

REPORT

Jetty Improvement Marine License

Water Environment Regulations Compliance
Assessment

Client: DragonLNG

Reference: PC7468-RHD-XX-XX-RP-EV-0001

Status: Final/1

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1 Introduction

DragonLNG is looking to undertake repairs for the jetty at Milford Haven. The jetty was constructed in the 1960's, built of steel piles, with a concrete roadway on top. Recent observations have identified potential issues with the integrity of the concrete roadway. In response, DragonLNG is looking to undertake an inspection of the jetty and carry out any subsequent repairs.

The inspection and repairs works would be undertaken during the low shipping period (May to September) and expected to last up to four years.

To support the Marine Licence application a Water Environment Regulations Compliance Assessment has been conducted.

2 Proposed scheme

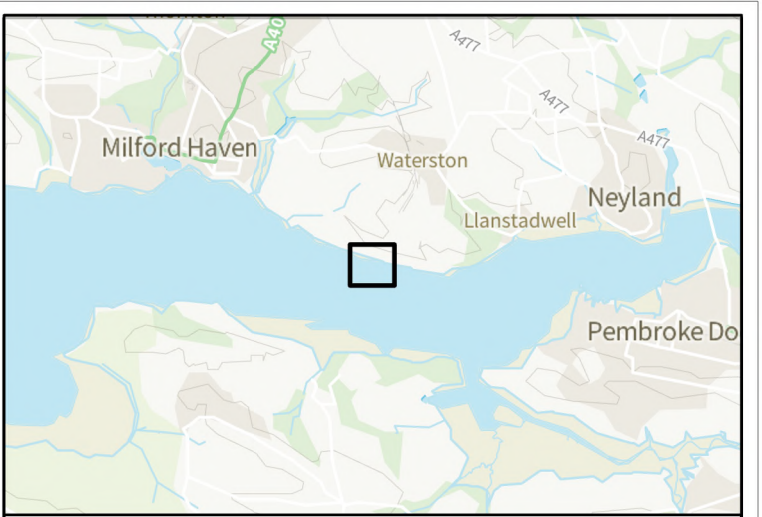
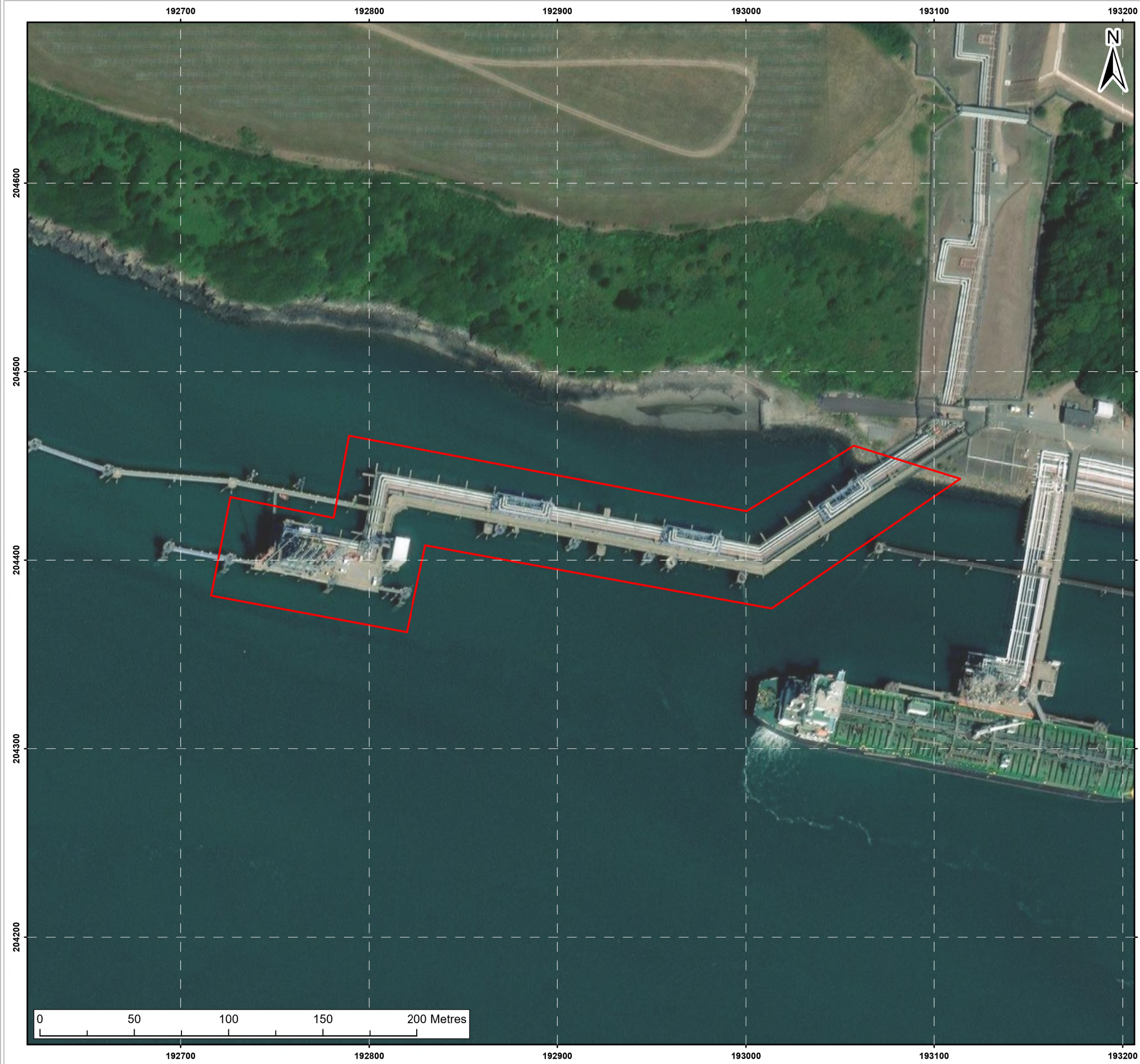
2.1 Proposed scheme location

