

W045 - Additional Supporting Information

Brief Project Description

The project involves the installation of a nominal 125mm diameter effluent discharge line which will be threaded through an existing 3m diameter culvert. The 3m Culvert was constructed during the building of Hunterston B Power Station for the purpose of carrying cooling water to the sea. The installation of a smaller bore pipe will allow heavy duty cooling water pumps to be switched off; this will reduce the electrical operating burden and will reduce the environmental impact from water abstraction from the Clyde Estuary.



Rig Specification

The Haven Seariser 2, is 29.26m in length, 17.07m wide and has a hull depth of 2.44m. 500m². The Jacking rig has 4 legs each with a diameter of 1.22m. Other rig specifications are detailed in the table overleaf:

Type:	RCP-250 Modular Self Elevating Platform
Classification:	Bureau Veritas Hull Offshore Self-Elevating Unit
Length:	29.26m
Breadth:	17.07m
Depth:	2.44m
Deck Area:	500m ²
Max Leg Length	36m
Leg Diameter:	1.22m
Gross Tonnage:	314GT
Lightship Weight:	450 tonnes
Jacking Speed	16m / hour (Fully Laden)
Jacking Stroke:	1.60m
Max Deck Load / Point Load:	250t / 5t/m ²
Max Free Leg Length:	29.50m
Max Crane Self Weight:	150 <u>tonne</u>

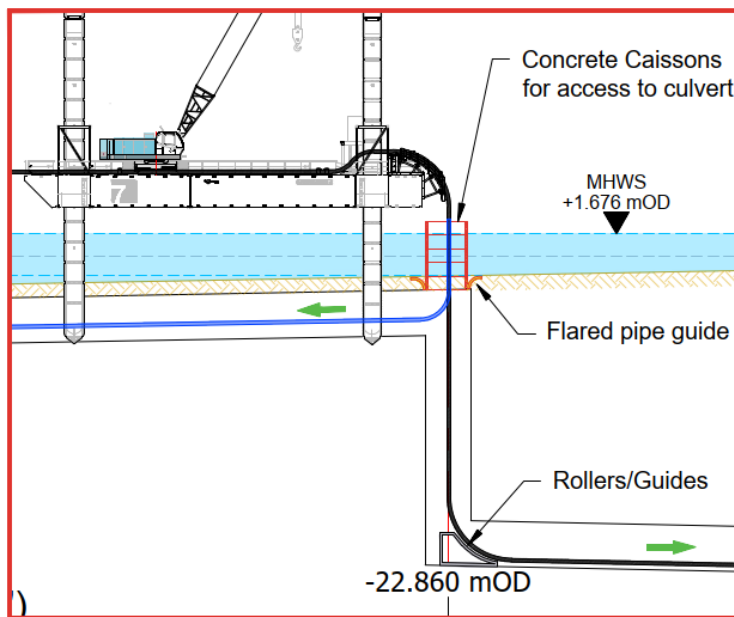
(table taken from R7M-MST-003 Concept Method Statement Hunterston AAEDL Extension)

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Pipework

Total length of pipe will be installed below surface of the water, as the entire length of the culvert is submerged. The total length of the installed pipe will be 1350m. Flexsteel pipe is a double contained HDPE steel reinforced flexible pipe system. It consists of an inner HDPE liner with a tensile layer consisting of contra-wound sets of steel strips applied over the liner at roughly a 55° lay angle. A secondary HDPE outer sheath is extruded over the inner liner and steel strips.

Shaft Chamber



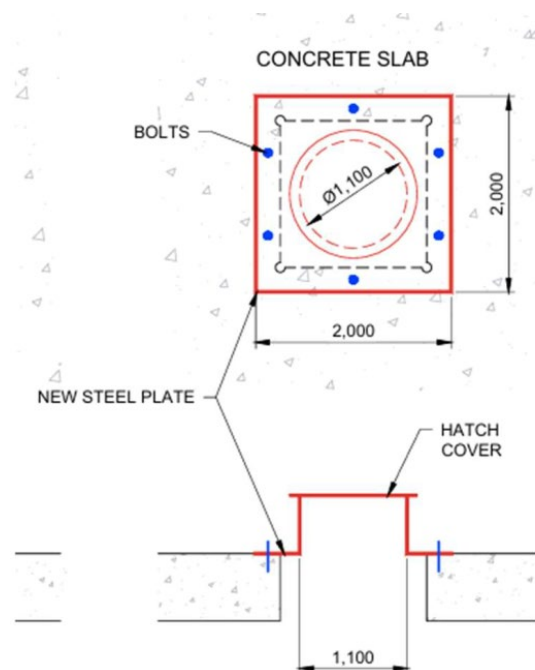
The work area for diamond wire cutting of the access hatch at top of shaft chamber will be cut to be between 1.5 and 2m square contained within the concrete top cover.

Using the crane positioned on the rig (JUB), temporary 4mØ precast concrete rings will be installed from sea bed level (-1.372mOD) up to 1m above MHWS (+1.676mOD) i.e. up to +2.676mOD resulting in temporary cofferdam c4.048m high. The precast concrete rings will be sealed and will provide a semi dry working area to provide safe access to the culvert shaft at bend 3.

(Information taken from document references R7M-525004-SKH-001, R7M Method Statement 2 and R7M Method Statement 4, which can be made available upon request)

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Hatch Cover



To ensure that the main cooling water system can be switched on at short notice, a strengthened steel plate, 2,000mm x 2,000mm will be fabricated which will be bolted down with drilled mechanical fixings at locations around the plate to seal the new 1,500mm x 1,500mm manhole access. This will facilitate switching on the main cooling water pumps at short notice. This plate will be secured by mechanical means using divers.

Guides and Supports

All other guides and supports will be positioned inside the culvert. Details of these are still to be defined however these are likely to be: Steel rollers installed in the 3m pipe to support the 125mm pipe around 90° bend. These will be 5 off, 2m x 1m and weigh approximately 250kg.

(Information taken from document references R7M-525004-SKH-001, R7M Method Statement 2 and R7M Method Statement 4 which can be made available upon request)

Jacking rig barge feet - RCP-250 Self Elevating Platform please refer to R7M-MST-003.

Noise Consideration

Piling and breaking works are not anticipated during the construction phase. It is anticipated that potential noise generating equipment in the range of 10Hz – 10 kHz will be used. This includes cutting wheels and wire cutters that will generate noise above 5kHz. There will be some use of impact drivers and other hand tools. Advice on whether project work activities should be submitted to the Marine Noise Registry was sought from the JNCC Marine Noise Registry Team. Advice received is detailed in Appendix A. Project work activities have not been submitted to the Marine Noise Registry because sounds generated by activities are not considered impulsive/pulsed sound. In addition, activities to be

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undertaken do not match activities described in the JNCC Marine Noise Registry Guidance found at [Marine Noise Registry](#) .

Pre-application Consultation

Under Part 4 of the Marine (Scotland) Act 2010 (M(S)A 2010), an application for a marine licence is submitted. Work activities undertaken as part of the W045 AAEDL project are not prescribed classes of activities requiring pre-application consultation under the Marine Licensing (Pre-application Consultation) (Scotland) Regulations 2013. Please refer to document reference R7M-MST-003 for more information on size and scope of marine activities.

Environmental Impact Assessment (EIA) Directive

This application does not include a new EIA produced for the AAEDL installation project as it is not required under article 4(1) or (2) of the EIA Directive. Whilst the project will be undertaken on HNB, a former nuclear power station undergoing decommissioning, the AAEDL installation project is not described under EIA Directive Annex I 2(b) or any other projects in Annex I or Annex II.

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Appendix A - JNCC Marine Noise Registry Team Advice

Alex Wilson (NRS)

From: JNCC Marine Noise Registry <MNR@jncc.gov.uk>
Sent: 10 April 2026 09:24
To: [Redacted] JNCC Marine Noise Registry
Subject: RE: Request for further guidance on whether our activity should be submitted to the MNR

You don't often get email from mnrc@jncc.gov.uk. [Learn why this is important](#)

CAUTION: External Email

Hi Alex, from your description it sounds as if you would not need to input as it's not considered impulsive/pulsed sound.

Here is a list of activities you should and should not input to the MNR.

Activities which **SHOULD** be uploaded to the MNR:

- **Piling** (including:)
 - Impact (or percussive) pile driving
 - Sheet piling
 - Conductor piling
- Multibeam echosounders <= 12kHz
- Seismic surveys
- Sub-bottom profiler surveys >10Hz and <40kHz
- USBL >10Hz and <40kHz
- Acoustic Deterrent Devices (ADDs) - except fisheries pingers - any frequency
- **Explosives** (including:)
 - Explosive use less than 100m below the mudline
 - UXO clearance (high and low order)
- Military Sonar

Activities which **SHOULD NOT** be uploaded to the MNR:

- Vibropiling
- Multibeam echosounders >12kHz
- USBL or sub-bottom profilers <10Hz or >40kHz
- Fisheries pingers
- Explosive use deeper than 100 metres below mudline
- Drilling
- Single beam echosounders
- Side scan sonars
- Fish finders
- Shot blasting
- Rock breaking

Cheers,

Sónia

From: [Redacted]

Sent: 09 April 2026 11:27

To: JNCC Marine Noise Registry <MNR@jncc.gov.uk>

Subject: Request for further guidance on whether our activity should be submitted to the MNR

You don't often get email from alex.wilson@nrservices.uk. [Learn why this is important](#)

CAUTION: Please remember your Cyber Security training. This email originated from outside the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Good morning,

I am contacting the MNR for further guidance on whether our marine licence activity should be submitted to the MNR.

I have read the guidance on [Marine Noise Registry](#) | and it is not clear if our project's activities should be uploaded to the MNR. Whilst piling and breaking is not anticipated in the construction phase of our project,

Cutting wheels and wire cutters will be used generating noise above 5kHz and there will be some use of impact drivers and other hand tools. Do these activities trigger the requirement for MNR submission?

Many thanks in advance of your help.

