

FISHGUARD LINKSPAN REPLACEMENT

Environmental Statement

Non-Technical Summary

794-NI-POR-00886R
May 2025

1 INTRODUCTION

1.1 The Environmental Statement

This Environmental Statement (ES) has been prepared by RPS on behalf of Stena Line Ports Ltd 'Stena Line' for a replacement linkspan at Fishguard Harbour (hereafter referred to as 'the Proposed Development') to accompany a Marine Licence application for construction works and dredging/disposal at sea, at lands at Fishguard Harbour, Pembrokeshire, Wales.

This standalone Non-Technical Summary (NTS) presents a summary of the ES in plain, non-technical language, as required by the EIA Regulations. The NTS provides a concise outline of the Proposed Development, the potential environmental effects identified, and mitigation measures proposed to avoid, reduce or offset these effects, as well as any related remaining ('residual') impacts.

The Proposed Development can be summarised as follows:

'Replacement linkspan pontoon comprising: demolition and removal of an existing linkspan bridge, jackup barge, buffer dolphin, suspended deck structure, disused RLNI slipway and 3 x small disused kiosks; reclamation and rock armour revetment area with hardstanding and lighting; scour protection; piled reinforced concrete bank seat; tubular Steel Guide Pile; dredging within Fishguard Harbour and Disposal to sea of 78,000m3 to Milford Haven LU169; and temporary and ancillary works'.

The application site is located within Goodwick/Fishguard Harbour, Pembrokeshire (central grid reference 195171.227: 238812.970).

The site is a parcel of land spanning an area of approximately 36 hectares of the harbour, to include the existing linkspan, hinterland and within the bay foreshore.

The UK Marine Policy Statement recognising the importance of Ports as critical to the effective movement of cargo and people.

A detailed description of the existing site and the Proposed Development is set out in ES Volume I Chapter 2: Project Description.

1.2 Structure and Context of the Marine Licence Application

1.2.1 Related Documents

The application is submitted with support by the following main documents:

- Marine Licence Application for construction works
- Marine Licence Application for Dredging and Disposal at Sea
- Environmental Statement (ES)
- Habitats Regulation Assessment (HRA)

The EIA has been conducted with regard to the following plans and drawings, which are submitted as part of the application:

- POR00886-RPS-ML-ZZ-DR-C-0203 Marine Licence Site Location Plan -P01
- POR00886-RPS-ML-ZZ-DR-C-0204 Marine Licence Demolition Layout-P03
- POR00886-RPS-ML-ZZ-DR-C-0205 Marine Licence Proposed General Layout-P02
- POR00886-RPS-ML-ZZ-DR-C-0206 Marine Licence Typical Cross Sections-P03
- POR00886-RPS-ML-ZZ-DR-C-0207 Marine Licence Overall Dredge Layout-P01
- POR00886-RPS-ML-ZZ-DR-C-0208 Marine Licence Depth of Material to be removed to achieve Design Dredge Depth-P01
- PO0886-RPS-PD-XX-DR-C-SK17 Preliminary Planning Boundary-P04

1.3 Structure of the ES

The EIA Regulations outline the formal requirement for the content of the ES. This ES will include matters for inclusion as detailed in Schedule 3 of the same Regulations.

Information contained within the ES is presented in the following way:

- Volume I Main Report
- Volume II Technical Appendices; and
- Volume III Design Drawings and Figures.

Non-Technical Summary (NTS) – **this document**.

Drawings, photomontage and figures which have been produced at A3 have been included within Volume III and referenced within the corresponding chapter and contents page accordingly.

Table 1-1 Specified Information identifies where the information defined by Schedule 3 can be found within this ES. It should be noted that relevant information may be found in ES Volume I, ES Volume II (the supporting technical appendices accompanying the ES) and ES Volume III (the drawings and figures accompanying the ES) and in other documents (as referenced) accompanying the Application.

Table 1-1 Specified Information

Specified Information	Location information is provided (within this ES unless otherwise stated)
a) Description of the Proposed Development comprising information on the site, design, size and other relevant features of the development	ES Volume I, Chapter 2: Project Description
b) Description of the likely significant effects of the Proposed Development on the environment	ES Volume I, Chapters 7 - 24: 'Impact Assessment'
c) Description of any features of the Proposed Development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment	ES Volume I, Chapters 7 - 24: 'Mitigation' sections
d) Description of the reasonable alternatives studied by the applicant, which are relevant to the Proposed Development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the significant effects of the development on the environment	ES Volume I, Chapter 3: Project Need & Alternatives
e) Non-technical summary of the information referred to in sub-paragraphs (a) to (d)	Non-Technical Summary
f) Any information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected	Baseline conditions relevant to each assessment are described in ES Volume I, Chapters 7 - 24: 'Baseline Environment' sections. Assessment methods are described in ES Volume I, Chapter 4 'EIA Process and Methodology' and ES Volume I, Chapters 7 - 24: 'Assessment Methodology' Sections

ENVIRONMENTAL STATEMENT

	Any limitations and/or difficulties with the assessments are described in ES Volume I Chapters 7 – 24: 'Limitation of the Assessment' sections.
--	---

The ES evaluates a series of environmental topics. These topics are considered most likely to be affected by the construction and operation of the Proposed Development.

The topics are presented in Volume I by way of the following Chapters:

Table 1-2 Chapter Numbers and Titles

Chapter Number	Chapter Title
1	Introduction
2	Project Description
3	Project Need & Alternatives
4	EIA Process and Methodology
5	Scoping and Consultation
6	Policy & Legislation
7	Human Health
8	Marine Biodiversity
9	Terrestrial Ecology & Ornithology
10	Coastal Processes
11	Water Resources & WFD
12	Flood Risk
13	Noise & Vibration
14	Underwater Acoustics
15	Air Quality & Climate
16	Archaeology, Architectural & Cultural Heritage
17	Soils, Geology & Geohydrology
18	Land Use & Material Assets
19	Transport
20	Seascape, Landscape & Visual
21	Waste
22	Climate Change
23	Risk of Major Accidents & Disasters
24	Shipping & Navigation
25	Interactions

Technical Appendices and Design Drawings and Figures that support the Chapters are contained within Volumes II – III of this ES respectively.

1.4 Chapter Structure

Each environmental topic Chapter within Volume I is based upon the following structure:

Introduction

This is a brief introduction presenting the scope of assessment.

Assessment Methodology

A brief outline of the technical criteria and the methodology used for the assessment is described. Where applicable, this refers to any consultation that has been undertaken.

Baseline Environment

This provides an assessment of the existing condition, sensitivity and qualities of the site/project area. All research and field work is explained as well as any constraints or difficulties encountered during the baseline process. This provides comparative measure against the project.

Impact Assessment

Each Chapter assesses the 'likely significant effects' that would arise from the Proposed Development. This is represented by the magnitude of impact, whether it is adverse or beneficial, short term or long term, and also the duration and the scale of the impact. Impact is quantified, i.e. in terms of none, negligible, slight/minor, moderate, or substantial/major.

Mitigation

Mitigation measures identified to prevent, reduce or remedy any potentially significant adverse environmental effects identified, beyond that already taken into account as normal good practice are specified here.

Assessment of Residual Effects

This provides a description and assessment of the magnitude and significance of any effects that will remain after the proposed mitigation/design measures are applied. Effects may be adverse or beneficial.

Cumulative Effects

This identifies any in-combination effects that may arise as a result of the effects of multiple projects in the area. The impacts from multiple projects may overlap or act in combination at a particular location or upon a particular resource, thereby leading to more significant environmental impacts than if the impacts were considered in isolation. Effects interactions caused by the combination of a number of effects on a particular receptor are also taken into consideration.

Limitations of the Assessment

This addresses any limitations with the assessment for example technical deficiencies or limitations in available data.

Summary of Effects and Conclusion

This is a concluding statement, which clearly describes the impacts of the project and the overall effects on the environment as a result of the project i.e. whether it is none, negligible, slight/minor moderate or substantial/major. Effects can be adverse or beneficial.

1.5 Project Team

Chapter Number	Chapter Title	Consultant	Qualifications
1	Introduction	Michelle Price, RPS	BLE (Hons) MRTPI
2	Project Description	Gavin Nicholl, RPS	BLE (Hons) MRTPI

ENVIRONMENTAL STATEMENT

3	Project Need & Alternatives	Michelle Price, RPS	BLE (Hons) MRTPI
4	EIA Process and Methodology	Michelle Price, RPS	BLE (Hons) MRTPI
5	Scoping and Consultation	Michelle Price, RPS	BLE (Hons) MRTPI
6	Policy & Legislation	Michelle Price, RPS	BLE (Hons) MRTPI
7	Human Health	Rygnan Pyper, RPS	MA PGDip CEnv MIEMA PFPH
8	Marine Biodiversity	Ellie Cooper, RPS	BSc Hons, MSc
9	Terrestrial Ecology & Ornithology	Tim Oliver, RPS	BSc, MSc
10	Coastal Processes	Kristopher Calder, RPS	BSc (HONS) MSc C.Sci MCIWEM C.WEM AMICE
11	Water Resources & WFD	Mark Magee, RPS	BA, MSc, CSci, CEnv, CWEM, MCIWEM
12	Flood Risk	Diane MacGinnis, RPS	BEng, MSc
13	Noise & Vibration	Catriona Cooper, RPS	BSc, MSc, MIOA
14	Underwater Acoustics	Rasmus Pederson, RPS	BSc. MSc, PhD
15	Air Quality	Stephen McAfee, RPS	BSc, MSc, AIEMA, MIAQM, IES
16	Archaeology, Architectural & Cultural Heritage	Nick Cooke, RPS	BA (Hons), PhD, MCIfA, FSA
17	Soils, Geology & Geohydrology	Joseph McGrath, RPS	MCIWEM C.WEM C.Sci
18	Land Use & Material Assets	Michelle Price, RPS	BLE (Hons) MRTPI
19	Transport	Conor O'Hara, RPS	MSc, BSc, CMILT, MCIHT
20	Seascape, Landscape & Visual	Stuart Anderson, RPS	BSc, Dip LandMan, Dip For, CMLI
21	Waste	Peter Braithwaite, RPS	BSc, MSc
22	Climate	Stephen McAfee, RPS	BSc, MSc, AIEMA, MIAQM, IES
23	Risk of Major Accidents & Disasters	Michelle Price, RPS	BLE (Hons) MRTPI
24	Shipping & Navigation	Client (Stena Line)	
25	Interactions	Sarah Little, RPS	BSc (Hons), MA

2 PROJECT DESCRIPTION

2.1 Site Location

The application site is located within Goodwick/Fishguard, Pembrokeshire (central grid reference 195171.227: 238812.970).

The site is a parcel of land spanning an area of approximately 36 hectares of the harbour, to include the existing linkspan, hinterland and within the bay foreshore.

The port was created in the 1910s by reclaiming land at the base of the headland. The site is indicated on Figure 2-1 Site Location as shown below and appended to this report.



Figure 2-1 Site Location

The site lies within the northern fringes of Goodwick which is a coastal town immediately west of its twin town of Fishguard, within Fishguard Bay. It is bound by steep cliff faces and the Fishguard train Station to the western extents, a breakwater to the north and RNLI Lifeboat Station. Residential properties of Harbour Village lie to the west elevated above Fishguard Bay.

The site is accessed from the A40/Station Hill to the south. The current Stena Line operation includes a twice daily ferry service to Rosslare, covering public ferry passengers and accompanied and unaccompanied freight. The berth is also infrequently used by cruise vessels and historic steamboats.

2.2 Overview

Stena Line operate the ferry terminal at Fishguard. Vehicles embark/disembark the ferries via a temporary linkspan structure which is nearing the end of its useful life. See Figure 2-2 below.



Figure 2-2 Existing Jack Up Barge, Linkspan Bridge, Towers and Concrete Buffer Dolphin

To safeguard the port and provide a safe, long-term solution, Stena Line wish to replace the existing temporary arrangement with a floating linkspan pontoon. Stena already own the proposed linkspan pontoon, which is in service at Mostyn, north Wales. Figure 2-3, below, shows the linkspan pontoon at Mostyn.

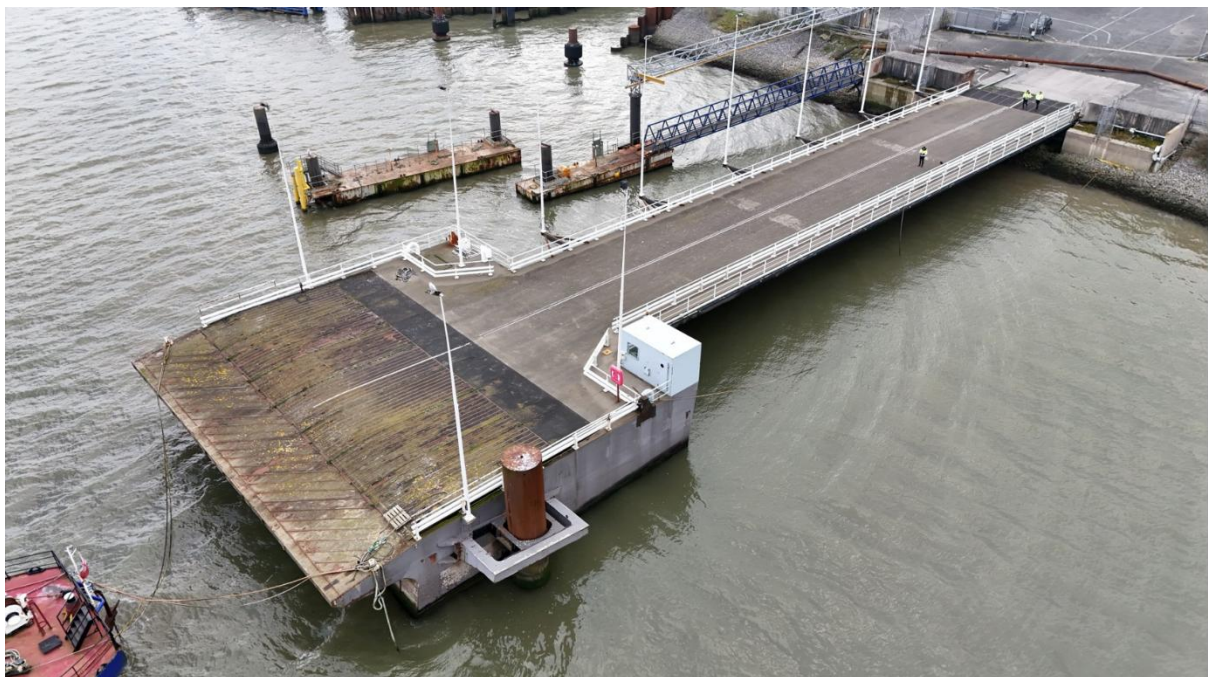


Figure 2-3 New floating linkspan pontoon in service in Mostyn, north Wales

Civil engineering works are required to accommodate the proposed floating linkspan pontoon. These works include demolition, dredging, piling, land reclamation, and rock armour revetment construction. Landside works will be required to adjust traffic and pedestrian routes.

Capital dredging will be carried out to the area to the south of the berth and beneath the existing linkspan to create sufficient water depth for the pontoon linkspan to float at all stages of the tide. Soft bed material within the footprint of the reclaimed area will be dredged to allow the revetment to bear on to competent strata below. Capital dredging in the approach channel and north section of the berth is also included within the scope of the project.

It is proposed that all dredged arisings will be disposed of to sea at a licenced sea disposal site near Milford Haven (LU169).

To construct the civil engineering infrastructure and install the new linkspan pontoon will involve a shutdown of the ferry terminal. It is expected that this shutdown will last approximately 3 months.

2.3 Components

The project involves several key activities aimed at enhancing the infrastructure and operational capabilities of the harbour. These include the following:

- Demolition of
 - Disused RNLI slipway structure
 - Buffer Dolphin
 - Suspended deck structure
 - 3 No. small disused kiosks
- Removal of
 - Linkspan bridge, equipment and cabin
 - Jack up barge
- Dredging with disposal at sea
- Reclamation
- Scour protection to the berth and dredged slope to the rear of the berth.
- Piled Reinforced Concrete Bankseat
- Tubular Steel Guide Pile
- Floating pontoon linkspan installation
- Terminal reconfiguration
- Temporary Works

The schematic diagram shown in Figure 2-4 below identifies the main components of the Proposed Development which will constitute the replacement linkspan.

