

Fishguard Replacement Linkspan

Environmental Statement
Non-Technical Summary

ES

April 2026

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Introduction

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 of existing linkspan bridge and jack up barge with new floating linkspan pontoon to serve Stena line ferry at Fishguard Harbour to include plough dredging of 2,500m³; piled reinforced concrete bankseat; tubular steel guide pile; rock armour scour protection; and ancillary and temporary 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 5.4 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.

1.1 Structure and Context of the Marine Licence Application

1.1.1 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-TT-ML-XX-DR-C-0250-A1-C01	Marine Licence Site Location Plan
POR00886-TT-ML-XX-DR-C-0252-A1-C01	Marine Licence Proposed Layout
POR00886-TT-ML-XX-DR-C-0251-A1-C01	Marine Licence Demolition Layout
POR00886-TT-ML-XX-DR-C-0253-A1-C01	Marine Licence Plough Dredge Location Plan

1.2 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 0-1 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 0-1 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

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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 Any limitations and/or difficulties with the assessments are described in ES Volume I Chapters 7 – 24: ‘Limitation of the Assessment’ sections.
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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 0-2 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

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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

REPORT

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

1.3 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.

1.4 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
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

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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

2.2 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.

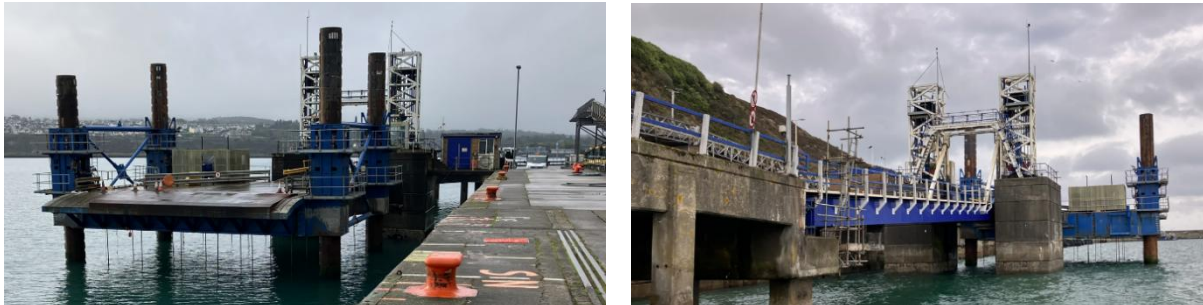


Figure 2-2 Existing Jack Up Barge, Linkspan Bridge, Towers and Concrete Buffer Dolphin

To

safeguard the future of the port and provide a safe, long-term solution, Stena wish to replace the existing linkspan with a new arrangement. The new arrangement consists of a pontoon restrained by steel tubular piles, and a replacement bridge structure spanning from the existing concrete deck to the new pontoon.

Civil engineering works are required to accommodate the new arrangement. These works include removal of the existing steel structures and jack up barge, dredging, piling, scour protection and repairs to the open piled concrete structure. New connections to the existing concrete bankseat will be required for the new bridge. Remedial works may be required to the bankseat to allow installation of new connections. Repair works to the suspended concrete deck approach will also be required. A new bankseat structure is included in the licence in the event that the existing structure is not deemed acceptable for the new bridge and traffic loads.

Partial demolition of the buffer dolphin towers is also required to allow installation of the new bridge.

In the event that the existing deck structure cannot support the proposed bridge, a piled bankseat structure is proposed. The structure would be constructed from precast reinforced concrete or a steel frame, supported by 6 nr steel tubular piles.

Plough dredging will be carried out beneath the existing jack up barge to redistribute soft material to allow more straightfoward installation of rock armour scour protection.

It is proposed that all dredging will be undertaken by plough dredging, moving soft material from under the pontoon to the scour pocket in the berth immediately north of the linkspan structure.