Alex Wilson

Licensing & Permitting Officer

AGR Transition & Transfer

[Redacted]



For all our futures



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W045 - Site Locality Plan



Design Feature	Map Coordinates	NGR	
Outfall/Bubble	55.724882940708646, -4.903748267621612	NS 17737 51762	55° 43.49298' - 4° 54.2249
Surge shaft	55.724715273802744, -4.902340860733254	NS 17824 51739	55° 43.48292' - 4° 54.14045'
Land shaft	55.724247, -4.8984871	NS 18051 6	55° 43.455' - 4° 53.909'
Seal Pit Shaft	55.72351977739272, -4.892137974174354	NS 18459 51579	55° 43.41119' - 4° 53.52828

Grid Reference Finder

https://gridreferencefinder.com/#gr=NS1806451677|218064_s_c_s_651677|1,NS1773751762|NS_s_17737_s_51762|1,NS1782451739|NS_s_17824_s_51739|1,NS1845951579|NS_s_18459_s_51579|1

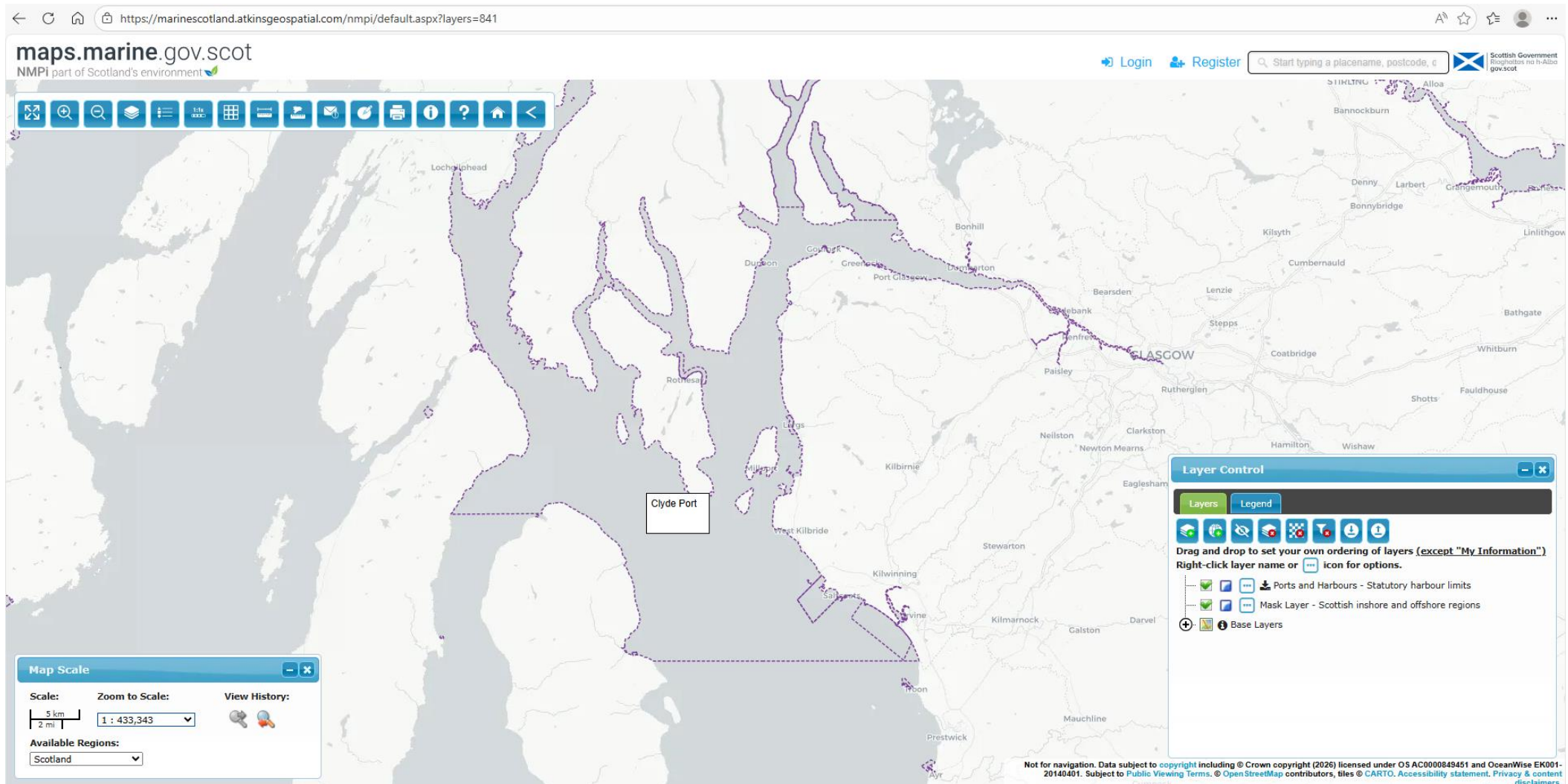
W045 - Site Locality Plan



[Magic Map Application](#)

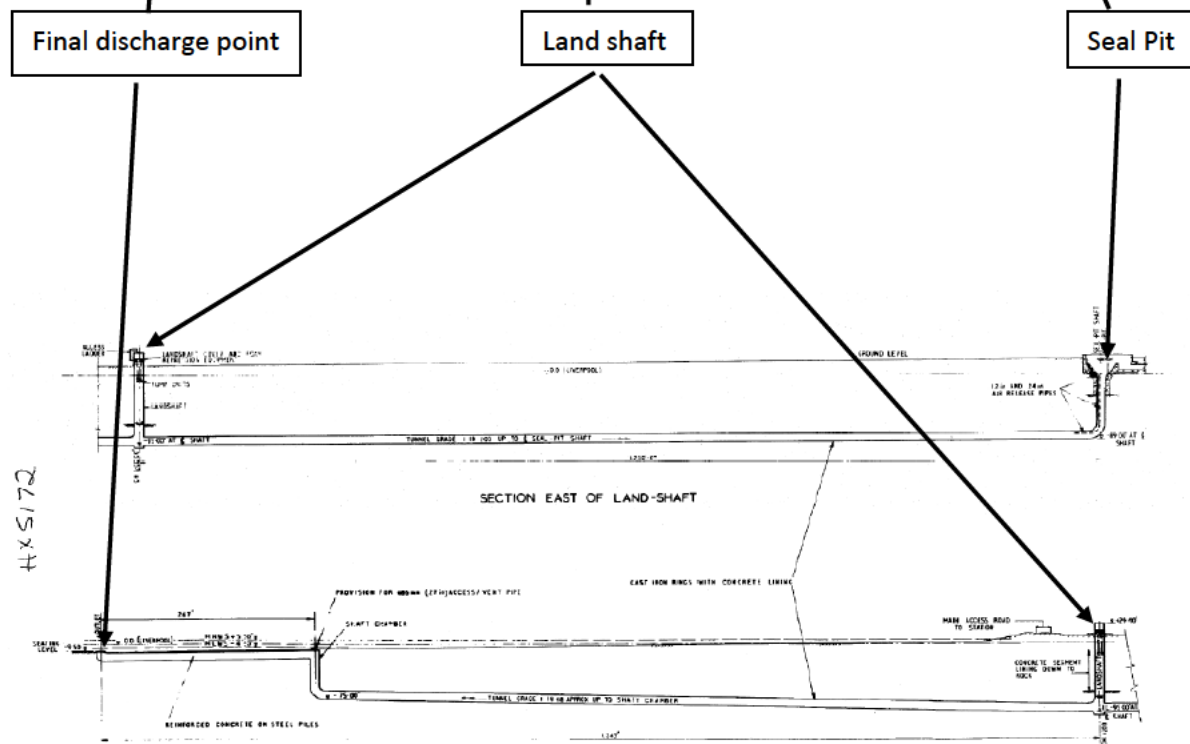
SSSI Site locations

W045 - Statutory Harbour Authority Map



<https://marinescotland.atkinsgeospatial.com/nmpi/default.aspx?layers=841>

W045 - Discharge Pipe-line plan



A2 September 1999

FIG 4/3 LONGITUDINAL SECTION OF CIRCULATING WATER OUTLET TUNNEL

Figure 1 – Longitudinal Section of CW Outlet Tunnel

CONCEPT METHOD STATEMENT HUNTERSTON AAEDL EXTENSION R7M-MST-003

OPTION 3 – GUIDES, ROLLERS, CONCRETE CUTTING PREFERRED OPTION

This Sheet Must be Completed at Each Revision Once Approved for Issue

Prepared By		Niall McGill	Technical Engineer		
Checked By		James Nicholl	Pre Construction Manager		
Approved By		Niall McGill	Technical Engineer		
Review Period		After any significant variations onsite			
C1	01/12/25	Revision following Amentum comments	NMG	JN	NMG
Rev	Date	Description	Prep	Chk	Appr

Outline Method Statement

R7M-MST-003
Rev C1 20251201



Revision History

Rev	Date	Description
C0	29/10/2025	Original Document Produced
C1	01/12/25	Revision following Amentum comments

1.0 Introduction

This project is supporting EDF's goal to reduce power usage and prepare for the shutdown of all Main Cooling Water Pumps (MCWP) at Hunterston (HNB). The project involves extending the existing effluent discharge line from B-Station Syphon Seal Pit and the Landshaft connection to A-station, through the outfall culvert to discharge at the current outfall diffuser point at sea.

It should be noted that this document has been produced as a high level concept method statement for discussion purposes only, and to demonstrate the how the operation will be carried out from a high level and to highlight the risks involved with the operation.

2.0 Contacts

Name:	Niall McGill	Address:	Red7Marine Yard
Position:	Technical Engineer		Cliff Quay
Tel:	01255 886 710		Cliff Road
Mob:	[Redacted]		Ipswich
Email:	[Redacted]		Suffolk
			IP3 0AX
Notes:			

Name:	James Nicholl	Address:	Red7Marine Yard
Position:	Preconstruction Manager		Cliff Quay
Tel:	01255 886 710		Cliff Road
Mob:	[Redacted]		Ipswich
Email:	[Redacted]		Suffolk
			IP3 0AX
Notes:			

Name:	Mark Smith	Address:	Red7Marine Yard
Position:	Head of QHSE and Fabrication		Cliff Quay
Tel:	01255 886 710		Cliff Road
Mob:	[Redacted]		Ipswich
Email:	[Redacted]		Suffolk
			IP3 0AX
Notes:	For all QHSE incidents/concerns/observations		

3.0 Barge, Plant and Equipment Details

3.1 Barge Information

The Haven Seariser 2, is 29.26m in length, 17.07m wide and has a hull depth of 2.44m. The barge is equipped with 4 number of legs 1.22m diameter 36m long jack-up legs. These will be operated utilising the barge's hydraulic system. Additional information of the barge can be found in the table below.



