Agency, 2004].
- Use and design of oil separators in surface water drainage systems: PPG 3 [Environment and Heritage Service, SEPA & Environment Agency 2006].
- Above ground oil storage tanks: Guidance for Pollution Prevention (GPP) 2 [NIEA, SEPA & Natural Resources Wales, 2017].
- Drums and intermediate bulk containers: PPG 26 [NIEA, SEPA & Environmental Agency, 2011].
- Light and lighting - Lighting of work places: BS EN 12464-2:2014 [BS Institute, 2014].
- Health and Safety in Ports (SIP009) – Guidance on Lighting. [PSS, 2010].

Additionally, an environmental survey will be conducted to identify sensitive habitats and species, to allow appropriate mitigation to be identified prior to construction.

The waters around the Isle of Harris and the Outer Hebrides are utilised by numerous marine mammal species, including both cetaceans and seals. These have the potential to be impacted by the utilisation of the marine environment during development, light emissions, under-water noise and vibration, and potential emissions to the marine environment. These impacts will be reduced through aligning practices with the guidelines outlined above and:

- Good practice guidelines for ports and harbours operating within or near United Kingdom (UK) European marine sites [Associated British Ports (ABP) Research & Consultancy Ltd, 1999]
- Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise [JNCC, 2010].
- Works and maintenance in or near water: GPP 5 [Natural Resources Wales, NIEA, & SEPA, 2017].

Hydrocarbon separators will be installed as part of the upgrade to the terminal. This will improve the current surface water management by providing protecting against oil spillages and result in a positive impact on the environment.

During the construction of the Tarbert Ferry Terminal development people using the Hotel Hebrides, the small collection of residential properties to the north-east, the community facilities and the two residential properties on the south side of East Loch Tarbert that overlook the existing quay have the potential to be affected. This may occur as a result of in-air noise and dust emissions. These impacts will be reduced through dust and noise management aligned with standard practices and guidelines outlined above.

CMAL will ensure that the contractor produces and instigates a suitable construction environmental management plan (CEMP) to ensure appropriate mitigation is implemented.

5.2 Operation

Table 3 provides a description of the likely effects resulting from the proposed operation of the upgraded Tarbert Ferry Terminal on the environment resulting from the use of natural resources and the expected residues and emissions. Additionally, it outlines the sensitivities as per Section 4 and proposes mitigation measures for any effects that could have a potential impact on the environment.

As the project is a replacement of an existing harbour emissions during operation are not expected to constitute a significant change from the baseline conditions. The new ferry is a replacement for the existing ferry, and will be working a similar timetable. As such it is not expected to have any significant negative environmental effect from the previously operated site. Table 3 therefore only discusses the operational effects associated with the increase capacity of the harbour.

Table 3: Operational Effects and Sensitivities

	Sensitivities (Section 4)	Source	Potential Effect (no mitigation)	Proposed mitigation
Use of Natural Resources				
Use of Material (eg steel)	None	Slight increase in use of materials required for maintenance, not significant.	NO	No mitigation required
Use of Land and Soil	None	None	NO	No mitigation required
Use of Water	None	Slight but not significant increase due to potential additional passengers.	NO	No mitigation required
Biodiversity / Land-Take	Biodiversity – Land Biodiversity - Marine	The new rock armour may provide additional habitat.	YES (positive)	Positive effect
Residues and Emissions				
In-Air Noise and Vibration	People Biodiversity - Land	Slight increase in noise may result from increase in traffic, not significant.	NO	No mitigation required