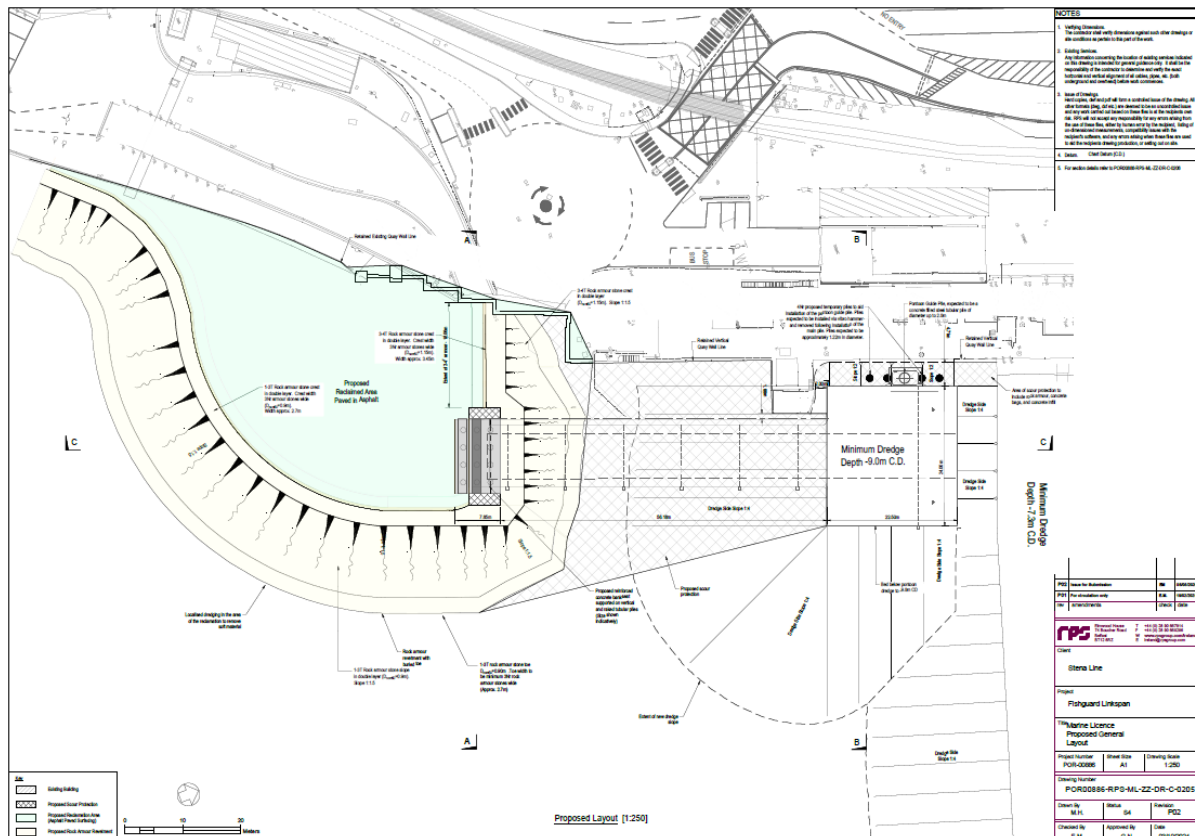


Figure 2-4 Layout showing proposed reclamation works and linkspan and dredging at berth overlaid on existing arrangement.

2.3.1 Reclamation

Construction of the new reclamation area will be undertaken against the shoreline in the vicinity of the old RNLI slipway. The extent of the reclamation is shown in Figure 2-4 Layout showing proposed reclamation works and linkspan and dredging at berth overlaid on existing arrangement.

This area will be formed with imported crushed rock fill material protected by a rock armour revetment. Crushed rock will range from 0-500mm in size and rock armour will range in size from 0.5 tonnes up to 6 tonnes. The footprint of the entire reclaimed area including the rock armour revetment is approximately 5500m² to include 2,150 m² of paved asphalt. The volume of primary rock armour (1-6t) required has been estimated at 5600m³.

The crushed rock and rock armour to form the revetment will either be delivered by road and end tipped off the side of the sea wall or by split hopper barge vessel and dumped within the reclamation area. The crushed rock will be levelled and shaped within the reclamation footprint using plant such as excavators and jack up barges. Excavators shaping the reclamation area will be located on the reclamation area whilst excavators placing the rock armour may be located on jack up barges immediately adjacent to the reclamation area.

The rock armour revetment will have a toe detail which will tie into the scour protection proposed to the dredged slope behind the berth.

This area will be surfaced with an asphalt road surface (surfaced area approximately 1800sqm) which will connect to the existing road and pedestrian footpath network within the terminal. There is currently a storm water outfall at the location of the proposed revetment. The storm sewer will be extended through the reclaimed area with a new headwall being constructed in the revetment.

2.3.2 Demolition/Removal of Structures

It will be necessary to demolish or dismantle a number of structures to enable the construction of the civil engineering works and the installation of the Linkspan Pontoon. These are presented in Figure 2-5 Extents of Demolition/Removal from Site, below. Note the car ramp structure is to be demolished and removed in advance of the rest of the works.

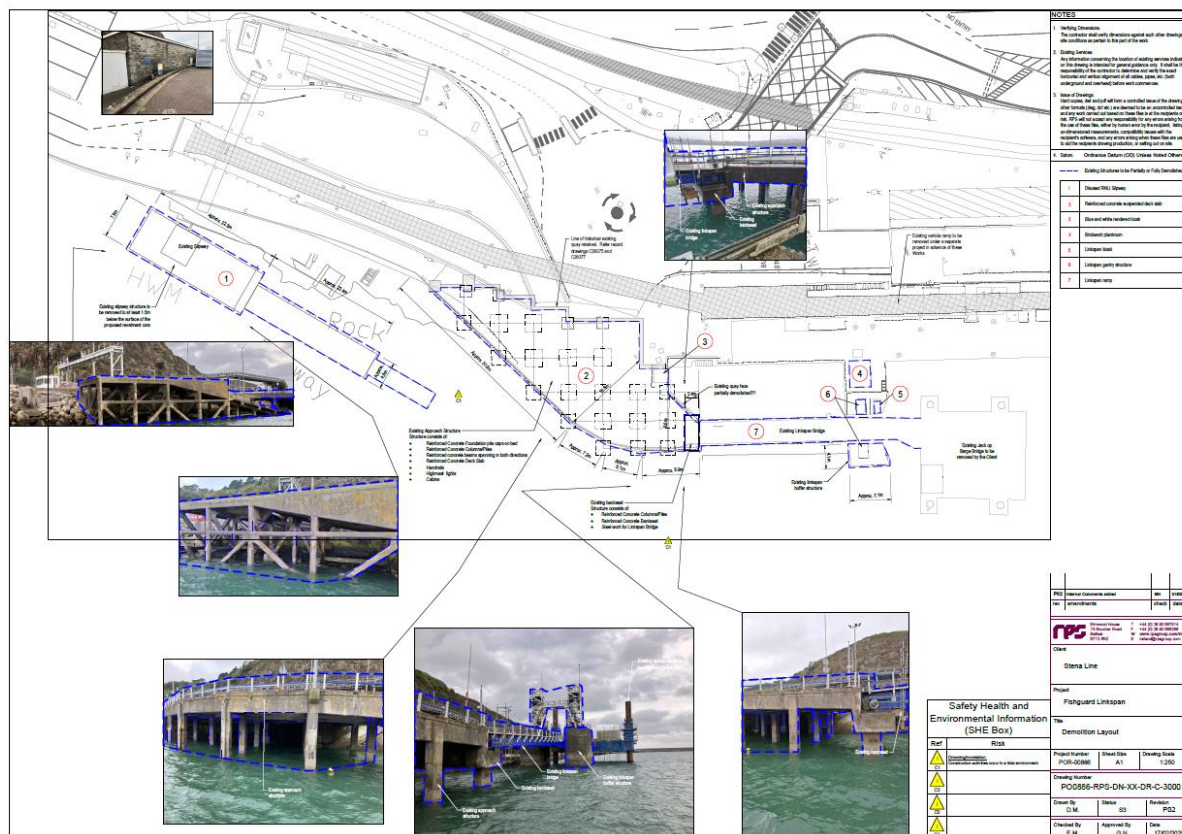


Figure 2-5 Extents of Demolition/Removal from Site

Two phases of demolition will be required. The structures to be demolished or removed in each phase are as follows;

1. Construction Phase with berth operational
The existing disused RNLI slipway, presented in Figure 2-6 Disused RNLI Slipway Structure will be removed using land-based excavators equipped with rock breakers and hydraulic grabs. The area of the RNLI slipway is within the area of reclamation. The shoreline in this area around the slipway consists of concrete or block retaining walls, rock rubble revetment or exposed bedrock. The volume of material to be removed is approximately 350m³



Figure 2-6 Disused RNLI Slipway Structure

2. Construction Phase with closed berth

The existing jack-up barge will be floated away and the steel linkspan bridge and gantry removed. The following structures will be demolished;

- 3 No. small masonry kiosk buildings adjacent to the structures
- Existing linkspan bridge and steel linkspan towers
- Suspended reinforced concrete deck structure (See Figure 2-7 Suspended reinforced concrete deck structure). This suspended deck is not a piled structure; the columns are placed directly on to bedrock exposed on the shoreline.
- Concrete 'buffer dolphin' structure. (See Figure 2-8 South Buffer Dolphin and Linkspan Tower Bridge)
- Jack up barge will be floated away
- The total volume of material to be removed is approximately 2200m³



Figure 2-7 Suspended reinforced concrete deck structure



Figure 2-8 South Buffer Dolphin and Linkspan Tower Bridge

The RNLi Slipway, suspended slab and buffer dolphin structures are all reinforced concrete marine structures. The demolition arisings from these structures may be temporarily placed on the seabed in the immediate vicinity of the respective structure before being removed prior to the construction of the reclaimed area.

All demolition arisings shall be disposed of to an appropriate offsite disposal facility.

2.3.3 Dredging

There has been no dredging undertaken in the harbour for at least the last ten years. All initial dredging undertaken as part of these works will be capital dredging. The Client is also applying for a licenced to subsequently maintenance dredge the harbour over the next 5 years under a separate application.

The proposed areas to be dredged have been named A-H and are presented in Figure 2-9 Dredge Areas. The harbour will be dredged to depths ranging between -7.3mCD and -6.8mCD in the berth and channel and -5.5mCD to the north of the harbour.

It is anticipated that the dredging will be a 24/7 operation over a 12-week period which may be broken into phases. The dredge material is expected to be silty sands and gravels. The dredge material is unsuitable for reclamation fill due to the potential settlement issues from the fine silt material present and the time and space required to dry out material.

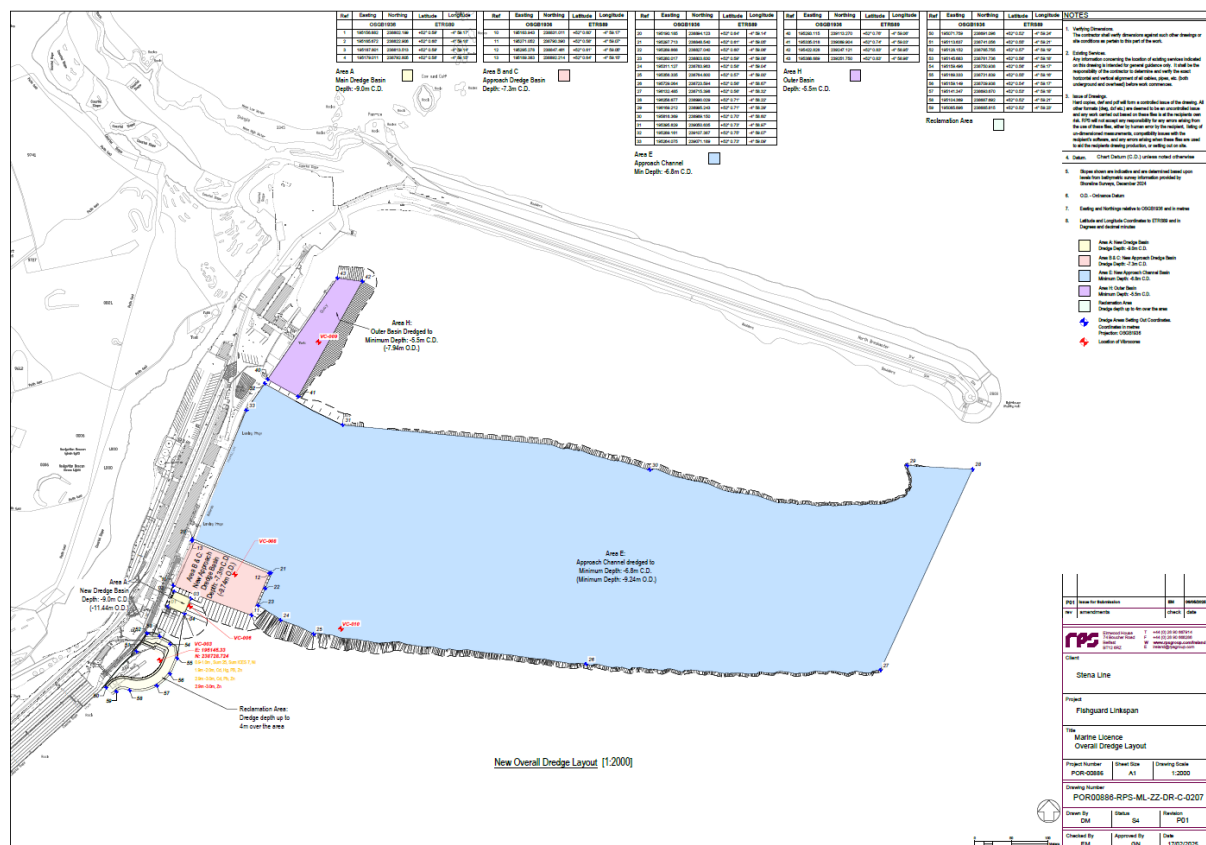


Figure 2-9 Dredge Areas

In total 78,000m³ of capital dredging is expected. The bed material in and around the area of the new linkspan will be dredged using a backhoe excavator mounted on a pontoon. The dredging in the approach channel and the north section of the berth will be undertaken using a Trailer Suction Hopper Dredger (TSHD) and backhoe. Approximate dredge volumes & dredge methods for each area are summarised in Table 2-1.

Table 2-1 Dredge Quantities

Area	Rounded totals to include the contingency up to 78000 m³	Method
A	10,200	Backhoe
B	9,200	Backhoe
C		
E	40,000	TSHD or Backhoe
H	11,200	TSHD or Backhoe
Reclamation area	7,400	Backhoe
Total	78,000	

Subject to geotechnical testing finding the material to be suitable, it is proposed that all dredged material will be disposed of to sea under licence from NRW at a licenced sea disposal site near Milford Haven (LU169).

2.3.4 Bankseat

A reinforced concrete bankseat structure will be constructed at the northern edge of the reclamation to support the linkspan pontoon. This structure is expected to be a piled bank seat, with steel tubular piles filled with concrete. The piles will be raked, or vertical piles installed using vibro, impact driving and rotary boring techniques. These piles are proposed to be steel tubes approximately 0.914m in diameter.

2.3.5 Guide Pile

The guide pile to restrain the floating linkspan will be a steel tube, approximately 2m in diameter, filled with reinforced concrete. This single guide pile will be socketed into bedrock beneath the bed material using a combination of vibro and rotary boring techniques. The installation of the guide pile will require four temporary steel piles to be installed adjacent to it to support the piling rig. These temporary support piles will each be approximately 1.22m in diameter and will be installed via vibro and/or impact driving techniques. The four temporary support piles will be removed once the guide pile has been installed.

2.3.6 Scour Protection

Discrete scour protection will be installed along sections of the existing quay wall where issues are regularly experienced with ship bow thrusters creating scour holes in front of the quay wall. This discrete scour protection will involve insitu poured concrete fill to be placed behind stacked concrete bags and surrounding rock armour.

Scour protection will also be provided to the northern edge of the existing buffer dolphin on the seabed. This scour protection consists of stacked concrete bags with insitu fill behind, between the bags and the toe of the wall. Rock armour will be placed around the bags on the slope of the dredged pocket. Scour protection will also be placed between the south side of the existing dolphin buffer and the toe of the revetment. It is proposed to consist of rock armour or a concrete gabion mattress, approximately 500mm thick.

The gabion mattresses/additional rock armour will also address the issue of secondary scour pits forming in front of the rock armour revetment.

2.3.7 Terminal Reconfiguration

On the landside, changes will be made to the movement of vehicles passenger access and footways to integrate the new reclaimed area to the existing road network to connect the linkspan to the internal terminal road network. No works are planned for the railway station or rail line.

The pontoon will be equipped with electricity, with 10 LED streetlights long its length. The lighting will be designed to prevent glare to receptors and illumination of night sky. A new high mast lighting column will be installed within the footprint of the new reclaimed area.

Drainage provision including drainage channels, gulleys, pipework, manholes, interceptor (where required) and an extension of the existing outfall through the reclamation area will be established. Ducting will be installed to connect power and communication cables to the linkspan pontoon.

International Ship and Port Security Fencing (ISPS) and vehicle barriers will be provided around the boundary of the proposed reclamation area at the waterside.

2.3.8 Linkspan Installation

The proposed linkspan will be transported to the site via floating plant. The linkspan will be floated or lifted into position using floating plant and crawler cranes working from the land.

2.4 Temporary Site Compound

An area will be required for the establishment of the Contractor's site compound. The site compound will be used for the Contractor's site office accommodation, welfare facilities and temporary storage of construction materials. Two potential areas have been identified in Figure 2-10 Potential Site Compound Locations, below. Area 1 is sited along the eastern edge of the Terminal area. The area is currently in use as a carpark for staff and passengers. It is envisaged that this area could be used throughout works for site cabins and parking. Area 2 comprises a large area of gravel on the north end of the Port which is currently in use for overflow parking for trailers and machinery could be utilised.

It is not expected that the use of either or both of these areas would adversely affect the operation of the terminal.

