Stornoway Port

DEEP WATER TERMINAL PROJECT **27th August 2024**

REQUEST FOR NON MATERIAL VARIATION TO MARINE CONSTRUCTION LICENCE

1. INTRODUCTION

The Deep Water Terminal (DWT) project involves construction of two new deep water berths with associated hardstanding, road and services infrastructure. The works involved dredging and construction works below Mean High Water Springs (MHWS). The Port obtained Marine Licences for these works in September 2021. The Port awarded a construction contract for the DWT to McLaughlin & Harvey in March 2022.

The Port is seeking non-material variations to the project's Marine Construction Licence in accordance with section 30(7) of the Marine Scotland Act 2010. This document sets out the details of the requested variations and explanation of their non-material nature.

The project includes installation of a linkspan on the north-facing berth to allow it to be used by roll-on, roll-off vessels which will function (amongst other tasks) as the back-up for the Lifeline Ferry services between the Western Isles and the Scottish Mainland. The original design was for a hydraulic linkspan, through the project development it has become clear that a more effective and lower impact options would be a floating linkspan, which is now proposed.

The Port wishes to proceed with procurement and installation of this item and associated enabling works. Details of the proposal and the associated marine works and timescale are set out in section 3 below.

As part of this design review, the Port will omit part of the consented works, namely part of the 15m wide by 114m long finger pier and the whole of the proposed 'bollard island'. The remaining 16m length of the proposed finger pier has been constructed as a stand-alone marine structure. Details of these works are set out in Section 4 below.

Section 5 considers the nature of the proposed variations in the context of the DWT EIA Report and mitigation measures which form part of the Marine Construction Licence currently in place.

2. MARINE CONSENTS DETAILS

Table 1 below gives details of the DWT Marine Construction Licence.

Licence no.	Type	Works (as described in the licence)	Issue date	Expiry date
8749	Construction licence	Construction of a deep water port at Glumaig Harbour, Stornoway, Isle of Lewis including the following components: • Construction of the main quay • Construction of a heavy load area • Construction of a pontoon • Construction of a bollard island • Construction of the freight ferry berth and linkspan	03/09/21	30/06/25

		• Creation of a levelled area by land reclamation • Construction of a link road by land reclamation; and • Removal of parts of the SS Portugal wreck.		

Table 1: DWT Marine Construction Licence scope

In addition, the following European Protected Species Licences are in place for construction, dredging and deposit activities:

(1) EPS/BS-00009686: Licence to disturb marine species, valid from 18/06/22 to 30/06/25
(2) EPS/BS-00009871: Licence to disturb basking sharks, valid from 18/06/22 to 30/06/25

3. Proposal for floating linkspan

3.1 Original proposal

At the time of submission of the marine licence application, the proposed linkspan was to be hydraulicly operated. This required installation of two reinforced concrete dolphins to support the linkspan's hydraulic arms.

3.2 Floating linkspan proposal

Following contract award, the opportunity to change from a hydraulic to a floating linkspan was identified. Following a thorough examination, the Port identified that a floating linkspan would provide the best value in the long term.

A floating linkspan is connected to the bankseat by means of a hinged connection which allows the ramp to rise and fall with the tide. The weight of the linkspan and the vehicles that use it are supported by a submerged float. The linkspan ramp is secured by means of a guide pile. Figure 1 below shows an indicative section through a floating linkspan. An indicative drawing is provided in in Appendix 1. This option therefore means that the linkspan automatically corrects for the tides without the need for major power to control the lifting and lowering mechanisms. The operation of the floating linkspan therefore requires less electrical power than a hydraulic one, thereby reducing carbon emissions. Additionally, there is less risk of pollution as there is no hydraulic fluid in the operating system.

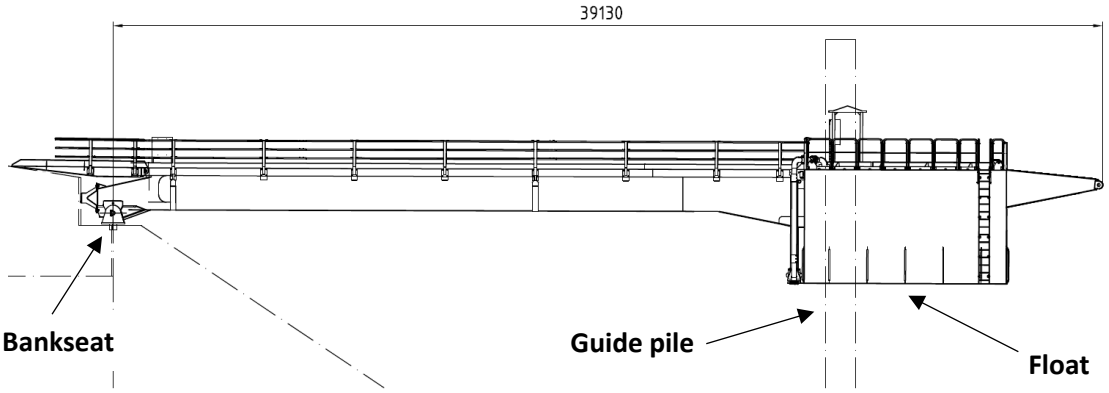

Figure 1: Section through indicative floating linkspan

Figure 2 below shows the plan of the consented design, including the two concrete dolphins. Drawings are provided in Appendix 2.

As a result of this design change, the dolphins that would have been required for the hydraulic linkspan are no longer required, reducing the amount of piling, and concrete required; thereby reducing the interaction with the seabed. Details of the omission are given in Section 4 below.

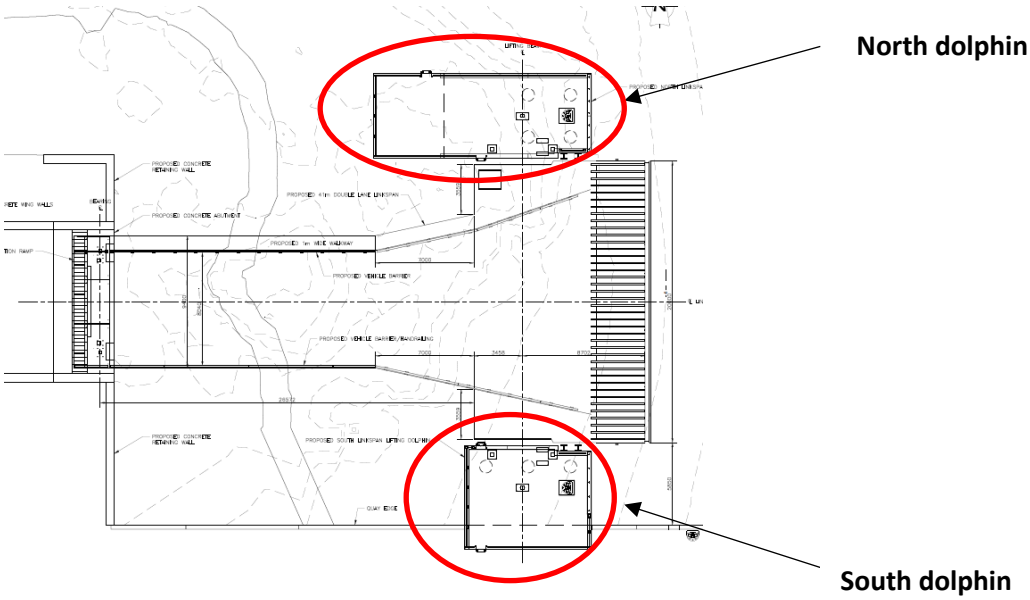

Figure 2: Plan showing consented dolphins for linkspan

3.3 Enabling works for floating linkspan

The enabling works set out in Table 2 are required to allow installation of the floating linkspan:

Ref	Description	Comment
1	Installation of tubular steel guide pile 1206mm diameter, 30m long, driven into the seabed.	The proposed steel pile is similar to the piles installed to form the DWT quay walls, i.e. piles driven by vibrating hammer to refusal, then completed by impact hammer
2	Completion of linkspan bankseat; this will comprise a concrete 'shelf' connected to the concrete structure installed as part of the existing contract. This may require installation of steel piles into the seabed rock, which would be secured with rock anchors.	This item formed part of the DWT project at application stage, as shown in the linkspan General Arrangement drawing on page 14 of Volume 4 of the EIA report of December 2020 (SDWP-WS2139-XX-04-DR-C-1003, included in Appendix 2).
3	Removal of approximately 300 cubic metres of rock (equivalent to 570 wet tonnes) under the linkspan float block. The rock requiring removal was part of a rocky island, the remainder of which has been covered by the construction of the DWT. The top of the rock requiring removal varies between Chart Datum and 3m below Chart Datum. This work would be done during normal working hours (7.30am to 7pm). Appendix 3 shows a plan of and sections through the rock to be removed. A report from the project's Consulting Engineer on the nature of the rock proposed for removal is included at Appendix 4.	The estimated volume of rock to be removed is 250 cubic metres; the exact quantity will be determined by the supplier's design of the linkspan float, so the requested quantity to be added to the marine licence is 300 cubic metres The method of removal of this rock would be by long reach excavator. See Appendix 4 for further information about the proposed method of removal. The rock removed will be stored on the DWT platform and set aside for beneficial use in the proposed Phase 2 of the Deep Water Terminal project (referred to as Deep Water South)[1]. No material will be taken to the disposal site.
4	Temporary rock bund of approximately 1,110 cubic metres (equivalent to 2,090 wet tonnes), to provide a working platform for long reach excavator to carry out removal of rock. Bund to be protected with rock armour. Top of bund: 4.5m above CD. Appendix 5 shows the proposed location of this bund.	To comprise surplus blasted rock from DWT project. Following completion of item 3, the bund material will be removed from the seabed and stored on the DWT set aside for beneficial use in the proposed Deep Water South project.

Table 2: Enabling works for floating linkspan

[1] A Scoping Study for an EIA for the Deep Water South project was submitted to Marine Scotland and Transport Scotland for this project in May 2024.

3.4 Programme

The anticipated timescale for the linkspan works is as shown in Table 3 below. However, the timescale is subject to alteration, as the completion date will depend on the supplier's lead time for manufacture of the linkspan.

Ref	Item	Anticipated date
1	Tender process	September – December 2024
2	Appoint contractor	January 2025
3	Detailed design of linkspan	February – March 2025
4	Carry out floating linkspan enabling works	July – September 2025
5	Install linkspan	November 2025

Table 3: Anticipated programme for linkspan works

The Marine Construction Licence is due to expire on 30th September 2025. Stornoway Port is therefore seeking an extension of the licence to 30th April 2026. The EPS licences listed in Section 2 above are due to expire on 30th June 2025. The Port seeks an extension of these licences to 30th April 2025.

3.5 Need for linkspan

Stornoway Port wishes to install a linkspan at the DWT in 2025. This will provide resilience for the lifeline Ullapool to Stornoway ferry service in the case of any breakdown of the existing linkspan at Pier No. 3. The existing back-up linkspan at Pier No. 1 has reached the end of its useful life and is no longer in use.

A linkspan at the DWT will also allow a greater range of freight vessels to berth at the DWT. This will provide additional capacity, thereby relieving the existing pressure on the existing Ullapool to Stornoway ferry service at peak periods. In addition, other cargo types, such as renewable energy developers and their supply chains are using linkspans as a method to load and discharge particular cargoes.

4. WORKS OMITTED FROM THE PROJECT

As noted in Section 1 above, a number of works are no longer required and will therefore not be carried out. Details are given in Table 4 below.

Ref	Item	Description	Materials omitted from works	Comment
1	Linkspan dolphins	2 No. reinforced concrete blocks cast on the seabed supported by steel piles. North dolphin: 15m x 8m in area, supported on 4 No. piles South dolphin: 9m x 7m in area, supported on 3 No. piles. The piles were to be driven to rock by vibrating hammer and	Concrete Steel reinforcement 7 No. 800mm diameter steel piles	Copies of drawings included in Appendix 2

		secured to the seabed by steel toe pins grouted with concrete into holes drilled into the bedrock		
2	98m length of finger pier	Open piled 15m wide pier comprising 800mm tubular steel pies driven into the seabed rock driven by vibrating hammer as far as possible, then by impact hammer	18 No. 800mm diameter steel piles	The finger pier was omitted following a design review, which identified that only part of the finger pier was required.
3	Bollard island	Bollards secured to rock outcrops with 4m access causeway approximately 100m long formed of rock bund protected by rock anchor	Rock fill Rock armour	Plan of bollard island included at Appendix 6.

Table 4: Marine works omitted from the project

5. ASSESSMENT OF REQUESTED VARIATIONS

5.1 Locations of variations

The proposed floating linkspan and associated enabling works are all located within the boundaries of the exiting Marine Construction Licence.

5.2 Extension of licence duration

The anticipated duration of rock removal is up to four weeks. This would be carried out at the start of the enabling works, which are planned for summer 2025.

The Port is seeing an extension to September 2026 in case of any delay in the delivery of the floating linkspan. Due to the volatile nature of demand for this type of infrastructure, the lead time is liable to variability in the supply chain and onward logistics. Manufacturing delays are also increasingly common.

The date in the marine construction licence for submission of the final report is 31st October 2026. No change is proposed to this deadline.