Type:	RCP-250 Modular Self Elevating Platform
Classification:	Bureau Veritas Hull Offshore Self-Elevating Unit
Length:	29.26m
Breadth:	17.07m
Depth:	2.44m
Deck Area:	500m ²
Max Leg Length	36m
Leg Diameter:	1.22m
Gross Tonnage:	314GT
Lightship Weight:	450 tonnes
Jacking Speed	16m / hour (Fully Laden)
Jacking Stroke:	1.60m
Max Deck Load / Point Load:	250t / 5t/m ²
Max Free Leg Length:	29.50m
Max Crane Self Weight:	150 tonne

Outline Method Statement

R7M-MST-003
Rev C1 20251201



4.0 Location of Operation

Details of Operation Location			
Location:	Hunterston Power Station		
Red7Marine Project Number:	R7M-MST-001		
Aerial Overview:			
Sufficient Access to Site:	☒ Yes / ☐ No	Details:	
Sufficient Rigging Space:	☒ Yes / ☐ No	Details:	
Safe Access/Egress:	☒ Yes / ☐ No	Details:	Suitable access / egress provided by client
Bridging Unit Used:	N/A		
Span between Supports:	N/A		
Overhead Obstructions:	☐ Yes / ☒ No	Details:	
Slew Path Obstructions:	☐ Yes / ☒ No	Details:	
Underground Services & Voids:	☐ Yes / ☒ No	Details:	Not to R7M knowledge
Additional Comments:	Other relevant details and restriction are not to R7M's knowledge. All non-essential personnel must be excluded from operating area. All plant operatives working on site will be required to hold valid industry standard training certificates for the plant/equipment they are required to operate on site. R7M will inspect all operatives' original certification prior to commencement of operations. Copies will be made available for inspection.		
Diagram/Sketch of Area Included:	☒ Yes / ☐ No	Details:	

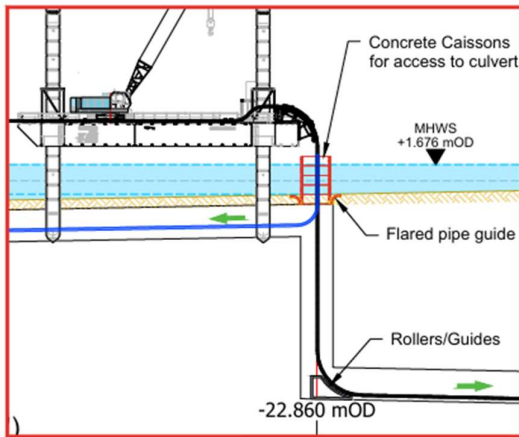
5.0 Methodology

1. We will collaboratively work with EDF / Amentum to ensure our safe system of work has been fully risk assessed and authorised prior to commencing works on site.
2. We will construct temporary crane platforms adjacent to the seal pit and the land shaft to accommodate lowering divers and equipment into the shafts via our crane. Please refer to SKETCH REF: R7M-525004-SKH-001 for Option 3 (sketch 4 and 5).
3. Under a permit to work and adopting the authorised safe system of work we will utilise a crane and man riding basket to remove all plant and equipment from the seal pit with qualified divers and handheld equipment, under the instruction and guidance of EDF personnel.
4. We will carry out the same process as above in 3. to remove all plant and equipment from the land shaft.
5. We will position our JUB adjacent to the existing manhole (bend 3) which provides access to the 'S' Bend Shaft. On a falling tide we will utilise divers to prepare the surrounding seabed to accommodate 4mØ precast concrete rings.
6. Using the crane positioned on our JUB we will install the temporary 4mØ precast concrete rings from sea bed level (-1.372mOD) up to 1m above MHWS (+1.676mOD) i.e. up to +2.676mOD resulting in temporary cofferdam c4.048m high. These precast concrete rings will be sealed and will provide a semi dry working area to provide safe access to the culvert shaft at bend 3.
7. Using our specialist dive team and utilising our JUB mounted crane and man riding basket, we will carefully cut out a square section (1,500mm x 1,500mm) of the existing manhole ring within the sealed temporary cofferdam using specialist concrete cutting techniques. **(PLEASE REFER TO SEPARATE DETAILED METHOD STATEMENT SPECIFICALLY ON CONCRETE CUTTING OF THE CONCRETE SLAB)**. The sections of cut concrete will be lifted out under a controlled operation and stored on the JUB for later disposal offsite.
8. To ensure that the main cooling water system can be switched on at short notice, we will fabricate a strengthened steel plate, 2,000m x 2,000m which will be bolted down with drilled mechanical fixings at locations around the plate to seal the new 1,500mm x 1,500mm manhole access. This will facilitate switching on the main cooling water pumps at short notice. This plate will be secured by mechanical means using divers. (Please refer to SKETCH REF: R7M-525004-SKH-002 for details).
9. The above operations will have cleared all apparatus and will provide clear access to the seal pit the land shaft and the 'S' Bend Shaft.
10. Guides and rollers within 30m vertical shaft are to be lowered and placed using that crane on the JUB and divers. At the land shaft and the seal pit, rollers/guides will be lowered in a similar manner, positioned and fixed by divers. Please refer to SKETCH REF: R7M-525004-SKH-001 for Option 3 (sketch 4 and 5) and sketches below in points 11.

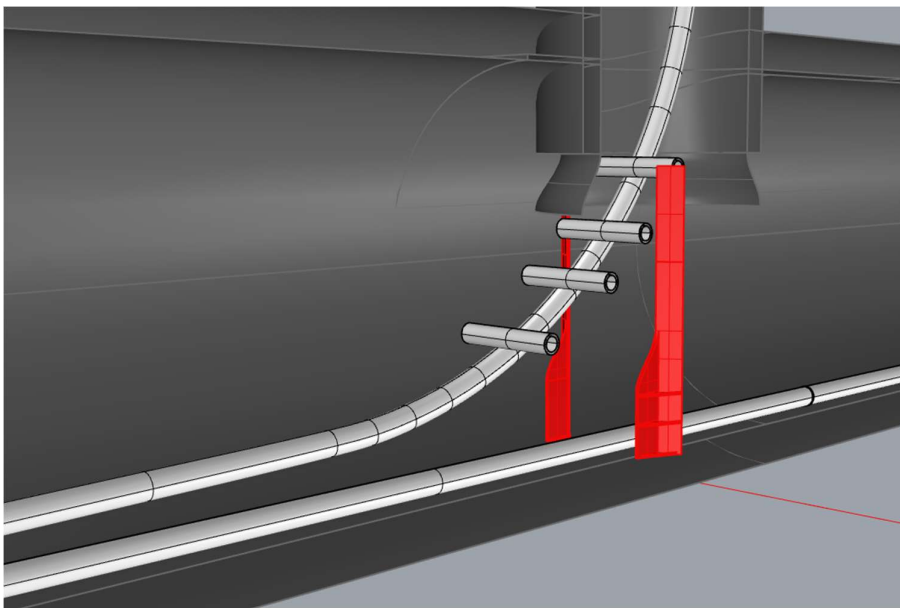
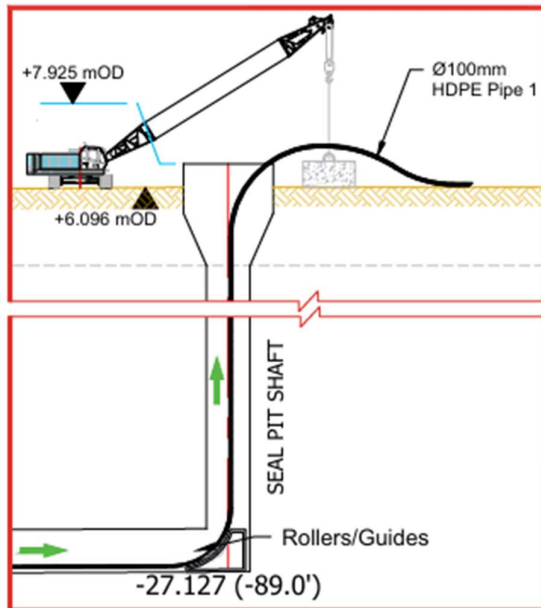
11. Pipe Installation:

a. Land Shaft - pulling from JU to Seal Pit and Land Shaft

- i. Guide rollers will be installed (as per 10 above) at bottom of 30m shaft and at the bottom of the land shaft and seal pit.

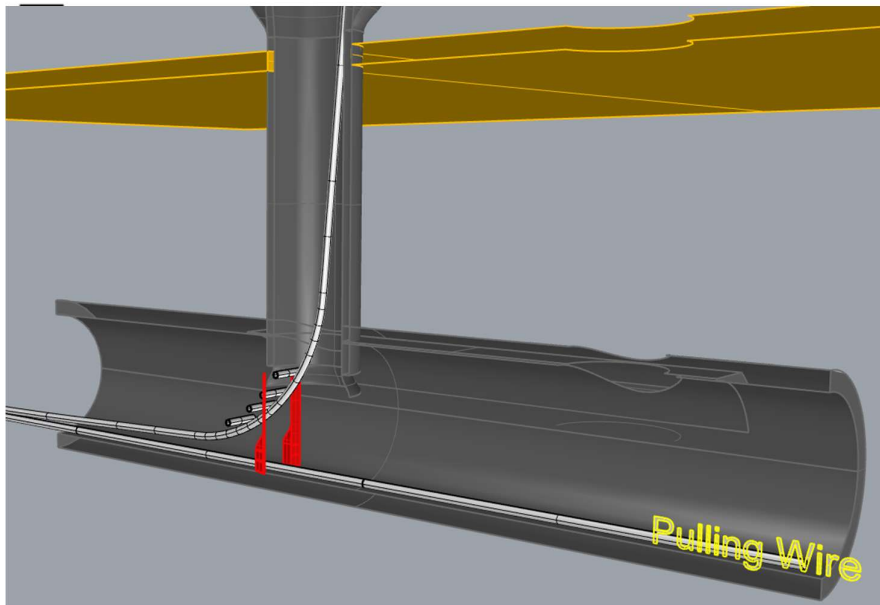
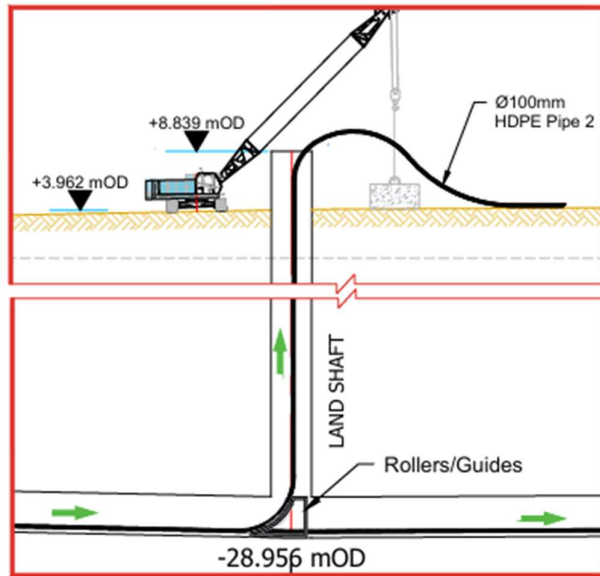


- ii. A communication system will be setup between the land shaft, seal pit and jack up so that the crews on each can communicate with each other during the pulling operation.
- iii. After the JUB has been setup offshore, and while there still is a flow of water from the seal pit through the tunnel and the outfall, a drogue will be attached to a sufficiently strong rope (25mm or equivalent), and let off from the seal pit to make its way through the tunnel and outfall to the JUB. This will be repeated from the land shaft also.
- iv. 2 no winches will be positioned on cast concrete bases at both the land shaft and seal pit with sufficient lengths of wire to enable them to pull the pipe from the jack up to each of the 2 terminating positions.
- v. When the drogue and rope reach the JUB, the barge crew will retrieve the rope, remove the drogue. A winch wire will be attached to the shore end of the rope and pulled through the tunnel towards the jack up. The operation will be controlled with both crews in communication on when to pull and when to feed the rope/wire. This will again be repeated for the land shaft to ensure that there are 2 winch wires within tunnel. One from the seal pit to the diffuser and one from the land shaft to the diffuser.
- vi. Load indicators will be fitted to both winches so that the winch operators can always monitor the load on the winch wires. Care will be taken not to exceed the allowable force. The operation will be stopped if the load is getting close to the allowable pull force. Direction will be sought from EDF personnel on how to proceed.
- vii. When satisfied that all of the above is in place, the pulling operation can start from the jack up to the seal pit first, (due to this being the worst case and better to carryout with a clear tunnel). The winch operator at the seal pit will control the pull and keep in communication with the barge crew with regards to the speed of release of the pipe and the speed of the pull. The pipe pull will continue while the readings on the winch are within tolerance. When they encroach the allowable levels, EDF will be consulted on how to proceed. The pull will be continued until the pipe reaches the seal pit, when it will be detached from the winch wire and secured.