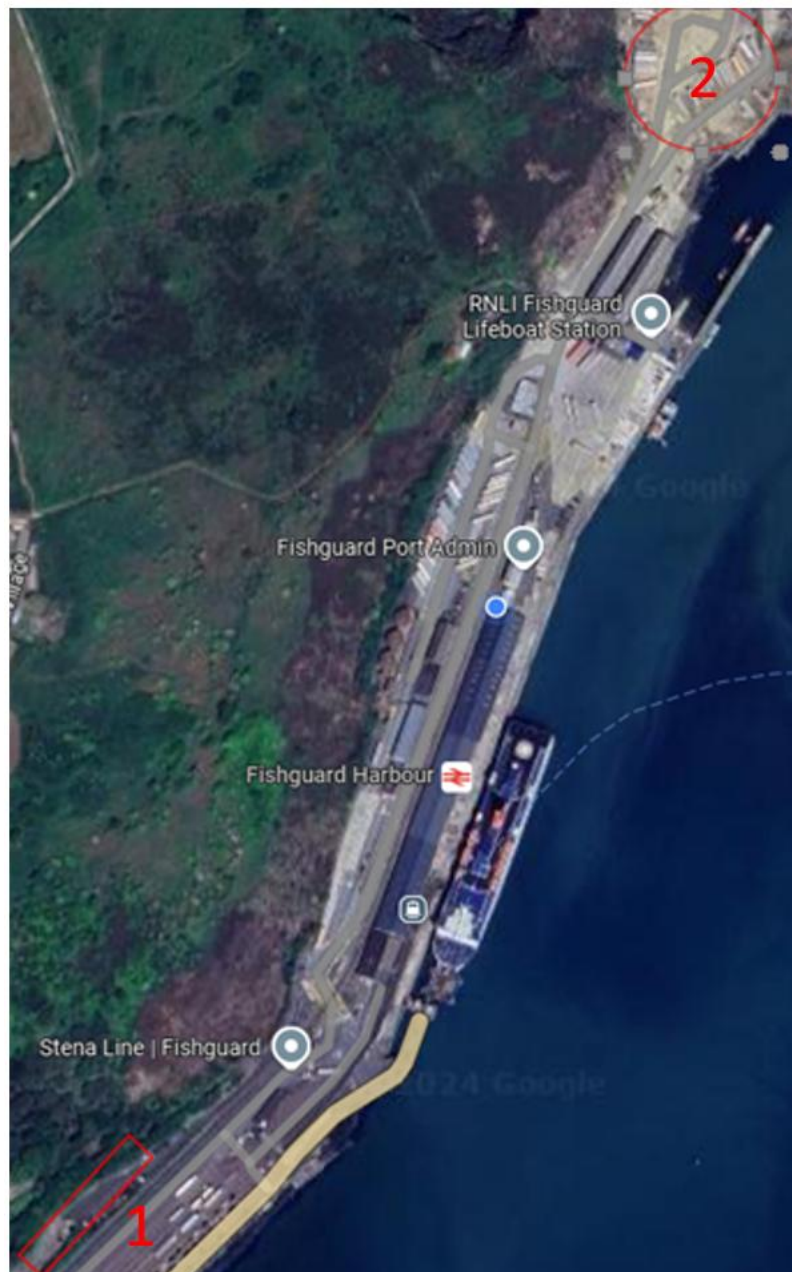


Figure 2-10 Potential Site Compound Locations

2.5 Site Access

With the exception of ferry operations, other port activities will continue to operate throughout the works.

Access to the site will be via Station Hill roundabout which can be accessed at Quay Road from Goodwick in the West or via the Parrog/A40 from Fishguard town in the East. Construction related traffic will use the Stena Ferry Terminal entrance via Station Hill which is accessed from the main centre of Fishguard. Construction traffic is most likely to arrive from Fishguard town direction, as it is the main commuter road from inland cities and towns within Wales.

Suitable traffic management and other systems will be put in place as required to minimise disruption to existing activities within the Stena Line port during the construction period.

The town itself should not be majorly affected by construction traffic; however, shipping and fishing vessels may be interrupted during the construction works.

2.6 Construction Period/Contractors Methodology

McLaughlin and Harvey, the appointed contractor specialising in construction and civil engineering have developed an outline programme.

It is anticipated that port operations will continue during the initial construction works, however the port will close with ferry operations suspended during the shutdown period.

2.6.1 Working Hours

The Port currently operates 24 hours per day, 7 days a week.

Due to the 3-month shutdown to the ferry service, it is expected that work during the construction stage will be 24hrs/day 7 days per week.

2.6.2 Construction Sequence

- Overall Construction – Approximately 9 months
- Shutdown Period – Approximately 3 months

2.6.3 Enabling Works

- Demolition of Car Ramp
- Linkspan Refurbishment Work

2.6.4 Outline Method of Works

- Demolition of RNLI slipway
- Dredging in the wider harbour and outside the area of the jack up barge
- Reclamation and revetment construction and paving works
- Road furniture and fencing
- Bankseat piling and concrete works
- Pavement construction and tie in to existing
- Guide Pile installation (including installation and removal of temporary piles)

2.6.5 Construction Sequence - Shutdown Period

- Demolition of Buffer Dolphin
- Demolition of Suspended Slab
- Installation of Linkspan
- Remove hydraulic Linkspan and Jackup Barge
- Dredge beneath of Jackup Barge
- Drainage and connection to the existing network
- Completion of the pavement works to reclaimed area and rock armour
- Scour protection

2.6.6 Dredging Works Method

Dredging will be undertaken within the footprint of the proposed reclaimed area and pontoon using a combination of dredging techniques, including Traylor Suction Hopper Dredger (TSHDs) and Backhoe Dredger over 2 phases. Dredged materials will be transported via split hopper barge to licenced disposal site Milford Haven LU169. To maximise the use of the dredging equipment on site, 24/7 dredging/transferring to the licenced site is proposed.

2.6.7 Removal of RNLI Slipway

During the reclamation works, the existing RNLI slipway will be demolished using tracked and 90t long reach excavators equipped with rock breakers and hydraulic grabs. Demolition arisings will be removed via dump truck from the site and transported to an approved offsite disposal facility.

2.6.8 Reclamation Works

Works to create a new area of area in front of the existing quay wall will involve transportation of infill material by tipper lorry, where it will be end tipped from the existing quay wall. The material will be placed and levelled within the reclamation footprint using plant such as excavators and dozers where it will be dynamically compacted by compaction roller. The rock armour revetment will be installed either during the installation of the core material so that it is protected from tidal/weather events or as soon as possible following.

Existing traffic management and barriers will be retained, and if necessary to be removed, will be replaced with temporary ones that can be installed/removed as required for traffic flow.

2.6.9 Bankseat Construction Method

A piled bankseat will be constructed for the floating linkspan. Piling activities will include a combination of vibro/impact driving and rotary boring technique to include a rotary piling rig and crawler crane vibro/impact hammer.

2.6.10 Guide Pile Installation

A guide pile is required for the floating linkspan. A temporary piling rig will be used to facilitate the installation of guide piles for the linkspan. This will require vibro/impact driving of temporary piles into position using a crawler crane operating from the quay edge. The guide pile will then be installed using a combination of vibro/impact driving and rotary boring techniques. A temporary steel piling platform will be installed supported on temporary piles to increase the working area of the crawler crane. Upon completion of the guide pile installation, the temporary works will be removed.

2.6.11 Demolition Works

Demolition of the buffer dolphin and suspended slab will be undertaken to accommodate the proposed linkspan. This will be carried out from floating plant (Jack up Barge/Spud Leg Barge/Sheer leg crane barge) using a combination of wire saws, underwater drilling/coring, expansive compounds cardox, and excavators equipped with rock breakers. Demolition arising will be recovered during the dredging campaign.

2.6.12 Linkspan Installation

The proposed linkspan will be transported to the site via floating plant (barges/crane barge) and then lifted onto the bankseat using floating plant and 500t mobile crawler cranes from the quay edge.

2.6.13 Ancillary works

On completion of the linkspan, the Stena line ferry operations will recommence and the contractor will undertake remaining ancillary works (road furniture and fencing) works around the sailings.

3 PROJECT NEED & ALTERNATIVES

3.1 Need for the Project

As stated in Chapter 2, Project Description, the Proposed Development is located within Fishguard Port, a privately run Port, owned by Stena Line who is the sole ferry operator at Fishguard Harbour providing two daily Ro Ro ferry crossings in Rosslare, Ireland all year round on the Stena Nordica.

Access to the ferry is currently via a single land linkspan (access ramp to ship from a fixed land structure), installed in the early 1970's supplemented by a temporary jack up structure. This existing linkspan pontoon and jack up barge does not provide a long-term solution for the ferry at the berth as it is approaching its practical end of life. Stena Line wish to remedy this by providing a replacement linkspan pontoon and associated civil and marine infrastructure to allow the continuation of ferry service from the Fishguard Port.

The Proposed Development will provide ongoing conventional ferry service to and from Fishguard in Wales and Rosslare in Ireland, the need for the Proposed Development is established in terms of continuing to operate the ferry route from the Port.

3.2 Assessment of Alternatives

3.2.1 Legislation and Guidance

Schedule 3, Paragraph 2, of the Marine Works (Environmental Impact Assessment) Regulations 2007 requires that an Environmental Statement (ES) includes:

“a description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the applicant, which are relevant to the proposed project, the regulated activity and their specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects”

Schedule 3 paragraph 3 of the EIA Regulations also requires:

“A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of availability of environmental information and scientific knowledge.”

This "do nothing scenario" is an assessment of the likely environmental effects that will ensue in the event that the Proposed Development is not taken forward.

The presentation and consideration of the various reasonable alternatives considered by the Applicant is an important requirement of the EIA process.

3.2.2 Consideration of Alternatives

Relocating the existing service to an alternative port or developing an entirely new port was ruled out at the outset of the design process, on the basis of a number of critical factors, including impact on the existing port and surrounding area, availability of site, associated infrastructure requirements, cost and operational limitations. As such, consideration was only given to design options which would permit the continuation of the ferry service, within Fishguard Port.

An assessment of the existing linkspan pontoon was carried out in October 2024 to determine if the existing structure could be refurbished. This was ruled out for several reasons:

- The existing linkspan pontoon and structure is approximately 50 years old which is approaching its potential design life.

- The structure is classified under maritime rules and requires ongoing certification which requires increasing amounts of work and poses a risk to continuing operations (in terms of failure to obtain certification).
- The Jack-up structure has been employed to improve the access to the ship due to the narrow width of the original linkspan.
- The existing linkspan is of a single lane configuration which is not the optimum arrangement for efficient and safe ferry operations.

It was considered that replacement of the existing linkspan pontoon was a better solution in terms of long-term sustainability of the ferry operations.

It was concluded that following assessments including site investigations, that the preferred location for the Proposed linkspan pontoon is at the location of the existing linkspan which produced the least impact on the surrounding environment and infrastructure.

For sufficient water depth to accommodate the Proposed pontoon linkspan at all stages of the tide; and for the footprint of the revetment to be placed onto competent strata; and dredging of the approach channel, the design has evolved to include the necessary dredging of approximately 78,000m³.

3.2.3 Conclusion

This chapter ES outlined the 'reasonable alternatives' considered in the design of the Proposed Development and identifies the reasons for the final selection. It demonstrates that the ES complies with the requirements of the EIA Regulations in providing a description of the reasonable alternatives studied by the applicant which are relevant to the Proposed Development and its specific characteristics and giving an indication of the main reasons for the options chosen, taking into account the significant effects of the development on the environment.

4 EIA PROCESS AND METHODOLOGY

4.1 Introduction

This section describes the methodology that will be used in the Environmental Statement (ES) prepared in support of the application for Marine Consent for the Proposed Development. It outlines the methodology for the identification and evaluation of potential likely significant environmental effects (as defined in the EIA Regulations and presents the proposed methodology for the identification and evaluation of potential cumulative and inter-related impacts, which includes due consideration of potential transboundary effects. A systematic and auditable evidence-based approach will be followed to evaluate and interpret the potential effects on physical, biological and human receptors.

4.2 Basis of Assessment

4.2.1 EIA Legislative Basis and Guidance Documents

In compliance with the EIA Regulations in Wales and the EU Directive on the assessment of the effects of certain public and private projects on the environment (EIA Directive) (2011/92/EU, as amended by Directive 2014/52/EU) as applied by The Environment, Food and Rural Affairs (Environmental Impact Assessment)(Amendment)(EU Exit) Regulations 2019 in the marine environment, when applying for a marine licence, and Harbour Revision Order an ES is required to be prepared and submitted in support of these applications if they are likely to have a significant effect on the environment due to factors such as their size, nature or location.

An EIA is required to fulfil the requirements of the following regulations:

- In respect of a marine licence application: The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)
- In respect of a Harbour Revision Order: The Harbour Act 1964

Environmental Impact Assessment of applications for consents likely to have a significant effect on the environment by virtue of factors such as their size, nature or location under Article 2 are required under the Marine Works (Environmental Impact Assessment) Regulations 2007, as amended.

In addition, the following Regulations will also be considered in the production of the Project ES:

- The Conservation (Natural Habitats, etc) Regulations 1994;
- The Conservation of Offshore Marine Habitats and Species Regulations 2017 (which apply to marine licences);
- The Wildlife and Countryside Act 1981 (Variation of Schedule 9) (Wales) Order 2015

In addition to the legislative requirements, guidance and best practice documents will be developed to assist with the production of a 'fit for purpose' ES. These include:

- Guidance on Marine Licencing under Part 4 of the Marine and Coastal Access Act 2009;
- Guidelines for Ecological Impact Assessment (EclA) in the UK and Ireland – Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2019);
- IEMA Environmental Impact Assessment Guide to Shaping Quality Development (IEMA, 2015);

4.3 Environmental Impact Assessment Process

The EIA process can be broadly summarised as consisting of:

- Scoping: The Applicant produces a Scoping Report and requests a formal Scoping Opinion from the competent authority, NRW)
- Consultation: The competent authority is required to consult statutory consultees;

- EIA Report Preparation: The ES will be prepared, considering the responses to the consultation process and outcomes of the assessment of likely significant environmental effects of the Proposed Development during the construction, operation and maintenance, and decommissioning stages of the project lifecycle;
- EIA Report Consultation: The ES (and the application to which it relates) must be publicised, and the consultation bodies and the public must be given an opportunity to give their views about the Proposed Development and the ES;
- Determination: The competent authority must examine all the environmental information, including the ES and any comments and representations received, and must reach their reasoned conclusion on the significant effects of the development on the environment. The environmental information, and the conclusions reached, must be taken into account by the competent authority in deciding whether or not to give consent for the development. The competent authority must also consider whether any monitoring measures are appropriate; and
- Decision notice: The competent authority must inform the public and the consultation bodies of the decision and must publish a 'decision notice' which incorporates the authority's reasoned conclusion on the significant effects of the development on the environment.

4.3.1 Proportionate EIA

The importance of delivering EIAs which are proportionate and accessible to a wide range of stakeholders has been acknowledged by EIA practitioners, with a recent drive for improved quality of ES from a number of organisations (e.g. IEMA, 2017).

4.3.2 Key Principles of EIA

4.3.2.1 Overview

Within the ES, the assessment of each topic will be included in a separate chapter. A list of the topic chapters that will be included in the ES is outlined in Table 1-2 Chapter Numbers and Titles. Within each of the topic chapters, the following matters will be considered:

- Identification of the study area for the topic specific assessment;
- Description of relevant legislation and guidance;
- Description of any relevant consultees responses from consultation;
- Description of the methodology to inform the baseline including any surveys or site specific studies
- The assessment methodology impact criteria
- Description of the baseline environment;
- The impact assessment and construction and operational effects;
- Identification of mitigation measures likely to be implemented to reduce or avoid significant adverse environmental effects
- Assessment of any residual effects
- Description of cumulative effects in-combination and effects interactions;
- Description of any limitations of the assessment;
- Summary of the effects and conclusions;
- Reporting; preparation of ES and Non-Technical Summary

4.3.3 Assessment of the Environmental Effects

The assessment of whether the proposed development is likely to have a significant impact on the environment has been undertaken through a variety of methods:

- Professional judgment and experience based on published guidance criteria;
- Assessment of both temporary and permanent effects (direct, indirect, secondary and residual);
- Assessment of interaction and cumulative effects;
- Assessment of duration and reversibility of these effects;
- Assessment against local, regional and national planning policy;
- Consultation with statutory and non-statutory consultees.

Determining the significance of effects is a process that involves defining the magnitude of the impacts and the sensitivity of the receptors. The criteria for defining impact magnitude are outlined in Figure 4-1 Definition of terms relating to the magnitude of an impact.

Magnitude of impact	Definition
High	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Adverse). Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial).
Medium	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements (Adverse). Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial).
Low	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements (Adverse). Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial).
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse). Very minor benefit to or positive addition of one or more characteristics, features or elements (Beneficial).

Figure 4-1 Definition of terms relating to the magnitude of an impact

The criteria for defining receptor sensitivity are outlined in Figure 4-2 Definition of terms relating to the sensitivity of the receptor.