5.3 Materials used in permanently in the marine environment to date

Table 5 below gives a summary of the consented and actual quantities to date for the main construction materials used in the marine area.

Ref	Item	Quantities (tonnes)		
		Consented	Actual to date	Balance
1	Steel	11,100	4,650	6,450
2	Concrete	30,700	9,100	21,600

3	Reclamation (sand, gravel, cobbles & boulders)	2,034,630	1,711,504	323,126

Table 5 Consented and actual marine area construction materials to date

The reduction in steel and concrete used is a consequence of omission of the finger pier, linkspan dolphins and a reduction in extent of concrete surfacing on the reclaimed platform. The reduction in reclamation materials used is due to the bulking factor of the rock being higher than estimated.

5.4 Floating linkspan and associated enabling works

Table 6 below sets out the rationale for the floating linkspan and its enabling works being non-material variations to the consented works.

Ref	Item	Comment on nature of change
1	Floating linkspan	The change from a hydraulic to a floating linkspan makes very little difference to the construction or operational stages of the DWT. Much like the originally envisaged hydraulic linkspan, the proposed linkspan is expected to be delivered on a barge and lifted into place by a land-based crane. The floating linkspan will be made of inert components which will have no impact on marine ecology. It will have the same operational capacities, so makes no difference to the socio-economic impact of the project. The quantity of steel in the floating linkspan will be determined by the detailed design process. This float will be made from steel, which may increase the weight of steel compared to a hydraulic linkspan. However, the overall weight of steel will be less than the consented option due to the omission of the linkspan dolphins. The weight of steel used in the marine environment to date is 42% of the consented weight. The effect of the change to a floating linkspan will not increase the consented weight of steel. The main difference is that the floating linkspan will not be operated by hydraulic cylinders, thereby reducing the risk of breakdown, unplanned hydraulic oil release into the environment and energy consumption.
2	Floating linkspan guide pile: 1206mm diameter, 30m long; weight: 23 tonnes	The proposed steel pile is similar to the piles installed to form the DWT quay walls. The proposed location is similar to that of the consented south dolphin. The method installation will be the same as the consented linkspan dolphin support piles, albeit fewer in number.
3	Completion of linkspan bankseat	The linkspan bankseat is part of the consented design, as stated in Section 3.3 above.
4	Removal of approximately 300 cubic metres of rock	As noted in Section 3.3 above, this rock is between Chart Datum and 3m below Chart Datum and as such is weathered. Its removal by means of a long reach excavator is similar in nature to the use of a

	(570 wet tonnes) under linkspan float block	cutter suction dredger, which was assessed in the EIA Report of December 2020. The impact of cutter suction dredging was considered in relation to underwater noise (section 11), in-air noise (section 12) water quality (section 14), air quality & navigation (section 16). Mitigation measures to avoid significant impacts were set out in the EIA Report. The benthic survey carried out as part of the EIA assessment found that the area to the east of the location of the proposed rock removal the seabed did not have any Priority Marine Features. As the specific area of proposed rock removal was not covered by the benthic survey due to insufficient water depth for the vessel, a dive survey was caried out in August 2024 to check the area. Findings are reported in section 5.5 below.
5	Placement of approx. 1,100 cubic metres (2,090 wet tonnes) of site-won rock on seabed to form temporary access track to provide working platform for item 4	Placement of rock bunds and rock armour was considered in the DWT EIA Report of December 2020, as was removal of seabed material (as part of the dredging process). Mitigation measures to avoid significant impacts were set out in the EIA Report.

Table 6: Rationale for floating linkspan and enabling works being nonmaterial variations to the marine construction licence

The mitigation measures set out in the DWT EIA Report of December 2020 which are applicable to these will be implemented. Key mitigations are as follows:

a) Marine Mammal and Basking Shark Protection Plan (item C.05)
b) Marine Mammal Impact Piling mitigation measures (item C.06)
c) Use of vibro hammers to drive piles prior to refusal prior to using impact piling techniques (item C.19)
d) Apply best practice in respect of construction noise as identified in Section 8 of BS5228
e) Noise monitoring during marine activities (item C.24)
f) Observation and review during activities that could give rise to increased sediment loading (item C.31 and C.32)
g) Controls on fuel storage and refuelling of plant (items C.34, C.35, C.39 and C.40)
h) Notices to Marines and good communications with the Harbour Master (item C.58)

Appendix 7 comprises the Schedule of Mitigation from the consented Construction Environmental Management Document (Version 2, dated July 2022). All mitigation measures relevant to the works listed in Table 6 above are highlighted.

These mitigation measures have been implemented during the works completed to date. No adverse incidents have occurred.

5.5 Benthic environment

A benthic survey of the project seabed area was carried out by Ocean Ecology Ltd in March 2020. No Priority Marine Features were found in the vicinity of the works required for the floating linkspan.

The March 2020 survey did not directly cover the area where the temporary bund and rock removal will take place due to insufficient water depths. Stornoway Port therefore commissioned a dive survey of the seabed in this area. This was carried out by Lochs Diving Service on 8th August 2024 under the supervision of the project's consultant Engineer. Ocean Ecology Ltd reviewed the video of this survey to check for Priority Marine Features. Their review noted the presence of Ciona intestinalis but did not identify any Priority Marine Features in the rock removal area.

6. CONCLUSION

Due to the design review, a number of elements have been revisited in the process of constructing the DWT. The effect of these changes is that two of these impact on the existing consent in a non-material way, both relate to the installation of a hydraulic linkspan: its construction and the enabling removal of high level rock. Stornoway Port now wishes to proceed with the installation of the floating linkspan. This work involves a small number of variations to the Marine Construction Licence and EPS Licences applicable to the project, predominantly timing.

This document has set out the scope of the requested variations and explained their nonmaterial nature. Stornoway Port requests that Marine Scotland consider this application so that we may now proceed to commission the work for the new floating linkspan.

Appendices

1 Indicative details of floating linkspan
2 General arrangement and detailed drawings of consented linkspan dolphins (omitted from the project)
3 Plan of and sections through rock proposed for removal
4 Wallace Stone LLP report on rock proposed for removal
5 Location of temporary access track for removal of rock
6 Plan of consented bollard island (omitted from the project)
7 Marked up Schedule of Mitigation from DWT Construction Environmental Management Document

Stornoway Port

DEEP WATER TERMINAL PROJECT

REQUEST FOR NON MATERIAL VARIATION TO MARINE CONSTRUCTION LICENCE

APPENDIX 1

INDICATIVE DETAILS OF FLOATING LINKSPAN

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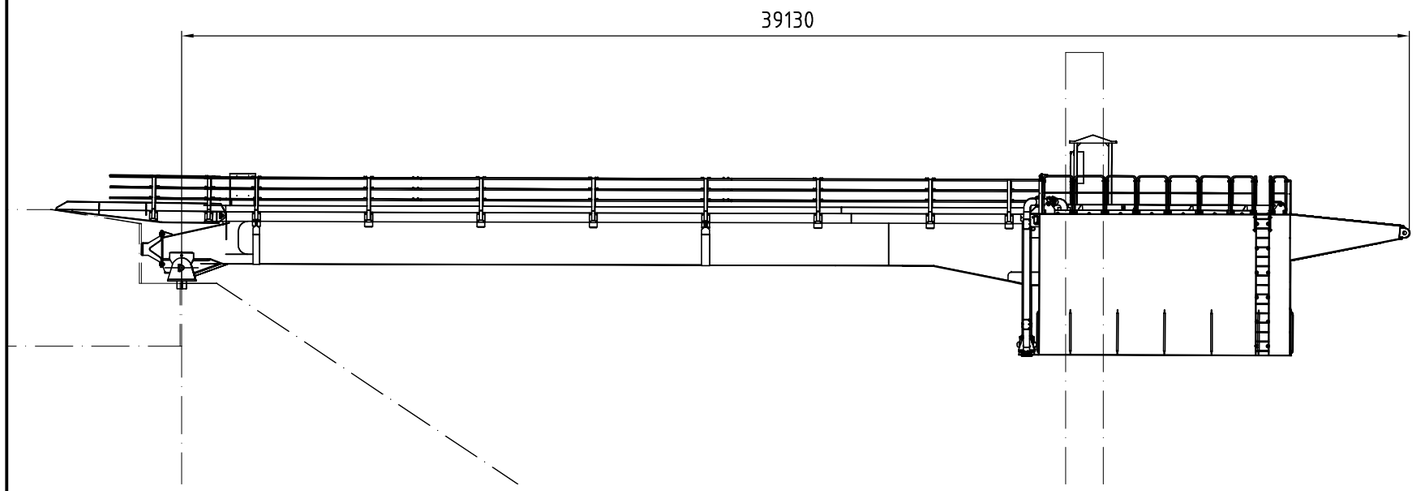
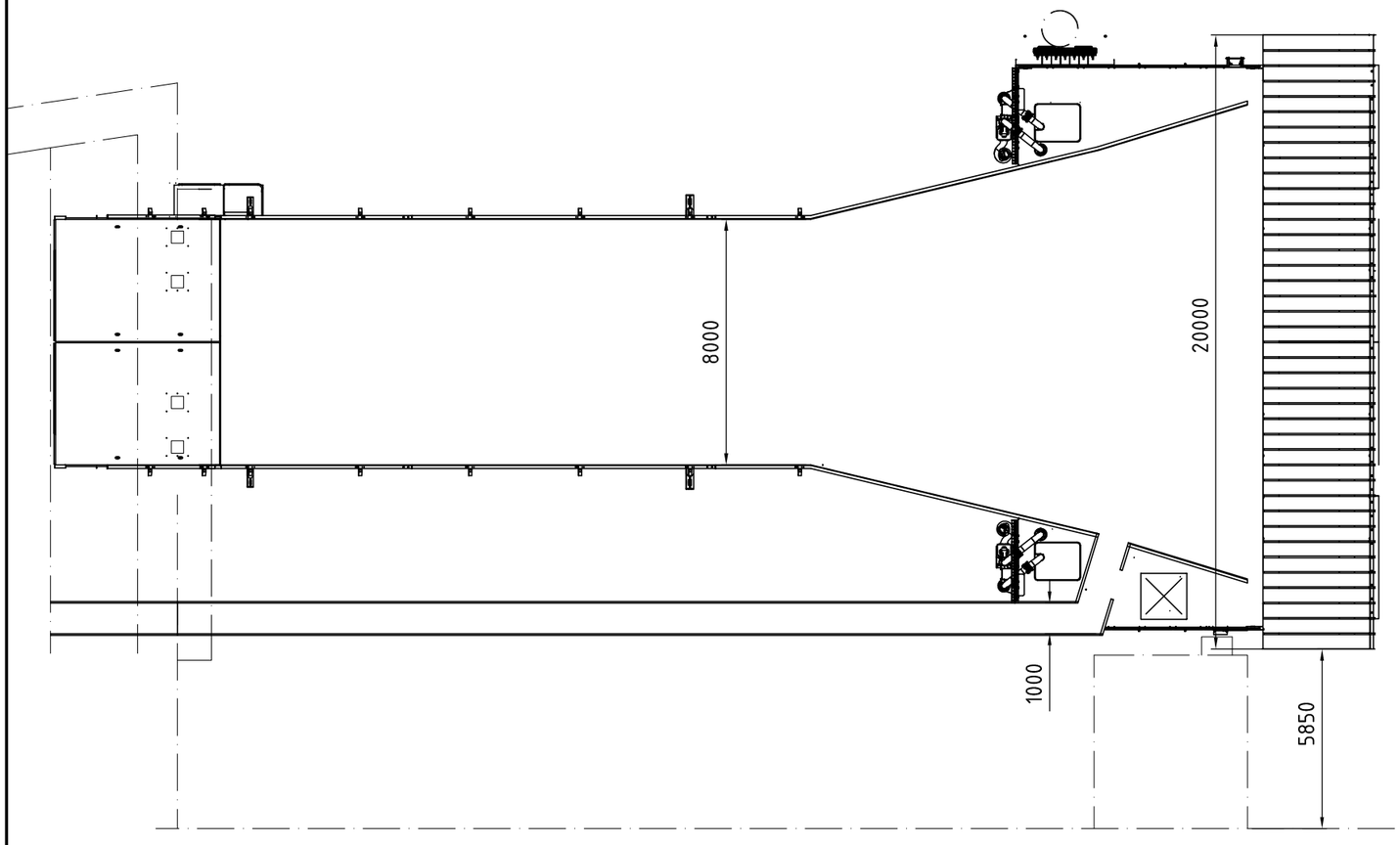


The Pontoon linkspan proposed for installation in Stornoway
is based on modifications to a design
installed in Australia (above) and in Oman (below).
Both proven in service in a remote location