(Note: The seal pit is where the highest load will be taken as the pipe approaches the shaft. We may consider terminating the pipe at the base of the shaft and bolting it to a vertical section with 90degree elbow as this saves pulling the pipe round the rollers and derisks the potential for damaging the product at this critical stage. A decision here will be made when we can access Seal Pit and assess the risk of the obstructions within. The final solution and methodology will be determined and finalised during the final Optioneering Workshop).

viii. The process will be repeated in a similar way for the land shaft, see sketch below.



- ix. The 80m length of pipe required for the section from top of 30m shaft to outfall diffuser (end point), will be the remainder of the pipe reel left on the jack up barge. So as there is no jointing, this end will be dropped into the shaft and pulled offshore towards the diffuser towards the tug using prepositioned winch wire. The pipe will be monitored and watched by divers to ensure that the pipe does not kink while entering culvert but opening will be of sufficient size to prevent this occurring.

W045 - Alternative Active Effluent Discharge Line to Sea

Activity Schedule

Activity	Who	When
Re-sanction current Gate	EDF	Complete
Complete all modelling	Amentum / PDL	Complete
Complete Trial (FLEXSTEEL)	Amentum	Complete
Review Commercial Options Destail Design & Installation	EDF	Complete
Complete Optioneering	Amentum / RED7 / EDF	Complete
Concept Design Approved	EDF	Mar / April '26
Submit Marine Licence Application	TSSM	April '26
Detail Design and Installation Preparation and Issue CETS	NRS	April '26
Issue Installation Contract	Commercial / NRS	July '26
Prepare WOCs / RAMS/ SQEP Packs / Security Clearance / Inductions	NRS	Oct '26
Site mobilisation / Pumps Switch Off / Install & Tie -In	Contractor	Nov '26 / Jun '27
Commissioning & Handover	NRS / Contractor	Jul '27

* Caveat - Contract award dates may be impacted by transfer to NRS. Working with NRS supply chain to try and negate.

* Activity Schedule accurate as of 24th March 2026

PROJECT DELIVERY	
ENVIRONMENTAL RISK & WASTE MANAGEMENT ASSESSMENT FORM	
PROJECT TITLE: AAEDL (Seaward)	PROJECT NO: W045
PROJECT MANAGER: Brett Loudfoot	QA GRADE: 3
This environmental risk assessment should consider the full lifecycle of the product/project being delivered. The Project Manager (PM) shall ensure:- 1. Completion of Section A of this Form for approval prior to Gate A. 2. Completion of Sections B-G of this Form for approval prior to Gate B. 3. Completion of Sections H-J prior to Gate C. Consider the use of Engineering Change (EC) Environmental Protection (EP) Specialist Assessment (SA) Form (BEG/FORM/SHE/ECA/035) as a checklist to do this. Section J shall be completed by a site Environmental Safety Engineer (ESE) or for Non-Operational Sites relevant expertise from within Environmental Safety and Sustainability (ESS). Section J shall be discussed and agreed with the PM and finally approved by the site ESE or ESS for corporate projects, prior to the start of Project Delivery (Prior to Gate C). <i>Note: Centre-based Projects shall include the Site ESE on the route list for review and approval.</i>	
SECTION A – CONCEPT Treated effluent is currently discharged from the Low-Level Waste Facility (LLWF) and Active Effluent Treatment Plant (AETP) via a discharge line which currently terminates in the siphon seal pit, commonly called seal pit, where the treated effluent mixes with Cooling Water (CW) and is discharged to sea via an outlet culvert. Additional treated effluent from Hunterston A Power Station (HNA) and the Sewage Treatment Plant (STP) tie into the outlet culvert from the seal pit via a landshaft. Going forward, the CW system will no longer be required for any cooling function. The intention is to remove the CW pumps from service as early as possible. Following this, the treated effluent from the AETP discharge line, HNA and HNB STP would no longer be able to mix with CW in the seal pit and landshaft prior to being carried to the discharge point at sea. It has been agreed with the Scottish Environmental Protection Agency (SEPA) that the 'trade' effluent from the HNB STP does not require to be pumped to the final discharge point. The adequacy of dispersion of liquid effluent arisings is supported by recent plume modelling work. As approved as PRC, request ID 001876. Onerisk business risk mitigation - OR4-4-1106 Maintaining Environmental Compliance. A BPM has been completed (Ref: HPS/TSSD/SR878, also with an addendum) outlines discharges to sea following fuel free verification. There is a requirement for a new Active Effluent Discharge line, incorporating the following terminal points: 1) Seal pit - AETP/LLWF discharge line to seal pit; 2) Land shaft - HNA AETP discharge line; 3) Sea - discharge point (National Grid reference NS 1773 5176).	
Section A needs to be completed by the ESE / Acc-RWE* and should outline what needs to be considered and completed during the concept design / optioneering phase to ensure compliance is maintained with our environmental obligations. Is there likely to be radioactive waste (solid / liquid / gaseous) management (which may or may not require characterisation) as part of this project? Yes / No	

*Or ESE representative for corporate projects

Is a Best Available Techniques / Best Practicable Means (BAT / BPM) assessment (optioneering) likely to be required (BEG/SPEC/SHE/ENVI/021)? If yes, which areas on site will be affected?		Yes / No
Project Manager	Brett Loudfoot	
Site ESE*	Anil Chundoo	
Other SQEP specialist as appropriate (e.g. Environmental Safety Group Head (ESGH), Accredited Radioactive Waste Adviser (Acc-RWE))	Kevin Smith	
SECTION B - PROJECT DESCRIPTION: Optioneering has concluded that a line is to be installed within the existing outlet culvert from Siphon Seal Pit to Sea. Provision of a design for a new discharge line from the seal pit to sea to modern relevant standards and best practicable means in accordance with SEPA guidance documents enabling manufacture, installation and commissioning of the system by EDF Energy and identified contractors. Flexsteel has been identified as the preferred pipeline for installation due to its mechanical properties and resilience. Marine contractors (Red7Marine) have been consulted as part of the concept design, and the project has concluded, via concept design optioneering, that breaking into the culvert at the shaft chamber and installing guides / rollers at specific bends will be required to successfully install the line within the culvert.		
SECTION C - PROJECT DELIVERY ACTIVITIES: KEY MILESTONES • Detailed Design Complete • Marine Licence Granted • Plant Installed including "A" Station Tie-In • Active Commissioning Complete • Project Finish A marine contractor will be employed to install the line within the culvert. A barge and divers will also be utilised to access the culvert for installation. Installation windows will be restricted between discharge windows and will therefore drive a shortened timescale for implementation.		
SECTION D - SITE AREAS AFFECTED • Will the work affect any land outside of the double security fence? Yes / No ◦ Shaft Chamber sea-bed area and land shaft. • Will you be working within the licensed boundary? Yes / No ◦ Seal pit. • Will you be working over or close to tidal water? Yes / No ◦ Marine licence application in progress. • Will there be any access issues or interruption to services etc.? Yes / No ◦ CW and therefore discharges, will be unavailable as work is being undertaken. ◦ Divers, cranes and barges will be required to gain access to the culvert.		
COMMENTS:		

*Or ESE representative for corporate projects

SECTION E - PLANT AND EQUIPMENT AFFECTED:

- Modifications to the existing culvert will include cutting an access hatch, installing rollers / guides and required bends, and threading a new 'Flexsteel' line within the existing to take over as main discharge route.
- Engineering change will be required but has not yet been developed. This will be undertaken once detail design is complete.
- There will be a large reduction in emissions due to the reduction in electricity usage once the line is installed and the cooling water pumps are switched off. The line is required to discharge treated effluent via water to the discharge point.

SECTION F - APPLICABLE REGULATORY AND STATUTORY REQUIREMENTS:

Mark all applicable regulatory and statutory requirements and list any additional requirements (including non-legal obligations) associated with this project. This should be done in conjunction with the station ESE or GEM representative.

Obligation	✓	Obligation	✓
Station Permit / Licence/ Consent(s): EAS/P/1173596	✓	Wildlife and Countryside Act	
Radioactive Substances Regulations (EPR / EASR)	✓	Habitats and Species Regulations	
Water Discharge Activity	✓	Waste Regulations	
Combustion Plant		Site Licence Conditions 32, 33, 34	
Ozone Depleting Substances (ODS) / Fluorinated (F) - Gas Regulations		Greenhouse Gas Emissions Regulations	
Control of Major Accident Hazards (CoMAH)		Oil Storage Regulations	
Marine & Coastal Access Act	✓	Waste Electrical and Electronic Equipment (WEEE) Regulations	
Other applicable legal requirements: <i>List here</i>		Applicable non-legal requirements: Duty of care for the potential of animals to make their way up the culvert if no screen exists, whilst CW system is off (animal welfare organisation)	✓

SECTION G - ESE/GEM REVIEW & COMMENTS:

The ESE* should review Sections A-E and add any comments in this section. The review should outline what needs to be considered and done during the design/options phase to ensure compliance is maintained with our environmental obligations.

*Or ESE representative for corporate projects

- | | |
|--|-----|
| • Is a Best Available Technique / Best Practical Means (BAT / BPM) assessment (optioneering) required (BEG/FORM/SHE/014)? If yes, ensure this is completed prior to Gate B | No |
| • Will the project generate Radioactive Waste? If yes, are the data requirements defined and has a Characterisation Plan (BEG/FORM/SHE/ENVI/017) been developed (if applicable) to address any data gaps? Has the required radioactive waste data been collated to support this project? | No |
| • Is a Process Hazard Review (PHR), Hazard and Operability (HAZOP) study and / or Control Of Major Accident Hazards (COMAH) review required? | No |
| • Is there any legal / BAT / BPM design / operational requirements? | Yes |
| • Are any new permits / licences / consents required? | Yes |
| • Are any variations to existing permits / licences / consents required? | No |
| • Is a Biodiversity Impact Assessment required? | No |
| • Does the Regulator(s) need to be consulted about the project? | Yes |
| • Will this project require specialist environment / radioactive support? | Yes |

COMMENTS:

The project options have been assessed via the programmes group and the selected option has a small work footprint. The project will require a marine licence to be granted before work commences. The project is subject to a EASR variation to be issued by SEPA, in this process has included BAT/BPM.