A shutdown of the ferry operations will be required to construct the civil engineering infrastructure and install the new pontoon. It is expected that this shutdown will last approximately 2 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:

- Removal of Structures
 - Existing Linkspan bridge, equipment and kiosk including lattice support structure between the buffer dolphins
 - Jack up barge
- Demolition
 - Partial demolition of the inside face of the buffer dolphin towers
- Dredging
 - Plough dredging of very loose silts and sands to be undertaken in the general footprint of the pontoon to enable installation of scour protection.
 - Material to be redistributed to scour hole in berth north of pontoon location.
- Pontoon Restraint/Guide piles
 - 2nr Tubular Steel Guide Piles (circa 2m diameter) to be drilled through bed into bedrock and grouted into place.
 - Temporary Works – 8 nr temporary piles (1.22m diameter) to support structural steel frame on the front of the quay wall for the drilling rig to access the pile locations.
- Scour protection
 - Clean rock armour stone to be placed onto dredged bed in the general area beneath the new pontoon.
- Bankseat and Existing Deck
 - The bankseat structure shall be constructed from precast concrete or fabricated steel and supported on 6 nr 914mm diameter steel tubular piles.
 - Temporary Works – 8 nr temporary piles (0.610m diameter) to support a temporary structural steel frame to allow install of the permanent bankseat piles.
 - The asphalt deck surface in the area of the existing bankseat is to be broken out and replaced with concrete surfacing with new levels to accommodate the new linkspan bridge
- Concrete Repairs

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- Concrete repairs to be undertaken to the underside of the open piled reinforced concrete structure. i.e. the soffit of the slabs, beams and columns.
- Defective areas of concrete to be broken out to expose sound steel. Defective steel to be cut out and new steel spliced in. repair areas to be shuttered to allow cementitious repair grout to be poured to replace defective concrete.
- Pontoon
 - Pontoon towed to site by a tugboat.
 - Pontoon to be floated into position and attached to guide piles.
- Installation of linkspan bridge
 - Bridge to be delivered to site on a floating pontoon towed by a tug.
 - Bridge will be lifted into place by a floating crane.

The schematic diagram shown in Figure 1-4 below identifies the main components of the proposed development.

It is anticipated that the restraining piles will be installed in advance of the jack up barge and linkspan removal.

The jack up and existing linkspan components will be removed, dredging carried out and scour protection installed in advance of the pontoon installation. The new linkspan bridge will be installed following the pontoon installation.

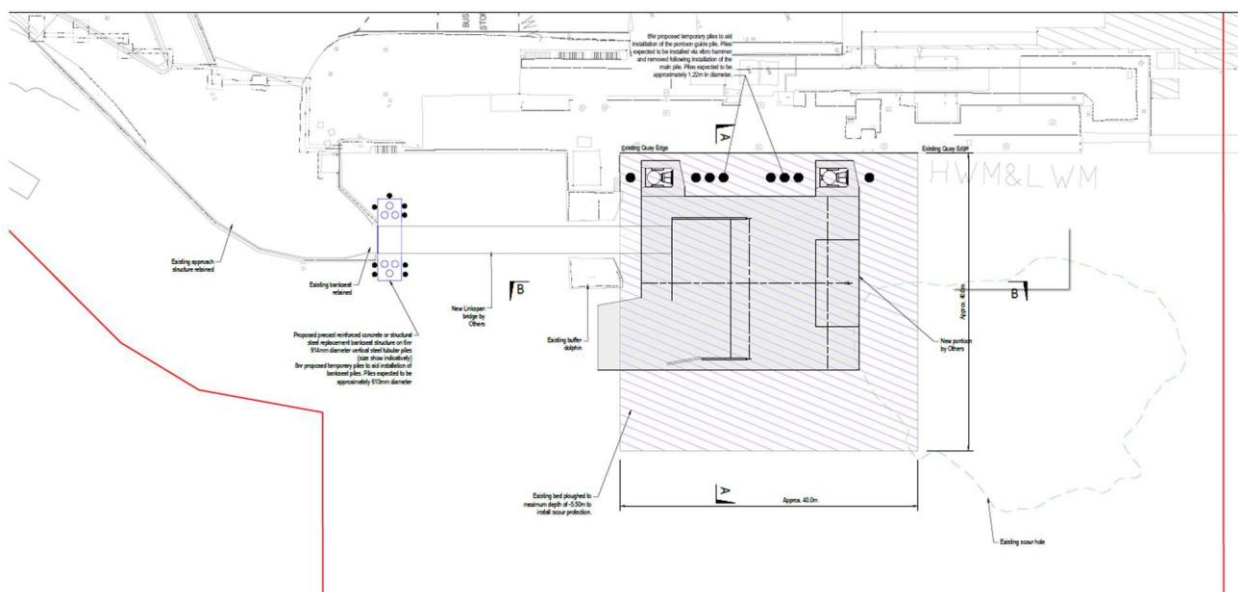


Figure 2-3 Layout showing Proposed works

2.3.1 Removal of Structures

It will be necessary to dismantle a number of structures to enable the construction of the civil engineering works and the installation of the new pontoon and bridge. These are presented in Figure 2-5, below.