ITEM No.	QTY.	UNIT	DRAWING No. ARTICLE/GROUP No.	ITEM MASS	DENOMINATION	TYPE	SIZE/DIMENSION	MATERIAL

MACGREGOR

RoRo DIVISION
MacGregor Sweden AB

Option
Pontoon Linkspan
Stornoway

PRELIMINARY

SCALE	1:100
APPROVED BY	
STATE	In Progress
DESIGN BY	CHE
DATE	2021-05-10
SHEET	4
REV.	B

TOLERANCE SYSTEM MCG 10730
CONTRACT No. 4661072
DRAWING No. 71-41875

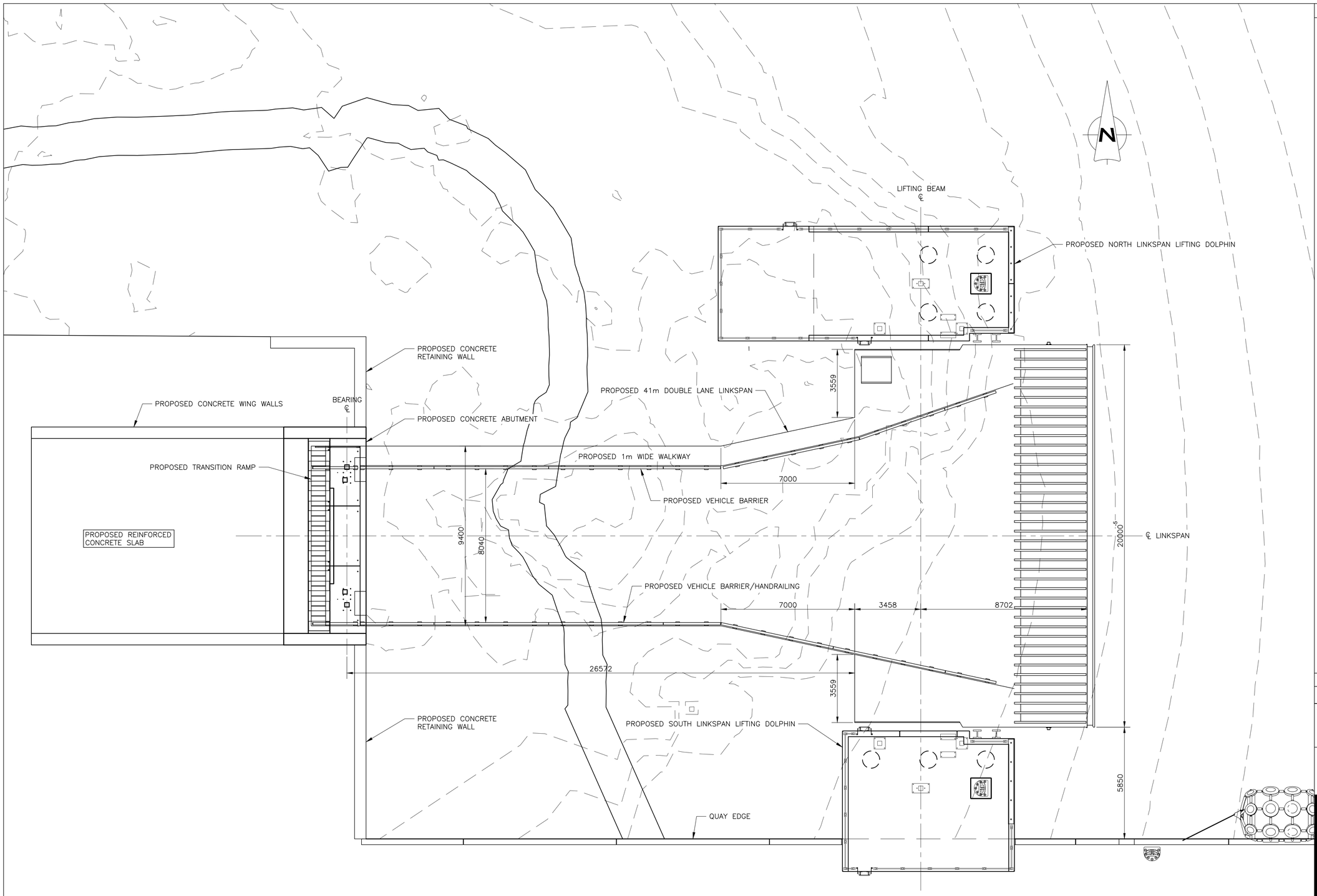
Stornoway Port

DEEP WATER TERMINAL PROJECT

REQUEST FOR NON MATERIAL VARIATION TO MARINE CONSTRUCTION LICENCE

APPENDIX 2

GENERAL ARRANGEMENT AND DETAILED DRAWINGS OF CONSENTED LINKSPAN (OMITTED FROM PROJECT)



PLAN

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GENERAL NOTES

1. ALL LEVELS ARE IN METRES AND RELATE TO CHART DATUM.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. TIDE LEVELS ARE AS FOLLOWS

HAT	+5.5mCD
MHWS	+4.8mCD
MLWS	+0.7mCD
LAT	0mCD

4. CHART DATUM IS 2.71m BELOW ORDNANCE DATUM.
5. FOR LINKSPAN ELEVATIONS AND SECTIONS, REFER TO DRAWING SDWP–WS2139–XX–04–DR–C–1002.
6. FOR LINKSPAN ABUTMENT GENERAL ARRANGEMENT, REFER TO DRAWING SDWP–WS2139–XX–04–DR–C–1003.
7. FOR LINKSPAN NORTH DOLPHIN GENERAL ARRANGEMENT, REFER TO DRAWING SDWP–WS2139–XX–04–DR–C–1004.
8. FOR LINKSPAN SOUTH DOLPHIN GENERAL ARRANGEMENT, REFER TO DRAWING SDWP–WS2139–XX–04–DR–C–1005.

REV	DATE	DETAILS	DRAWN	CHK'D	APP'D

AMENDMENTS

CLIENT

STORNOWAY PORT AUTHORITY

PROJECT

STORNOWAY DEEP WATER PORT

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Consulting Civil Engineers

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DRAWING TITLE

LINKSPAN
GENERAL LAYOUT

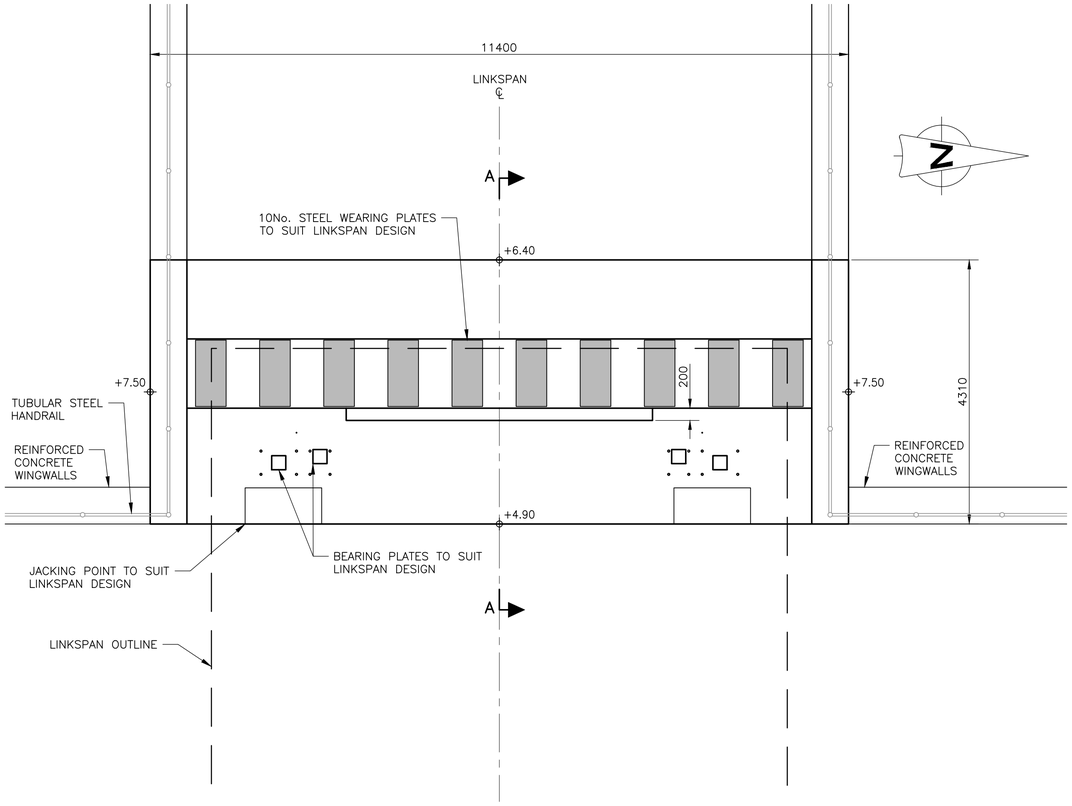
DRAFT

DRAWN	CHECKED	APPROVED
JA		
DATE	DATE	DATE
APR 20		

SCALE (A1)	STAGE	REV
AS SHOWN	PRELIMINARY	P01.1

DRAWING No.

SDWP–WS2139–XX–04–DR–C–1001



PLAN

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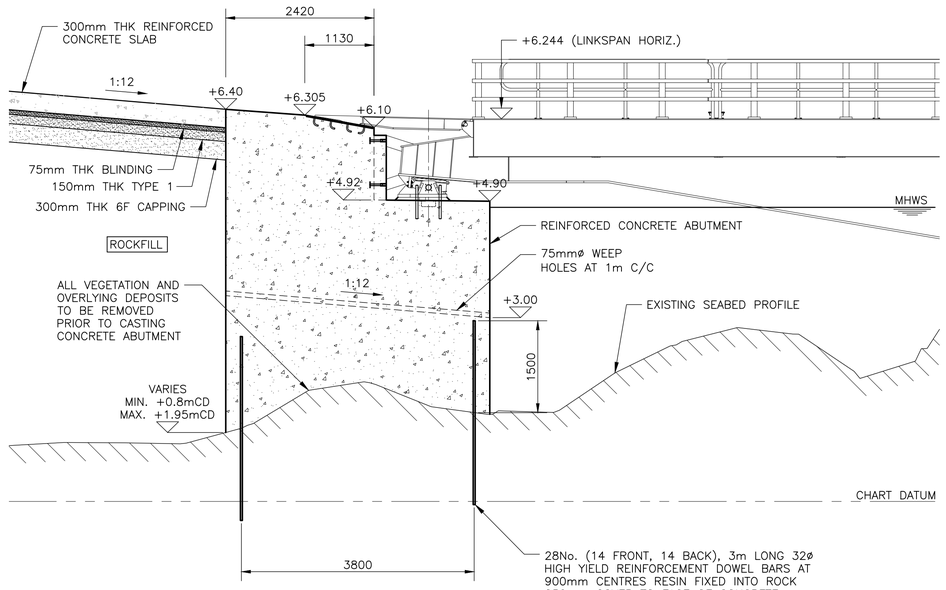

SECTION A–A

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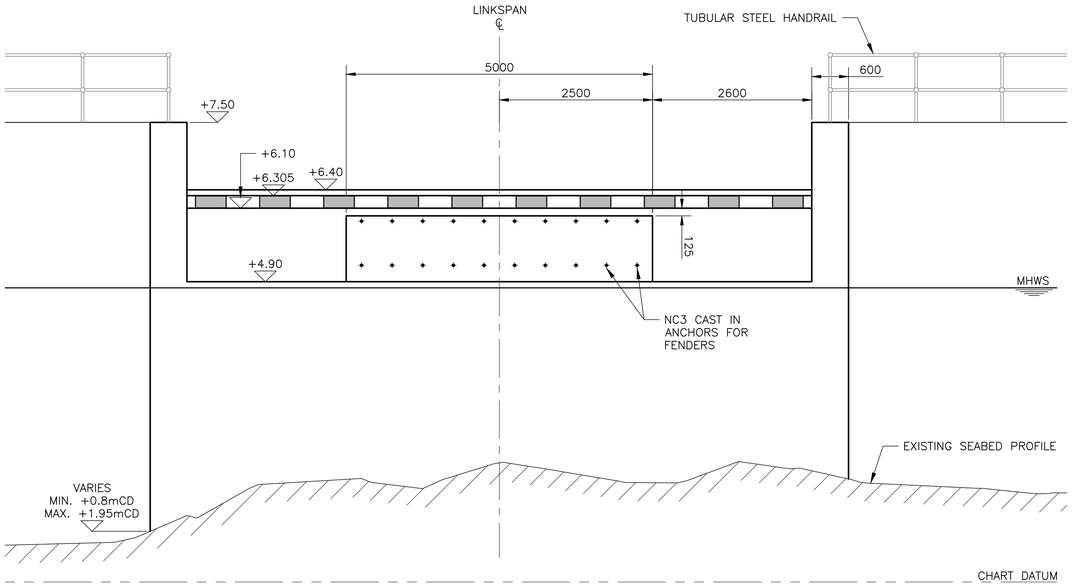