Initial Approval will be done via electronic sign-off in AMS

Project Manager	Brett Loudfoot
PD HSE Representative	James Bailey
Site ESE*	Anil Chundoo
Other SQEP specialist as appropriate (e.g. Environmental Safety Group Head)	Kevin Smith

SECTION H - PROJECT ENVIRONMENTAL ASPECTS¹ (RISKS AND OPPORTUNITIES) & IMPACTS:

Note 1: Environmental Aspect is an element of an organization's activities, products or services that can interact with the environment.

Mark all applicable environmental (radiological and non-radiological) aspects of this project that will interact with the environment including biodiversity and state how they will be mitigated. Include opportunities for biodiversity enhancement / net gain.

Impact	✓	Activities	Mitigations
Water Emissions			
Land / Groundwater			
Air Emissions / Odour			
Noise	✓	Noise generated will be greater the >5kHz	Noise will not be impulsive
Waste / Resource Usage			

*Or ESE representative for corporate projects

Flora / Fauna/ Habitats / Protected Sites	✓	Local to SSSI	Works will not encroach on the SSSI
Species		Protected species	The work in small area/short duration and is unlikely to have an impact on protected species

The PM shall ensure relevant risks are included in the **Project Risk Log** and the Risk Assessment and Method Statements (RAMS) used to address the risks and impacts identified above are in place and effective.

SECTION I - MANAGEMENT OF WASTE STREAMS:

To ensure appropriate waste management identify the waste types and quantities likely to be produced by the project including any packaging.

Consider the waste hierarchy for all potential waste streams and where possible avoid or minimise waste generation in the project or product design by applying Circular Economy Principles.

If applicable (see the *ESE's requirements in the next Section) a Project Waste Management Plan shall be completed on template BEG/FORM/SHE/015 for any project

- that is occurring offsite, or
- producing abnormally large quantities of normal site waste or
- requiring additional management and resource because of its hazardous nature, or
- if the project intends to use another waste contractor outside of the normal site waste management arrangements / facilities.

Waste Type	Hazardous?	Radioactive?	Site Waste Contractor?	Additional Containers?	Amount
Concrete	No	No	No	no	<1 tonne

SECTION J - ESE/GEM REVIEW & COMMENTS:

The ESE* representative should review Sections B-I and add any comments in this section. The review should check and confirm what needs to be considered and effectively done during project delivery (Gate C to Gate D).

- | | |
|---|----------|
| • Has the requirements/output from Section F been met? | Yes |
| • Has a BAT / BPM assessment been completed if required and issued in AMS? | Yes |
| • Has a Radioactive Waste Characterisation Plan (BEG/FORM/SHE/ENVI/017) been completed if required and issued in AMS? | No |
| • Are there any permits / licences / consents pre-construction conditions? | Yes |
| • Are there any permits / licences / consents pre / post-commissioning conditions? | Yes |
| • Are new/varied (if required) permits / licences / consents in place? | Yes |
| • Does the Regulator(s) need to be informed before construction / commissioning? | Yes |
| • Are the proposed risk management and mitigations appropriate? | Yes |
| • Does this project require an update to be made to the Environmental Aspects Register? | Yes |
| • Will new / updated procedures / Environmental, Maintenance, Inspection and Test Specification (EMITS) be required? | Yes / No |

*Or ESE representative for corporate projects

COMMENTS:

A ABT BPM Assessment has been completed as part of the AAEDL project,
No radioactive waste will be generated from the construction works
A marine licence will be required before construction begin and relevant condition shall be complied with.
EASR permit variation conditions shall be met when commissioning the discharge line and during its ongoing use.
The aspects register will be updated when commissioning is complete

Approval:

Project Manager	Brett Loudfoot
HSE Representative	James Bailey
Site ESE*	Anil Chundoo
Other SQEP specialist as appropriate (e.g. ESGH)	Kevin Smith

*Or ESE representative for corporate projects

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General Planning Principle	Project Consideration
GEN 1 General planning principle: There is a presumption in favour of sustainable development and use of the marine environment when consistent with the policies and objectives of this Plan. 4.5 This principle is relevant to all marine activities, but is especially relevant for the key growth sectors which Scotland specialises in. These include aquaculture and fisheries as food sectors; oil and gas and renewable energy activities; and tourism. Many of these sectors are particularly important in more remote areas of Scotland. The principle is equally relevant to existing and established activities as well as emerging activity and should be applied equally across all activity, subject to objectives and policies of this Plan. 4.6 Development and use of the marine area should be consistent with this Plan. This will help activity and businesses to grow while ensuring activities are undertaken in a sustainable manner that protects and enhances Scotland's natural and historic marine environment. It will also provide greater certainty as to how proposals relating to the marine environment will be considered by planning and consenting authorities.	The Hunterston B (HNB) site has now accomplished Fuel Free Verification. There are no safety claims on the station's cooling water system (CWS), however, there remains a requirement for aqueous radioactive discharges from both Hunterston A and HNB during decommissioning of the stations which are under environmental permitting arrangements to control radioactive discharges. Both stations are required to apply 'Best practical means' (BPM) during decommissioning. BPM includes the shutdown of the extant CWS and a new much smaller active effluent discharge pipeline is to be installed within the extant CWS shaft chamber. This specific project design minimises impact on the surrounding marine environment during construction and on completion also further enables nuclear decommissioning of the HNB and HNA sites that will enhance Scotland's natural and historic marine environment.
GEN 2 Economic benefit: Sustainable development and use which provides economic benefit to Scottish communities is encouraged when consistent with the objectives and policies of this Plan.	The project construction works and enabling nuclear commissioning works will provide economic benefit to local Scottish communities.
GEN 3 Social benefit: Sustainable development and use which provides social benefits is encouraged when consistent with the objectives and policies of this Plan. 4.7 Sustainable development and use of the marine environment can provide multiple economic benefits at a community and national level, including economic growth, skills development, employment, maintaining or increasing population levels and opportunities for investment and trade. 4.8 The economic benefit of proposed development and use should be considered carefully and taken into account, appropriately and proportionately, in marine decision making. 4.9 Particular consideration should be given to opportunities that aim to provide benefit to communities, including local job creation and local training either directly or through supply chain projects. 4.10 Social benefits include those directly associated with economic growth such as increased wealth, improved quality of life and community regeneration. However, benefits of an intrinsic nature such as health and wellbeing associated with the natural and historic environment, a choice of location and lifestyle, sport and recreation are also important. Social benefits apply not only to coastal communities but also to those who travel to and use the marine and coastal environment for employment or leisure.	The project construction works and enabling nuclear commissioning works will provide social benefit to local Scottish communities through maintaining and/or job creation.

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4.11 The social benefit of proposed developments and increasing use should be considered carefully and taken into account, appropriately and proportionately, in marine decision making. Consideration should be given where industries and developers assist in supporting the development of onshore infrastructure, helping to achieve community cohesion and reducing social disparity. The impact of proposed development on existing activities, including those which promote health and wellbeing, should also be taken into account in decision making. 4.12 Developers will be expected to co-operate to input into practical scenarios related to the lifecycle of a project (for example construction, operation and maintenance of their development) to allow local communities to understand the socio-economic and environmental implications of a proposed development. Scenario mapping, Strategic Environmental Assessment and Sustainability Appraisal may all be helpful in doing so.	
GEN 4 Co-existence: Proposals which enable coexistence with other development sectors and activities within the Scottish marine area are encouraged in planning and decision-making processes, when consistent with policies and objectives of this Plan. 4.13 As development and use of the marine environment continues to increase, there is likely to be increased competition for space. One approach to managing this is to encourage development proposals which bring together activities which are compatible or synergistic in one location, to make good use of space, i.e. those which involve or allow co-existence, taking account of temporal and spatial issues. 4.14 This applies to a wide range of scenarios, including using existing infrastructure as a basis for a new activity, or taking advantage of opportunities now and in the future as technology advances, or for inshore activities to locate further offshore in tandem with other industries. 4.15 Opportunities for coexistence and synergies may be identified through existing examples, by sectors as new practices and technologies emerge or by data collection at a national or regional level. Where possible, marine planners and decision makers should encourage development or use which does not result in areas being unsuitable for future use by others (e.g. by considering alternative designs or through licensing decisions and conditions). 4.16 Where it becomes apparent that different activities are incompatible or mutually exclusive, some areas may be identified within regional marine plans for preferential use by specific sectors. Any selection of such areas should follow: • A scoping exercise to determine where potential interactions may occur and the likely effect of interaction. • An understanding of environmental, planning and other sectoral constraints. Where appropriate, this can be developed through Regional Locational Guidance. • A consideration of the priorities for development and use of the area, taking account of the feasibility of taking forward expansion. • Sustainability appraisal considering the potential range of impacts on the environment and the range of other potential users, and others who could be less directly impacted.	This is a multi-disciplinary project utilising skills and expertise across a range of sectors including engineering consulting & contracting, marine construction and nuclear decommissioning expertise.

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• Consideration of any cumulative impact. • Scenario mapping to understand the impact on the local communities. • Robust consultation. 4.17 Marine planning should not impede existing agreements between sectors and should seek to complement such arrangements where they exist. Where conflict over space or resource exists or arises, marine planning should encourage initiatives between sectors to resolve conflict and take account of agreements where this is applicable. Regional Policy: regional marine plans should consider: • Determining sectoral incompatibilities and potential for coexistence of development and activity using appropriate mechanisms such as interactions matrices. • Identifying areas for preferential use by specific sectors, where appropriate, following consultation and using appropriate mechanisms such as sustainability appraisal and scenario mapping. • Taking account of cross sectoral agreements with regards to shared usage of the marine area. <applies to inshore waters only>	
GEN 5 Climate change: Marine planners and decision makers must act in the way best calculated to mitigate, and adapt to, climate change. 4.18 Developers and users of the marine environment should seek to address climate change through: • Mitigation: Marine planners and decision makers should seek to facilitate a transition to a low carbon economy. They should consider ways to reduce emissions of carbon and other greenhouse gasses. This will be of particular relevance in cases of large-scale development and infrastructure projects. • Adaptation: Marine planners and decision makers should be satisfied that developers and users have sufficient regard to the impacts of a changing climate and, where appropriate, provide effective adaptation to its predicted effects. Offshore and coastal developments should be appropriately sited and designed, and use technologies and equipment appropriate for local conditions, now and in the future, giving particular consideration to vulnerability, scale and longevity of operation. The Scottish Climate Change Adaption Programme [31] should be complied with. Where appropriate, marine planning authorities should be satisfied that adequate risk management and contingency plans are in place, particularly in relation to potential changes in sea temperatures, sea level rise, storminess and extreme water levels, using the best scientific evidence available at the time. 4.19 Reducing human pressure and safeguarding ecosystem services such as natural coastal protection and natural carbon sinks (e.g. seagrass beds, kelp and saltmarsh) should be considered. In some cases, compensatory habitat creation or enhancement may be	This project enables lower carbon footprint energy consumption for the decommissioning phase at both HNB and HNA through cessation of CWS pumping. Specific project design has been made to maximise efficiency and limit environmental impact. See W045 – Environmental Risk and Waste Assessment for additional information.