Summary of structures to be removed:

- Jack up barge
- 1 No. kiosk adjacent to the existing linkspan structure
- Existing linkspan bridge and steel linkspan towers
- The total volume of material to be removed is approximately 250m³

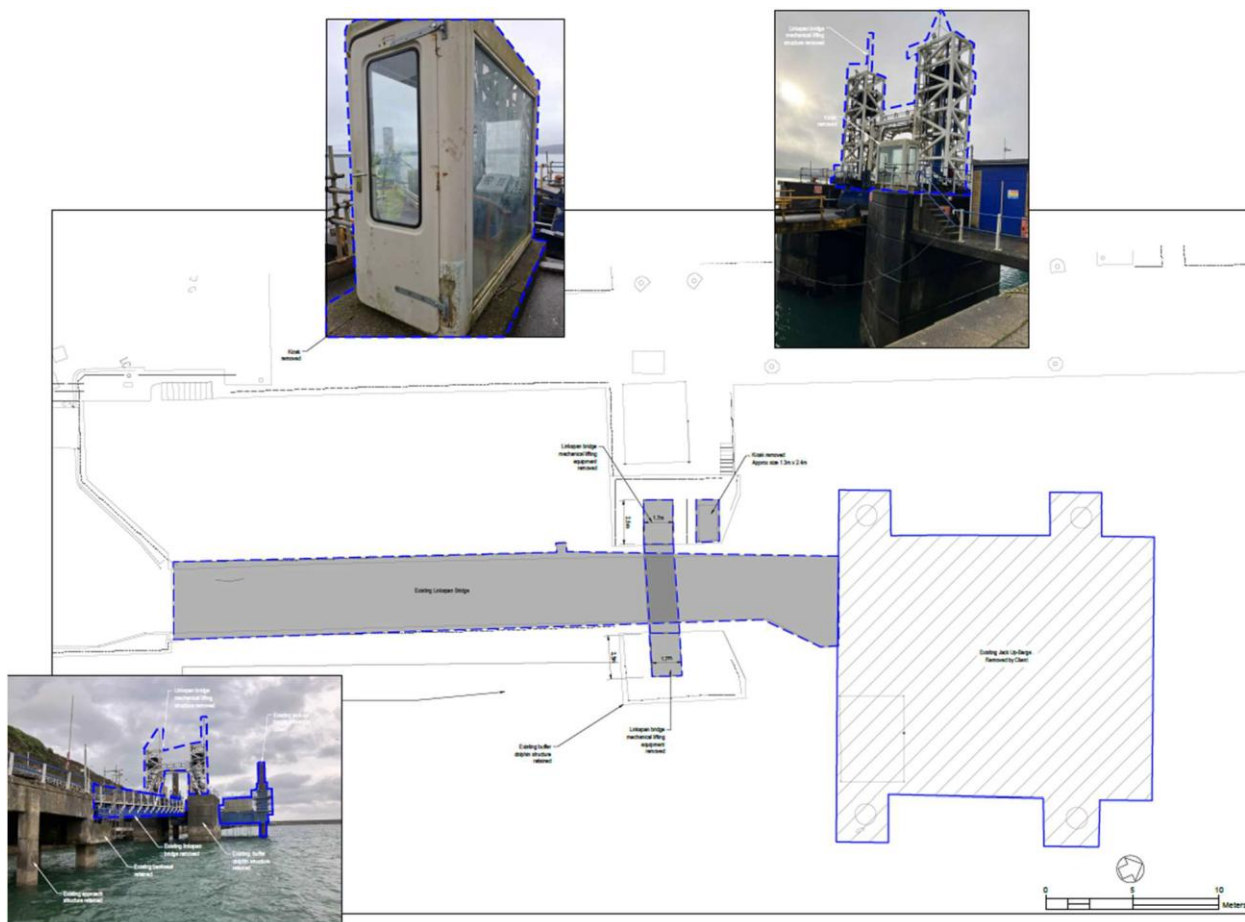


Figure 2-4 Extents of Dismantling and removal from site

The existing linkspan bridge, equipment and kiosk including lattice support structure between the buffer dolphins to be lifted off by a floating crane and/or landside plant and placed onto a pontoon

towed by a tugboat or to the land for disposal off site. All arisings shall be disposed of to an appropriate offsite disposal facility.