FRONT ELEVATION

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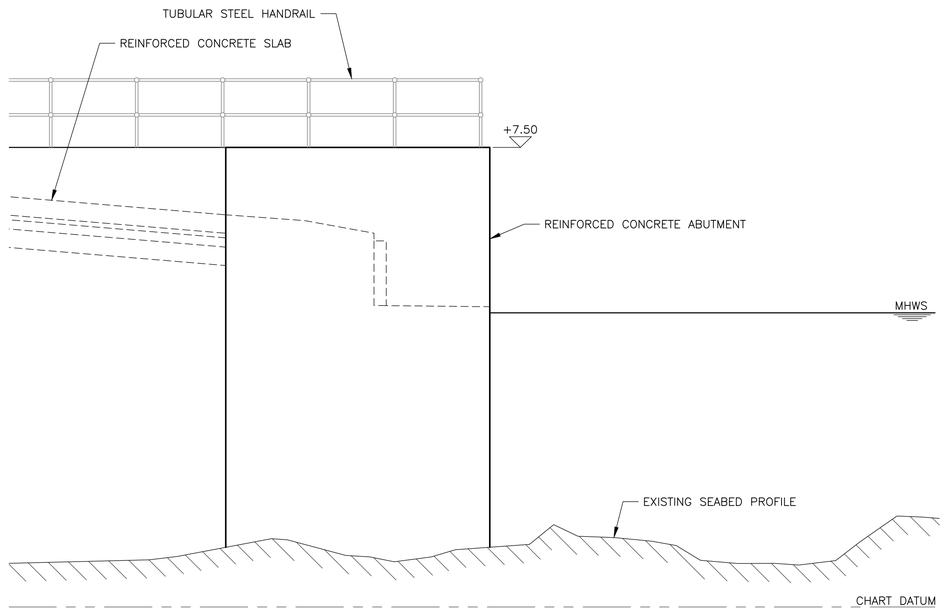

END ELEVATION

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GENERAL NOTES

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HAT	+5.5mCD
MHWS	+4.8mCD
MLWS	+0.7mCD
LAT	0.mCD

4. CHART DATUM IS 2.71m BELOW ORDNANCE DATUM.
5. FOR LINKSPAN GENERAL LAYOUT, REFER TO DRAWING SDWP–WS2139–XX–04–DR–C–1001.
6. FOR LINKSPAN ABUTMENT GENERAL DETAILS, REFER TO DRAWING SDWP–WS2139–XX–04–DR–C–1101.
7. FOR RC DETAILS, REFER TO XX–04–7000 SERIES.
8. EXACT GEOMETRY OF LINKSPAN ABUTMENT, TOP PROFILE OF ABUTMENT, LEVEL OF BEARING SHELF, BEARING HOLDING DOWN ARRANGEMENT AND WEAR PLATE TO BE CONFIRMED WITH LINKSPAN DESIGNER.
9. CONCRETE TO BE GRADE C32/40, UNLESS NOTED OTHERWISE.

REV	DATE	DETAILS	DRAWN	CHK'D	APP'D

AMENDMENTS

CLIENT

STORNOWAY PORT AUTHORITY

PROJECT

STORNOWAY DEEP WATER PORT

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DRAWING TITLE

LINKSPAN ABUTMENT
GENERAL ARRANGEMENT

DRAFT

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DATE	DATE	DATE
APR 20		
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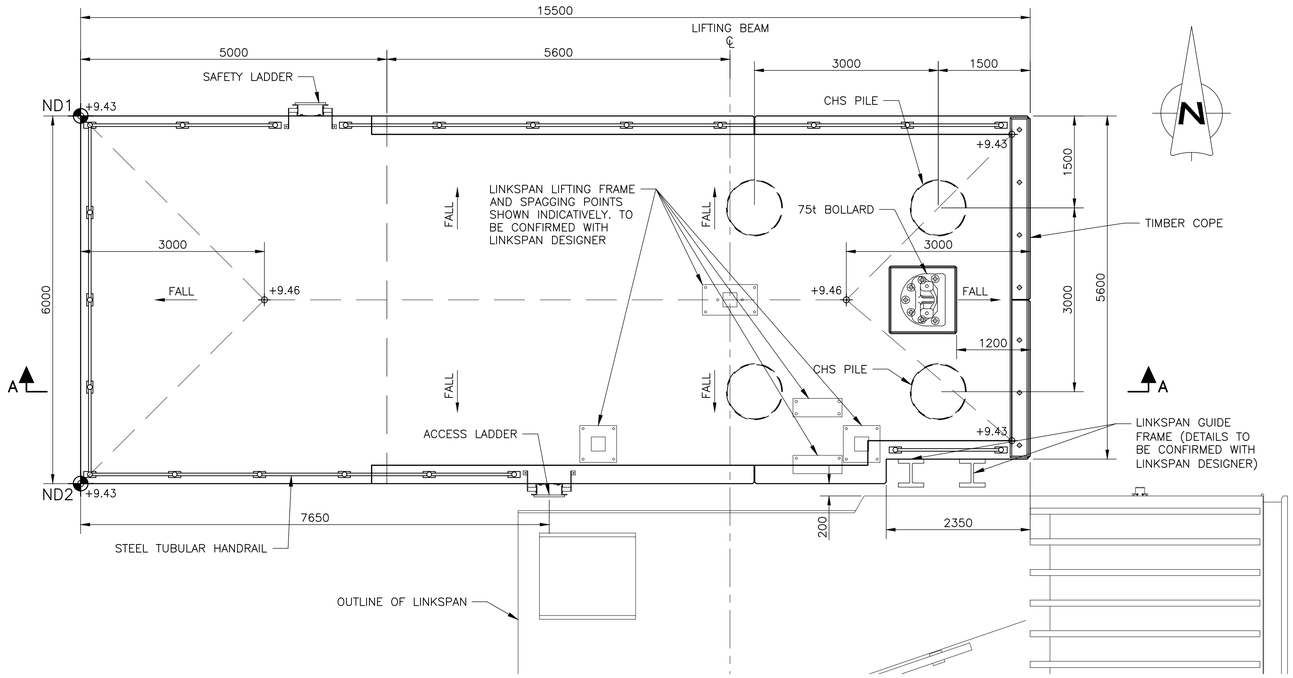
DRAWING No.

SDWP–WS2139–XX–04–DR–C–1003



PLAN

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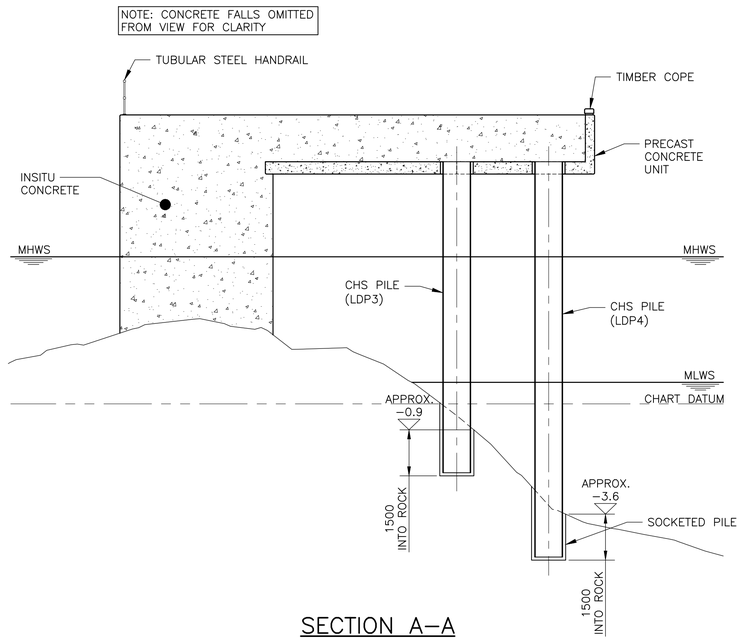

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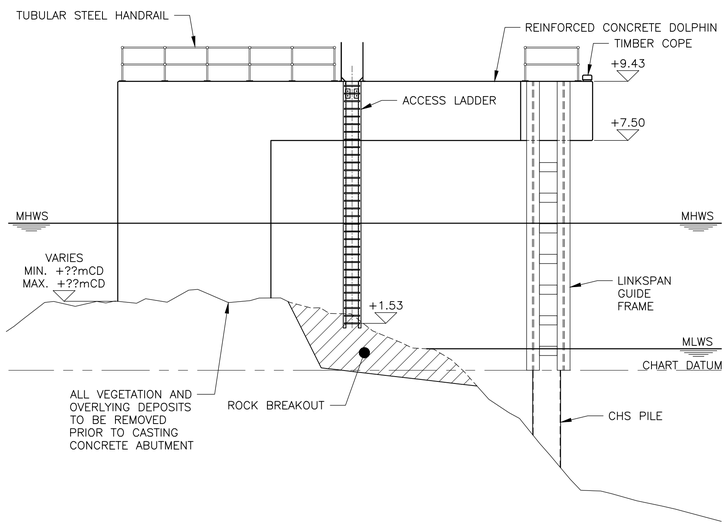

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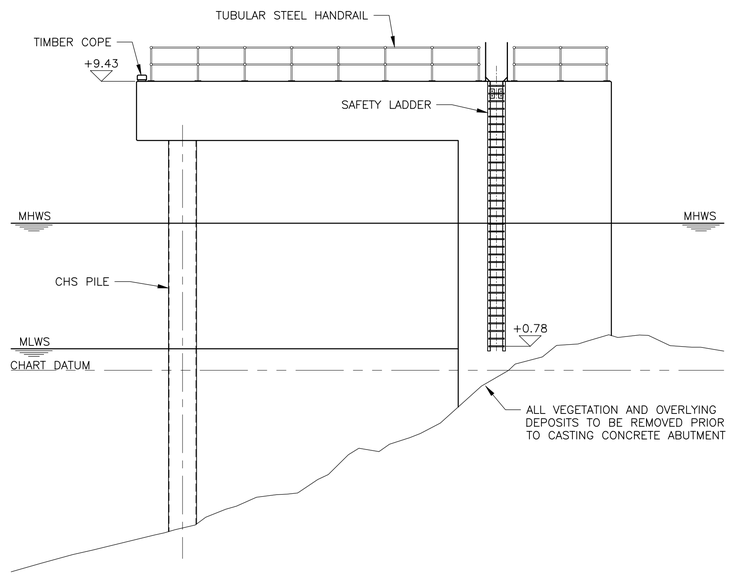

NORTH ELEVATION

SCALE 1:100

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5. FOR LINKSPAN GENERAL LAYOUT, REFER TO DRAWING SDWP–WS2139–XX–04–DR–C–1001.
6. FOR LINKSPAN DOLPHINS PILING LAYOUT AND DETAILS, REFER TO DRAWING SDWP–WS2139–XX–04–DR–C–3001.
7. FOR LINKSPAN DOLPHINS PRECAST MARKING PLAN, REFER TO DRAWING SDWP–WS2139–XX–04–DR–C–5001.
8. FOR RC DETAILS, REFER TO XX–04–7000 SERIES.
9. CONCRETE TO BE GRADE C32/40, UNLESS NOTED OTHERWISE.

NORTH DOLPHIN SETTING–OUT

SOP	EASTING (m)	NORTHING (m)
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ND2	142300.387	931515.296

REV	DATE	DETAILS	DRAWN	CHK'D	APP'D

AMENDMENTS

CLIENT

STORNOWAY PORT AUTHORITY

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DRAWING TITLE

LINKSPAN NORTH DOLPHIN GENERAL ARRANGEMENT

DRAFT

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DATE	DATE	DATE
APR 20		

SCALE (A1)	STAGE	REV
AS SHOWN	PRELIMINARY	P01.1

DRAWING No.