The proposed scheme is located in Milford Haven at OS Grid reference SM928044. As shown in **Figure 2-1**.

2.2 Overview

The proposed scheme consists of the inspection and subsequent repairs of DragonLNG's jetty. The inspection will consist of constructing a temporary access system. The concrete will be inspected visually and also through the use of a 'hammer test' (using a handheld hammer to determine the thickness and state of the concrete). The inspection will inform whether repairs are only required for the concrete or if the rebars also need replacing. Following the repair works, a protective coating will be applied to the jetty.

The proposed jetty structure varies in height above the water due to tidal fluctuations. On average, the underside of the jetty deck sits approximately 3.0 to 3.5 m above the waterline at high tide, increasing to around 4.5 to 5.5 m at low tide. These measurements are site-specific and have been verified through recent surveys conducted by DragonLNG or as-built drawings. The total area of concrete on the jetty is approximately 3,000 m².



Legend:

Project Boundary

Source: © Haskoning UK Ltd, 2025
Base map: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Contains OS data © Crown Copyright and database right 2025
Contains data from OS Zoomstack

Project: Jetty Improvement Marine License (WERCA)

Title: Location Plan

Figure: 2-1	Drawing No: PC7468-HAS-XX-XX-DR-GS-0001				
Revision: 01	Date: 26/08/2025	Drawn: MW	Checked: RG	Size: A3	Scale: 1:2,000

Co-ordinate system: OSGB 1936 British National Grid



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2.3 Construction methodology

2.3.1 Access

Land based access will be from the north end of the jetty where the structure meets the shore. Mobile equipment such as scaffolding and access towers will be used for land based repairs.