	Sensitivities (Section 4)	Source	Potential Effect (no mitigation)	Proposed mitigation
Water Noise and Vibration	Biodiversity - Marine	No significant increase from current conditions	NO	No mitigation required
Air Emission - Dust	People Biodiversity - Land	None	NO	No mitigation required
Air Emission - GHG and Climate Change	None	Additional Traffic Larger vessel movements. Electricity Use	YES	Plant and vehicles well maintained.
		New more efficient substation installed. New vessel capable of operating with Liquefied Natural Gas (LNG) (reduced NOx and SOx emissions).	YES (positive)	Positive effect
Emission to Marine Water	Biodiversity - Marine	Sedimentation from maintenance dredging	YES	Standard best practice in line with existing guidelines on waste management [1] and dredging [1].
		The installation and use of hydrocarbon separators for surface water run off prior to any discharge occurring.	YES (positive)	Positive effect Standard best practise in line with existing guidelines on hydrocarbon separators [6]
Emission to Land	Biodiversity - Land	None	NO	No mitigation required
Emission to Surface Water	None	None	NO	No mitigation required
Light Emissions	Biodiversity – Land Biodiversity - Marine	Increased lighting with larger marshalling area and pier extension.	YES	Standard best practice in line with existing guidelines on lighting [3,14].

As the project is a replacement extension to of an existing harbour, emissions during operation are not expected to constitute a significant change from the current conditions.

However, four positive effects will result from the development of this project that will be evident during its operation. These includes:

- an upgrade to a more efficient substation;
- the potential for the new vessel to operate on LNG in addition to using marine gas oil (MGO);
- the installation of a hydrocarbon separator system prior to discharge of contaminated surface water; and
- the installation of rock arming which may provide additional habitat.

Unfortunately, the infrastructure for providing LNG instead of MGO is not currently available in Scotland to realise this potential environmental benefit in the short term.

The waters around the Isle of Harris and the Outer Hebrides are utilised by numerous marine mammal species, including both cetaceans and seals. These have the potential to be impacted during the operation of the upgraded terminal, primarily through emissions to the marine environment during maintenance dredging and the increase in lights required for the larger area. These impacts will be reduced through aligning practices with the guidelines outlined above and:

- Good practice guidelines for ports and harbours operating within or near UK European marine sites [ABP Research & Consultancy Ltd,1999]
- Light and lighting. Lighting of work places. Outdoor work places: BS EN 12464-2:2014 [British Standards Institute, 2014].
- Health and Safety in Ports (SIP009) – Guidance on Lighting. [PSS, 2010].

Terrestrial species (including otters) and the various species of birds that utilise the area may also be impacted by the increase in light pollution resulting from the larger area. These impacts will be minimised through operating in line with the previously mentioned guidelines.

6 Summary

The Tarbert Ferry Terminal development is required to accommodate a larger ferry which will operate from this facility. This development requires; dredging, pier extension and reconstruction, installation of fendering, an increase in the marshalling area and an upgrade to the; substation, linkspan and terminal building. These activities require the use of natural resources and will result in emissions which without mitigation may affect environmentally significant areas including the nearby people, marine and terrestrial biodiversity.

During construction, there is a potential to have significant effects, however standard environmental good practice mitigation will be effective in minimising these. CMAL will ensure that the contractor produces and instigate a suitable construction environmental management plan (CEMP) to ensure appropriate mitigation is implemented.