SDWP–WS2139–XX–04–DR–C–1004

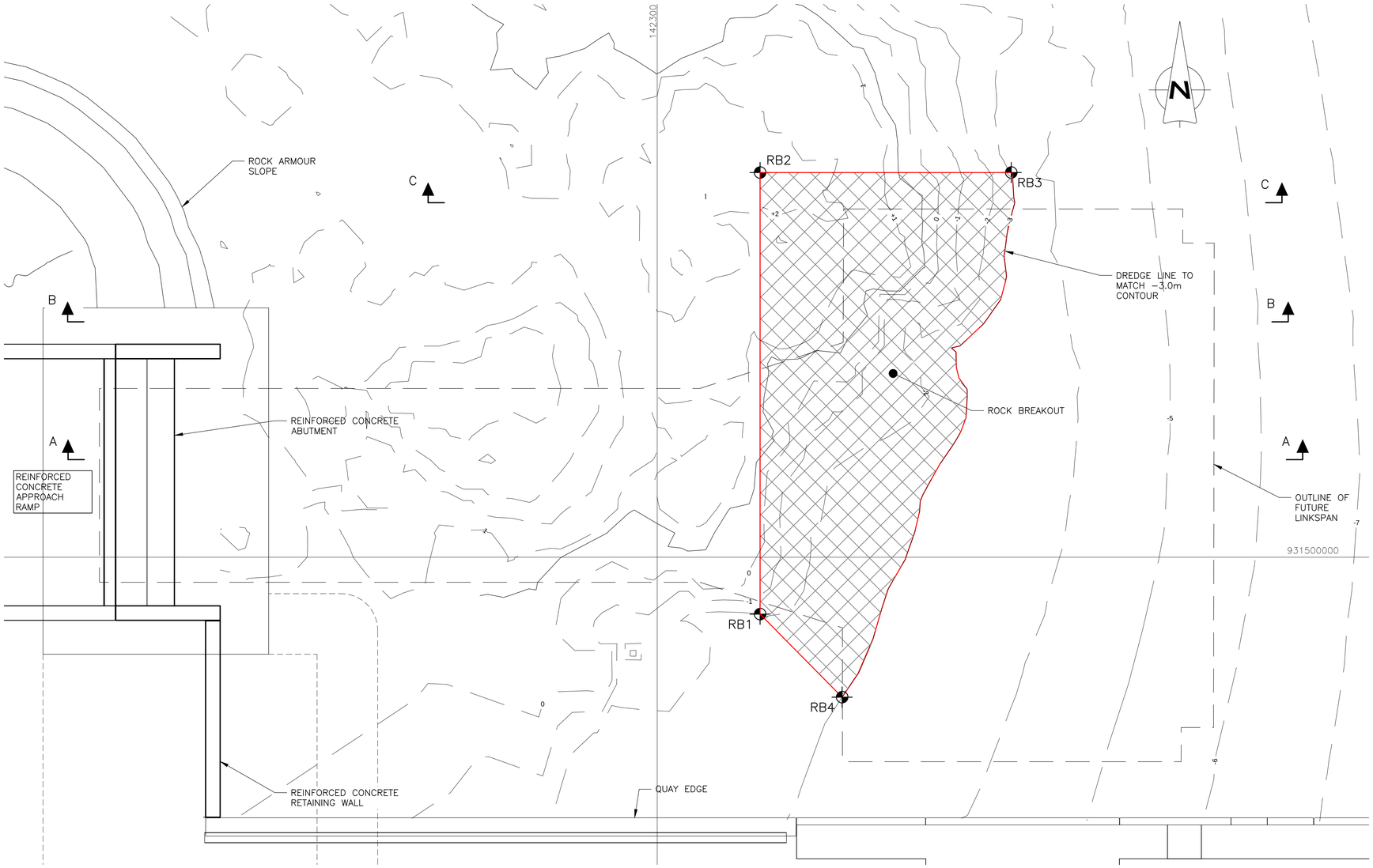
Stornoway Port

DEEP WATER TERMINAL PROJECT

REQUEST FOR NON MATERIAL VARIATION TO MARINE CONSTRUCTION LICENCE

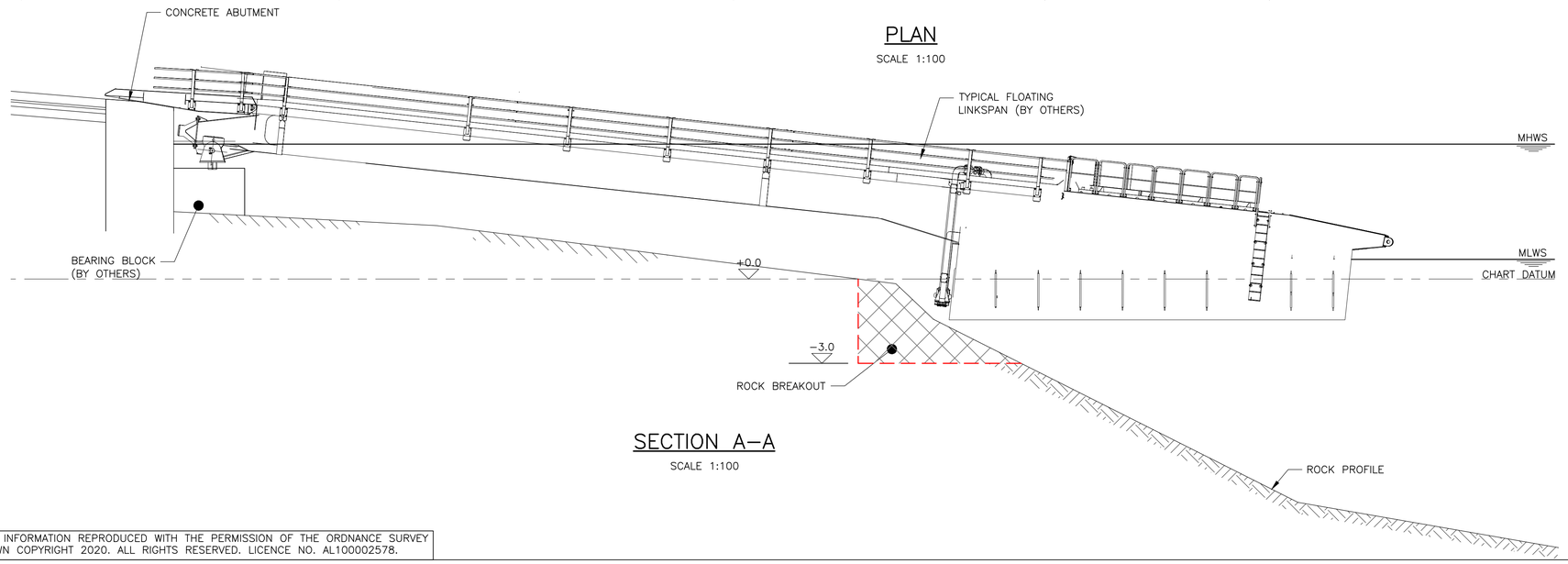
APPENDIX 3

PLAN AND SECTIONS THROUGH ROCK PROPOSED FOR REMOVAL



PLAN

SCALE 1:100



SECTION A–A

SCALE 1:100

ROCK BREAKOUT PLANE SETTING–OUT		
SOP	EASTING (m)	NORTHING (m)
RB1	142304.244	931497.650
RB2	142304.244	931515.884
RB3	142314.608	931515.884
RB4	142307.630	931494.225

GENERAL NOTES

1. ALL LEVELS ARE IN METRES AND RELATE TO CHART DATUM.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. TIDE LEVELS ARE AS FOLLOWS

HAT	+5.5mCD
MHWS	+4.8mCD
MLWS	+0.7mCD
LAT	0mCD

4. CHART DATUM IS 2.71m BELOW ORDNANCE DATUM.
5. FOR SECTION B–B & C–C REFER TO DRAWING SDWP–WS2139–XX–00–DR–C–9088.

REV	DATE	DETAILS	DRAWN	CHK'D	APP'D

AMENDMENTS

CLIENT

STORNOWAY PORT AUTHORITY

PROJECT

STORNOWAY DEEP WATER PORT

Wallace Stone
Consulting Civil Engineers

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DRAWING TITLE

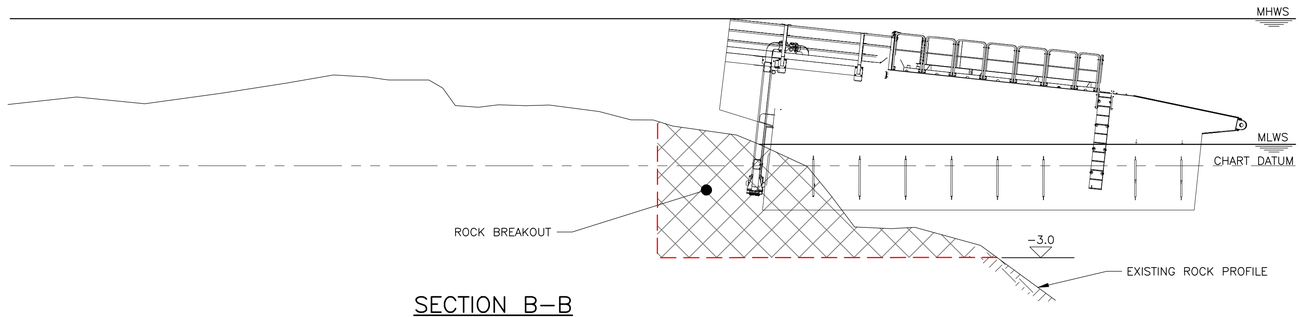
LINKSPAN
ROCK BREAKOUT
GENERAL ARRANGEMENT

DRAWN	CHECKED	APPROVED
[Red	[Red	[Red
DATE	DATE	DATE
JUL 24	JUL 24	JUL 24

SCALE (A1)	STAGE	REV
AS SHOWN	PRELIMINARY	P01

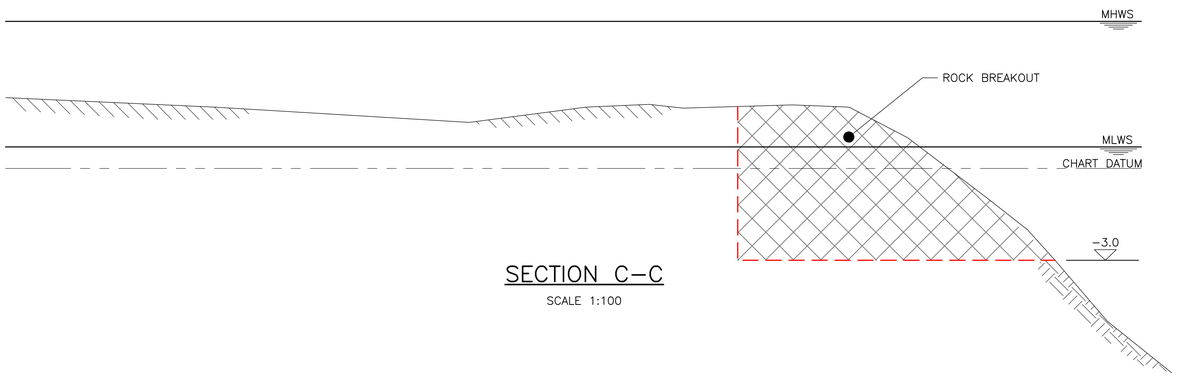
DRAWING No.

SDWP–WS2139–XX–00–DR–C–9087



SECTION B–B

SCALE 1:100



SECTION C–C

SCALE 1:100

GENERAL NOTES

1. ALL LEVELS ARE IN METRES AND RELATE TO CHART DATUM.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. TIDE LEVELS ARE AS FOLLOWS

HAT	+5.5mCD
MHWS	+4.8mCD
MLWS	+0.7mCD
LAT	0mCD

4. CHART DATUM IS 2.71m BELOW ORDNANCE DATUM.
5. FOR SECTION LOCATION AND PLAN REFER TO DRAWING SDWP–WS2139–XX–00–DR–C–9087.

REV	DATE	DETAILS	DRAWN	CHK'D	APP'D

AMENDMENTS

CLIENT

STORNOWAY PORT AUTHORITY

PROJECT

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DRAWING TITLE

PROPOSED LINKSPAN
ROCK BREAKOUT
SECTION SHT 2

DRAWN	CHECKED	APPROVED
[Redacted]	[Redacted]	[Redacted]
DATE JUL 24	DATE JUL 24	DATE JUL 24

SCALE (A1)	STAGE	REV
AS SHOWN	PRELIMINARY	P01

DRAWING No.

SDWP–WS2139–XX–00–DR–C–9088

Stornoway Port

DEEP WATER TERMINAL PROJECT

REQUEST FOR NON MATERIAL VARIATION TO MARINE CONSTRUCTION LICENCE

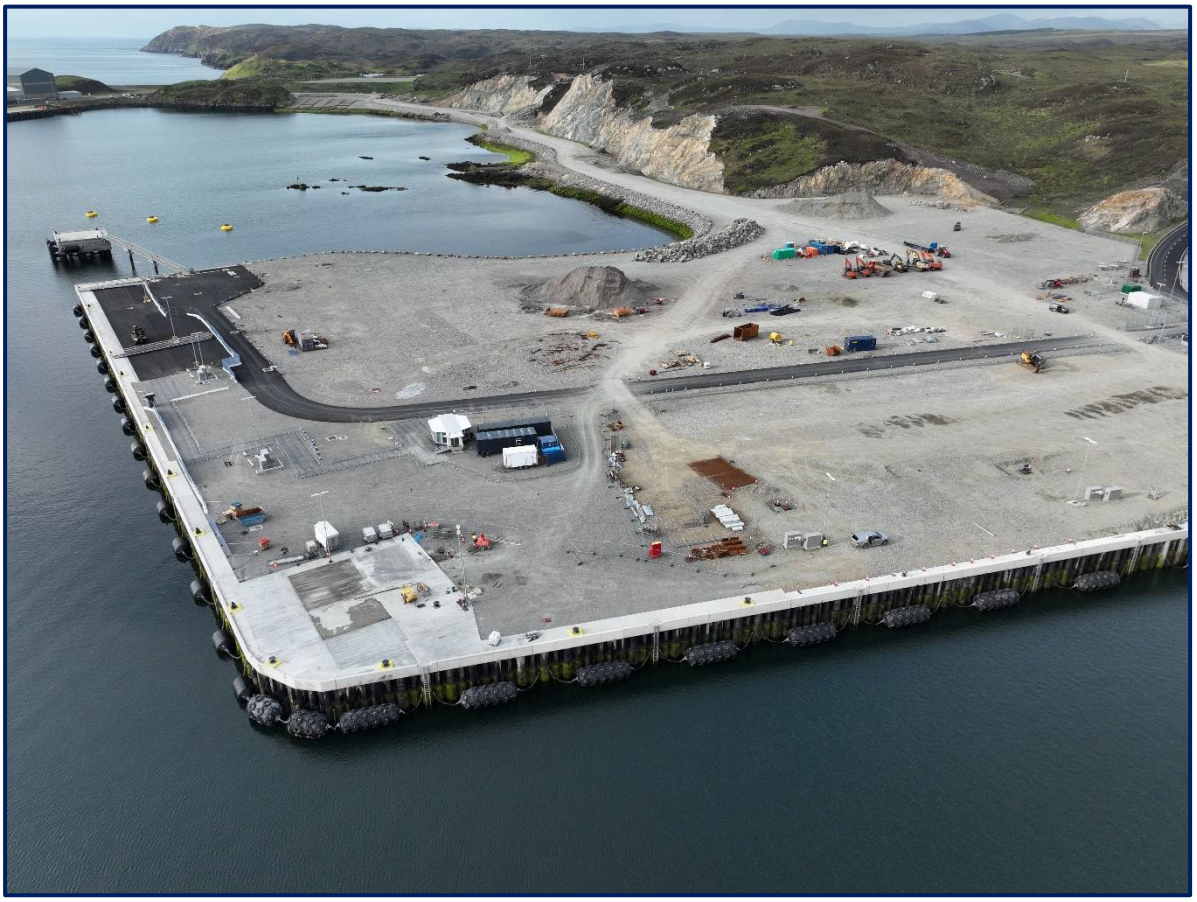
APPENDIX 4

WALLACE STONE LLP REPORT ON ROCK PROPOSED FOR REMOVAL

STORNOWAY PORT AUTHORITY

STORNOWAY DEEP WATER PORT

REPORT ON LINKSPAN ROCK REMOVAL



Wallace Stone LLP
Glasgow

16th August 2024

Project No: 2139

Introduction

This report outlines the proposed rock removal works at the west end of the linkspan quay at the Stornoway Deep Water Terminal. These works are required to allow the planned installation of a floating linkspan.