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possible and should be considered as a last resort if significant harm cannot be avoided. Appropriate proactive opportunities for enhancing natural carbon sinks and allowing natural coastal change where possible should also be considered. Regional Policy: regional marine plans should: • Identify significant natural carbon sinks and seek to avoid colocation with potentially damaging activity; then • Assess the acceptability of any proposed partial loss or damage to natural carbon sinks (including any compensatory measures) through licensing or management of marine activities, balanced with priorities presented in this Plan and respective regional marine plans. • Explain how they have taken into account future climate change in terms of climate change adaptation. <applies to inshore waters only>	
GEN 6 Historic environment: Development and use of the marine environment should protect and, where appropriate, enhance heritage assets in a manner proportionate to their significance. 4.20 The historic environment includes all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged. In addition to its cultural value, the historic environment can be a powerful driver for economic growth, attracting investment and tourism and sustaining enjoyable and sustainable places in which to live and work. 4.21 Those elements - buildings, monuments, sites or landscapes - that have been identified as holding a degree of significance meriting consideration are called 'heritage' assets. Some heritage assets around our coast have a level of interest that has justified statutory designation [32] (Map 3). There are also many undesignated heritage assets which also contribute positively to the cultural and social dimension of our coasts and seas and to local economies through recreation and tourism [33]. 4.22 Marine planning should help to ensure that future marine activities and developments can be carried out in a way that respects the marine historic environment and the setting of important coastal heritage assets. It can also help to increase the social and economic contribution of the heritage assets, for example by encouraging opportunities for public access. 4.23 To achieve this, marine planners and decision makers should consider implications and opportunities for the historic environment taking into account the potential impacts of development and use on: • Designated heritage assets - representing sites of national or international significance for which statutory requirements apply. Designated assets should be protected in situ within an appropriate setting [34]. Substantial loss or harm to designated assets should be exceptional and should only be permitted if this is necessary to deliver social, economic or environmental benefits that outweigh the harm or loss.	The project is not undertaken in any close proximity to any designated or heritage buildings, monuments, sites or landscapes.

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Undesignated heritage assets - those that meet designation criteria [35] or make a positive contribution should also be protected in situ, wherever possible, and consideration given to the potential for new discoveries of historic or archaeological interest to arise. 4.24 Proposals for development and use that may affect the historic environment should provide information on the significance of known heritage assets and the potential for new discoveries to arise. They should demonstrate how any adverse impacts will be avoided, or, if not possible, minimised and mitigated. Where it is not possible to minimise or mitigate impacts, the benefits of proceeding with the proposal should be clearly set out. 4.25 Where the case for substantial change to a heritage asset is accepted, marine decision-making authorities should require applicants to undertake suitable mitigating actions to record and advance understanding of the significance of the heritage asset before it is lost, in a manner proportionate to that significance. The resulting evidence should be made publicly accessible and copies of reports archived with the Royal Commission on the Ancient and Historical Monuments of Scotland [36] and the adjacent Local Authority archaeology service.	
GEN 7 Landscape/seascape: Marine planners and decision makers should ensure that development and use of the marine environment take seascape, landscape and visual impacts into account. 4.26 Landscape and seascape [37] are important elements of people's enjoyment of the coastal and marine environment. They are also important as the setting for coastal communities, contributing to sense of place, economic livelihoods and quality of life. Scotland's varied coastal landscapes are internationally renowned and support a valuable recreation and tourism sector. 4.27 The Scottish Government is committed to implementing the principles of the European Landscape Convention, which includes seascapes and applies an 'all landscapes approach' that addresses developed, altered and cultural landscapes as well as more natural scenic areas. This does not preclude development or change, but recommends that it is carried out appropriately for the area's landscape character and visual amenity. 4.28 Development and use that affect National Scenic Areas, National Parks and World Heritage Sites should only be permitted where: - It will not adversely affect the integrity of the area or its special qualities for which it has been designated; or - Any such adverse effects are clearly outweighed by social, environmental or economic benefits of national importance. 4.29 In making these judgements, planners and decision makers should have regard to the qualities of the location in question, including any designation [38]. More generally, the siting and design of a development should take account of the local landscape/seascape character and quality. Potential effects on landscapes and seascapes, including cumulative effects should be	The project is not likely to have a negative effect on the local or national aquaculture. The overall footprint of the work is small and is being conducted within an existing industrial installation. See W045 – Environmental Risk and Waste Assessment for additional information on assessed risk of environmental impact.

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considered and developers should seek to minimise adverse impacts through careful planning and design, considering the services which the natural environment is providing and maximising the potential for enhancement. 4.30 Where development has the potential to impact on wild land, [39] locally designated areas, largely undeveloped coast, areas subject to significant constraints or largely unspoiled areas of coast, Scottish Planning Policy [40] should be considered when planning for, and taking decisions, which may impact on such areas. 4.31 Existing Scottish Natural Heritage (SNH) guidance [41] on the principles of good siting and design and examples of emerging good practice should be followed. SNH Landscape Character Assessments and forthcoming SNH guidance on undertaking Coastal Character Assessment also provide useful tools in considering impacts on landscape. Regional policy: regional marine plans should consider identifying the landscape character types and protected landscapes within the Marine Region and setting out policies to safeguard their special qualities. <applies to inshore waters only>	
GEN 8 Coastal process and flooding: Developments and activities in the marine environment should be resilient to coastal change and flooding, and not have unacceptable adverse impact on coastal processes or contribute to coastal flooding. 4.32 Over the coming decades, much of Scotland's coastline is expected to experience rising sea level, increased extreme water levels and an associated increased flood risk, possibly leading to greater rates of coastal change. Natural change may be compounded by human activities such as dredging, soil deposition, construction and coastal protection measures. While flooding and coastal change cannot be prevented entirely, it can be managed to reduce impacts on people, property, businesses and infrastructure. 4.33 Coastal infrastructure should generally be sited in areas less vulnerable to flooding and erosion, although there may be exceptions if a specific location is essential for operational reasons or infrastructure cannot be located elsewhere. Marine planners and decision makers should take account of national flood risk assessment and flood risk and hazard maps, prepared by the Scottish Environment Protection Agency (SEPA), which identify areas at risk of significant flooding (Potentially Vulnerable Areas) along with Local Flood Risk Management Plans [42]. 4.34 The Scottish Government is working with SNH and partners to assess coastal change and map vulnerability. Marine planners and stakeholders with an interest in coastal developments should take account of these maps, when available, to ensure priorities in coastal areas are managed in an integrated way. 4.35 A precautionary and risk-based approach should be taken in terms of understanding emerging evidence on coastal processes and sea-level rise. 4.36 Marine planners and decision makers should also be satisfied that activities and developments will be resilient to risks from coastal change and flooding over their lifetime, and will not have an unacceptable impact on coastal change. They should seek to ensure that any geomorphological changes that an activity or development bring about in coastal processes, including sediment movement and	The proposed marine works will be confined to a localised area around the existing outfall diffuser point. There is no historical evidence of significant sea-level rise or substantial geomorphological change along this section of coastline, this will be monitored and risk assessed as required. Further location information is provided in Drawing W045 – Site Locality Plan.

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wave patterns, are minimised and mitigated, bearing in mind the potential impact on commercial interests such as fisheries and conservation of the natural environment and key coastal heritage sites. Developments which may affect areas at high risk and increase the probability of coastal change should not be permitted unless the impacts upon the area can be managed effectively. 4.37 Wherever possible, flood risk management and coastal protection solutions should work with natural processes and features, encouraging managed realignment of coastal habitats such as sand dunes, salt marshes and mudflats. The protective role of geodiversity, geomorphological and natural features such as kelp beds, biogenic reefs and sandbanks should also be considered alongside opportunities for recovery and enhancement. 4.38 As well as offering flood protection, this approach will help adaptation to the effects of climate change, improve resilience of ecosystems, deliver benefits for biodiversity and support ecosystem services more generally. If and where more traditional engineered solutions are required, the appraisal process should seek to fully understand the risks imposed by a changing climate using the most up to date robust evidence. Modelling will be required to estimate the potential impacts of the relevant climate change projections for a specific flood risk protection scheme. Planners and decision makers should be satisfied that coastal processes will not be adversely affected. Regional policy: Regional marine plans should be aligned with terrestrial development plans and reflect coastal areas likely to be suitable for development, taking into account the most recent flood risk and flood hazard maps, and forthcoming coastal erosion vulnerability mapping. Where relevant, regional marine plans should also reflect areas where managed realignment of coast may be appropriate, setting out the potential benefits such as habitat creation and new recreation opportunities. <applies to inshore waters only>	
GEN 9 Natural heritage: Development and use of the marine environment must: (a) Comply with legal requirements for protected areas and protected species. (b) Not result in significant impact on the national status of Priority Marine Features. (c) Protect and, where appropriate, enhance the health of the marine area. 4.39 Scotland's marine natural resource, biodiversity and geodiversity is a valuable asset delivering a wide range of ecosystem services (see Annex A), which provide a large stock of natural capital and support a variety of recreational and economic activities. Nature conservation measures play an integral role in protecting and enhancing the marine natural environment, ensuring it is healthy, biologically diverse, resilient and productive and that ecosystems continue to provide social, economic and wider benefits for people, industry and society.	The programme has been designed and assessed to ensure resilience to coastal change and flooding while avoiding unacceptable impacts on protected sites. The work site is close to but does not encroach on the local designated SSSI. Please refer to W045 – Site Locality Plan.

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4.40 Marine planners and other decision makers should act in the way best calculated to further the achievement of sustainable development and use, including the protection and, where appropriate, enhancement of the health of the Scottish marine area [\[43\]](#). The Strategy for Marine Nature Conservation in Scotland’s Seas [\[44\]](#) sets out aims and objectives to achieve this. The Strategy outlines a three-pillar approach to conservation: site protection, species conservation and wider seas policies and measures.

SITE PROTECTION

4.41 A network of well managed marine protected areas is being established to meet national objectives and help deliver an ecologically coherent MPA network in the North East Atlantic, contributing to the protection and enhancement of the area to which this Plan applies [\[45\]](#). The network will comprise of newly designated Marine Protected Areas (Map 4) as well as Natura Sites and marine components of Sites of Special Scientific Interest (SSSI) and Ramsar sites [\[46\]](#). The management requirements of each of these designation types must be met. These sites, together with other protected areas will make a significant contribution to the protection, enhancement and health of the marine area. Improved health of the marine environment will also lead to increased resilience of ecosystems to climate change.