Sensitivity	Definition
High	High importance and rarity, national scale, and limited potential for substitution. Those affected will not be able to adapt to changes and continue to maintain pre impact status.
Medium	High or medium importance and rarity, regional scale, limited potential for substitution. Able to adapt with some difficulty and maintain pre-impact status but only with a degree of support.
Low	Low or medium importance and rarity, local scale Those affected are able to adapt with relative ease and maintain pre-impact status.
Negligible	Very low importance and rarity, local scale Those affected are able to adapt easily and maintain pre-impact status.

Figure 4-2 Definition of terms relating to the sensitivity of the receptor

The significance of the effect is determined by correlating the magnitude of the impact and the sensitivity of the receptor. The particular method employed for this assessment is presented. Where a range of significance of effect is presented, the final assessment for each effect is based on calculated assessment and professional judgement.

For the purposes of this assessment, any effects with a significance level of slight or less have been concluded to be not significant in terms of the EIA Regulations.

Sensitivity of Receptor / Receiving Environment to Change / Effect					
Magnitude of Change		High	Medium	Low	Negligible
	High	Major	Major	Moderate	Negligible
	Medium	Major	Moderate	Minor	Negligible
	Low	Moderate	Minor	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Figure 4-3 Matrix used for the assessment of the significance of the effect

In instances where assessment do not adhere to the significance criteria stated above, this is due to specific tailored approaches to assessment of significance that are required by professional institutions of which the assessors are members and/or approaches that have been refined and agreed through previous experience.

In all instances, assessments contained in the ES follow a structured layout and contain an assessment of significance that is clearly set out and rationalised in each topic chapter.

Each topic chapter provides an explanation of any assumptions and limitations that have been recognised in the preparation of the ES and identifies the predicted effects on identified receptors with regard to that specific environmental consideration.

4.3.4 Mitigation Measures

The EIA can influence the design of a project in many ways, including:

- amending the layout and extent of a development site to avoid key sensitive receptors;
- amending the design of a specific aspect of the development to manage impacts;
- specifying construction techniques to avoid effects on particular receptors; and
- changing materials to reduce volume and/or transport impacts (IEMA, 2016).

There are three distinct forms of mitigation which include:

- **primary mitigation** (inherent): “Modification to the location or design of the development made during the pre-application phase that are an inherent part of the project, and do not require additional action to be taken” (IEMA, 2016);
- **secondary mitigation** (foreseeable): “Actions that will require further activity in order to achieve the anticipated outcome. These may be imposed as part of the planning consent, or through inclusion in the ES” (IEMA, 2016); and
- **tertiary mitigation** (inexorable): “Actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirement, or actions that are considered to be standard practices used to manage commonly occurring environmental effects” (IEMA, 2016).

Primary Mitigation (Embedded Mitigation Measures)

Primary mitigation has been referred to as “Embedded Mitigation Measures” within this report. The iterative approach to the impact assessment process has been utilised to inform the design of the Proposed Development (through the identification of likely significant environmental effects and development of embedded mitigation measures to address these). The incorporation of such measures within the design demonstrates commitment to implementing the identified measures. These measures will be referred to throughout the ES as ‘embedded mitigation measures’.

By employing this approach, the significance of effect to be presented in the ES is considered representative of the maximum residual effect that the Proposed Development will have, should the application for consent be approved and the Proposed Development be constructed.

Both primary and tertiary measures can be ‘embedded’ into the project design. EIA can therefore be undertaken on the basis that these measures will definitely be delivered and therefore any effects which might arise without these mitigation measures do not need to be identified as potential effects as there is no potential for them to arise (IEMA, 2016).

4.3.5 Cumulative Effects

A Cumulative Effect Assessment (CEA) is a legal requirement under the EIA Regulations. A CEA provides consideration of the impacts arising from the Proposed Development alone and cumulatively with other relevant plans, projects and activities. Cumulative effects are therefore the combined effect of the Proposed Development in combination with the effects from a number of different projects, on the same receptor or resource.

A fundamental requirement of undertaking the CEA is to identify those foreseeable developments or activities with which the Project may interact to have the potential to result in a cumulative impact. All phases (construction, operation and maintenance, and decommissioning) of the Proposed Development may have the potential to lead to cumulative impact.

The CEA will consider all other relevant plans, projects and activities that are publicly available six months prior to the Proposed Development application.

The EIA Directive 2014/52/EU specifies at Annex III that "the likely significant effects of projects on the environment must be considered [...] taking into account [*inter alia*] the cumulation of the impact with the impact of other existing and/or approved projects"; and at Annex IV that "a description of the likely significant effects of the project on the environment resulting from, *inter alia* [...] the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources" is required.

This obligation is mirrored in Schedule 4 of The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended).

Cumulative effects are assessed in each chapter in respect of impacts resulting from the accumulation of impacts generated by the proposed redevelopment on the same receptors and the impacts potentially arising from adjacent or nearby developments together with those predicted for the proposed redevelopment. A list of projects considered for their potential to generate significant cumulative effects is contained at Appendix 4.A and associated Figure 4.1.

The first step in determining cumulative effects comprised the identification of a list of other projects which may have the potential to overlap with the proposed redevelopment based on available information.

The scope of the other projects that have been considered as part of this cumulative assessment have been identified through a desk study involving general internet searches and in particular, scrutiny of consenting authority websites. The projects were either registered on Natural Resource Wales, An Bord Pleanála, Maritime Area Regulatory Authority (MARA), Pembrokeshire Coast National Park and North Devon Council websites.

Other projects for which a development consent application has been submitted or consent granted were included. Potential future projects which have not submitted an application for consent were not included.

Those other projects whose impacts could foreseeably overlap with the construction or operation of the proposed redevelopment or where construction impacts may be consecutive but cumulative, were considered.

When undertaking the CEA of the Proposed Development, a tiered approach was adopted. This provides a framework for placing relative weight upon the potential for each project/plan to be included in the CEA to ultimately be realised, based upon the project/plan's current stage of maturity and certainty in the projects' parameters. The tiered approach which will be utilised within the Proposed Development CEA employs the following tiers:

- **Tier 1 assessment** – Proposed Development;
- **Tier 2 assessment** – All plans/projects assessed under Tier 1, plus projects which are operational, under construction, those with consent and submitted but not yet determined;
- **Tier 3 assessment** – All plans/projects assessed under Tier 2, plus those projects with a Scoping Report; and
- **Tier 4 assessment** – All plans/projects assessed under Tier 3, plus projects where a TCE Agreement for Lease (AfL) or regional equivalent has been granted.

All projects/plans that have been screened into the CEA via the screening process will be allocated into one of the above Tiers and assessed in the CEA.

4.3.5.1 Transboundary effects

Transboundary effects arise when impacts from the Proposed Development within one devolved UK region affects the environment of another devolved UK region, self-governing Crown Dependency or EC or EEA member state(s). The need to consider such transboundary effects has been embodied by the United Nations Economic Commission for Europe Convention on EIA in a Transboundary Context

(commonly referred to as the 'Espoo Convention'). The Convention requires that assessments are extended across borders between Parties of the Convention when a planned activity may cause significant adverse transboundary impacts.

Article 7 of the amended EIA Directive provides the basis for consultation between sovereign States in relation to the likely significant environmental effects of proposed development in one State on the environment in another State. The principal obligation is in respect of information and consultation and is imposed by Article 7(4) of the amended Directive:

“The Member States concerned shall enter into consultations regarding, inter alia, the potential transboundary effects of the project and the measures envisaged to reduce or eliminate such effects and shall agree on a reasonable timeframe for the duration of the consultation period. Such consultations may be conducted through an appropriate joint body.”

Under Regulations 27 and 28 of the EIA Regulations, for any project that is likely to cause significant transboundary effects, the Department must send information about the development to the relevant government department of the affected State and invite them to participate in the consultation procedures. The possibility of transboundary effects with Republic of Ireland and other neighbouring devolved UK regions will also be considered.

4.3.6 Inter-related effects/Interactions

The EIA Regulations require consideration of inter-related effects. Inter-related effects refer to the inter-relationships between EIA topics that may lead to environmental effects. There are two categories of inter-related effects:

- project lifetime effects: effects that occur throughout more than one phase of the project (construction, operational and maintenance, or decommissioning) interacting to potentially create a more significant effect upon a receptor than if just assessed in isolation in a single phase; and
- receptor-led effects: effects that interact spatially and/or temporally resulting in inter-related effects upon a single receptor. For example, the effect upon subsea noise on marine mammals may be greater when multiple sources of impact interact or combine to produce a different or greater effect upon this receptor than when single sources of impact are considered in isolation. Receptor-led effects might be short term, temporary or transient effects, or incorporate longer term effects.

Within the EIA, assessment of inter-related effects will be undertaken with specific reference to the potential for such effects to arise in relation to receptor groups. The term 'receptor group' is used to highlight the fact that the proposed approach to inter-relationships assessment will, in the main, not assess every individual receptor assessed at the EIA stage, but rather, potentially sensitive groups of receptors.

Where the significance of an effect within the topic-specific assessment has been identified as 'no effect across all stages of the project', the assumption has been made that these effects can not contribute to any inter-related effects. These effects will therefore not be included in the inter-related effects assessment as there will be no effect from the Proposed Development over the lifetime of the project.

The inter-related assessment will consider only effects from the Proposed Development and not those from other projects, which will be considered in the Cumulative Effect Assessment (CEA).

4.3.7 Assumptions and Limitations

The key assumptions and limitations that have been identified in undertaking the ES are set out below:

- Baseline conditions established from a variety of sources, including historical data, are correct and accurate, but due to the dynamic nature of certain aspects of the environment, conditions will change during the construction and operation of the Proposed Development;
- It is assumed that information received from third parties is accurate, complete and up to date;
- The assessments contained within each of the technical chapters are based on an assumption that embedded mitigation measures set out in the drawings and detailed in ES Volume I Chapter 2: Project Description are implemented;
- The mitigation and monitoring measures outlined within each of the technical chapters are implemented and secured by the LPA through conditions and/or obligations (as appropriate);
- Demolition and construction works across the site would take place substantially in accordance with the programme of works described in ES Volume I Chapter 2: Project Description;
- Where detailed information has not been available, reasonable assumptions have been made, and have been clearly set out, based on experience of developments of similar type and scale to enable assessment of likely significant effects; and
- Consented or proposed cumulative schemes will be implemented substantially in accordance with information that is publicly available and subject to the same regulatory regimes and good practice management controls as this Proposed Development.

Assumptions and limitations specific to certain topics are identified in the appropriate technical chapters.

4.4 Professional Team and Quality Management

4.4.1 The Applicant

Stena Line is a Swedish shipping company and one of the world's largest ferry operators. It services Denmark, France, Germany, the United Kingdom, Ireland, Latvia, the Netherlands, Poland, Finland and Sweden. Stena Line was founded in 1962 in Gothenburg, Sweden, the company headquarters.

4.4.2 The Project EIA Team

The EIA regulations require that the ES must be prepared by competent experts in order to ensure completeness and quality of the EIA Report. All experts employed to prepare the individual assessment have the appropriate qualifications and level of experience with their given field to undertake the relevant surveys and assessments.

RPS has been instructed by the developer to lead the marine licensing, design and EIA for the Proposed Development. This includes a review of the key environmental issues associated with the construction, operation and maintenance, and decommissioning of the Proposed Development as part of the EIA.

This ES has been completed using the quality controls and procedures with the RPS Tetrattech Quality Management System to British Standard ISO 9001 and has ensured that all surveyors, assessors, co-ordinators and reviewers associated with the preparation of this ES have the appropriate qualifications and experience.

The ES has been subject to rigorous internal RPS Tetrattech peer review to ensure compliance with EIA Regulations.

5 SCOPING AND CONSULTATION

5.1 Screening, Scoping and Consultation

5.1.1 Pre application Discussions with NRW

Formal consultation with NRW, the client and RPS was undertaken on the 5th November 2024 to discuss the site investigation works and marine licence for construction and dredging and disposal. Clarifications were sought from NRW regarding the sample locations, sample plan and analysis and timescales for the associated band 1 licence. RPS clarified the timescales for submission of the Band 1 and Band 3 screening/scoping and EIA/Marine Licence. NRW clarified the submission of two application forms for the construction and dredging/disposal at sea however to be recorded as same case number (one licence). NRW also advised that the INNS Biosecurity Risk Assessment and Management Plan and the National Marine Plan signposting should be submitted with the Band 3 licence.

5.1.2 Band 1 Marine Licence Responses

A list of the consultees who responded to the pre submission of the associated Band 1 Marine Licence Consultees and Response to Marine Licence for Band 1 - Site Investigations are set out in 5.1.5.2.

5.1.3 Scoping Responses

In preparation of the Marine Licence application, a formal screening and scoping opinion was sought on the need for an EIA in respect of the Proposed Development in accordance with Part 2, Regulation 11 and 13 of the Marine Works (EIA) Regulations 2007 (as amended). The screening and scoping request was submitted to NRW in November 2024 (NRW reference SC2402) and NRW issued a formal response on the 31st of January 2025. A list of the consultees whom responded to the scoping request are set out in 5.1.5.1 List of Consultees; and issues raised and project team responses are set out in Table 5-1 Consultee Responses and Consideration

Copies of correspondence between RPS and NRW, is included in Volume III, Appendix 5.A.

Under direction of the applicant, Stena Line, RPS have coordinated and prepared an ES in line with The Marine Works (EIA) Regulations 2007 (as amended) in respect of the Proposed Development. In defining the scope of the ES and undertaking the EIA process, consideration has been given to the matters identified within the NRW response.

5.1.4 Engagement with NRW Advisory Team

Further meetings were undertaken between NRW and the project team following the scoping opinion.

A meeting with NRW Advisory team and the project team was undertaken on the 28th February 2025. Key elements discussed included; the disposal of dredge materials and the procedures for new dredge materials and potential in combination effects; the calibration/validation of data within the Harbour and disposal site; records of blue mussels and necessary for subtidal survey; and the necessity of an intertidal survey.

A 2nd meeting was undertaken on the 5th March 2025 with James Highfield, NRW Advisory lead for Benthic ecology and the project team to discuss the plans for sampling and possibility of blue Mussels within the Harbour. At this meeting it was confirmed that the record of Blue Mussels from 2014 suggested that the age and size of mussel from that record would not warrant a survey to be undertaken. It was also confirmed that another grab sample was undertaken for Macrofauna at each of the sample locations and that these are tested at an accredited laboratory.

A 3rd Meeting was undertaken on the 18th March 2025 with Heads of Development Planning and Marine, NRW; Rhian Jardine and Emmer Litt as point of contacts for the project. It was confirmed that the requirement for modelling at Fishguard Harbour was dependent on any sensitive habitats present within the vicinity of the proposed project and that no modelling of the disposal site was required as

this was considered disproportionate to the scale of the disposal at LU169. It was however advised that engagement was undertaken with Milford Haven Port Authority (MHPA).

5.1.5 Engagement with Milford Haven

RPS Project Team met with Martin Maloney, The Port Hydrographer from The Bates Partnership Dredging, Harbour and Offshore Consultancy on behalf of Milford Haven Port Authority on 1st April 2024. The Bates Partnership consultancy carry out the development and supervision of dredging and survey requirements of Milford Haven Port Authority and others wishing to dispose at the licensed sites LU168 and LU169.

Mr Maloney advised that LU169 is licensed to accept 154,000m³ and up to 250,000m³ with permission by NRW over a 12-month period providing an allowance of 96,000 m³ for third parties to use the disposal site.

It was confirmed that there are no commitments for 2026, but that planned dredging in 2025 may spill into 2026. It was also advised that Milford Haven Port Authority undertake annual surveys in August/September to assess need for any dredging to be undertaken. The Proposed Development seeks to disposed 78,000M³ of sandy silt in 2026 which is well below the licensed capacity per annum.