Barges and workboats will be used for transporting materials and equipment to site and will be used to reach the seaward sections for the jetty repairs. Suspended scaffolding or work platforms will be used for safe access beneath the deck when working over water. All access systems are engineered and will be approved in accordance with safety standards.

2.3.2 Concrete removal

Deteriorated concrete will be removed using a combination of hand tools, pneumatic chipping hammers, and, where appropriate, hydro-demolition. Removal will be controlled to prevent overbreak, minimise damage to surrounding structures and loss to the marine environment.

2.3.3 Concrete pouring

Concrete will be poured in small sections of up to 2 m. Depending on the location and access chosen, concrete will be poured using either form-and-pour techniques, shotcrete application, or pre-mixed concrete delivered via pump lines. Admixtures may be used to improve workability and reduce curing time. A protective coating will then be applied to the concrete using rollers (or similar). The coating to be used will be reviewed to ensure suitable for application in the marine environment. It is expected to provide adequate protection against typical conditions encountered in coastal and offshore environments

2.4 Mitigation

2.4.1 Dust control

It is proposed to use water misting systems and wet cutting techniques to suppress dust during concrete removal. Additionally, vacuum systems would be used in confined or sensitive areas.

2.4.2 Leaks and spills

All equipment will be inspected prior to mobilisation. Spill kits will be stationed at every work zone with drip trays placed under stationary machinery. Refuelling will be conducted away from the water where feasible, and secondary containment is proposed for fuel and chemical storage.

2.4.3 Containment measures

Silt curtains or floating booms will be deployed around work areas where there is a risk of material entering the water. It is proposed to install attachment trays or netting under the repair zones to capture any falling debris or slurry.

2.5 Programme

The inspection and repairs works would be undertaken during the low shipping period (May to September) and expected to last up to four years.



2.6 Operation

There are no proposed changes to the operation of the Jetty due to the proposed works.

3 Method of assessment

3.1 Water Environment Regulations Compliance Assessment (WERCA)

The Water Framework Directive (WFD) is transposed into Welsh law by means of the Water Environment (WFD) (England and Wales) Regulations 2017, as amended¹. These Regulations provide for the implementation of the WFD, from designation of all surface waters (rivers, lakes, transitional (estuarine) and coastal waters and ground waters, including those that are man-made) as water bodies to the requirement for achievement of good ecological status or good ecological potential by 2027. The consideration of the proposed scheme under the WFD, therefore, applies to all water bodies that have the potential to be impacted.

Classification schemes for both estuarine and coastal waters from MHWS out to one nautical mile (nm) have been developed in response to the WFD. The schemes classify the status of Transitional and Coastal Waters (TraC) using information on the ecological, chemical and hydromorphological quality of a body of water. For TraC water bodies that have been designated as heavily modified water bodies (HMWB), NRW classify according to their ecological potential rather than status.

The WFD applies to all water bodies, including those that are man-made. The consideration of the proposed scheme under the WFD will, therefore, need to be applied to all water bodies that have the potential to be impacted by the proposed development. This applies to those water bodies within which direct effects would take place, including demolition and construction activities.

This assessment has been carried out in line with the 'Clearing the Waters for All' guidance (Environment Agency, 2023) found at: <https://www.gov.uk/guidance/water-framework-directiveassessmentestuarineand-coastal-waters>. The construction methodology for the proposed scheme is described in **Section 2** and consists of inspection of the jetty, concrete removal and replacement.