The existing jack-up barge legs will be lifted from the seabed and the barge lowered and towed away by tugboat.



Figure 2-6 Linkspan Tower and Bridge

2.3.2 Demolition

Partial demolition of the buffer dolphin towers is required to allow adequate clearance for the new bridge. 500mm of the inside face of the towers will be removed over a vertical length of 7.5m. Total reinforced concrete to be removed is 60m³ including an allowance for tolerance, equivalent to a weight of 144t.

Demolition shall be carried out using a wire saw, and sections of concrete removed by either a landside or marine crane.

Asphalt surfacing on the existing deck over an area of 50m² is to be planed off and reinstated with concrete surfacing. Surfacing to be removed is assumed to be up to 100mm. Total volume of 5m³.

These works will be carried out following the removal of the existing bridge and existing linkspan equipment.

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.

Plough dredging is proposed in the area of scour protection to remove a layer of soft material before the scour protection is installed.

The dredged material will be placed in an area within the berth that has experienced scour. It is anticipated that approximately 2500m³ of material will be redistributed in the berth.

The dredge material is expected to be loose silts and sands.



Two guide piles are to be installed to restrain the pontoon. These are anticipated to be steel tubular piles, approximately 2.032m in diameter, filled with reinforced concrete. These guide piles 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 eight 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 eight temporary support piles will be removed once the guide pile has been installed. The pontoon will be floated into place and secured to the guide piles.

Plough dredging will be carried out over the footprint of the scour protection where required. A layer of soft material up to 1.5m in depth shall be removed and displaced to a deeper 'scour

pocket' close by within the berth. It is anticipated that the plough dredger will track over the area a number of times to achieve the appropriate depth.

Scour protection will be provided to the northern edge of the existing buffer dolphin on the seabed under the proposed pontoon footprint and extending to the toe of the quay wall. This scour protection will consist of rock armour approximately 1000mm thick.

Scour protection in the form of rock armour will be placed on the seabed via a long reach excavator mounted on a barge.

2.3.6 Remedial works to Bankseat, Existing Deck and New Bankseat

Remedial works such as the removal of existing bolts or addition of chemical anchors to the existing bankseat may be required to allow installation of the bridge. This will be carried out once the existing bridge has been removed.

Following the removal of the asphalt surfacing on the existing deck, the surface will be reformed with concrete to the correct level for the proposed ramp. The existing railings may need to be extended to suit the new deck levels. New concrete surfacing will be up to a maximum of 400mm thick.

If required, a new bankseat structure will be constructed at the northern edge of the existing deck structure to support the bridge. This structure is expected to be constructed from precast concrete or a steel frame supported by steel tubular piles filled with concrete. The piles will be vertical piles installed using vibro, impact driving and rotary boring techniques. These piles are proposed to be steel tubes approximately 0.914m in diameter. The concrete section of the bankseat will be installed from insitu concrete. 8nr temporary piles will be installed to support the piling frame for the permanent piles. These 8nr piles are expected to have a diameter of 610mm.

2.3.7 Installation of Bridge

The proposed pontoon and bridge will be transported to the site via floating plant. The pontoon will be floated into place and secured to the guide piles. The bridge will be lifted into position using floating plant.

The proposed pontoon and bridge will be transported to the site via floating plant. The pontoon will be floated into place and secured to the guide piles. The bridge will be lifted into position using floating plant and secured to the existing bankseat at the edge of the suspended concrete deck structure. Electrical connections to the pontoon to be made, and testing and commissioning of the pontoon completed.

Upon installation of the pontoon and bridge the ferry sailings may recommence.

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 2-8 Potential Site Compound Locations . 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 to the north end of the Port which is currently in use for overflow parking for trailers and machinery.