Table 5-1 Consultee Responses and Consideration

Consultee and type of response Date	Issues Raised	Response to issue raised and/or where considered in EIA
General/Overarching 31 January 2025 NRW PS Scoping Opinion	Competent expert statement	A list of the competent authors is listed within Table 1, Chapter 1 and statement of competency within section 4.4, Chapter 4
General/Overarching 31 January 2025 NRW PS Scoping Opinion	Inclusion within EIA: - Non-technical summary	A Non-Technical Summary accompanies this EIA
General/Overarching 31 January 2025 NRW PS Scoping Opinion	Inclusion within EIA: - Chart/Map of activity	A Chart/Map of activities are included within Volume III of this EIA
General/Overarching 31 January 2025 NRW PS Scoping Opinion	Inclusion within EIA: - Description of likely significant effects	A description of the likely significant effects are included within Chapters 7 – 24 of this EIA
General/Overarching 31 January 2025 NRW PS Scoping Opinion	Inclusion within EIA: - Description of methodology for assessment	Chapter 4 outlines the overarching EIA Process and Methodology
General/Overarching 31 January 2025 NRW PS Scoping Opinion	Inclusion within EIA: - Description of measures used to avoid significant adverse effects and mitigation	A description of significant adverse effects and mitigation are included within Chapters 7 – 24 of this EIA
General/Overarching 31 January 2025	Inclusion within EIA: -	Chapter 23 outlines the risks of major accidents and disasters

ENVIRONMENTAL STATEMENT

NRW PS Scoping Opinion	Description of significant adverse effects from risks of major accidents and disasters	
General/Overarching 31 January 2025 NRW PS Scoping Opinion	Inclusion within EIA: - Transboundary impacts	Transboundary impacts (were appropriate) are included within Chapters 7 – 24 of this EIA
General/Overarching 31 January 2025 NRW PS Scoping Opinion	Engagement with relevant stakeholders	Chapter 5 (this chapter) outlines the consultation with relevant stakeholders
General/Overarching 31 January 2025 NRW PS Scoping Opinion	Sediment sampling and analysis and biosecurity risk assessment	Sediment sampling results and analysis are provided at Appendix 17.C INNSMP/Biosecurity Risk Assessment is provided at Appendix 8.B
General/Overarching 31 January 2025 NRW PS Scoping Opinion	Consideration and compliance with the Shoreline Management Plan; UK Marine Policy Statement; and Welsh National Marine Plan	These are considered within Chapter 6 Policy & Legislation and Appendix 6.A WNP Signposting document
General/Overarching 31 January 2025 NRW PS Scoping Opinion	Landowners consent (Crown Estate)	Correspondence with Crown Estate is provided at Appendix 5.B
Project Description 31 January 2025 NRW PS Scoping Opinion	Further information on dredging programme (volumes, footprint and particle size distribution)	Chapter 2 Project Description sets out the dredging volume and footprint. Sediment sampling results and analysis are provided at Appendix 17.C
Project Description 31 January 2025 NRW PS Scoping Opinion	Samples analysed in accredited UK lab and sediment characterised by particle size distribution, type and contaminants	Sediment sampling results and analysis are provided at Appendix 17.C Macrofauna sampling results and analysis are provided at Appendix 8.A

ENVIRONMENTAL STATEMENT

Project Description 31 January 2025 NRW PS Scoping Opinion	Further information on dredging methodology, location and duration	Chapter 2 Project Description sets out the dredging methodology, location and duration
Project Description 31 January 2025 NRW PS Scoping Opinion	Further information on use and disposal of dredge	Chapter 2 Project Description sets out the disposal of the dredge materials
Project Description 31 January 2025 NRW PS Scoping Opinion	Details of existing dredge maintenance regime and prediction of maintenance following proposal	Localised plough dredging occurs in the harbour periodically. Any maintenance dredging will be dealt with separately under a future licence.
Project Description 31 January 2025 NRW PS Scoping Opinion	Disposal site suitability of dredge	Appendix 17.C sets out the Particle Size Analysis and Results. Whilst this indicates that there is some contamination in VC3 and VC9 at the required depth, the location of depth of the samples found above action level 2 is not in an area scheduled for dredging to the contaminated depth. The disposal site is relatively local to Fishguard port, accepting the full range of particle sizes and providing capacity for dredging volume.
Project Description 31 January 2025 NRW PS Scoping Opinion	Further information on land reclamation and rock revetment methodology (volumes required, area of seabed lost, area reclaimed) Clarity on how the sediment will be retained prior to construction of rock armour revetment	Chapter 2 Project Description sets out the land reclamation and rock revetment volume and area. Following design evolution there is no longer requirement for sediment retention.
Project Description 31 January 2025 NRW PS Scoping Opinion	Further information on rock armour revetment toe methodology (type of materials for buried toe and rock revetment)	Following design evolution there is no longer requirement for a buried rock armour revetment toe. Details of are set of in section 2.3.6 of Chapter 2 Project Description.
Policy & Legislation 31 January 2025 NRW PS Scoping Opinion	Include policy and legislation section and consideration of plan policies	These are considered within Chapter 6 Policy & Legislation and Appendix 6.A WNP Signposting document

Benthic Subtidal and Intertidal Ecology 16 January 2025 NRW(A)	NRW(A) advises that the potential release of contaminants during dredging and construction works needs to be included for assessment of impact to Water Frameworks Directive (WFD), Water Quality and benthic ecology.	The impact of the release of sediment bound contaminants has been assessed for benthic ecology in section 8.9.1.2.4.
Benthic Subtidal and Intertidal Ecology 16 January 2025 NRW(A)	NRW have records of blue mussel <i>Mytilus edulis</i> beds within the Planning Boundary. As these are a 'Habitat of Principal Importance to Wales' under Section 7 of the Environment (Wales) Act (2016), we advise that they are given consideration in the full EIA and Environment Statement.	Blue mussel beds were identified within Fishguard Harbour during a 2014 NRW survey (NRW, 2025b). However, during a meeting with NRW on 5th March 2025, a benthic specialist at NRW confirmed that these blue mussel records were juveniles and were highly unlikely that the mussel bed habitat is present (NRW, pers. comm.). Therefore, blue mussel beds were not considered further in the assessment.
Benthic Subtidal and Intertidal Ecology 31 January 2025 NRW Permitting Service (NRW PS) Scoping Opinion	NRW PS draw to your attention, as identified by NRW(A) that there are records of blue mussel beds within the Planning Boundary. These beds are listed as 'Habitat of Principal Importance to Wales' under Section 7 of the Environment (Wales) Act (2016) and must be appropriately considered in the ES.	Blue mussel beds were identified within Fishguard Harbour during a 2014 NRW survey (NRW, 2025b). However, during a meeting with NRW on 5th March 2025, a benthic specialist at NRW confirmed that these blue mussel records were juveniles and were highly unlikely that the mussel bed habitat is present (NRW, pers. comm.). Therefore, blue mussel beds were not considered further in the assessment.
Benthic Subtidal and Intertidal Ecology 16 January 2025 NRW(A) Comments	NRW(A) note that no subtidal surveys have been proposed by the Applicant in the EIA Scoping Report. As the habitats maps shown in Figures 4.2 and 6.7 [of the EIA Scoping Report] differ slightly, NRW(A) advise that an updated survey programme is conducted to gain an accurate understanding of the benthic habitats present both within and outside the Planning Boundary in order to fully understand the potential impacts of the Proposed Development and identify suitable mitigation measures. We advise that the Phase 1 intertidal survey discussed in the EIA Scoping Report is also conducted to inform and update the baseline.	Figure 4.2 of the EIA Scoping Report is presented as Figure 8.2 of Chapter 8 Marine Ecology and shows the EUSeaMap seabed habitat classifications from the European Marine Observation Database (EMODnet, 2025). Figure 6.7 of the EIA Scoping Report showed marine sediments within the Coastal Processes Study Area, however these were derived from the British Geological Survey (BGS) Seabed Sediments 250k dataset (BGS, 2025), therefore differ slightly. Within both these figures, seabed sediment data were only available for a portion of the Boundary. In figure 8.2 of Chapter 8 Marine Ecology, the seabed sediments within the Boundary were 'infralittoral sandy mud' and 'circalittoral sandy mud' and the equivalent area was labelled as 'muddy sand' in Figure 6.7 of the EIA Scoping Report. As both the EUSeaMap and BGS Seabed Sediments 250k datasets are very high level and not designed to be used for local-scale classification, the discrepancy in labelling between 'infralittoral sandy mud/circalittoral sandy mud'

		(EMODnet, 2025) and 'muddy sand' (BGS, 2025) is not expected to cause a material difference in the baseline nor assessments provided for Benthic Ecology and Coastal Processes. These figures were included in the EIA Scoping Report to provide wider-scale information on the seabed substrates and illustrate that a portion of the Planning Boundary consists of sandy mud or muddy sand. In addition, a site-specific subtidal survey (including PSA) was undertaken in 2017 at the Stena Line Ferry Terminal (thus within the Planning Boundary). The results of this survey (slightly gravelly sand to slightly gravelly muddy sand) were at a finer scale than that of EUSeaMap and BGS Seabed Sediments 250k datasets, and therefore provide additional, recent context to the seabed within Fishguard Harbour. In addition, PSA data collected by NRW in 2022 (<i>pers. comm.</i>)¹ were available for two sampling stations within Fishguard Harbour. These two samples consisted of mud and sand sediments, respectively, further corroborating the muddy and sandy sediments detailed in the wider scale data (BGS, 2025, EMODnet, 2025) and the finer scale site-specific data from the 2017 Stena Line ferry terminal survey (ABPmer, 2018). A benthic subtidal validation survey was undertaken in March 2025 and an intertidal survey was undertaken in April 2025. The results of these will not be available at the time of submission of this EIA, however the results will be submitted once available and provide further justification to support the conclusions of the assessment on benthic ecology presented in this chapter.
Benthic Subtidal and Intertidal Ecology 16 January 2025 NRW(A) Comments	The Drop Down Video (DDV) survey undertaken in 2015 classified much of the study area as 'Arenicola marina in infralittoral fine sand or muddy sand' (SS.SSA.IMuSa.ArelSa) but as no suitable groundtruthing was undertaken in the form of sediment samples and subsequent Particle Size Analysis (PSA), and given the age of the data, NRW(A) advise that the	Increases in SSCs, sediment plumes, and associated deposition has been modelled in Chapter 10: Coastal Processes, with the results used to inform the assessment on benthic and fish and shellfish receptors in this chapter (see section 8.9). As detailed in the row above, the sediments within Fishguard Harbour are largely comprised of muddy sand and/or sandy mud (based on

¹ Contains Natural Resources Wales information © Natural Resources Wales and database right. All rights reserved.

	confidence levels in these data cannot be high. As such, we recommend that new subtidal sediment data is collected both within the footprint of the Proposed Development and outside of the current benthic study area for context and to take into account potential impacts from increased Suspended Sediment Concentrations (SSCs) over a wider area than that represented by the present study area, as per those discussed in the Physical Processes chapter [of the EIA Scoping Report]. NRW(A) advise that sediment samples are analysed for PSA, Macrofauna and contaminants by an accredited UK laboratory in line with the guidelines of the North East Atlantic Marine Biological Analytical Quality Control (NMBAQC) scheme.	site specific data from the 2017 survey at the Stena Line terminal and from NRW data within the Planning Boundary). The Coastal Processes modelling accounts for slight variations in these sediment types and will therefore still be representative of the Maximum Design Scenario (MDS) for the impact of increased SSCs and associated deposition for marine biodiversity receptors.
Benthic Subtidal and Intertidal Ecology 31 January 2025 NRW PS Scoping Opinion	NRW(A) note that no subtidal surveys are proposed. NRW(A) have a low confidence in the existing subtidal data identified within the Scoping Report. NRW(A) indicate that the DDV survey undertaken in 2015, which classified much of the study area as '<i>Arenicola marina</i> in infralittoral fine sand or muddy sand' (SS.SSA.IMuSa.AreISa), has relatively low confidence due to the age of the data and the lack of associated direct ground-truthing. NRW(A) also note that there are discrepancies between the habitats maps shown in Figures 4.2 (EUSeaMap) and 6.7 (BGS) of the EIA Scoping Report. NRW A request that a survey programme is conducted to gain an accurate understanding of the benthic habitats present within the Proposed Development and its zone of influence. NRW PS consider that the baseline subtidal environment must be suitably assessed and see this to be necessary to fully understand the potential impacts on benthic habitats and identify possible mitigation measures. NRW PS would strongly recommend you engage with NRW(A) to ensure that baseline data relied upon or collected is suitable. NRW PS recommend engagement with NRW(A) to understand the extent and sampling effort required to adequately assess the Proposed Development's direct and indirect impacts. NRW(A) advise that sediment samples are analysed for PSA, macrofauna and contaminants. NRW PS remind you that this	A benthic validation survey is currently being undertaken and an intertidal survey was undertaken in April 2025. The results of these will not be available at the time of submission of this EIA, however the results will be submitted once available and provide further justification to support the conclusions of the assessment on benthic ecology presented in this chapter

ENVIRONMENTAL STATEMENT

	has to be undertaken by an accredited UK laboratory in line with the guidelines of the NMBAQC scheme.	
Benthic Subtidal and Intertidal Ecology 16 January 2025 NRW(A) Comments	There is no mention within the EIA Scoping Report of the Welsh National Marine Plan which “sets out the Welsh Government’s vision and objectives for the Welsh marine plan area and policies to support their achievement, helping marine users and those undertaking land-based activities (with the potential to affect the plan area) to support the sustainable development of our seas. The Welsh National Marine Plan supports sustainable development by guiding and supporting effective, proportionate and consistent decision making”. NRW(A) recommends that the Applicant take the policies set out in the Welsh National Marine Plan into consideration with particular focus on those relating to 2.4 ENV – Living within environmental limits and the sector supporting policies in Section 3.1 such as 3.1.3 Dredging and Disposal and 3.1.7 Ports and Shipping.	The Welsh National Marine Plan has been considered in section 8.4, with particular attention paid to the policies highlighted by NRW(A) (see Table 8 2).
Benthic Subtidal and Intertidal Ecology 16 January 2025 NRW(A) Comments	NRW(A) agrees with the impacts scoped in for Benthic subtidal and intertidal ecology receptors and recommends that the impact pathway “Accidental pollution to the surrounding environment” should also be scoped into the EIA for further assessment. The reasons given for being scoped out are reliant on mitigation which suggest that an adverse impact is possible, and, in addition, rock armour revetments are known to trap litter which represents a form of accidental pollution. Therefore, this impact pathway should be scoped into both the construction and operation phases at this stage of the process.	This impact is still scoped out of assessment based on the following justification (also provided in Table 8.6 of Chapter 8 Marine Ecology). The risk of accidental pollution will be mitigated by the implementation of measures set out in standard post-consent plans, such as an Environmental Management Plan (EMP), which will include a Marine Pollution Contingency Plan (MPCP). These plans will include planning for accidental spills, address all potential contaminants that could be released, and include key emergency contact details. They will also set out good industry practice and relevant guidelines for preventing pollution at sea (such as those from the Oslo Paris Convention (OSPAR), International Maritime Organisation (IMO), and the International Convention for the Prevention of Pollution from Ships (MARPOL)). Thus, it is unlikely that accidental pollution will occur and in the unlikely

ENVIRONMENTAL STATEMENT

		event that it did, it will be minimised through measures outlined in the MPCP. The approach to scope out this impact using the justification provided here is standard practice across EIAs from a range of sectors and aligns with the proportionate EIA approach.
Benthic Subtidal and Intertidal Ecology 31 January 2025 NRW PS Scoping Opinion	NRW PS disagree that accidental pollution should be scoped out of the EIA. NRW PS consider that the details of the proposed post-consent plans are unknown at this stage. Therefore, as mitigation measures are not yet known, accidental pollution should be scoped into the assessment.	As above
Fish and Shellfish Ecology 16 January 2025 NRW(A) Comments	NRW(A) agree with the sites and potential impacts scoping assessment for fish and shellfish ecology. We welcome the inclusion of nearby designated sites (Cardigan Bay Special Area of Conservation (SAC), Afon Teifi SAC, Cleddau Rivers SAC, Pembrokeshire Marine SAC and Carmarthen Bay and Estuaries SAC) in view of the migratory species features. The applicant should make consideration of relevant section 7 species as listed within the Environment (Wales) Act 2016 alongside the SAC species features.	These designated sites have been considered in this assessment (see section 8.8.2.5 of Chapter 8 Marine Ecology). In addition, species listed within the Environment (Wales) Act 2016 have been included as Important Ecological Features (IEFs) in this assessment (see section Error! Reference source not found.).
Fish and Shellfish Ecology 31 January 2025 NRW PS Scoping Opinion	NRW PS agrees with the sites included and potential impacts scoped into the assessment for fish and shellfish ecology. NRW(A) welcomes the inclusion of nearby designated sites (Cardigan Bay SAC, Afon Teifi SAC, Cleddau Rivers SAC, Pembrokeshire Marine SAC and Carmarthen Bay and Estuaries SAC) in view of the migratory species features. NRW PS agrees with NRW(A) that the relevant section 7 species listed within the Environment (Wales) Act 2016 should also be scoped into the assessment.	As above

Fish and Shellfish Ecology 16 January 2025 NRW(A) Comments	NRW(A) agree with the underwater noise scoping assessment. The preliminary mitigation measures proposed for noise are standard measures and likely to be sufficient given the amount of piling proposed, however, the Applicant will need to consider the appropriateness of measures designed to reduce noise impact for mammals on fish species. However, section 10.4 in the EIA scoping report mentions that the assessment will also account for fleeing animals. It is not clear if this statement only relates to marine mammals or applies to fish as well. NRW(A) advise that assessments for fish focus on fish as a stationary receptor, as this will cover the worst-case scenario and there is limited consistent information on fish utilising directional avoidant fleeing behaviour in response to noise impacts	This response is noted. Stationary fish have been presented as a worst-case scenario, based on the underwater noise modelling (see section 8.9.2.2.3 of Chapter 8 Marine Ecology). Appropriate mitigation measures for fish and shellfish receptors have been discussed in section 8.1 of Chapter 8 Marine Ecology and within the assessment itself in section 8.9.2.2.3 of Chapter 8 Marine Ecology.
Fish and Shellfish Ecology 31 January 2025 NRW PS Scoping Opinion	NRW PS agrees that underwater noise from piling during construction is scoped into the EIA and agrees with the preliminary mitigation measures proposed. NRW(A) advises that these standard mitigation measures are likely to be sufficient; however, stresses that measures designed to reduce noise impact for mammals are not always appropriate on fish species. NRW PS would encourage you to engage with NRW(A) as you carry out your assessment and consider appropriate mitigation measures.	This response is noted. Stationary fish have been presented as a worst-case scenario, based on the underwater noise modelling (see section 8.9.2.2.3 of Chapter 8 Marine Ecology). Appropriate mitigation measures for fish and shellfish receptors have been discussed in section Error! Reference source not found. and within the assessment itself in section 8.9.2.2.3 of Chapter 8 Marine Ecology.
Marine Mammals 16 January 2025 NRW(A) Comments	NRW(A) note that North Anglesey Marine SAC has been omitted from scoping. The activity is located within the Celtic and Irish Seas Management Unit (MU) for harbour porpoise <i>Phocoena phocoena</i> , so animals from the SAC population could feasibly be found within the survey area and could potentially therefore be impacted. Due to the mobile nature of all Annex II marine mammal features of SACs, it is accepted that they do not stay within site boundaries. We generally consider that the appropriate scale at which to consider offsite impacts for marine mammals is the relevant species specific MU. We consider SACs within an MU to be 'functionally linked' to the surrounding sea because evidence demonstrates a degree of connectivity between SACs and the wider area, and because SACs represent special areas of sea within the MU.	The North Anglesey Marine SAC has been included in the baseline assessment presented in section 8.8.3.3 of Chapter 8 Marine Ecology.