Background

After discussions with floating linkspan suppliers, it was identified that the buoyancy tank of the floating linkspan (Figure 1) would clash with current bed levels at the west end of the linkspan quay.

(a) Floating linkspan

Figure 1 - Floating Linkspan Diagram

In order to accommodate the buoyancy tank, the bed level at the buoyancy tank location requires to be at least -3.00mCD. A small area of rock (approximately 157m^2 in area) is above this level. This rock requires to be removed to facilitate the installation of a floating linkspan.

Location

The location of the rock to be removed is to the west end of the linkspan quay at the Stornoway Deep Water Terminal site, grid reference: NB 42290 31501.

The drawings in Appendix 3 (SDWP-WS2139-XX-00-DR-C-9087 P01 and SDWP-WS2139-XX-00-DR-C-9088 P0) provide a detailed plan and sections of the rock removal area.

Material Description

The rock to be removed is Gneiss and forms part of the skerries off the peninsula (highlighted in Figure 2). Parts of these skerries lying above MHWS were removed during the Stornoway Deep Water Terminal works.

Gneiss rock is a low-porosity stone, due to its tightly interlocking mineral structure. As this rock forms part of a skerry, it will have experienced weathering due to wave action. Therefore, it will be easily removed as described in the Proposed Works section below.

A dive survey was carried out in August 2024 to check for the presence of Priority Marine Features (PMF) on the seabed. No PMF were found. The survey identified that a small amount of fine sediment is present above the rock to be removed. The estimated quantity of this material is 40m^3.

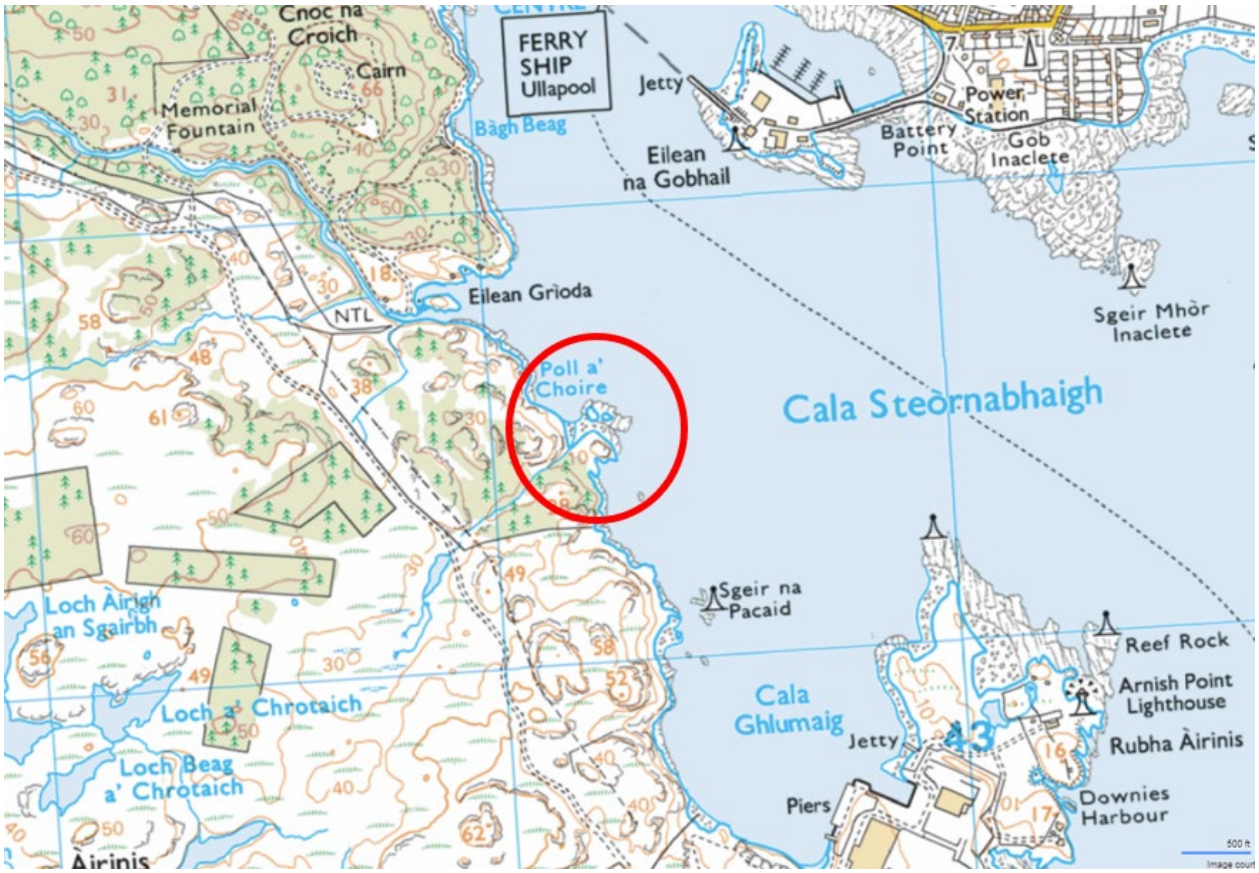


Figure 2 – Rock Peninsula at the Stornoway Deep Water Port site

Quantities

The quantity of rock required to be removed has been calculated as 200m^3. Allowing 25% for overbreak achieves a total quantity for removal of 250m^3. However, the exact quantity of rock to be removed will be determined by the detailed design of the linkspan float. Therefore, the proposed quantity for the purpose of the application for variation of the construction licence is 300m^3.

Proposed Works

It is proposed to remove this rock by splitting it with a hydraulic breaker then removing the material with an excavator mounted on a temporary bund of crushed rock comprised of material from the Stornoway Deep Water Terminal works. The estimated duration of this work is one to two weeks.

Prior to use of the hydraulic breaker, the fine sediment will be removed by excavator bucket. During this process, the mitigation measures set out in the CEMD will be implemented to avoid negative impacts from sediment transport.

This material will be taken to the Deep Water Terminal platform, where it will be left to dry out. Once dry, the fine material will be used beneficially for levelling the surface on the platform. The rock removal area will be checked by probing from a small boat at low tide to ensure that the fine material has been removed as far as possible.

The underwater noise generated by the hydraulic breaker will be similar to a cutter suction dredging operation, which was assessed as part of the EIA process and found to have a non-significant minor effect.

The impact of the proposed rock removal works on sediment transport will be minimal, as the material being recovered is solely comprised of intact rock. The hydraulic breaker will work locally on the intact rock to weaken it into blocks. Once sufficiently weakened, these blocks can then be recovered to the temporary bund via the excavator bucket.

Conclusion

To conclude, these rock removal works are a straightforward activity, with minimal to no risk of sediment transport or significant impacts from underwater noise.

Stornoway Port

DEEP WATER TERMINAL PROJECT

REQUEST FOR NON MATERIAL VARIATION TO MARINE CONSTRUCTION LICENCE

APPENDIX 5

LOCATION OF TEMPORARY ACCESS TRACK FOR REMOVAL OF ROCK

(APPROX. 200 m³)

AREA FOR EXCAVATION TO -2m.

ACCESS TRACK

+4.5m

LONG REACH PLATFORM

+4.5m

-2m

-5m

SCALE 1:200

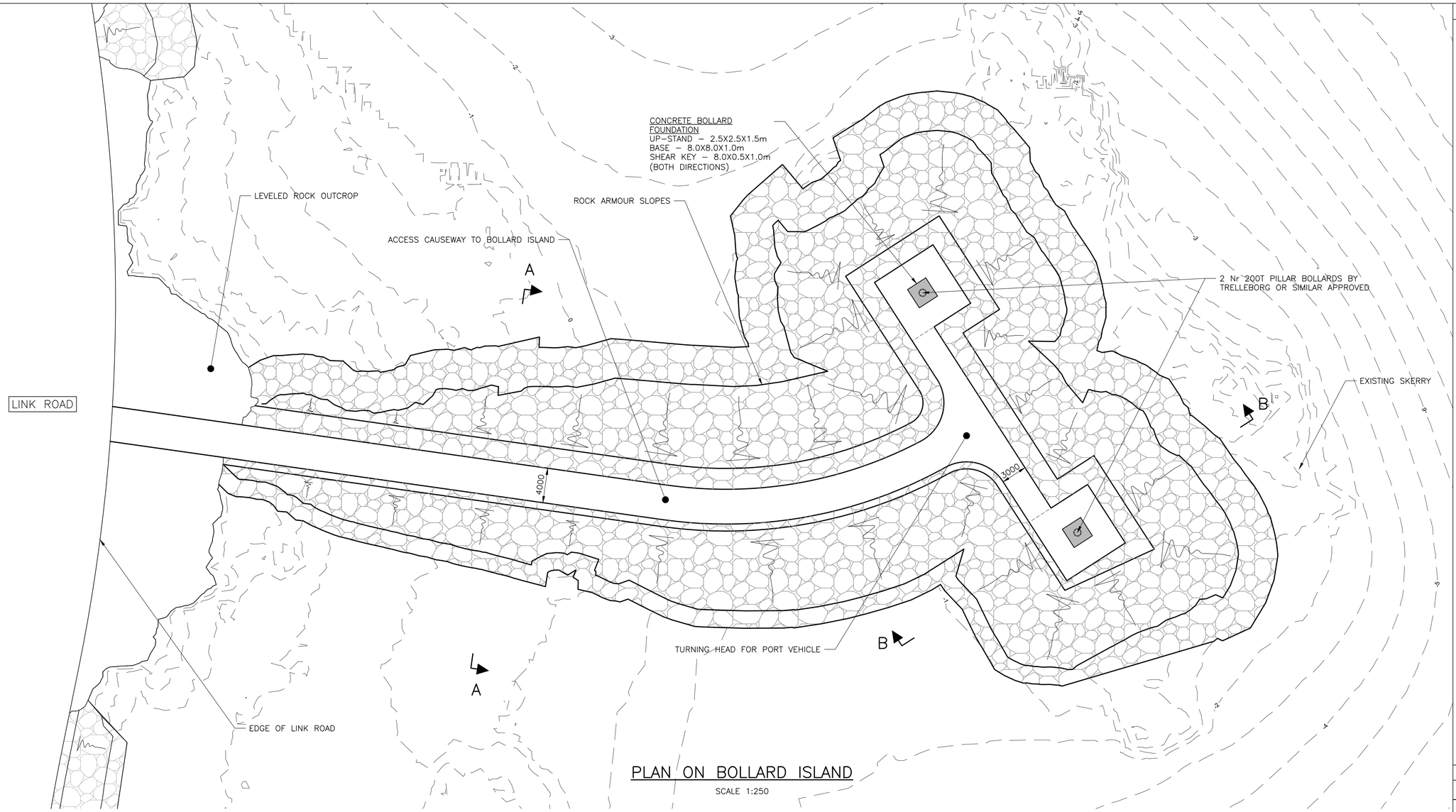
Stornoway Port

DEEP WATER TERMINAL PROJECT

REQUEST FOR NON MATERIAL VARIATION TO MARINE CONSTRUCTION LICENCE

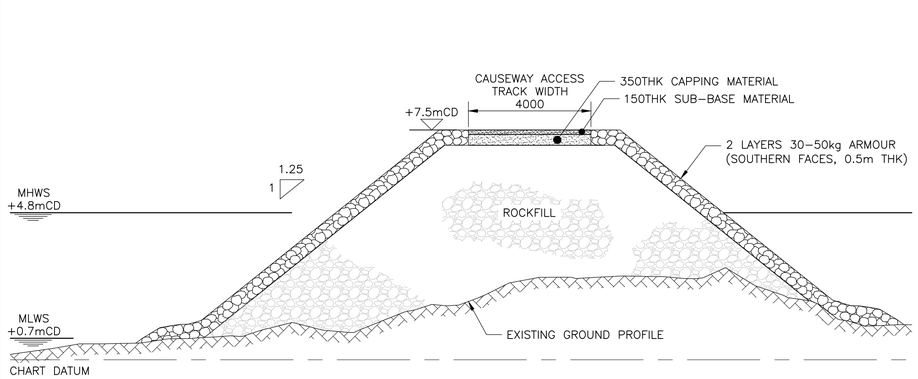
APPENDIX 6

PLAN OF CONSENTED BOLLARD ISLAND (OMITTED FROM PROJECT)