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

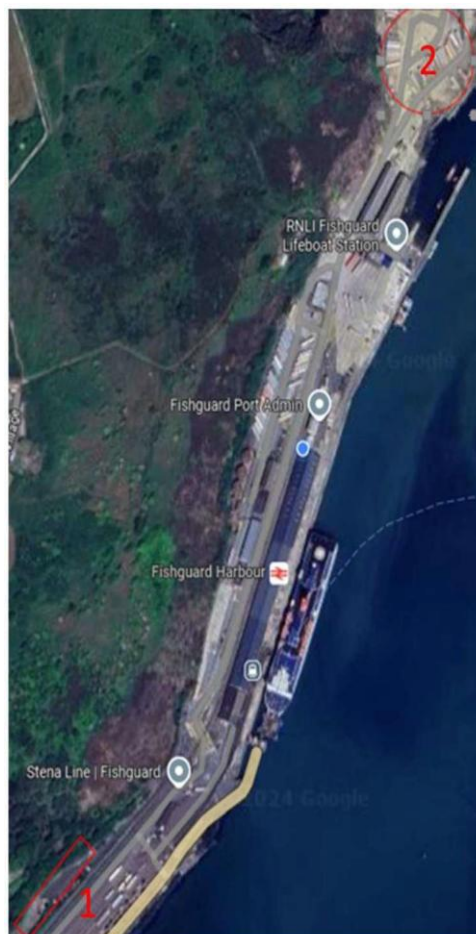


Figure 2-8 Potential Site Compound Locations

2.5 Site Access

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

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Vehicular 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 terminal during the construction period.

The town itself should not be significantly affected by construction traffic.

3 Project Need and 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.

Stena Line's overarching driver for this project is to have a new linkspan bridge and pontoon in place and operational by Spring 2027. Failure to achieve this would result in the closure of their Fishguard- Rosslare route.

The original proposals provided for a two lane linkspan bridge to allow vehicles to board/disembark the vessel side by side. This two lane linkspan would not fit in the location of the existing single lane linkspan and therefore necessitated the reclamation of new hinterland area as detailed in the initial submissions.

Geotechnical site investigations found the seabed in the area of reclamation to be poor. This created a significant risk that the project could not be completed by Spring 2027. Stena Line were not comfortable with this risk.

To mitigate this risk, Stena line revisited their original requirements and satisfied themselves that a single lane linkspan bridge was sufficient. This change to their requirements meant that the linkspan could be located where the current linkspan is and therefore avoided the need to reclaim hinterland. This is the basis of this new submission.

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.

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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.

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 (EclIA) 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 0-2 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:

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- 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.

A 100km radius was adopted to give adequate coverage for marine mammals as a realistic, although arbitrary distance over which marine mammals could be cumulatively affected by projects due to the mobile nature of marine mammals when weighed against the size of the marine units for cetaceans and NRW advice to use the OSPAR Region III when considering connectivity of grey seals.

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);

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- 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 of the initial project which comprised a revetment and significant dredging. Clarifications were sought from NRW regarding the sample locations, sample plan and analysis and timescales for the associated band 1 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 5.1.1.8 of Chapter 5 of the ES.

5.1.3 Scoping Response

In preparation of the initial 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 (Appendix 5.A). A list of the consultees who responded to the scoping request are set out in 5.1.1.7 List of Consultees of Chapter 5 of the ES; and issues raised and project team responses are set out in 5.1.1.6 Consultee Responses and Consideration of Chapter 5 of the ES.

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.

NRW have confirmed that this Proposed Development would also require Environmental Impact Assessment.

5.1.4 Engagement with NRW Advisory Team

Further meetings were undertaken between NRW and the project team following the scoping opinion received in January 2025 to clarify assessments of dredging and disposal, elements which are largely removed from this submission.

Following submission of the Marine Licence application in May 2025, formal request for further information/technical clarifications was received on 15th August 2025 from NRW to which RPS Tetrattech responded to on 22nd September 2025. A copy of the request and response is contained within Appendix 5.C. Discussions were ongoing as to the necessity for further sampling in dredging areas containing elevated zinc and PAH concentrations. These dredging areas have now been removed from this Proposed Development, and no possible areas of contamination are to be disturbed.

Between September 2025 and February 2026 discussions have been bi-monthly between RPS Tetrattech and NRW to address design options and the consenting processes. NRW have advised to withdraw the previous application under ML2533 and resubmit an application for the Proposed Development, the subject to this ES.

6 Summary of Technical Chapters

6.1 Population and Human Health

The Population and 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-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.

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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.