Natura 2000 Sites

4.42 Sites designated as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) make up the Natura 2000 network of protected areas. Any plan or project likely to have a significant effect on these sites, which is not directly connected with or necessary to their conservation management, must be subject to an 'appropriate assessment' of their implications for the site in view of its conservation objectives. Such plans or proposals may only be approved if the competent authority has ascertained by means of an 'appropriate assessment' that there will be no adverse effect on the integrity of the site.

4.43 A derogation is available for authorities to approve plans or projects which could adversely affect the integrity of a Natura site if:

- there are no alternative solutions;
- there are imperative reasons of overriding public interest, including those of a social or economic nature [\[47\]](#); and
- compensatory measures are provided to ensure that the overall coherence of the Natura network is protected.

4.44 If an authority wishes to use this derogation, Scottish Ministers must be notified. For sites hosting a priority habitat or species (as defined in Article 1 of the Habitats Directive), prior consultation with the European Commission via Scottish Ministers is required unless either the proposal is necessary for public health or safety reasons or it will have beneficial consequences of primary importance to the environment.

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4.45 Authorities should afford the same level of protection to proposed SACs and SPAs (i.e. sites which have been approved by Scottish Ministers for formal consultation but which have not yet been designated) as they do to sites which have been designated.

Marine Protected Areas

4.46 Marine Protected Areas (MPAs) are those designated under the Marine Acts to protect features of importance to Scotland [\[48\]](#) and which will contribute to an ecologically coherent network of sites. MPAs are identified according to the guidelines on the selection and development of the MPA network [\[49\]](#).

4.47 The Marine Acts place a duty on all regulators to ensure that there is no significant risk of hindering the achievement of the conservation objectives of an MPA before giving consent to an activity. Where an ongoing activity presents a significant risk of hindering the achievement of the conservation objectives of an MPA there will be a management intervention. This intervention will be practical and proportionate, utilising the most appropriate statutory mechanism to reduce the risk. Detailed guidance can be found in Marine Scotland's Nature Conservation Marine Protected Areas Draft Management Handbook [\[50\]](#).

Sites of Special Scientific Interest

4.48 Development that affects a Site of Special Scientific Interest should only be permitted where:

- the objectives of designation and the overall integrity of the area will not be compromised; or
- any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, environmental or economic benefits of national importance.

Locally Designated Sites

4.49 Locally designated natural heritage areas reflect areas of at least local importance. Where it is appropriate to do so, the Scottish Planning Policy [\[51\]](#) approach to local designations should be considered.

Other Policies for all Protected Areas

4.50 In addition to complying with legal obligations for protected areas, management plans and guidance on protected areas should be followed to contribute to the achievement of site objectives. All Ramsar sites are also Natura sites and/or Sites of Special Scientific Interest and are protected under the relevant statutory regimes.

SPECIES PROTECTION

Taking a precautionary, risk-based approach informed by flood risk mapping and coastal change evidence, the proposal will not adversely affect the integrity of any designated sites.

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4.51 The presence (or potential presence) of a legally protected species is an important consideration. If there is evidence to suggest that a protected species is present or may be affected by a proposed development, steps must be taken to establish their presence. The level of protection afforded by legislation must be factored into the planning and design of the development and any impacts must be fully considered prior to the determination of the application.

4.52 Certain activities in territorial waters (e.g. those involving European Protected Species as specified in the Conservation (Natural Habitats etc.) Regulations 1994, and wild birds, protected animals and plants under the Wildlife and Countryside Act 1981) may only be undertaken under licence. Equivalent provisions for birds and European Protected Species under the offshore regulations need to be followed in the Scottish offshore zone in accordance with the Offshore Marine Conservation (Natural habitats, &c.) Regulations 2007.

4.53 For certain species [\[52\]](#) deliberate or reckless disturbance or harassment is prohibited and can only be carried out in accordance with the terms of a licence. Marine Scotland's Guidance on Protection of Marine European Protected Species from Injury and Disturbance [\[53\]](#) must be followed. The principles in this Guidance may also be of relevance to other species such as basking shark.

4.54 Guidance on harassment at designated seal haul out sites [\[54\]](#) should be taken into account. Seal conservation areas should also be taken into account, as should recommended techniques for assessing acceptable levels of man-made pressures.

WIDER SEAS MEASURES

4.55 Marine planning can deliver significant improvements to management of our seas by contributing to improvement in the status of Priority Marine Features (PMFs) and their associated habitats, species and ecosystems.

4.56 Priority Marine Features [\[55\]](#) are species and habitats which have been identified as being of conservation importance to Scotland. Most are a subset of species and habitats identified on national, UK or international lists. They provide a new focus for marine conservation in Scotland. The list does not currently include wild birds species, which are protected under the EU Birds Directive. Impacts of development and use on the national status of Priority Marine Features must be considered when decisions are being made, taking account of the advice of Statutory Advisors. Where planned developments or use have potential to impact PMFs, mitigation, including alternative locations, should be considered. Actions should be taken to enhance the status of PMFs where appropriate.

4.57 Consideration should be given to opportunities to enhance biodiversity and associated ecosystem services, including recovery and/or enhancement of degraded habitats or species populations.

4.58 The descriptors and targets for the achievement of Good Environmental Status (GES) under the Marine Strategy Framework Directive are also relevant to the wider seas approach to nature conservation. Development in, and use of, the marine environment must not compromise the achievement or maintenance of GES for UK waters.

The activity will not hinder the achievement of conservation objectives for any Marine Protected Area and will not cause significant alterations to coastal or marine processes, including sediment transport or wave regimes.

The works will not compromise the integrity or designated features of any SSSI and avoids geomorphological or hydrodynamic changes that could exacerbate erosion or flood risk.

Potential effects on locally designated sites have been considered within the context of coastal change and flood risk. The work site does not encroach on any locally designated national heritage areas. Please refer to W045 – Site Locality Plan.

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GEODIVERSITY

4.59 Geodiversity provides many ecosystem services, such as a diversity of seabed habitats and physical features necessary for the existence of important marine life, the basis for energy development and the attenuation of erosive forces close to shore.

4.60 Marine planning should consider opportunities to protect important geodiversity features and prevent deterioration or enhance where appropriate. Where geodiversity features are qualifying or protected features of designated sites, activities must be managed accordingly under the relevant legislation. Marine planners and decision makers should consider impacts on geology, taking into account their significance. Substantial loss or harm should be exceptional and should only be permitted if this is necessary to deliver social, economic or environmental benefits that outweigh the harm or loss.

Regional policy: Regional marine plans should consider:

- Using relevant guidance and data sources to identify, where appropriate, areas that are sensitive to specific types of development or other activity. Particular regard should be given to protected sites, protected species and Priority Marine Features. Spatial policies should take account of the sensitivities identified.
- Developing policies that contribute to the achievement of Conservation Objectives for designated sites within the MPA network.
- Recognising the role of habitats and species in providing and supporting ecosystem services and consider opportunities to enhance these services. **<applies to inshore waters only>**

The presence of a legally protected species is not expected in the locality of the work area and works are not expected to have an impact on same.

The wider seas will not be affected by this activity and will not have an impact on the wider marine plan.

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	Minimal work will take place directly on the seabed and permanent change will only be affected on an existing civil installation.
GEN 10 Invasive non-native species: Opportunities to reduce the introduction of invasive non-native species to a minimum or proactively improve the practice of existing activity should be taken when decisions are being made. 4.61 Invasive non-native species can cause damage to the environment, economy and health. Control is expensive and not always possible, especially in the marine environment where internationally agreed prevention measures may be needed. 'Prevention, rapid response, control' is the hierarchical approach to management of invasive non-natives currently employed. Good biosecurity practice should consider the risk of planned activities establishing new pathways for the spread of invasive non-natives and is essential. Biosecurity measures must be established in any instance where a new route for invasive non-native species is determined. SNH guidance is available for producing site and operation-based biosecurity plans for preventing the introduction of non-native species [56]. 4.62 The Code of Practice on Non-Native Species for Scotland [57], species control agreements and orders (under the Wildlife and Natural Environment (Scotland) Act) and international guidelines should be used where relevant to the marine environment.	The project will not introduce invasive non-native species, as it does not create new pathways for species transfer and will be delivered in accordance with good biosecurity practice. Where relevant, measures aligned with the Code of Practice on Non-Native Species for Scotland and SNH biosecurity guidance will be implemented to minimise risk and ensure no introduction or spread of invasive non-native species.
GEN 11 Marine litter: Developers, users and those accessing the marine environment must take measures to address marine litter where appropriate. Reduction of litter must be taken into account by decision makers. 4.63 Marine litter poses a number of detrimental problems across the economy, environment and society. These include ingestion by and entanglement of, wildlife; wider ecosystem deterioration; public health issues; impacts on aesthetics and a wide range of economic impacts across the raft of industries reliant on our coastal and marine environment. 4.64 Opportunities to reduce and address marine litter, with reference to A Marine Litter Strategy for Scotland [58], should be taken into account in decision making and when marine plans are being developed. In particular the integrity and function of marine and coastal ecosystems should not be compromised by litter and there should be no significant risk to wildlife, communities and human health. Regional Policy: Regional marine plans should consider identifying measures in place to address marine litter and demonstrating how they contribute to the Marine Litter Strategy. <applies to inshore waters only>	The project will comply with GEN 11 by implementing best-practice site management measures to prevent the generation, release, and persistence of marine litter during installation, testing and operation. These measures include controlled material handling, waste management, and post works inspection, ensuring no adverse effects on marine ecosystems, wildlife, or human health.
GEN 12 Water quality and resource: Developments and activities should not result in a deterioration of the quality of waters to which the Water Framework Directive, Marine Strategy Framework Directive or other related Directives apply. 4.65 Marine planners and decision makers should be satisfied that impacts of development and use on water have been taken into account. With regards to the Water Framework Directive (WFD), reference should be made to the 'ecological status of the water	The assessment of R7M concept method statement 003 confirms the view the project will not result in deterioration of water body status, will not affect water levels or flows, and will not introduce or facilitate the spread of non-native species. This will ensure the biological, chemical, and physical integrity of the water environment will remain unchanged.