	We recommend that North Anglesey Marine SAC is scoped in for harbour porpoise.	
Marine Mammals 16 January 2025 NRW(A) Comments	For most impact pathways, particularly those associated with potential removals or injury, NRW(A) consider MUs as the most appropriate spatial scale for assessment of the Test of Likely Significant Effect (screening).	This advice has been incorporated into the assessment for marine mammals (see section 8.9.3 of Chapter 8 Marine Ecology).
Marine Mammals 16 January 2025 NRW(A) Comments	NRW(A) would like to highlight the preferred use of OSPAR Region III as a spatial area for the assessment of grey seal <i>Halichoerus grypus</i> , rather than seal MUs. However, as all three Welsh sites for grey seal have been scoped in here, no changes are required.	This comment is noted, and information on the OSPAR Region III grey seal population has been included in the baseline for additional context (see section 8.8.3.2.4 of Chapter 8 Marine Ecology).
Marine Mammals 16 January 2025 NRW(A) Comments	NRW(A) have anecdotal evidence of common dolphin <i>Delphinus delphis</i> usage within the study area on a regular basis and therefore we recommend that the common dolphin, as a protected species under Annex IV of the Habitats Directive as enacted through the England and Wales Conservation of Habitats and Species Regulations, Schedule 5 & 6 of the Wildlife and Countryside Act 1981(as amended) and Sections 6 & 7 of the Environment (Wales) Act 2016, should be also considered for assessment.	Common dolphin has been scoped into the assessment (see section 8.8.3.2.3 of Chapter 8 Marine Ecology).
Marine Mammals 16 January 2025 NRW(A) Comments	The justification for scoping out “accidental pollution to the surrounding environment” impact pathway relies on the need for mitigation measures, which suggests that this has the potential to create an adverse effect. Therefore, NRW(A) recommends the impact pathway “Accidental pollution to the surrounding environment” should be scoped into EIA for further assessment.	This impact is still scoped out of assessment based on the following justification (also provided in Table 8.29 of Chapter 8 Marine Ecology). The risk of accidental pollution will be mitigated by the implementation of measures set out in standard post-consent plans, such as an EMP which will include a MPCP. These plans will include planning for accidental spills, address all potential contaminants that could be released, and include key emergency contact details. They will also set out good industry

		practice and relevant guidelines for preventing pollution at sea (such as those from OSPAR, the IMO, and MARPOL)). Thus, it is unlikely that accidental pollution will occur and in the unlikely event that it did, it will be minimised through measures outlined in the MPCP. The approach to scope out this impact using the justification provided here is standard practice across EIAs from a range of sectors and aligns with the proportionate EIA approach.
Marine Mammals 16 January 2025NRW(A) Comments	NRW(A) welcomes the use of the data sources and literature listed within the EIA Scoping Report but would like to highlight the following relevant guidance on underwater noise to be considered when undertaking the EIA: NRW's Position on Assessing Behavioural Disturbance of Harbour Porpoise from underwater noise (NRW, 2023a); and NRW's Position on Assessing the effects of hearing injury from underwater noise for environmental assessments (NRW, 2023b).	These guidance documents have been considered as part of the assessment on marine mammal receptors.
Marine Mammals 31 January 2025 NRW PS Scoping Opinion	NRW PS will expect that the assessment is carried out in line with NRW's position statements (NRW, 2023a, NRW, 2023b)	These guidance documents have been considered as part of the assessment on marine mammal receptors.
Biodiversity – Birds 31 January 2025 NRW PS Scoping Opinion	Suggestion of creating habitat for Black guillemots	Measures for Black Guillemots are provided within Chapter 9, section 9.11.3
Coastal Processes 31 January 2025 NRW PS Scoping Opinion	Requests copy of historical numerical modelling to inform baseline	Chapter 10 Coastal Processes sets out the baseline data
Coastal Processes 31 January 2025 NRW PS Scoping Opinion	Modelling as separate technical appendix to coastal processes chapter	Appendix 10.A sets out the Coastal Process Modelling
Coastal Processes 31 January 2025 NRW PS Scoping Opinion	Modelling of SSC plumes, duration, dispersion and settlement	Appendix 10.A sets out the Coastal Process Modelling

ENVIRONMENTAL STATEMENT

Coastal Processes 31 January 2025 NRW PS Scoping Opinion	Scour protection possible formation of secondary scour pits around toe of rock armour requiring assessment	Following design evolution there is no longer requirement for a buried rock armour revetment toe.
Coastal Processes 31 January 2025 NRW PS Scoping Opinion	Consideration of increased erosion at the end of the revetment and seabed lowering in front	Following design evolution there is no longer requirement for a buried rock armour revetment toe
Water Resources 31 January 2025 NRW PS Scoping Opinion	WFD compliance assessment is required	Appendix 11.A sets out the Water Framework Directive Assessment.
Noise & Vibration 31 January 2025 NRW PS Scoping Opinion	Consideration of how materials are transported to site	Chapter 13 Noise and Vibration and Chapter 19 Transport considers transportation of materials
Underwater Acoustics 31 January 2025 NRW PS Scoping Opinion	Assessment for fish as stationary receptors	Chapter 14 Underwater Acoustics, Section 14.7 assesses the impact on fish as stationary receptors
Air Quality & Climate 31 January 2025 NRW PS Scoping Opinion	Compliance with Public Health Wales	Chapters 15 & 22 Air Quality and Climate sets out how the Proposed Development complies with relevant public health legislation.
Historic Environment 31 January 2025 NRW PS Scoping Opinion	Engage with RCAHMW, HENEB and CADW	Chapter 16 Cultural Heritage section 16.5 sets out engagement with RCAHMW, HENEB and CADW.
Historic Environment 31 January 2025	Assessment of the intertidal historic environment	Appendix 16.A Cultural Heritage Desk Based Assessment sets out the intertidal features within the study area.

ENVIRONMENTAL STATEMENT

NRW PS Scoping Opinion		
Historic Environment 31 January 2025 NRW PS Scoping Opinion	The historic Environment (Wales) Act 2023 enacted 4 th November and removal ref earlier versions	Chapter 16 Cultural Heritage Section 16.4 sets the policy context in The Historic Environment (Wales) Act 2023
Historic Environment 31 January 2025 NRW PS Scoping Opinion	CADW recommends search area of 3km for designated assets and 1km non designated assets	A 2km radius for designated heritage assets and 1km radius for non-designated heritage assets has been applied to the assessment within Appendix 16.A as agreed with Mr Neil Maylan of CADW and RPS via email 12/11/2024.
Transport 31 January 2025 NRW PS Scoping Opinion	Clarity on how materials will be transported to site	Chapter 13 Noise and Vibration and Chapter 19 Transport considers transportation of materials
Waste 31 January 2025 NRW PS Scoping Opinion	Adequate disposal of dredging materials required.	Chapter 2 Project Description outlines that the dredged materials will be taken for disposal at sea at licenced disposal site Milford Haven LU69
Waste 31 January 2025 NRW PS Scoping Opinion	Identify suitable site at sea and status of.	Chapter 2 Project Description outlines that the dredged materials will be taken for disposal at sea at licenced disposal site Milford Haven LU69
Shipping and Navigation 31 January 2025 NRW PS Scoping Opinion	Requirement to be scoped in	Chapter 24 outlines Shipping & Navigation
Shipping and Navigation 31 January 2025	Navigation Safety Plan and Vessel Management Plan	Stena Lines existing Navigational Safety and Vessel Management of Fishguard Harbour will apply.

ENVIRONMENTAL STATEMENT

NRW PS Scoping Opinion		
Shipping and Navigation 31 January 2025 NRW PS Scoping Opinion	Consider impact on recreational sea users	Chapter 24 Shipping & Navigation section 1.8 considers the baseline environment

5.1.5.1 List of Consultees

Consultee	Date of Response
CADW (Historic Environment Service)	15/01/2025
Maritime & Coastguard Agency	15/01/2025
Defence Infrastructure Organisation	10/12/2024
NATS Safeguarding	10/12/2024
NRW - Marine Area Advice and Management Team	17/01/2025
Royal Commission on the Ancient and Historical Monuments of Wales	08/01/2025
Royal Yachting Association	15/01/2025
The Crown Estate	08/01/2025
Trinity House Navigation	15/01/2025
HENEB – The Trust for Welsh Archaeology	17/01/2025

ENVIRONMENTAL STATEMENT

Marine and Fisheries	15/01/2025
Local Biodiversity Officer (Pembrokeshire)	No response
Local Planning Authority (Pembrokeshire Coast National Park Authority)	No response
Local Harbour Authority	No response
Local Port Authority (Fishguard)	No response
Local Port Authority (Stenaline)	No response
Welsh Fishermen's Association (WFA)	No response
National Federation of Fishermen's Organisations (NFFO)	No response
Royal Society for the Protection of Birds (RSPB)	No response
Chamber of Shipping	No response

5.1.5.2 Consultees and Response to Marine Licence for Band 1 - Site Investigations

Consultee	Date of Response
HENEB – The Trust for Welsh Archaeology	No objections - 19/11/2024
Maritime & Coastguard Agency	No objections - 25/11/2024
Trinity House Navigation	No objections - 29/11/2024
Royal Commission on the Ancient and Historical Monuments of Wales	No objections – 19/11/2024

5.2 Summary of Technical Chapters

5.2.1 Population and Human Health

The Human Health Assessment considers the public health implications of the Fishguard Linkspan Replacement. Following established guidance, this assessment adopts a population health approach. Population health refers to the health outcomes of a group of individuals, including the distribution of those outcomes within the group. The assessment evaluates the potential for likely direct, indirect, and cumulative significant effects during the construction and operation phases of the Proposed Development. Physical health, mental health, and health inequalities are considered across a broad range of health determinants. The methods used align with the Health in Environmental Impact Assessment guidance provided by the Institute of Environmental Management and Assessment. This health assessment examines the potential effects on both the general population and vulnerable groups. Vulnerability refers to the differential experience of effects based on factors such as age, income level, health status, social disadvantage, or access to services and resources. The assessment considers localised population effects as well as broader population effects at regional, national, and international levels.

A baseline health profile was gathered from publicly available public health evidence sources for Fishguard Northeast Goodwick wards, using local (Pembrokeshire) and national (Wales) data as comparators.

The data indicate that the general health of the population in the two wards is broadly consistent with district and national averages. Fishguard Northeast, where the Proposed Development is located, is classified among the 50% least deprived areas nationally, whereas Goodwick is among the 50% most deprived. The presence of vulnerable groups has been identified, and high sensitivity has been assigned to potential effects on these populations.

With mitigation measures adopted as part of the Proposed Development in place, no adverse effects are anticipated to be significant for public health. In addition, there are positive effects anticipated during operation. These effects are summarised below:

During construction, the Proposed Development may result in temporary and short- to medium-term disruptions to health-related travel times, accessibility, active/sustainable travel, and road safety. This is assessed as having a minor adverse effect which is considered to be not significant for population health. During operation, the Proposed Development is expected to enhance the safety of the Fishguard berth, ensuring long-term safe berthing for the Stena Line ferry service between Fishguard and Rosslare, Ireland. This is assessed as a minor beneficial effect which is considered not significant.

During construction, air quality effects on population health are assessed as being minor adverse which are considered not significant, reflecting the minimal risk of dust emissions from project activities.

During the construction phase, the effects of the Proposed Development on water quality would be minor adverse which is considered not significant for population health.

During construction, noise and vibration impacts are assessed as minor adverse which is considered not significant for population health, due to the minimal risk of noise from construction activities and machinery.

No other developments have been identified that would interact with the Proposed Development to cause cumulative impacts on population health.

The Proposed Development is expected to result in a range of effects on population health, primarily experienced by residents of the Fishguard Northeast and Goodwick wards. With appropriate mitigation measures in place, no significant adverse effects on public health are expected. The Proposed Development is anticipated to improve the safety of the Fishguard berth and enhance ferry services, with potential indirect benefits to the local community through improved access and connectivity.

5.2.2 Marine Biodiversity

The marine biodiversity baseline has been divided into three receptor groups:

- Benthic subtidal and intertidal ecology;
- Fish and shellfish ecology; and
- Marine mammals.

The baseline environment within the Marine Biodiversity Study Area (defined as Fishguard Harbour; see Figure 8.1) is representative of an active harbour. This area was considered to subject to high levels of anthropogenic influence, and not regarded as pristine natural habitat. For example, while some benthic habitats of conservation importance have been identified within Fishguard Harbour (and within the Planning Boundary), these were not widespread. Regarding the fish and shellfish assemblage, the baseline was characterised by a range of typical demersal fish and shellfish, such as gadoids, flatfish, gobies, gurnards, and crabs. Spawning and/or nursery grounds for some of these were identified within the vicinity of Fishguard Harbour. Elasmobranchs, such as thornback ray, spotted ray, and tope shark also had nursery grounds in the vicinity of Fishguard Harbour. Diadromous fish migrating to and from the River Gwaun could be present within Fishguard Harbour. Finally, there were four marine mammals discussed as part of the baseline: harbour porpoise, bottlenose dolphin, common dolphin, and grey seal. These species were considered to have the highest potential to occur within Fishguard Harbour and/or the ZoI associated with underwater noise during piling associated with the Proposed Development. It should be noted, that Fishguard Harbour itself is not likely to represent an important habitat for these marine mammals, due to the high levels of anthropogenic activity (such as shipping) already occurring.

The Cardigan Bay/Bae Ceredigion SAC sits 14.9 km from the Planning Boundary, and is designated for a range of benthic, fish, and marine mammal features. In addition, the Planning Boundary is located within the West Wales Marine/Gorllewin Cymru Forol SAC, which is designated for harbour porpoise. Other designated sites with relevant marine biodiversity qualifying features were identified in section 8.8, although these were located further away from the Planning Boundary than the West Wales Marine and Cardigan Bay SACs.

The mitigation measures included as part of this assessment are presented in section 8.10, which include a 20-minute soft start for piling, a pre-piling marine mammal survey, and the development of and adherence to a range of plans (such as a VMP, NSP, CMS, CoCP, EMP, MPCP, MMMP, INNS Management Plan).

A range of impacts were assessed for the marine biodiversity receptors, including temporary and long term habitat loss, increased SSCs and associated deposition, changes in water quality, increased risk of INNS, and impacts associated with underwater noise during piling. There were no significant effects concluded for any of the impacts scoped in for the Proposed Development alone (section 8.9). The potential for significant effects was also considered for the Proposed Development cumulatively with other plans and projects (the CEA; section 8.12.1), and for inter-related effects (effects interactions; section 8.12.2). As a result, no future monitoring has been proposed (section 8.10.3).

5.2.3 Terrestrial Biodiversity

Chapter 9 of the Environmental Statement (ES) assesses both direct and indirect significant effects of the Fishguard Linkspan Replacement (The Proposed Development) on terrestrial ecology and ornithological receptors. It includes information from scoping responses, baseline conditions from habitat surveys and inspections, and acknowledges limitations of the data. The chapter outlines the embedded mitigation measures planned as part of the Proposed Development and evaluates the potential significant effects stemming from construction and operation activities. It also discusses monitoring and additional mitigation strategies to address the identified environmental impacts, alongside an assessment of residual effects, which seek to achieve a net benefit for biodiversity. Furthermore, it includes an analysis of potential cumulative impacts. The assessment is based on ecological surveys conducted between 2021 and 2024 and follows the Chartered Institute of Ecology and Environmental Management's guidelines.

The Terrestrial Ecology Study Areas are defined by specific distance buffers from the Application Site boundary, set at 15km for international designated sites and 2km for national designated sites, priority habitats, ancient woodlands, and priority and protected species. Additionally, terrestrial habitats and related surveys are conducted within 50m of the Application Site. These distances follow best practices established by CIEEM and are determined through professional judgment to adequately represent the potential Zone of Influence (ZoI) of the Proposed Development, indicating the area that may be affected by ecological changes resulting from development activities.