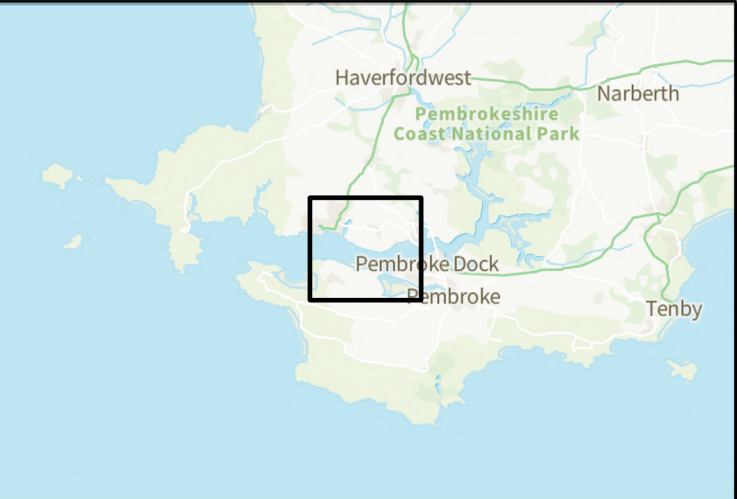
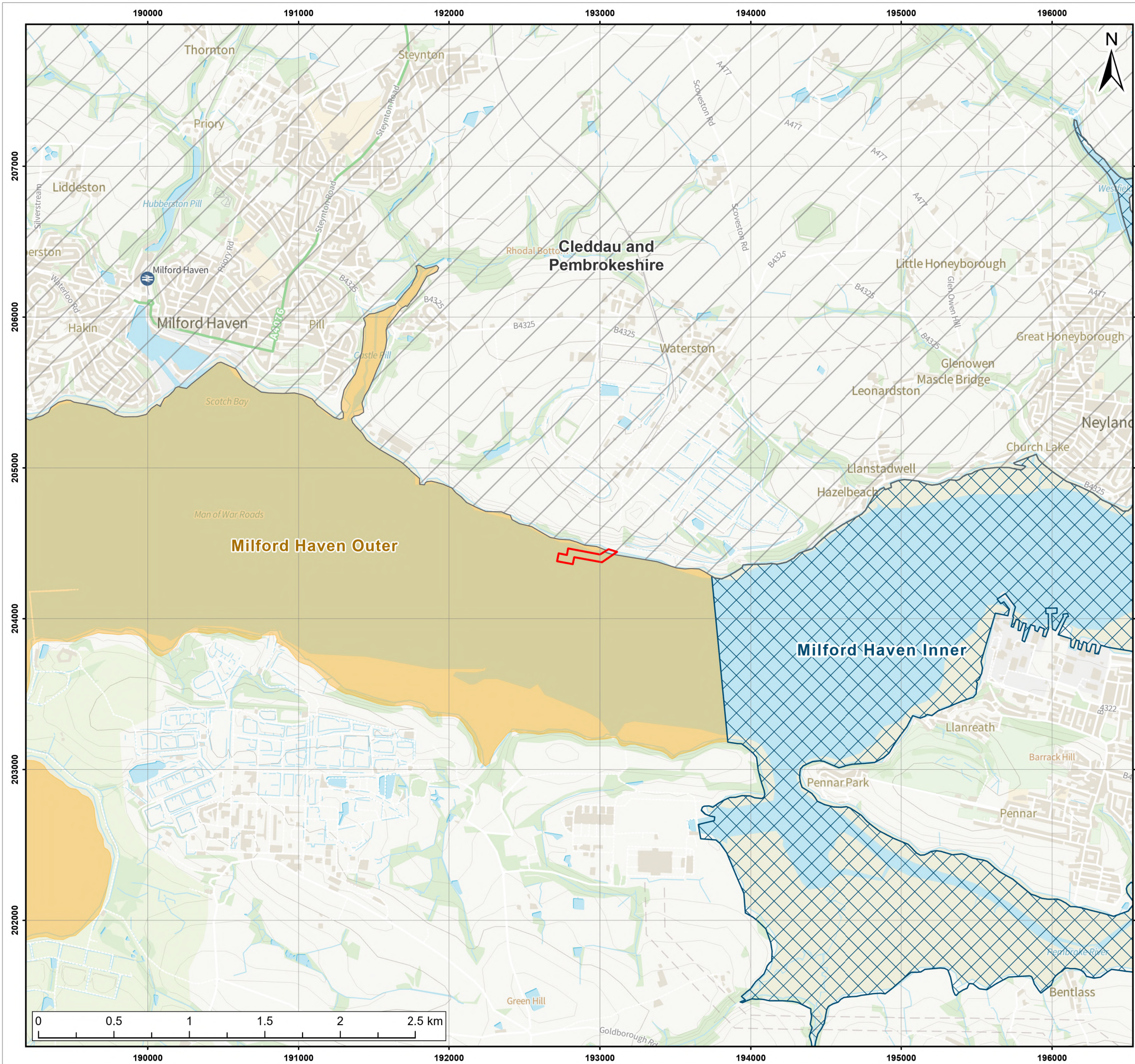
4 WERCA Screening