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environment' which includes water quality and quantity and changes to water level as well as biological aspects such as the impact of non-native species. 4.66 Marine planning and decision-making authorities should ensure they have regard to any relevant River Basin Management Plans which implement the WFD and also take account of Shellfish Growing Waters and Bathing Water Directives. Supplementary plans and programmes of measures devised for the river basin district should also be taken into account. They should satisfy themselves where relevant that any development will not cause a deterioration in status of any water to which the WFD applies, subject to the provision of Article 4.7 of that Directive, and should be consistent with the requirements of related Directives of the WFD including those on priority substances and groundwater. Decision makers should seek to mitigate impacts on the quality of shellfish waters, designated bathing waters and areas particularly important for immersion sports from any proposed development. <applies to inshore waters only> 4.67 The Marine Strategy Framework Directive also introduces requirements for targets on contamination and eutrophication for marine waters out to 200 nautical miles.	
GEN 13 Noise: Development and use in the marine environment should avoid significant adverse effects of man-made noise and vibration, especially on species sensitive to such effects. 4.68 Noise and vibration has the potential to disturb, or be damaging to, a number of species, although the full extent of this is not known, either at an individual or population level. Consideration should be given to the effects of man-made noise and vibration ^[59] on marine environment and people ^[60], with effective mitigation measures being adopted where appropriate. Mitigating and minimising the effects of noise and vibration on wildlife should be considered, taking account of known sensitivities to particular frequencies and source levels of sound. Significant adverse effects on health should be avoided. 4.69 Protection can be advanced with the development of systems for monitoring noise and further research that quantifies the related and cumulative risks to the marine environment. Developers should monitor loud, low to mid frequency (10Hz to 10kHz) impulsive noise. This includes use of seismic airguns, other geophysical surveys (<10kHz), pile driving, explosives and certain acoustic deterrent devices. Details of proposed work should be provided to the Noise Registry ^[61].	The project works design avoids significant adverse effects of man-made noise and vibration. Piling and breaking works are not planned during the construction phase. It is anticipated that potential noise generating equipment in the range of 10Hz – 10 kHz will be used. Advice on whether project work activities should be submitted to the Marine Noise Registry was sought from the JNCC Marine Noise Registry Team and is detailed in Appendix A. Please refer to W045 – Additional Information for further description on noise consideration.
GEN 14 Air quality: Development and use of the marine environment should not result in the deterioration of air quality and should not breach any statutory air quality limits. 4.70 Some development and use may result in increased emissions to air, including particulate matter and gasses. Impacts on relevant statutory air quality limits must be taken into account and mitigation measures adopted, if necessary, to allow an activity to proceed within these limits.	The project will comply with GEN 14 by ensuring that all activities are managed to avoid any deterioration in air quality, with emissions maintained through the use of appropriate controls and good practice.

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4.71 Marine and terrestrial planners should liaise to consider how air quality may be improved, particularly within or adjacent to Air Quality Management Areas.	
GEN 15 Planning alignment A: Marine and terrestrial plans should align to support marine and land-based components required by development and seek to facilitate appropriate access to the shore and sea. 4.72 Alignment of marine and terrestrial plans is required for successful planning and operation of marine industries and activities requiring both land and marine infrastructure, or infrastructure which straddles the jurisdiction of both plan areas. Examples include, but are not limited to, cables or pipelines, aquaculture, ports and harbours, offshore renewables and coastal infrastructure. Maintaining access to the shore and sea is equally important. While access is essential for the economic success of marine industries and consequential social benefits, it is also equally important for recreational activities (many of which are associated with health, wellbeing and sport development) and tourism. 4.73 Marine planners should ensure compatibility with plans for any adjoining land planning area and marine region, and should work cross border to ensure compatibility where this is relevant (Chapter 2 Marine Planning in Context; also Planning Circular - The relationship between the statutory land use planning system and marine planning and licensing 1621). 4.74 When developing proposals, developers and users should be compliant with relevant Local Development Plans. They should also ensure that land-based components of a development or infrastructure, such as cables or pipelines which cross the marine/land interface, do not restrict access to the marine area. Regional Policy: Regional marine plans are required to be compatible with the plans for any adjoining marine region. <applies to inshore waters only>	The submission relates to the continued operation of an existing pipeline already aligned with relevant marine and terrestrial planning frameworks, and no changes are proposed that would alter existing land–sea interfaces. As such, the project remains compliant with GEN 15, maintaining established access to the shore and sea and ensuring continued compatibility with relevant Local Development Plans and adjoining marine plan areas.
GEN 16 Planning alignment B: Marine plans should align and comply where possible with other statutory plans and should consider objectives and policies of relevant non-statutory plans where appropriate to do so. <applies to inshore waters only> 4.75 Alignment of marine planning with other planning, regulation and management that affects the use of the marine area and its resources will be important to manage pressures, further environmental health and achieve sustainable development across the coastal area. Regional Policy: Regional marine plans should consider: relevant non statutory plans or strategies to allow for integration of policies of local relevance to be included for consultation. Examples include, but are not restricted to, shoreline management plans and integrated coastal zone management plans. <applies to inshore waters only>	The project meets GEN 16 as it aligns with relevant statutory marine and terrestrial planning frame and applicable non-statutory plans and strategies, ensuring integrated and sustainable management of the inshore marine area. It is close to but does not encroach on any designated SSSI as detailed in W045 – Site Locality Plan.
GEN 17 Fairness: All marine interests will be treated with fairness and in a transparent manner when decisions are being made in the marine environment.	The project is compliant with GEN 17 as it will be considered through established marine planning and consenting processes that are transparent, proportionate, and allow all marine

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4.76 The concept of the marine environment and its resources being managed for current and future generations and for the benefit of the nation as a whole is integral to marine planning. The marine planning system therefore operates in the long-term public interest. Marine planning has a role to play balancing competing demands for marine resources and resolution of planning issues will not be able to satisfy all interests all of the time. However, it is fundamental that all interests should be able to participate on an equal basis in the planning and decision-making process and that decisions should be taken in a transparent manner.	stakeholders to engage on an equal basis. Decision-making will therefore balance relevant marine interests in the long-term public interest and for the benefit of current and future generations.
GEN 18 Engagement: Early and effective engagement should be undertaken with the general public and all interested stakeholders to facilitate planning and consenting processes. 4.77 Engagement with the public and other stakeholders should be appropriate, proportionate and meaningful. It should be undertaken as early as possible in planning and consenting processes, taking into account statutory pre-application consultation requirements where these apply, to enable a range of views to be fairly reflected. Marine users and potential users, planners and decision makers, statutory consultees, communities, representative organisations, public bodies, government and the general public should all contribute where necessary. Engagement and the views expressed should be a consideration in decision making. There should be a presumption in favour of publicising applications for marine and terrestrial components of a development together during consenting processes.	GEN 18 engagement is undertaken through established site stakeholder groups and the provision of publicly available information, ensuring early, proportionate, and transparent engagement with interested stakeholders to inform the planning and consenting process.
GEN 19 Sound evidence: Decision making in the marine environment will be based on sound scientific and socio-economic evidence. 4.78 Marine plans and decision making will be based on a sound evidence base, drawn from a wide range of sources including the scientific community, stakeholders and users of the marine area. New social, economic and environmental and historic information will continue to improve knowledge of the marine environment and the potential impacts and benefits of its use. Gaps in evidence will be addressed through a variety of means, including, but not exclusively, the Marine Scotland Science Strategy [63], evidence gathered in support of regional planning, and marine research and monitoring mechanisms and stakeholders. 4.79 Deployment and monitoring of new technologies and development on a limited basis and limited scale will improve understanding of impacts, mitigations and the potential for sustainability prior to full scale activity. It should be encouraged by planners and decision makers subject to licensing considerations and the policies and objectives of this Plan. 4.80 Key evidence bases such as National Marine Plan interactive and Marine Scotland interactive will be updated to reflect current information. 4.81 Where evidence is inconclusive and impacts of development or use on marine resources are uncertain, reasonable efforts should be made to fill evidence gaps and decision makers should apply precaution within an overall risk-based approach. This means that if impacts of an activity are uncertain, preventative measures may be required if there is concern that activity may harm human health, living resources, marine ecosystems, interfere with other legitimate uses of the sea or have other social and economic impacts. Modifications to proposals which would eliminate or minimise risk must be considered. The precautions taken should be considered based on risk, by balancing environmental, social and economic costs and benefits and should also take account of legal designations.	The programme is supported by a robust evidence base drawing on appropriate scientific, environmental, and socio-economic information, including existing datasets, stakeholder knowledge, and regulatory guidance. Where evidence uncertainty exists, a precautionary, risk-based approach has been applied to ensure potential impacts are appropriately assessed, mitigated, and balanced against environmental, social, and economic considerations. Please reference the W045 – Environmental Risk and Waste Assessment for additional information.

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GEN 20 Adaptive management: Adaptive management practices should take account of new data and information in decision making, informing future decisions and future iterations of policy. 4.82 Characteristics of the marine area may change over time, as may demands on marine resources. Knowledge of the marine environment and the impacts on it will improve as monitoring data becomes available. Adaptive management provides an opportunity to take account of changing demands and emerging information to make sure decision making and new marine plans remain relevant. 4.83 Where research, data collection and strategic or project level monitoring identifies issues and brings to light new social, economic or environmental evidence, adaptive management practices should incorporate this in decision making, iterations of policy and new marine plans where appropriate. Evolving technologies, innovation and new techniques should all be considered to ensure a flexible and appropriate approach is taken to marine planning and decision making. Planners and decision makers should recognise the benefits of a stable operating environment and should be as transparent as possible as to the breadth of the evidence base being utilised - and the implications of any emerging evidence.	Adaptive management will be adopted where required however the programme has a short timeframe for execution and the change to the marine environment is not anticipated to be significant.
GEN 21 Cumulative impacts: Cumulative impacts affecting the ecosystem of the marine plan area should be addressed in decision making and plan implementation. 4.84 Cumulative impact on a resource and ecosystem service may occur because of a series of developments or activities of the same type or from the combined effects of a mix of different types of activities. How cumulative impacts should be taken into account 4.85 Planning authorities and decision makers will consider the potential cumulative impact of activities and, using best available techniques, whether: • the cumulative impact of activities, either by themselves over time or in conjunction with others, outweigh the benefits; • a series of low impact activities would have a significant cumulative impact which outweigh the benefit; • an activity may preclude the use of the same area/resource for another potentially beneficial activity. 4.86 It is expected that the development of regional marine plans and sector development plans will consider these elements through processes such as Sustainability Appraisal and Strategic Environmental Assessment. Appropriate assessment may be required. Impact Assessment of the socio-economic costs and benefits may also be needed, providing further opportunity to consider a range of possible cumulative impacts. At a project level, such consideration will be given through Environmental Impact Assessment and Habitat Regulation Appraisal. Other considerations	Potential cumulative impacts have been considered in a similar method to that of GEN20. The programme has a short timeframe for execution and culminative effects are not expected.

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4.87 Benefits and adverse effects of a proposal, which may be economic, social or environmental in nature should be provided by the proposing party and weighed using information from a variety of sources to consider different impacts. Cumulative impact assessment may be appropriate even if a project is small where it is reasonably expected to contribute to cumulative impact of existing or proposed activity. However, the level of assessment undertaken for any project should be proportionate to the expected scale and impact of the project as well as the sensitivity of the environment or social or economic effect concerned.

4.88 Mitigation may be required depending on the significance of impacts. This should be evaluated in terms of whether there are any potential impacts on the sustainability of the coastal and marine environment, or social wellbeing.

4.89 Close working across plan boundaries should exist to allow for cumulative effects of activities in plan boundary areas to be considered.