The following EU legislation relating specifically to ecology and has been considered where relevant:

- The Conservation of Habitats and Species Regulations 2017 (as amended);

The following UK and 'national' legislation relating specifically to ecology and has been considered where relevant:

- Environment (Wales) Act 2016;
- The Wildlife and Countryside Act 1981 (as amended);
- The Countryside and Rights of Way (CROW) Act 2000;
- The Protection of Badgers Act 1992;
- The Hedgerow Regulations 1997;
- The Well-being of Future Generations Act (Wales) 2015.

The key national planning policy documents relevant to the assessment of Terrestrial Ecology for the Proposed Development are as follows:

- Future Wales: The National Plan 2040 (Welsh Government, 2021)
- Planning Policy Wales Edition 12 (Welsh Government, 2024),

Conclusively, Chapter 9 identified and evaluated several key ecological receptors. The important ecological receptors assessed within the chapter are otters, wintering and passage bird assemblages, multiple bat species, and black guillemots. The Chapter outlines that various ecological features such as internationally and nationally designated sites, ancient woodlands, and priority habitats are unlikely to be impacted by the proposed development. Additionally, species not listed within the chapter are deemed to have negligible importance or are considered absent from the application site and its immediate surroundings.

5.2.4 Coastal Processes

The baseline environment within Fishguard Harbour is characterised by extremely weak tidal flows, particularly in the direct vicinity of the Proposed Development. A tidal eddy forms adjacent to the northern breakwater at the entrance of the harbour, wherein the highest current speeds are observed as water moves in a clockwise direction, flows around the breakwater and out of the harbour. The wave regime within the harbour shows that the most arduous waves approach from the northern sector, where waves were diffracted around the breakwater and approached the site of the Proposed Development. Very little sediment transport occurs within the harbour due to the weak tidal flows, what little transport does occur does so in a clockwise direction. Based on the bathymetry of the sea bed around the Proposed Development, the most significant impact on the seabed sediment regime comes from the movement of ships on and off the berth, particularly at times of low water when the ships' propulsion systems can stir up and redistribute fine sediment. Sediments within the harbour generally consist of muddy sands, with vibrocore data indicating sandy fines and fines sands within the area of the Proposed Development.

The impacts assessment has included:

- Increase in suspended sediments due to construction activities, and the potential impact to relevant environmental receptors.
- Impacts to coastal processes due to the presence of infrastructure related to the Proposed Development within the water column.

During construction, increases in suspended sediment concentrations may arise due to dredging operations however, sediment plumes produced during construction will be localised and will not persist beyond the immediate vicinity of the Proposed Development. Sediment increase would not influence the bathymetry of key receptors such as sandbanks, mudflats and sandflats.

During operation, the presence of infrastructure associated with Proposed Development may lead to changes in impacts to the tidal regime, wave regime, sediment transport and associated sediment transport pathways and the associated potential impacts along adjacent shorelines and physical features. However, the impacts will occur at a negligible magnitude and local scale.

Overall, it is concluded that there will be no significant cumulative effects from the Proposed Development alongside other projects/plans.

No significant potential transboundary impacts have been identified in regard to effects of the Transmission Assets.

Given the insignificant impact on existing coastal processes, no mitigation measures are considered necessary during the construction or operational phase of the Proposed Development.

5.2.5 Water Quality & Water Framework Directive

The Proposed Development is within Fishguard Bay in the Cardigan Bay South coastal waterbody. It is classified as Good ecological status and High chemical status and is not classified as a HMWB. Numerous WFD protected areas are located within the water body such as bathing waters, SACs and SPAs, however the Proposed Development is not located within or close to these areas.

The most significant impacts associated with the Proposed Development have the potential to cause deterioration to water quality and water body objectives. These include suspended sediment from capital and maintenance dredging activities. Dredge material has been tested and has established that there is a localised area of contamination exceeding the chemical action levels at 3metre depth within the area proposed for land reclamation. The design has been undertaken to ensure that this contamination at depth is avoided and therefore all dredge material will be below cAL2 and in many instances below cAL1 and is considered suitable for disposal at the approved licensed location of Milford Haven. Other impacts include cement and concrete pollution from construction of new marine infrastructure and accidental spillages of oils, fuels and chemicals.

These impacts will be subject to stringent mitigation measures to reduce the impact associated with the Proposed Development upon the marine environment. These mitigation measures include NetRegs GPPs, toolbox talks to site personnel, pollution contingency plans, bunding for storage of oils. With the implementation of these mitigation measures the significance of each effect will be negligible.

There is one project that is included in the cumulative assessment is a Câr Y Môr shellfish farm expansion located in Ramsey Sound in St Bride's Bay. The submitted environmental impact statement by Câr Y Môr identified the most significant effects were increases in suspended sediment within Ramsey Sound and introduction of INNS. However, it is not anticipated that any cumulative effects will arise and there is no interaction with this project and the Proposed Development. There is a considerable distance between these developments (28.8 km) and is located in the Pembrokeshire South coastal water body.

5.2.6 Flood Risk

RPS have assessed the flood risk to the Proposed Development and determined the predominant source of flood risk emanates from coastal flooding from Fishguard Bay.

The Development Advice Map shows that the Proposed Development lies within Zone C2 - Areas of floodplain (0.1% AEP) without significant flood defence infrastructure. TAN 15 defines these areas as 'used to indicate that only less vulnerable development should be considered subject to application of justification test, including the acceptability of consequences'. The precautionary framework in TAN 15 identifies the vulnerability of different land uses to flooding. Paragraph 5.3 of TAN 15 states 'there are uses which are considered to be exceptions to the general rule, and have not been classified above, because they are required to be in a fluvial, tidal or coastal location by virtue of their nature. These include boatyards, marinas, essential works required at mooring basins, and development associated with canals'. Replacement of the Linkspan can be considered under this category. The types of developments will not subject to the first part of the justification test in Section 6 of TAN (Justifying the location of development) but will be subject to the acceptability of the consequences part of the test as outlined in Section 7 of TAN (Assessing flooding consequences).

Temporary works may be required to prevent coastal waters interacting with works activities throughout the duration of the construction phase. The temporary works design to ensure the method of temporary flood protection is stable and avoids seepage will be the responsibility of the appointed Contractor. Met Office and Natural Resources Wales both provide a weather warnings alert service. The Pembrokeshire Coast is a Flood Alert Area for Natural Resources Wales. These warnings can be used during construction to manage the risk of flooding to the works from extreme events.

The Proposed Development has been designed for extreme tidal events. There will be no damage caused to the replacement linkspan if it is flooded, and there will be no major clean up required. Therefore, no mitigation measures are proposed to manage flood risk to the development itself. The impact of the Proposed Development on the existing tidal regime is determined to be negligible and no mitigation measures are required to avoid an increase in flood risk elsewhere. There is an existing linkspan in place and the site currently operates in a similar manner, so the flood risk exists at present. If an extreme event is forecast, any sailings from the port are likely to be cancelled meaning that the replacement linkspan will not be in operation so there will be no risk to life. The entire port area will be at risk, so it is likely to have been closed and evacuated in accordance with any existing emergency plans.

The mitigation measures will manage the consequences of flooding to an acceptable level and ensure that the Proposed Development is as safe as possible. As required by TAN 15, it has been demonstrated that there is:

- minimal risk to life;
- minimal disruption to people living and working in the area;
- minimal potential damage to property;
- minimal impact of the Proposed Development on flood risk generally; and
- minimal disruption to natural heritage.

This assessment has shown that the consequences of flooding resulting from the Proposed Development are acceptable, therefore meeting the TAN 15 flood risk and development requirements.

5.2.7 Noise & Vibration

This chapter assesses the potential impacts and likely significant effects of noise and vibration associated with the construction of the Proposed Development. The noise and vibration effects of the construction stage and all operations associated with the proposed development has been assessed at the nearest construction noise receptors.

Operational noise and vibration has been scoped out as there is no inclusion of new significant noise or vibration sources likely to generate perceptible noise levels or vibrations when the Proposed Development is operational. Once the replacement Linkspan is constructed and operational, the vessel numbers and vessel size are not expected to increase above existing levels. The related number of generated vehicle movements are also not expected to increase above existing levels. Therefore, there will be no traffic noise impact associated with the replacement Linkspan scheme once completed.

The existing noise environment surrounding the site has been characterised by noise-sensitive receptors within the noise study area of 300 meters from the Proposed Development. There are no sensitive properties within the vibration study area of 100m from the Proposed Development.

To inform the assessments, representative baseline data describing the ambient noise environment in the vicinity of the nearest and representative receptors to the Proposed Development was undertaken during January 2025. The locations of the unattended baseline noise monitoring locations are detailed in ES Volume III Figure 13.3 Noise Monitoring Locations and ES Volume II Appendix 13.A Noise Monitoring Survey. Unattended noise monitoring was undertaken at three locations between 21st January and 11th February 2025. For full details of the baseline noise monitoring survey, please refer to Volume II Appendix 13.C.

The assessment of construction effects has considered the potential noise and vibration effects during construction of the Proposed Development.

The noise impact of demolition and construction works will be dependent on the construction methodologies and scheduling of works. The details of demolition and construction methodologies and scheduling will be determined by the contractor. The noise impact assessment is presented in the chapter and is based on realistic worst-case assumptions, considering typical construction plant and equipment for individual phases and tasks.

The construction noise source levels in Annex C and D of BS5228-1 have been used to carry out construction noise predictions. BS5228-1 provides the sound pressure level at 10m or the sound power level of plant and equipment. The worst-case assumptions of plant and equipment associated with each construction activity have been detailed in along with full details of construction noise predictions. A summary of the construction noise source levels and activities are summarised.

The construction programme will give rise to variable noise levels and the impact will vary throughout the construction phase, which will take place over a period of several months. Noise impacts will not be continuous and will vary by phase and by construction activity or combination of activities taking place. The construction noise predictions and impacts are based on worst-case scenarios, assuming construction plant at the closest location within each activity boundary to noise-sensitive receptors.

BS 5228:2009 Part 2 provides historical data of Peak Particle Velocity at various distances. The vibration study area for construction is 100m from source to receptor. There are no sensitive receptors located within

100m of the proposed piling works. The nearest noise sensitive receptors are approximately 270m from proposed piling locations. Therefore, due to distance between receptors and piling operations, vibration from piling operations will not be significant.

To minimise noise and vibration impacts during construction and operation, several mitigation measures have been proposed in line with BS5228-1 for noise and BS5228-2 for vibration. The implementation of a Construction Environmental Management Plan (CEMP) will outline best practices.

5.2.8 Underwater Acoustics

The linkspan bridge and support structures used for vehicles to board the Stena Line service from Fishguard needs to be replaced. This work includes dredging to maintain adequate depth, installation of piles for a new pontoon and the construction of a new revetment (rocks placed to support reclaimed land).

These activities are noisy and can potentially lead to behavioural effects (animals deterred from using the area) or harm to the hearing of marine animals. Impact piling (hammering steel piles into the sediment) is the activity with the greatest potential to cause permanent harm to the hearing of marine mammals or temporary paralyses or sensory impairment to fish.

Given that especially porpoises and dolphins rely on their hearing in order to find food and to navigate, an injury to their hearing is a very serious impairment and should be avoided where possible.

The activities proposed during the construction of the proposed development has been assessed in relation to the relevant thresholds for underwater noise effects on marine mammals and fish. These thresholds are based on the current best scientific understanding of the effects of noise on marine mammals and fish and accounts for both the frequencies, the loudness, swimming speeds and the duration of the noise generated by the project.

Generally, the fact that the harbour forms an enclosure, serves to minimise the volume of water for the noise to travel through, and once out of the harbour vessel noise (or general wind and wave noise) from the Irish Sea will likely drown out the noise from the project.

The impact piling poses a potential risk of causing hearing injury to marine mammals and fish if not properly managed. Therefore, we have suggested mitigation that will ensure that the risk of any hearing injuries occurring in marine mammals remains low.

The inclusion of a survey before impact piling starts (carried out by a competent observer), along with a period of impact piling of lower noise emission will reduce the chance of any marine mammals to suffer auditory injury. This will effectively mean that the risk of adverse effects on marine mammals will be very low. The impact piling will only take place in connection with the installation of four support piles, each of which will require less than half an hour of impact piling each, for a total maximal duration of two hours of impact piling spread over two to four days.

The impact piling of the support piles will likely have an adverse effect on the hearing of fish to range of up to c. 700 m.

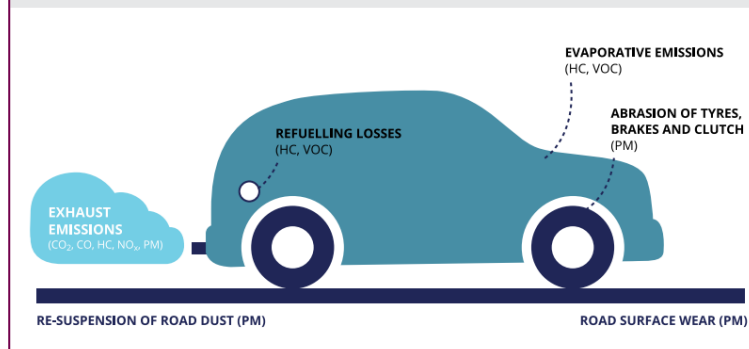
The remaining activities have much lower noise emissions and have little to no risk of causing auditory injury to fish or marine mammals.

5.2.9 Air Quality

This chapter of the ES assesses the impact on air quality arising from the Proposed Development of Fishguard Linkspan Replacement. It considers air quality within the Proposed Development and provides information on the key receptors that have the potential to be subject to likely significant effects resulting from the Proposed Development, and how that assessment is to be conducted. Air Quality relates to pollutants with potential to affect human health and ecosystems at a local level (this includes a construction phase dust and emissions assessment).

Potential effects to air quality may arise during the construction phase, such as from the generation of dusts and from traffic. The construction activities have been examined to identify those that have the potential for air emissions. Each of these potential sources has been identified and emissions have been evaluated using standard procedures.

The different types of emissions from vehicles, and a comparison of the relative amounts of selected pollutants released by the latest Euro 6 petrol and diesel vehicles



Potential air quality effects during the construction phase can occur due to dust emissions and from construction traffic movements. A semi-quantitative approach is recommended to determine the likelihood of a significant impact from dust (nuisance), PM₁₀ and PM_{2.5} on human health and on vegetation. The approach should be combined with an assessment of the proposed mitigation measures. The pollutants of most concern in relation to emissions from construction road traffic are nitrogen dioxide (NO₂) and particulate matter (PM₁₀ and PM_{2.5}) and NO_x and ammonia on sensitive designated habitats.

For the construction phase, an important consideration is dust. Without appropriate mitigation, dust could cause temporary soiling of surfaces, particularly windows and cars. The mitigation measures provided within this report should ensure that the risk of adverse dust effects is reduced to a level categorised as “**Not Significant**”. The assessment indicates that while construction dust emissions may pose a low risk to human health, particularly in terms of PM₁₀ concentrations, effective dust control measures will be implemented to ensure that any potential impacts remain negligible and do not result in significant adverse effects on the community. Another important issue during the construction phase is control of emissions from construction plant and machinery. Mitigation measures are detailed to help control air quality pollutants.

Dust emissions can affect plant life and habitats, particularly if they settle on vegetation, potentially impacting photosynthesis and overall health. However, the assessment indicates that with appropriate dust control measures in place, the risk to ecological receptors can be effectively managed. The overall risk of dust impacts on ecological features is deemed medium, and the implementation of mitigation strategies is expected to further reduce any potential effects. By adhering to established guidelines, the proposed development aims to ensure that any residual dust impacts on the local ecology remain negligible and do not lead to significant adverse effects on the environment.

For the operational phase, arrivals at and departures from the Proposed Development may change the number and speed of vehicles using the local road network. Changes in road vehicle emissions are the most important consideration during this phase of the development. There is no significant increase in traffic or associated pollutant with the Proposed Development. Shipping emissions from the proposed ferry operations at the existing port are not expected to be significant, as the facility is already operational and designed to accommodate ferry traffic.

Pollutant concentrations are predicted to be within the relevant health-based air quality objectives. Therefore, air quality is acceptable at the receptors surrounding the development site, making it suitable for its proposed uses. The operational impact of the Proposed Development on existing receptors is predicted to be ‘negligible’ taking into account the changes in pollutant concentrations and absolute levels. Using the significance criteria adopted for this assessment together with professional judgement, the operational air quality effects are considered to be ‘not significant’ overall. The development does not, in air quality terms, conflict with national or local policies, or with measures set out in Air Quality Progress Report. There are no constraints to the development in the context of air quality.

5.2.10 Cultural Heritage

Following production of a Cultural Heritage Desk-Based Assessment it was identified that within the study area that was multiple designated heritage assets present. The assessment identified that the majority of the designated heritage assets present within the study area would not be impacted by the Proposed Development, although four of the designated heritage assets identified would be subject to potential impacts related to alterations within the setting of the asset. Those designated heritage assets which could be subject to impacts were identified as Castle Point Old Fort Scheduled Monument, Fishguard Fort Grade II Listed Building, Fishguard Bay Hotel Grade II Listed Building, and Bridge Cottages Grade II Listed Building. These assets are of national significance.

The baseline assessment also identified a number of non-designated present within the Site, of which only a 1930s lifeboat slipway and potential remains of Post-Medieval maritime shipwrecks, could be potentially impacted by the Proposed Development.