6.2 Marine Biodiversity

The marine biodiversity baseline is presented in section 8.8, and 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 Site 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 15.8 km from the Site Boundary, and is designated for a range of benthic, fish, and marine mammal features. In addition, the Site 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 Site 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), and for inter-related effects (effects interactions; section 8.12.1). As a result, no future monitoring has been proposed (section 8.10.3).

6.3 Terrestrial Ecology

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 (Zol) 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.

6.4 Coastal Processes

The baseline environment within Fishguard Harbour is characterised by 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. During northerly events, waves can diffract around the breakwater and approach the site of the Proposed Development from the northeast and easterly sectors.

During normal tidal conditions (i.e., non-storm events) 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 seabed 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. Any resultant deposition of sediment would not influence the bathymetry of key receptors such as sandbanks, mudflats and sandflats.

During the operational phase, the presence of infrastructure associated with Proposed Development may lead to changes 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.

6.5 Water Quality & Water Framework Directive

The Proposed Development is located within Fishguard Bay in the wider context of 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 marginally exceeding chemical action level 1 within the dredge area. However, the dredging activities will not interact with those contaminants that are above chemical action level 1 as they are found within sediments at depths (2.9-3.0 metres) which is greater than depths to be dredged (1.5 metres). Other impacts includes 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 Guidance for Pollution Prevention (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 (26 km) and is located in the Pembrokeshire South coastal water body.

6.6 Flood Risk

The Proposed Development requires a waterfront location. The main source of flood risk for the Proposed Development site is from coastal flooding.

As shown in the Flood Map for Planning, the Proposed Development lies within Flood Zone 3 (areas with more than 0.5% (1 in 200) chance of flooding from the sea in a given year, including the effects of climate change). Technical Advice Note (TAN) 15 'Development, flooding and coastal erosion' identifies the vulnerability of different land uses to flooding, and development has been sub-divided into three categories. 'Boatyards, marinas and essential works required at mooring basins' are classified as 'Water compatible development'. TAN 15 describes 'Water compatible development' as developments which are required to be located near water by virtue of their nature, and developments which are resilient to the effects of occasional flooding. The description covers the Proposed Development. TAN 15 states that water compatible development is acceptable in all flood zones.

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. Tidal warning will be the key mitigation measure for the operation of the site. 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.

Environmental Statement

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 the sustainable management of natural resources.

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.

6.7 Noise & Vibration

This chapter evaluates the likely effects of noise and vibration in relation to the Proposed Development. Operational noise and vibration affecting noise receptors has been scoped out as there are no new known significant vibration sources associated with the Proposed Development. During the construction phase, there is potential for noise and vibration impacts at the nearest noise sensitive properties from the use of associated construction plant and equipment.

Construction noise and vibration receptors were identified using Google maps and there are 155 sensitive receptors located within the Study Area of 300m. A further two industrial receptors have been included in the construction noise and vibration assessment. The construction assessment assumed that there would be seven activities:

- Activity 1 - Demolition
- Activity 2 - Dredging works
- Activity 3 - Scour protection
- Activity 4 - Bankseat piling and concrete works
- Activity 5 - Guide pile installation
- Activity 6 - Install of floating pontoon linkspan
- Activity 7 – Remedial works
- Activity 8 – Site Compounds.

Construction noise thresholds have been set using BS 5228-1 based on noise measurements that were conducted at three locations. All receptors within the Study Area were assigned Category A

threshold value for daytime and Saturday and evening and weekend. All receptors within the Study Area were assigned Category C threshold values for night-time. The threshold values are 65 dB LAeq,T and 55 LAeq,T for daytime and evenings, and night-time respectively.

To ensure a worst-case assessment, the predicted noise levels take account of the likely plant required to facilitate each activity within the construction process are located on the boundary closest to the nearest noise sensitive receptors. Within all activities, all receptors are predicted to experience noise levels less than 55 dB LAeq,T. Vibration levels were predicted during Activity 4 which is the installation of temporary guide piles. Predicted vibration levels were less than 0.3 mm/s at all receptors within the Study Area.

The assessment predicted that construction noise and vibration as a result of the Proposed Development would result in a negligible magnitude of impact at all receptors which corresponds to a Negligible or Minor significance of effect.

No operational noise or vibration impacts resulting from the operation of the Proposed Scheme are anticipated. There will be no significant effects arising from the operational phase.

Therefore, it can be concluded that there are no significant effects predicted due to noise and vibration from the Proposed Development.