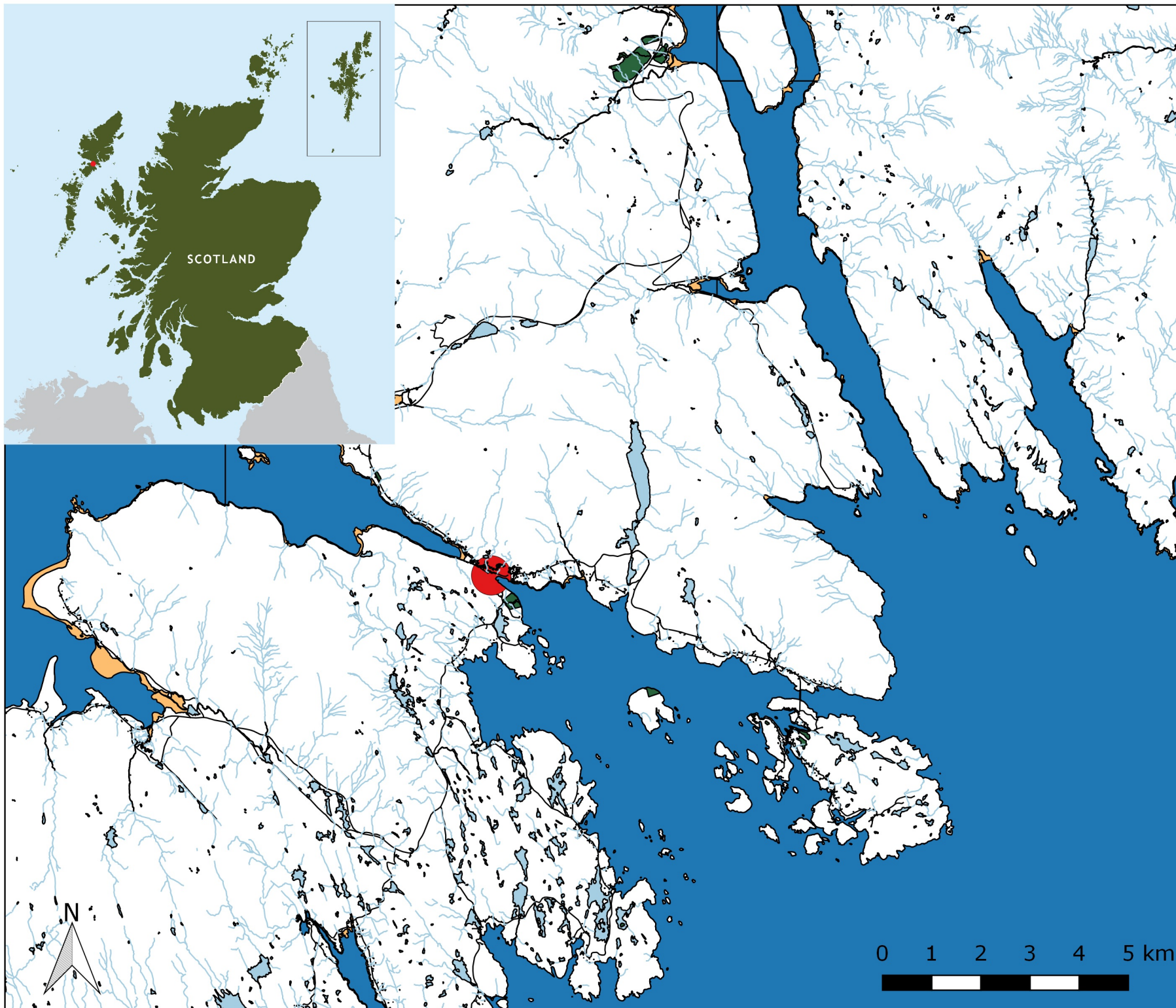
The Tarbert Development is an upgrade of an existing harbour to accommodate a larger ferry vessel. As such significant impacts during operation are not expected to differ significantly from the current conditions.

7 References

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8 Glossary

Acronym	Definition
1984 Act	The Lochmaddy and East Loch Tarbert (Improvement of Piers &c.) Confirmation Act 1984
ABP	Associated British Ports
BS	British Standard
CEMP	Construction Environmental Management Plan
CMAL	Caledonian Maritime Assets Ltd
CnES	Comhairle nan Eilean Siar
EIA	Environmental Impact Assessment
EIA Regulations	Marine Works (Environmental Impact Assessment) Regulations 2017
GPP	Guidance for Pollution Prevention
Harbours Act	Harbours Act 1964 (as amended)
HRO	Harbour Revision Order
IAQM	Institute of Air Quality Management
JNCC	Joint Nature Conservation Committee
LNG	Liquefied Natural Gas
MGO	Marine Gas Oil
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
NBN	National Biodiversity Network
NIEA	Northern Ireland Environmental Agency
PPG	Pollution Prevention Guidance
pSPA	Proposed Special Protection Area
SAC	Special Area of Conservation
SEPA	Scottish Environmental Protection Agency
SPA	Special Protection Area
SSSI	Sites of Special Scientific Interest
UK	United Kingdom