The assessment of likely effects undertaken within the ES chapter identified that there would be no change magnitude of impact to the designated heritage assets identified during the construction phase, while the operational phase would result in a minor beneficial impact. Impacts associated with the non-designated heritage assets identified would occur during the construction phase, resulting in a moderate adverse magnitude of impact.

Due to the assessed magnitude of impact associated with the designated heritage assets, no mitigation measures will be required. The impacts associated with the non-designated heritage assets will be offset through the provision of a programme of survey and recording for the 1930s lifeboat slipway, and the provision of a Protocol for Archaeological Discoveries to be put in place prior to dredging activities being undertaken. Implementation of the mitigation measures will give rise to a negligible significance of effect on the receptors in question.

5.2.11 Soils, Geology & Geohydrology

Chapter 17 of the Environmental Statement (ES) provides an assessment of the potential impacts of the Fishguard Linkspan Replacement (the Proposed Development) on Soils, Geology and Hydrogeology. The chapter considers the potential impacts to Soils, Geology and Hydrogeology from the Project during the construction and operational phases of the Proposed Development.

Baseline Conditions

The project area has been evaluated to establish the baseline conditions of soils, geology, and hydrogeology. The assessment indicates that the local environment is characterized by specific soil types and geological formations that are crucial for understanding the potential impacts of the proposed development.

European and National legislation is a significant consideration in assessing the effects of a scheme on the geological and hydrogeological attributes of a site and is outlined below.

- The Water Framework Directive (2000/60/EC)
- Directive 2004/35/EC
- The Groundwater Directive (2006/118/EC)
- Environmental Protection Act 1990

The Contaminated Land (Wales) Regulations 2006, The Contaminated Land (Wales) (Amendment) Regulations 2012, Contaminated Land Statutory Guidance for Wales 2012 (Welsh Government, 2012) and the Defra Circular 01/2006 (Defra 2006) also govern contaminated land assessment in Wales.

Mitigation Measures

The chapter outlines mitigation measures planned as part of the Proposed Development and evaluates the potential significant effects stemming from construction and operation activities. Furthermore, it includes an analysis of potential cumulative impacts.

To minimize adverse effects, the project includes several mitigation strategies aimed at protecting the soil and geological integrity. These measures will be implemented during construction and operation to ensure compliance with environmental standards and to safeguard local ecosystems.

Likely Effects

Overall, the chapter and assessment concluded that the proposed development would have a negligible effect on soils, geology and hydrogeology during both the construction and operational phase of the development. However, the chapter outlines that there would be a minor effect on marine sediments due to the irreversible loss of a high proportion of local low fertility sediments during the construction phase. It was also concluded that there are no known limitations to the assessment presented within the chapter.

5.2.12 Land Use & Material Assets

This chapter of the ES evaluates the potential impacts of the Proposed Development on material assets and land use during both the construction and operational phases. The assessment is guided by relevant planning policies and regulations, including the Welsh Marine Plan. The assessment focuses on infrastructure, utilities and land use that may be directly or indirectly affected by the Proposed Development.

The existing land use surrounding the site is characterised by Fishguard Harbour and operations. The existing Port at Fishguard lies at the western side of the Harbour and consists of extensive tarmac area used by traffic queuing for ferries. Fishguard train station and platform lies to the west of the harbour and a number of buildings serving the RNLI and Stena offices to the North.

The Proposed Development includes the replacement of an existing linkspan and jackup with a new linkspan pontoon, revetment and dredging. During the construction works, this assessment concludes the Proposed Development will result in negligible impacts on adjoining land use and material assets where proposed mitigation measures are implemented.

Mitigation measures involve ensuring communication and liaison with all relevant utility providers to ensure infrastructure is not damaged or interfered with during the construction phase. Extensive surveys will be conducted prior to any construction works to locate all infrastructure within and surrounding the site. Any electrical works will be conducted by National Grid if required and any works involving water and sewage infrastructure will be overseen by Welsh Water. Clear communication protocols will be established, and Openreach engineers will be consulted to ensure the protection of infrastructure. Contractors should be provided with up-to-date locations of all infrastructure within and surrounding the Proposed Development. The residual effect associated with the replacement linkspan pontoon and revetment area are considered negligible. The Proposed Development aims to align with the objectives of the Marine Plan for Wales by providing economic development at an existing Port.

5.2.13 Transport

This chapter of the ES comprises a transportation assessment of the proposed replacement linkspan at Fishguard Port. The primary purpose of this chapter of the ES is to provide an assessment of the likely direct and indirect significant effects of the Project on traffic and transport during the construction period as the operational period will be no more onerous in traffic terms than currently occurs on the highway network.

Traffic surveys were carried out on Thursday 30th and Friday 31st January 2025 at the A40 The Parrog / A487 Wern Road / Station Hill / Port double roundabout access junction for the 12-hour period between 07:00-19:00 on both days to ensure that the AM, PM and interpeak times were surveyed and to cover the 12-hour working day proposed for the construction works.

The results indicates that there is a continuous low flow of traffic associated with the Ferry Port access throughout the day with traffic activity increasing in connection with the ferry sailing timetable.

The construction works will occur over a 12-month period with a 3-month ferry service shutdown. For the first 8 months the ferry services will remain online while the construction works are being carried out, then the ferry services will be offline for 3no. months and then back online for the last month of the construction period. The works will be carried out by approximately 10-15no. construction related staff that will be present at the site.

The projected constructions programme estimates the most onerous construction period is identified as Month 3 (March 2026). An assessment of the proposed construction traffic indicates that it will have a minimal impact upon the surrounding highway network during the construction period.

As is typical to the construction process, the appointed Contractor will liaise with the Local Highway Authority to agree the proposed construction traffic management measures prior to the start of the construction period. This will ensure the proposed construction activities and working hours assessed within this chapter can be implemented. However, there is no mitigation associated with the proposed construction period as the surrounding road network can accommodate the predicted levels of HGV traffic.

Once the replacement Linkspan is constructed and operational, the vessel numbers and vessel sizes are not expected to increase above existing levels, therefore the number of vehicle movements generated by the Ferry Port (the operational phase) are also not expected to increase above existing levels, resulting in a negligible traffic impact.

5.2.14 Seascape, Landscape & Visual

The purpose of the Seascape, Landscape and Visual Impact Assessment (SLVIA) is to identify and determine the effects on seascape and landscape character, features, visual receptors and visual amenity because of the works associated with the construction and the operational phases of the Proposed Development.

The SLVIA firstly assesses how a Proposed Development would impact directly on features and resources within the seascape or landscape. This category of effect relates to specific elements and features (e.g. woods, trees, walls, hedgerows, watercourses) that are components of the landscape or seascape that may be physically affected by the Proposed Development, such as the removal or addition of trees and alteration to ground cover.

The SLVIA then considers impacts on seascape or landscape character at two levels. Firstly, consideration is given to how the seascape or landscape character is directly affected by the removal or alteration of existing features and the introduction of new features.

Secondly, the indirect impacts on the wider seascape or landscape are considered. The assessment of impacts on the wider seascape and landscape is discussed using the surrounding character areas identified in the relevant seascape and landscape character assessments. It is acknowledged there is an overlap between perception of change to seascape and landscape character and visual amenity, but it should be remembered that seascape and landscape character is generally derived from the combination and pattern of elements within the view.

The significance of effects on seascape and landscape features and character is determined by considering both the sensitivity of the feature or landscape character and the magnitude of impact.

Consideration of the sensitivity of the landscape / seascape resource against the magnitude of impact caused by the Proposed Development is fundamental to seascape, landscape and visual assessment and these two criteria are defined in more detail below.

The Proposed Development is located within a single National Landscape Character Area identified as West & North Pembrokeshire Coast NLCA 43. The identified NLCA has been assessed for both construction and operational phase effects associated with the Proposed Development. The NLCA has been predicted to experience localised, minor short-term effects assessed as not significant during the construction phase, restricted to areas contained within the Proposed Development site boundary only, with remaining portions of NLCA 43 predicted to experience no significant indirect effects. During the operational phase of the Proposed Development, negligible to minor, assessed as not significant effects are predicted as the Proposed Development easily integrate into the existing landscape and will not be perceived as a noticeable alteration.

Additionally, the Proposed Development is located within the Cardigan Bay (South) MCA, the Fishguard Coastal LCA as well as the Fishguard and Goodwick including Fishguard Harbour and the Quayside at Lower Town SCA. Like the NLCA mentioned above, the identified areas have been assessed for both construction and operational phase effects associated with the Proposed Development. These identified areas are predicted to experience localised, minor short-term effects assessed as not significant during the construction phase, restricted to areas contained within the Proposed Development site only, with surrounding areas predicted to experience no significant indirect effects. During the operational phase of the Proposed Development, negligible to minor assessed as not significant effects are predicted as the Proposed Development easily integrate into the existing landscape and will not be perceived as a noticeable alteration.

The Proposed Development has been assessed as not giving rise to any significant direct or indirect effects on any of the landscape designations including; National Parks, Historic Landscapes, Registered Parks & Gardens; Listed Buildings or Conservation Areas.

A total of 8 viewpoints have been assessed, for both construction and operational phases associated with the Proposed Development. None of the viewpoint's assessment are considered to experience significant effects during either the construction phase or operational phase of the Proposed Development, as whilst portions of the Proposed Development are predicted to be visible, visible elements of the Proposed Development will be difficult to discern and perceived as a minor alteration to the existing character and composition of the view. The Proposed Development is easily absorbed within views as the development type and form is of a similar nature to existing infrastructure elements visible in views.

It is noted that the Proposed Development is located within a robust harbour setting and is considered that the wider landscape and visual resources surrounding the Proposed Development site have the capacity to accommodate a development of this type and scale.



Image: Extract from Viewpoint location figure (refer Volume III; Figure 20.4 for complete figure).

5.2.15 Waste

Chapter 21 of the Environmental Statement (ES) provides an assessment of the potential impacts of the Fishguard Linkspan Replacement (the Proposed Development) by wastes produced from the Proposed Development. This chapter considers the potential impacts from wastes that are generated from offshore and onshore activities during the construction and operational phases of the Proposed Development.

Waste is defined as *'any substance or object the holder discards, intends to discard or is required to discard'* under the Waste Framework Directive (European Directive 2006/12/EC as amended by Directive 2008/98/EC). Once a substance has become waste it will remain waste until it has been fully recovered and no longer poses a potential risk to the environment or human health.

Directive 2011/92/EU included waste as a criteria for assessment in EIA requiring an estimate of the quantities and types of waste produced during the construction and operation phases of projects.

The study area for wastes generated from the Proposed Development is the site's red line boundary. The study area for the treatment and disposal of wastes not reused on the site will be Mid and South-West Wales as a sub-region of Wales.

The UK legislative framework for the management of construction wastes comprises the following:

- Environmental Protection Act 1990;
- Environment Act 1995;
- Hazardous Waste (England and Wales) Regulations 2005 (as amended);
- Waste Management (England and Wales) Regulations 2006;
- Waste (Wales) Measure 2010;
- Waste (England and Wales) Regulations 2011 (as amended);
- Environmental Permitting (England and Wales) Regulations 2016 (as amended);
- Environment (Wales) Act 2016; and
- Waste (Circular Economy) (Amendment) Regulations 2020.

The following waste strategy details the Welsh Governments current long-term framework for resource efficiency and managing wastes in Wales:

- Towards Zero Waste. One Wales: One Planet. The Overarching Waste Strategy Documents for Wales (Welsh Assembly Government, 2010).

Overall, the chapter concludes that through implementing the mitigation measures and by managing wastes in accordance with the waste hierarchy as required, wastes generated during the construction phase of the works associated with the upgrade of the linkspan would have no adverse effect on waste management in the area. Further, the chapter outlines that there are no known limitations to its waste management assessment.

5.2.16 Risk of Major Accidents & Disasters

The linkspan bridge and support structures used for vehicles to board the Stena Line service from Fishguard needs to be replaced. This work includes dredging to maintain adequate depth, installation of piles for a new pontoon and the construction of a new revetment (rocks placed to support reclaimed land).

These activities have potential to be affected by major accidents and/or disasters. This assessment sets out the baseline conditions in terms of local features that contribute to potential source of hazard; existing infrastructure and major accident and disaster risks that presently exist in relation to an existing harbour with ferry port in the coast of Wales.

The activities proposed during the construction, operation and maintenance of the Proposed Development has been assessed using a matrix to determine the level of significant of each risk for each hazard scenario. All scenarios/sources of hazard considered within construction and operation phases have been 'low risk'.

Embedded mitigation is included within the design of the Proposed Development and management of replacing the existing pontoon to industry standard. An oCEMP will accompany this EIA.

5.2.17 Climate Change

This chapter of the ES identifies, describes, and assesses the impact on climate from the construction and operation of the Proposed Development. It assesses the potentially significant effects arising from GHG emissions from both activities and traffic associated with both the construction and operational stages, and an assessment of the vulnerability of the Proposed Development to climate change.

Climate relates to emissions of greenhouse gases (GHGs). Climate change will continue to cause impacts on the environment. In this regard, it is appropriate to assess the impact of projects on climate (for example greenhouse gas emissions) and their vulnerability to climate change.

As all GHG emissions are contributing to a global accumulation, the global climate is the ultimate receptor and the impacts of climate change will impact all aspects of the Environmental Impact Assessment (EIA) directive. Although GHG emissions to the atmosphere are localised, the impacts are transboundary, meaning no matter where the emissions are released, the social, economic and environmental impacts will be felt on a global scale. Potential effects to climate may arise during the construction phase, such as from the generation of dusts and from traffic. Each of these potential sources has been identified and emissions have been evaluated using standard procedures.

The effective assessment and management of impacts on climate, as well as the effects of climate change on projects provides the opportunity to:

Improve the resilience of projects to future climate conditions, such as increased risk and severity of flooding, drought, heatwaves, intense rainfall events and other extreme weather events; and, reduce the impact of projects on climate by minimising the magnitude of greenhouse gas (“GHG”) emissions.

In 2022, Wales' net greenhouse gas emissions were estimated to be 35.7 million tonnes of carbon dioxide equivalent (MtCO₂e). This total is a result of various sectoral emissions, with notable reductions across all sectors compared to the base year of 1990. The largest decreases were observed in the fuel supply sector, which saw a reduction of 48.3%, and within the waste sector which saw a reduction as 71.8%. The LULUCF sector in Wales demonstrated a significant increase in carbon sequestration, reflecting a 137.0% improvement in its capacity to absorb carbon dioxide. Overall, the net figure of 35.7 MtCO₂e represents a decrease of 36.4% compared to emissions in 1990.

Throughout the lifespan of the Proposed Development, climate variables over time are expected to become more inconsistent and intense. Precipitation is likely to increase in winter and decrease in summer, increasing the likelihood of flooding in winter and droughts in the summer.

Traffic impact of the Proposed Development will be most onerous during the construction stage than the operational stage.

Dredging activities can release carbon from seabed sediments, but significant emissions from this source are not expected due to limited vegetation and ongoing sediment renourishment efforts. Meanwhile, maritime transport, vital to the Welsh economy, is a growing source of greenhouse gas emissions, contributing to global shipping emissions of 1,076 MtCO₂e in 2018. The Welsh Government's National Marine Plan aims to reduce these emissions by promoting cleaner technologies, improving air quality, and aligning with international agreements, while also emphasizing the importance of monitoring and integrating local plans to achieve emissions reduction targets.

With regard to climate change risks to the Proposed Development during the construction period, it is considered reasonable that construction contractors would be able to adapt working methods if necessary.

Based on professional judgement, the overall GHG emissions generated from the Proposed Development has been suitably mitigated to reduce the likelihood of such an event having a significant adverse impact. In short, the vulnerability of the works to climate change has been suitably mitigated and the potential impact is considered to be minor adverse for the construction and operational phase.

5.2.18 Shipping and Navigation

Chapter 24 of the ES provides an assessment of the potential impacts on shipping and navigation from the construction and operation of the Fishguard replacement linkspan. It assesses the potential significant effects arising from the risk of physical impacts on existing navigation and shipping vessels from collision and Allison, and the effect of the ferry shutdown.

This chapter sets out the existing navigational features of the Fishguard Harbour, which is controlled by Stena Line Ports Limited and the use of Local Port Services (LPS) which disseminates information to vessels. The existing vessel traffic activities mainly consist of the Stena Line linking Wales and Ireland via a RO-PAX ferry which undertakes 4 x crossings (2round trips) per day and accounts for all commercial movements in the Port.

The chapter assessed impact from the construction effects in the harbour when the ferry is operational and during shutdown taking into consideration the contractor's methodology and sequencing of works. The significance of effect was considered slight adverse, which is not significant in EIA terms. The area is adjacent to an existing prohibited anchorage area for non-ferry traffic as marked on admiralty charts; the area is to be marked by 2 x cardinal markers and promulgation of information and warnings will be made to mariners through appropriate Maritime Safety Information (MSI) methods. Furthermore, there will be no commercial vessel movements for 3 months when the ferry is down.

The chapter also assessed the impact from the construction effects when the ferry is down taking into consideration that this was a temporary measure and to coincide with low season for travelling. The significant of effect was considered temporary tolerable adverse, which again is not significant in EIA terms.

On balance, the overall impacts from the Proposed Development are suitability mitigated against and the potential impact is considered to be slight adverse and temporary during construction.