6.8 Underwater Acoustics

The Project

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 to find food and to navigate, an injury to their hearing is a very serious impairment and should be avoided where possible.

This Assessment

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.

Conclusion and Recommendation

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.

6.9 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.

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 PM2.5 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.

6.10 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 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 a in negligible adverse magnitude of impact for the 1930's lifeboat station and moderate adverse magnitude of impact for any remains on the seabed within the area of proposed dredging. The lifeboat station would be subject to a negligible beneficial significance of effect during the operational phase.

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 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.

6.11 Soils, Geology & Geohydrology

This chapter assesses how the proposed Fishguard Linkspan Replacement could affect soils, geology and any contaminated land within the harbour area during both construction and operations

Baseline Conditions

Environmental Statement

The site comprises Fishguard/Goodwick Harbour, an area of reclaimed land and seabed made up of layers of sand, silt, gravel and clay overlying volcanic and mudstone bedrock. Previous and recent ground investigations show:

- Made ground is widespread across the site, reflecting historic port development.
- The underlying bedrock forms a Secondary B aquifer, meaning it has low groundwater value and does not contribute significantly to water supplies.
- No sensitive water features or watercourses lie close to the site.
- Sediment samples show localised contamination, including some metals and hydrocarbons above lower guideline thresholds; however, most material is suitable for disposal at sea, except for targeted areas (e.g. around vibrocore VC003).
- A formal Preliminary Risk Assessment identified no pollutant linkages, meaning no realistic pathways for contamination affecting human health or the environment.

Overall, the baseline conditions indicate a low sensitivity environment with limited geological or groundwater vulnerability.

Construction Effects

Construction activities include piling, plough dredging within the berth, and general site operations.

Key findings:

- Plough dredging will move sediment within the harbour rather than remove it, resulting in negligible effects on soils and geology.
- Piling works will not significantly disturb geological features or groundwater and are assessed as negligible effect activities.

No significant impacts are predicted.

Operational Effects

During operation:

- There will be no extraction of groundwater and no anticipated disturbance of soils or geology.
- As no source-pathway-receptor contamination linkages are present, human health and environmental risks are negligible.

No operational impacts are expected

Mitigation Measures

Although effects are negligible, standard good-practice measures will be implemented:

- Secure, bunded storage of fuels and oils.

- Refuelling only in designated areas, with spill kits available.
- A spill response plan to manage any accidental releases.

These measures ensure risks remain extremely low

Residual and Cumulative Effects

With mitigation in place:

- All effects on soils, geology and contaminated land remain Not Significant.
- There are no expected cumulative impacts with other nearby projects

6.12 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 with a new linkspan pontoon and plough 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 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.

6.13 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 9-month period with a 2-month ferry service shutdown. For the first 5 months the ferry services will remain online while the construction works are being carried out, then the ferry services will be offline for 2no. 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 5 (January 2027). 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.

6.14 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 arising 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.

6.15 Waste

A range of inert, non-hazardous and hazardous wastes will be generated from the Construction and Operational Phases of the Project. These wastes will be required to be stored, transferred and managed at various waste treatment or disposal facilities to comply with regulatory requirements and minimise impacts on the environment. The Proposed Development will produce relatively small quantities of waste from removal of existing infrastructure, dredging works and installation of the new port access and pontoon / linkspan installation.

The operational wastes will be managed in line with approach set out in the current Port Waste Management Plan for the Fishguard Port that complies with requirements for businesses in Wales to segregate recyclables.

Details of all waste types that will be produced from the Construction Phase of the Proposed Development will be documented in the Site Waste Management Plan (SWMP) that will form part of the CEMP. The SWMP will detail how each waste stream will be managed and the locations and requirement for storage of wastes, along with appropriate management option at approved waste contractors.

By 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 replacement of the linkspan will have no adverse effect.

It is concluded that the replacement linkspan, which includes development and implementation of a detailed SWMP will have a neutral or slight effect on the environment in relation to waste management. The residual effects of the Proposed Development considering the mitigation measures are determined to be Not Significant.

6.16 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 plough dredging and installation of piles for a new pontoon.

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. Adherence to the existing vessel and navigation management within the harbour, and oCEMP which will accompany this EIA.

6.17 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.

Environmental Statement

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.

6.18 Shipping & 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 2 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.

Environmental Statement

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.