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Farr, Inverness, IV2 6AW

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Title: 39.03 Tarbert Location

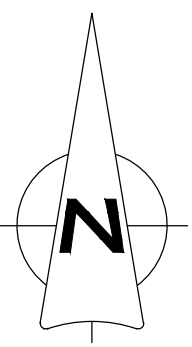
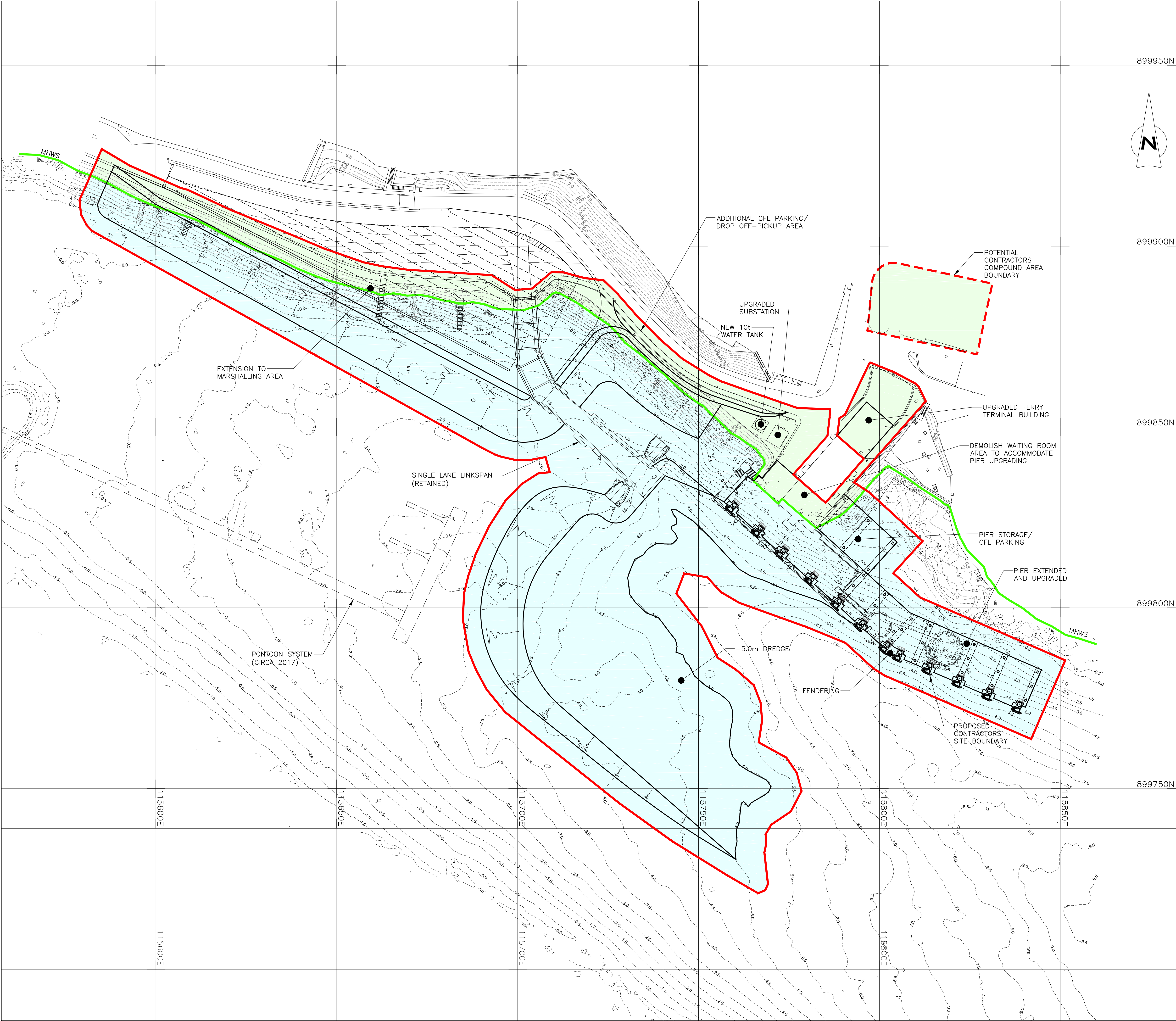
Projection: OSGB 1936/British National
Grid EPSG: 27700