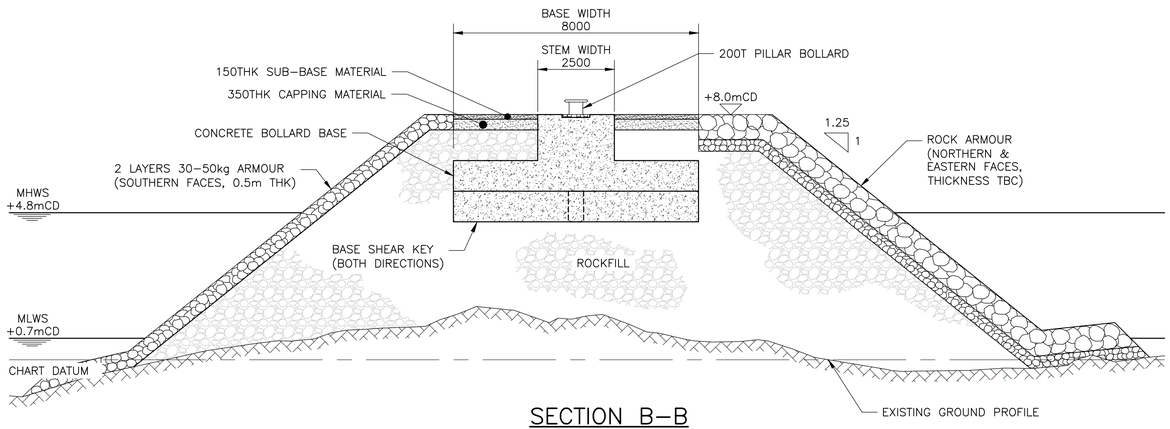
PLAN ON BOLLARD ISLAND

SCALE 1:250



SECTION A–A

SCALE 1:100



SECTION B–B

SCALE 1:100

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES AND RELATE TO CHART DATUM.
3. CHART DATUM IS 2.71m BELOW ORDNANCE DATUM.
4. TIDE LEVELS:

H.A.T	=	+5.5mCD	(+2.79mOD)
M.H.W.S	=	+4.8mCD	(+2.09mOD)
M.L.W.S	=	+0.7mCD	(–2.01mOD)
L.A.T	=	0.0mCD	(–2.71mOD)

REV	DATE	DETAILS	DRAWN	CHK'D	APP'D

AMENDMENTS

CLIENT

STORNOWAY PORT AUTHORITY

PROJECT

STORNOWAY DEEP WATER PORT

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DRAWING TITLE

BOLLARD ISLAND
GENERAL ARRANGEMENT

DRAWN	CHECKED	APPROVED
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DATE: MAY 20	DATE: MAY 20	DATE: MAY 20

SCALE (A1)	STAGE	REV
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DRAWING No.

SDWP–WS2139–XX–00–DR–C–9028

Stornoway Port

DEEP WATER TERMINAL PROJECT

REQUEST FOR NON MATERIAL VARIATION TO MARINE CONSTRUCTION LICENCE

APPENDIX 7

MARKED UP SCHEDULE OF MITIGATION FROM DWT CONSTRUCTION ENVIRONMENTAL MANAGEMENT DOCUMENT

Text highlighted yellow Items relevant to propose floating linkspan works

Table 18.1: Schedule of Mitigation – Construction Mitigation

No.	Topic	Aspect	Mitigation/Enhancement	Source	CEMD Section Reference
C.01	Landscape and Visual	Visual impacts	Detailed design, and construction planning will ensure that the design mitigation of minimising the rock extraction to that required for the construction only.	EIAR Chapter 5 Section 5.7.1 PPiP 19/00273	n/a
C.02	Landscape and Visual	Visual impacts	In siting buildings on the levelled/reclaimed platform, ensure their exact location benefits from the best possible screening provided by surrounding landform.	EIAR Chapter 5 Section 5.7.2	n/a
C.03	Landscape and Visual	Visual impacts	The buildings should be simple in appearance with façades coloured to reflect the backdrop of rock and moorland.	EIAR Chapter 5 Section 5.7.2	n/a
C.04	Landscape and Visual	Visual impacts	Where logistically feasible, locate any built development, above ground infrastructure and storage away from the water's edge	EIAR Chapter 5 Section 5.7.2	n/a
C.05	Marine Mammals	Marine Mammals	Marine Mammal and Basking Shark Protection Plan to be implemented	EIAR Chapter 7 Section 7.6 EIAR Chapter 8 Section 8.6	16.2
C.06	Marine Mammals Fish Ecology (specifically Basking Shark)	Marine Mammals Fish Ecology (specifically Basking Shark) Piling	The impact piling marine mammal mitigation will provide the following measures: • A 500m mitigation zone will be established around the piling rig for cetaceans and basking shark, whilst a 100m mitigation zone will be applied to seals and otters; • Trained marine mammal observers (MMO) will conduct a 20min pre-watch prior to the commencement of piling operations;	EIAR Chapter 7 Section 7.6.1 EIAR Chapter 8 Section 8.6 Marine Construction	16.2.4

Text highlighted yellow Items relevant to propose floating linkspan works

No.	Topic	Aspect	Mitigation/Enhancement	Source	CEMD Section Reference
			○ If the 500m mitigation zone for cetaceans and basking shark and the 100m mitigation zone for seals and otters remains clear during the watch, permission will be given to commence piling; but ○ If a marine mammal is sighted within the mitigation zone(s), piling will be delayed until the zone has been clear of marine mammals for at least 10min. ○ A 30minute soft start-up for 123cm and 80cm diameter king piles is required to protect HF hearing receptor groups; and ○ A soft start-up is not required for the piling of the heavy load area 30cm diameter piles. • If conditions are unsuitable for visual observations (darkness, fog reducing visibility to <500m, or sea states >Beaufort 4); passive acoustic monitoring (PAM) will be utilised by a trained PAM operator to monitor the mitigation zone; ○ A PAM watch of the mitigation zone will have a minimum duration of 20min; • Once piling has commenced there will be no requirement to stop works if a marine mammal enters the mitigation zone, as long as piling has been continuous, with no breaks exceeding 10min; • If a break in piling operations exceeds 10min the following conditions will apply: ○ During a break in piling operations, the noise generator will be utilised to produce sound at lower pressures to deter marine mammals away from the construction area and maintain a soft start procedure. Should the noise generator fail to be utilised for whatever reason, an	Licence (MS-00008749)	

Text highlighted yellow Items relevant to propose floating linkspan works

No.	Topic	Aspect	Mitigation/Enhancement	Source	CEMD Section Reference
			MMO/PAM operator will be on watch during the break. The MMO/PAM operator will remain on watch during the break with or without the noise generator. o If an MMO/PAM operator has been on watch during the break, with or without the utilisation of the noise generator, if the mitigation zone remains clear of marine mammals, piling can recommence immediately; o If an MMO/PAM operator has been on watch during the break, with or without the noise generator running, and a marine mammal is observed within the mitigation, piling will not recommence until the zone has been clear of marine mammals for at least 10min; and o If no marine mammal observations have been conducted during a break exceeding 10min and without the noise generator running, a 20min pre-watch will be conducted before piling can recommence, as detailed above. • All MMO/PAM operations will be recorded using the JNCC marine mammal reporting forms template and submitted to Marine Scotland once the works are complete.		
C.07	Marine Mammals Fish Ecology (specifically Basking Shark)	Spoil Disposal Marine Mammals Fish Ecology (specifically Basking Shark)	The dredged spoil disposal marine mammal and basking shark mitigation will provide the following measures: • A 200m mitigation zone will be established around the disposal vessel during disposal for marine mammals and basking shark. • A mitigation zone is placed around the vessel as opposed to the disposal site as the vessel will be in transit during disposal;	EIAR Chapter 7 Section 7.6.2 EIAR Chapter 8 Section 8.6	16.2.4

Text highlighted yellow Items relevant to propose floating linkspan works

No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference

			• Trained marine mammal observers (MMO) will conduct a 20min pre-watch prior to the commencement of spoil disposal, either on board the disposal vessel or from land;
			  ○ If the 200m mitigation zone for marine mammals and basking shark is clear, then MMO will give permission to proceed.; and
			  ○ If a marine mammal or basking shark is sighted within the mitigation zone, disposal will be delayed until the zone has been clear of marine mammals for at least 5min.
			• If conditions are unsuitable for visual observations (darkness, fog reducing visibility to <300 on-board the vessel and <700m from the observation point on land, or sea states >Beaufort 4); passive acoustic monitoring (PAM) will be utilised by a trained PAM operator to monitor the mitigation zone;
			  ○ A PAM watch of the mitigation zone will have a minimum duration of 20min;
			  ○ If a marine mammal is detected within the mitigation zone during a PAM watch, disposal will be delayed until the zone has been clear of marine mammals for at least 10min.
			• All MMO/PAM operations will be recorded using the JNCC marine mammal reporting forms template and submitted to Marine Scotland once the works are complete.			

C.08	Marine Mammals	Marine Mammals	All vessels to comply with the Scottish Marine Wildlife Watching Code.	Scottish Marine Wildlife	EIAR Chapter 7 Section 7.6	16.2.4 16A

Text highlighted yellow Items relevant to propose floating linkspan works

No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
				Watching Code (SNH, 2017)		10.10
C.09	Benthic Ecology	Benthic Species on Sections of Wreck for Relocation	Divers will be briefed before the wreck removal to attempt to relocate individual organisms likely to be affected by the wreck section relocation works prior to them commencing.		EIAR Chapter 9 Section 9.6	16.3.1
C.10	Benthic Ecology	Benthic Species in Dredge Area	The dredging will be carried out utilising positioning technology to ensure only the required dredge area is dredged and further impacts on benthic species are minimised.		EIAR Chapter 9 Section 9.6	16.3.1
C.11	Terrestrial Ecology	Permanent Loss of Habitat	Minimise the area of the habitats to be removed. Rock armour revetments will be installed replacing coastal habitats used by otter. Replacement tree planting to minimise loss of woodland. (Replacement tree planting to be completed post construction, hence not included in CEMD).		EIAR Chapter 10 Section 10.6	S11A (section 5) 16.4.4
C.12	Terrestrial Ecology	Habitat Disturbance	Turves removed in soil stripping will be used to seal exposed peat where practicable to prevent heathland and/or shrub habitats from drying out. Mitigation is incorporated into the construction design to help retain water in the remaining flush and spring habitats.		EIAR Chapter 10 Section 10.6	S11A (section 7) S16.8.4

Text highlighted yellow Items relevant to propose floating linkspan works

No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
C.13	Terrestrial Ecology	Non-native Invasive Species	Pre-construction surveys will be undertaken to identify any non-native invasive species in the onshore construction area. Exclusion zones around rhododendron found in or adjacent to the construction site. Removal of rhododendron if required, following appropriate methodology. All equipment will arrive clean to site.		EIAR Chapter 10 Section 10.6	S11A (section 7) S16.9.2 16.10
C.14	Terrestrial Ecology	Otter	Pre-construction surveys. EPS licence sought if required. Development of Species Protection Plan (SPP). Minimise area and duration of disturbance. Artificial lighting within the site should only be used where required to light works sites and for safety reasons and should be directional towards the required works area. Measures to prevent entrapment.		EIAR Chapter 10 Section 10.6	16.4.4 17.2
C.15	Terrestrial Ecology	Bats	Pre-construction surveys. EPS licence sought if required. Development of Species Protection plans (SPP). Minimise area and duration of disturbance.		EIAR Chapter 10 Section 10.6	16.5.4 17.2

Text highlighted yellow Items relevant to propose floating linkspan works

No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
			Artificial lighting within the site should only be used where required to light works sites and for safety reasons and should be directional towards the required works area.			
C.16	Terrestrial Ecology	Amphibians and Reptiles	Pre-construction surveys. Development of Species Protection plans (SPP). Seasonal considerations when timing works where practical. Translocation of reptiles to suitable receptor site if required. Minimise area and duration of disturbance. Avoidance of hibernacula outwith active season where practicable. Watching briefs.		EIAR Chapter 10 Section 10.6	16.6.4
C.17	Terrestrial Ecology	Birds	Pre-construction surveys. Ongoing watching brief during breeding bird season. Development of Species Protection plans (SPP). Seasonal considerations when timing works where practical. Exclusion zones around any nests found. Minimise area and duration of disturbance. Artificial lighting within the site should only be used where required to light works sites and for safety reasons and should be directional towards the required works area.		EIAR Chapter 10 Section 10.6	16.7.4
C.18	Terrestrial Ecology	Habitat Disturbance or Loss of Ground	Installation of impermeable membrane to protect remaining habitat and encourage formation of new habitat.		EIAR Chapter 10 Section 10.6	16.8.4