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- Legend**
- Inland Water
 - Foreshore
 - Tarbet
 - Buildings
 - Tidal Water
 - Woodland
 - Roads



- GENERAL NOTES
1. ALL LEVELS ARE IN METRES AND RELATE TO CHART DATUM UNLESS NOTED OTHERWISE.
 2. TIDE LEVELS ARE AS FOLLOWS:
HAT = +5.9mCD
MHWS = +5.0mCD
MLWS = +0.8mCD
LAT = +0.1mCD
 4. CHART DATUM IS 2.74m BELOW ORDNANCE DATUM.

LEGEND

- MHWS
- SITE BOUNDARY
- SITE COMPOUND
- WORKS ABOVE MHWS
- WORKS BELOW MHWS

A	12/06/17	MINOR AMENDMENTS	JA	BP	TR
REV	DATE	DETAILS	DRAWN	CHK'D	APP'D

AMENDMENTS

CLIENT

PROJECT

TARBERT FERRY TERMINAL
UPGRADE WORKS

Wallace Stone
CONSULTING CIVIL ENGINEERS

GLASGOW 0141 554 8233
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DINGWALL 01349 866775
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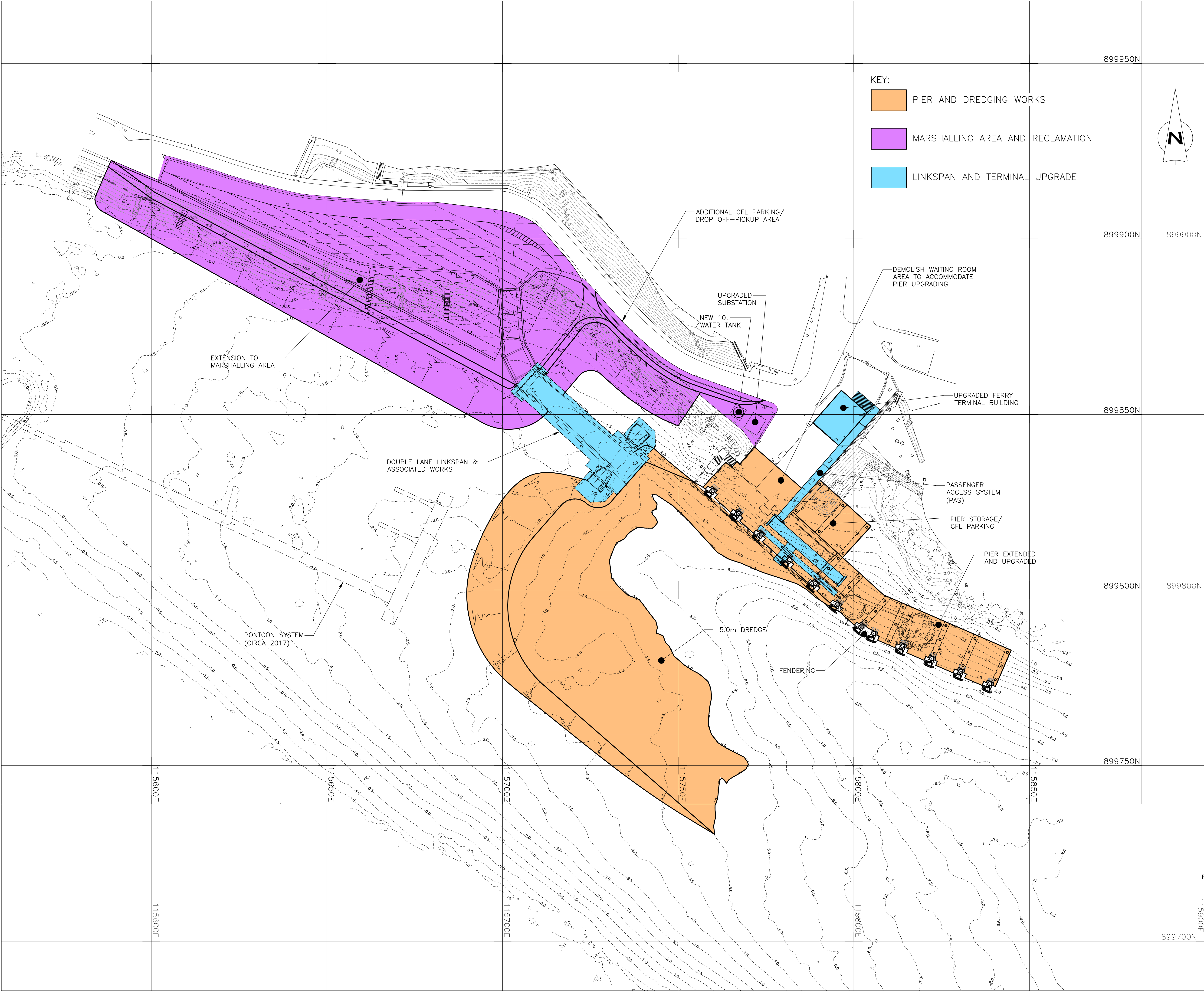
HEBRIDES 01851 612454
hebrides@wallacestone.co.uk

DRAWING TITLE

PROPOSED
SITE BOUNDARY