Text highlighted yellow Items relevant to propose floating linkspan works

No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
		Water Dependent Terrestrial Ecosystems	Installation of SuDS.			
C.19	Underwater Noise	Piling	The use of vibro hammers to drive the piles to refusal prior to using impact piling techniques.		EIAR Chapter 11 Chapter 7 Section 7.5	16.2.4
C.20	Noise and Vibration (In-Air)	Control of In-Air Noise Impacts at all times of day	Applicable best practice techniques as identified in Section 8 of BS5228: • Ensure regular maintenance of all equipment used on site, including maintenance related to noise emissions; • Ensure that vehicles and vessels are loaded carefully to ensure minimal drop heights so as to minimise noise during this operation; and • Ensure that machines are shut down between work periods or throttled down to a minimum.		EIAR Chapter 12 Section 12.5.1	14.2
C.21	Noise and Vibration (In-Air)	Noise Impacts	A protocol for handling any noise related complaints will be contained within a Construction Environmental Management Document (CEMD), this will be applicable for all noise complaints but of particular use in addressing any concerns associated with dredging.		EIAR Chapter 12 Section 12.5.1	14.2
C.22	Noise and Vibration (In-Air)	Noise Impacts associated with Dredging	Dredging of areas to the north of the dredge area will be carried out during the day whenever practicable.		EIAR Chapter 12 Section 12.5.1	10.10 14.2
C.23	Noise and Vibration (In-Air)	Noise Impacts associated with Dredging	Prior to night-time dredging in the north of the dredge area (if required), the NSR likely to be affected will be informed.		EIAR Chapter 12 Section 12.5.1	14.2

Text highlighted yellow Items relevant to propose floating linkspan works

No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
C.24	Noise and Vibration (In-Air)	Noise Impacts associated with Dredging	Noise monitoring during dredge activities will be carried out to understand the actual noise levels arising at receptors.		EIAR Chapter 12 Section 12.5.1	14.2
C.25	Noise and Vibration (In-Air)	Noise Impacts associated with Blasting	Restriction of blasting as far as practicable to regular daytime periods, not on Sundays and away from public holidays.		EIAR Chapter 12 Section 12.5.1	14.2
C.26	Noise and Vibration (In-Air)	Noise Impacts associated with Blasting	Good community relations; informing nearby noise/vibration sensitive receptors ahead of periods of blasting		EIAR Chapter 12 Section 12.5.1	14.2
C.27	Noise and Vibration (In-Air)	Noise Impacts associated with Blasting	The choice of appropriate drilling rigs.		EIAR Chapter 12 Section 12.5.1	14.2
C.28	Noise and Vibration (In-Air)	Noise Impacts associated with Blasting	Designing blasts to maximize efficiency and reduce the transmission of noise/vibration.		EIAR Chapter 12 Section 12.5.1	14.2
C.29	Cultural Heritage and Archaeology	Archaeology – '*Alabama*' Wreck	A Method Statement detailing the proposed scope and methodology of the 'After' dismantling survey with regard to the archaeological elements of the wreck site will be developed. The survey and subsequent recording would be undertaken in accordance with the 36 Rules governing the management of underwater cultural heritage assets contained in the Manual for Activities directed at Underwater Cultural Heritage: Guidelines to the Annex of the UNESCO 2001 Convention (MAUCH) (UNESCO, 2013).	Policy GEN 6, paragraph 4.24 and 4.25 of the SNMP (Scottish Government, 2015). MAUCH (UNESCO, 2013)	EIAR Chapter 13 Section 13.6.1.1	9

Text highlighted yellow Items relevant to propose floating linkspan works

No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
			The results of the surveys and further research into the history of the '*Alabama*' will be presented in a report, in accordance with paragraph 4.24 of the Scottish National Marine Plan SNMP (Scottish Government, 2015), providing detailed information on the significance of the wreck, as well as recording and presenting evidence of that significance in a publicly accessible report.			
C.30	Cultural Heritage and Archaeology	Archaeology	In accordance with Conditions 14 and 15 of the Planning Permission in Principle (PPiP, 19/00273) an archaeological watching brief, preceded by a Method Statement to be approved by the CnES Archaeologist, shall be undertaken during ground-breaking construction works. The CnES Archaeologist shall also be granted access to inspect any construction works and to monitor the watching brief.		EIAR Chapter 13 Section 13.6.1.2 PPiP 19/00273	9
C.31	Water Environment, Soils and Coastal Processes	Increased sediment loading	The start of each activity that could give rise to increased sediment loading in the water column will be observed, to ensure that any plumes arising are localised and disperse quickly as they occur.		EIAR Chapter 14 Section 14.6.1	10.10 & 13A: Pollution Prevention Plan
C.32	Water Environment, Soils and Coastal Processes	Increased sediment loading.	Where increases in sediments are not as predicted, the construction technique will be reviewed to identify areas for improvement to prevent reoccurrence.		EIAR Chapter 14 Section 14.6.1.1	10.9.2 & 13A: Pollution Prevention Plan
C.33	Water Environment, Soils and	Increased sediment loading.	Implementation of Sustainable urban Drainage System (SuDS) as per the design.	The SuDS Manual (CIRIA, 2015)	EIAR Chapter 14 Section 14.6.1.1	13A: Pollution Prevention Plan

Text highlighted yellow Items relevant to propose floating linkspan works

No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
	Coastal Processes		Temporary surface water management requirements will be identified in the RAMS.		Simple CAR Licence (CAR/S/SEPA2021-883)	13.3.1 and 13A: Pollution Prevention Plan
C.34	Water Environment, Soils and Coastal Processes	Potential loss of containment: fuel on site.	Fuel bowsers on site will be under strict management controls, in compliance with the requirements of the relevant GBR's.	The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended).	EIAR Chapter 14 Section 14.6.1.2	10.3
C.35	Water Environment, Soils and Coastal Processes	Potential loss of containment: fuel on site.	Refuelling will be carried out in designated areas, by trained operatives following site refuelling procedures. The refuelling procedure will take into account best practice laid out in GPP2 and PPG6.	PPG6: Work at Construction and Demolition Sites (Environmental Agency, NIEA, & SEPA, 2012) GPP2: Above Ground Oil Storage Tanks (SEPA,	EIAR Chapter 14 Section 14.6.1.2	10.3

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No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
				NIEA, & Wales, 2017).		
C.36	Water Environment, Soils and Coastal Processes	Potential loss of containment: oils and chemicals on site.	Where practicable, bio-degradable hydraulic fluids will be utilised in machinery during construction.		EIAR Chapter 14 Section 14.6.1.2	7A & 10.3
C.37	Water Environment, Soils and Coastal Processes	Potential loss of containment: oils and chemicals on site.	All oils and chemicals will be subject to Control of Substances Hazardous to Health (COSHH) assessments under the COSHH Regulations 2002.		EIAR Chapter 14 Section 14.6.1.2	7A & 10.4
C.38	Water Environment, Soils and Coastal Processes	Potential loss of containment: oils and chemicals on site.	All COSHH assessments will include a section on the environment to highlight any precaution or mitigation requirements.		EIAR Chapter 14 Section 14.6.1.2	7A & 10.4
C.39	Water Environment, Soils and Coastal Processes	Potential loss of containment: oils and chemicals on site.	Appropriately bunded oil and chemical storage cabinets will be provided on site. These will be kept locked, with the key under management control to ensure appropriate use and accountability.	PPG6: Work at Construction and Demolition Sites (Environment	EIAR Chapter 14 Section 14.6.1.2	7A, 10.3 & 10.4

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No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
				al Agency et al., 2012)		
C.40	Water Environment, Soils and Coastal Processes	Potential loss of containment: oils and chemicals on site.	Appropriate spill plans aligned to the pollution control hierarchy and spill kits will be in place, construction operatives will be trained in the plans and in the use of spill kits.	GPP21: Pollution Incident Response Plans (NIEA, 2017)	EIAR Chapter 14 Section 14.6.1.2	7A
C.41	Water Environment, Soils and Coastal Processes	Cement washings.	Cement washings will be carried out in a dedicated area.	PPG6: Work at Construction and Demolition Sites (Environment al Agency et al., 2012)	EIAR Chapter 14 Section 14.6.1.2	8.3 & 13A: Pollution Prevention Plan
C.42	Water Environment, Soils and Coastal Processes	Cement washings.	Washing arisings will be collected for onsite treatment. This will include settlement and, if required, pH correction. If not suitable for reuse liquids will be tankered off site for appropriate disposal. The solids will be disposed of as solid waste.	PG6: Work at Construction and Demolition Sites (Environment al Agency et al., 2012)	EIAR Chapter 14 Section 14.6.1.2	8.3 & 13A: Pollution Prevention Plan

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No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
C.43	Water Environment, Soils and Coastal Processes	Introduction of non-native marine species.	Contractors will be required to ensure all plant and equipment brought to site is properly cleaned prior to arrival.		EIAR Chapter 14 Section 14.6.1.3	16.9.2
C.44	Water Environment, Soils and Coastal Processes	Introduction of non-native marine species.	All equipment will be inspected prior to mobilisation on site; any equipment carrying excessive sediment deposits will be returned to the supplier.		EIAR Chapter 14 Section 14.6.1.3	16.9.2
C.45	Water Environment, Soils and Coastal Processes	Litter	Prior to construction works on site commencing, a litter sweep will be conducted to prevent the escape of existing litter on site into the marine environment.		EIAR Chapter 14 Section 14.6.1.4	8.4
C.46	Water Environment, Soils and Coastal Processes	Litter	All personnel working on the project will undertake site induction; this will include a section on waste management and the use of the waste receptacles provided.		EIAR Chapter 14 Section 14.6.1.4	8.4
C.47	Water Environment, Soils and Coastal Processes	Litter	Waste receptacles will be covered, and littering will not be tolerated.		EIAR Chapter 14 Section 14.6.1.4	8.4 8.5

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No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
C.48	Water Environment, Soils and Coastal Processes	Litter	Construction staff will be encouraged to collect any litter they see in the construction areas and, if deemed necessary litter sweeps will be carried out.		EIAR Chapter 14 Section 14.6.1.4	8.4
C.49	Water Environment, Soils and Coastal Processes	Litter	The use of single use plastics will be discouraged, reusable water bottles supplied to all personnel and reusable crockery and cutlery will be provided in the welfare facilities.		EIAR Chapter 14 Section 14.6.1.4	8.2.1
C.50	Water Environment, Soils and Coastal Processes	Litter	All generated waste will be segregated to facilitate appropriate recycling.		EIAR Chapter 14 Section 14.6.1.4	8.2.3
C.51	Water Environment, Soils and Coastal Processes	Litter	Staff will be encouraged to collect any litter they see on site, and if deemed necessary litter sweeps will be carried out.		EIAR Chapter 14 Section 14.6.1.4	8.4
C.52	Water Environment, Soils and Coastal Processes	Peat Removal	A Peat Management Plan is to be developed, details of which are to be agreed with Comhairle nan Eilean Siar (CnES) in consultation with Scottish Environment Protection Agency (SEPA).		EIAR Chapter 14 Section 14.6.1.5 Chapter 10 Section 10.6	11 & 11A : Peat Management Plan

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No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
					19/00273, Condition 7(4)	
C.53	Traffic and Transport	Road Safety and Condition	Undertake a Road Condition Survey prior to any commencement of construction works no later than 2 weeks before the anticipated start date in line with Condition 9 of the PPiP from CnES.		EIAR Chapter 15 Section 15.4.1 PPiP 19/00273	15.2
C.54	Traffic and Transport	Road Safety and Navigation	Traffic management plan to monitor the traffic movements associated with the construction of the development in line with Condition 10 of the PPiP from CnES.		EIAR Chapter 15 Section 15.4.1 & 15.4.2 PPiP 19/00273	15.2
C.55	Air Quality	Air Quality - Dust	Dust mitigation plan to be implemented.	Guidance on the assessment of dust from demolition and construction (IAQM, 2014).	EIAR Chapter 16 Section 16.3	10.7 12
C.56	Air Quality	Air Quality - Dust	Appropriate planning to minimise the number of times dust emitting material is moved.		EIAR Chapter 16 Section 16.3	10.8
C.57	Socio-economics	Creation of construction jobs	Encourage local supply chain involvement in the project.		EIAR Chapter 16 Section 16.2	

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No.	Topic	Aspect	Mitigation/Enhancement	Guidance	Source	CEMD Section Reference
C.58	Navigation	Increase in collision risk during construction due to construction/ dredge vessels.	Appropriate Notice to Mariners placed. Compliance with the Port Safety Management System. Good communications with the Harbour Master.		EIAR Chapter 16 Section 16.4	
C.59	Navigation	Additional vessel movements in the harbour area, leading to additional navigational safety issues.	Navigational aids agreed with the Northern Lighthouse Board prior to installation.		EIAR Chapter 16 Section 16.4	
C.60	Population & Human Health	Spread of communicable disease	All government guidance to be followed. Risk assessments to have particular regard for infection control. Working patterns for visiting workforce to take account of relevant guidance.		EIAR Chapter 16 Section 16.5	
C.61	Materials & Waste	Materials	Use of local materials where available.		EIAR Chapter 16 Section 16.6	10.8
C.62	Materials & Waste	Waste	Waste hierarchy to be implemented. All relevant waste legislation to be followed.		EIAR Chapter 16 Section 16.6	8.2