Redacted

DATE	JUNE '17	DATE	JUNE '17	DATE	JUNE '17
SCALE (A1)	1:500	STAGE	PRELIMINARY		
REVISION	A				
PROJECT No.	1973	DRAWING No.	906		

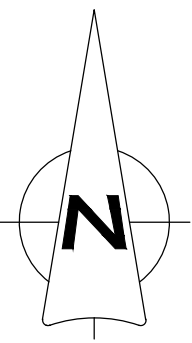


KEY:

PIER AND DREDGING WORKS

MARSHALLING AREA AND RECLAMATION


LINKSPAN AND TERMINAL UPGRADE



- GENERAL NOTES**
- ALL LEVELS ARE IN METRES AND RELATE TO CHART DATUM UNLESS NOTED OTHERWISE.
 - TIDE LEVELS ARE AS FOLLOWS:
HAT = +5.9mCD
MHWS = +5.0mCD
MLWS = +0.8mCD
LAT = +0.1mCD
 - CHART DATUM IS 2.74m BELOW ORDNANCE DATUM.

REV	DATE	DETAILS	DRAWN	CHK'D	APP'D
B	12/6/17	MINOR AMENDMENTS	JA	BP	TR
A	6/6/17	MINOR AMENDMENTS	JM	BP	TR

AMENDMENTS

CLIENT 

PROJECT
TARBERT FERRY TERMINAL UPGRADE WORKS

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DRAWING TITLE

PROPOSED PHASED SITE LAYOUT

Redacted

DATE	JUNE '17	DATE	JUNE '17	DATE	JUNE '17
SCALE (A1)	1:500	STAGE	PRELIMINARY		
REVISION	A	B			
PROJECT No.	1973	DRAWING No.	905		