The Cleddau and Pembrokeshire Groundwater body (GB41002G200400) is located within 2 km of the Proposed Works; however, due to the distance and no overlap with the Proposed Works, no impacts would occur and this water body has been screened out of further assessment (**Figure 4-1**).

The proposed scheme is located within Milford Haven Outer Coastal waterbody (GB641008220000) and 830m from Milford Haven Inner Transitional waterbody (GB531006114100). Due to the nature (inspection of the jetty, concrete removal and replacement), scale of the works (limited to the footprint of the jetty) and distance from the proposed scheme; it is not anticipated that the proposed scheme would cause adverse effects to the Milford Haven Inner (GB531006114100) waterbody; it has therefore been screened out of further assessment (**Figure 4-1**).

Details for the Milford Haven Outer (GB641008220000) Coastal waterbody are provided in **Table 4-1**.

¹ Amended by the Floods and Water (Amendment etc.) (EU Exit) Regulations 2019



Legend:

- Project Boundary
- Transitional Water Body
- Groundwater Body
- Coastal Water Body

Source: © Haskoning UK Ltd, 2025, © Natural Resources Wales
 Base map: Contains OS data © Crown Copyright and database right 2025
 Contains data from OS Zoomstack

Project: Jetty Improvement Marine License (WERCA)

Title: WFD Waterbodies

Figure: 4-1	Drawing No: PC7468-HAS-XX-XX-DR-GS-0002				
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Co-ordinate system: OSGB 1936 British National Grid

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Table 4-1 WERCA screening Milford Haven Outer Coastal waterbody (GB641008220000)

Water Body Parameters	Description
WFD water body name	Milford Haven Outer
Water body ID	GB641008220000
River basin district name	Western Wales
Water body type (estuarine or coastal)	Coastal
Water body total area (km ²)	35.39 km ²
Overall water body status	Moderate
Ecological status	Moderate
Chemical status	Good
Target water body status and deadline	Good by 2027
Hydromorphology status of water body Supports	Supports good
Heavily modified water body and for what use	No
Higher / lower sensitivity habitats present	- Sandbanks which are slightly covered by sea water all the time - Mudflats and sandflats not covered by seawater at low tide - Coastal lagoons <i>Priority feature</i> - Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) - Submerged or partially submerged sea caves
Phytoplankton status	High
History of harmful algae	Not assessed
WER protected areas within 2km	Pembrokeshire Marine / Sir Benfro Forol Special Area of Conservation (SAC) (UK0013116) (0 km)

The construction activity has been compared to the scoping criteria as set out in the Clearing the Waters for All guidance (Environment Agency, 2023). Initial stages of this assessment focus on the water body in which the activities occur. If a risk is identified to a WFD parameter in this water body, then the potential for effect on adjacent water bodies will be considered as part of further assessment. The output of this assessment is presented in **Table 5-1**.

Table 5-2 WERCA scoping Milford Haven Outer (GB641008220000)

Parameter	Scoping question	Activity response	Further Assessment Required
Hydromorphology	Will the activity impact on the hydromorphology (for example morphology or tidal patterns) of a water body at high status	The hydromorphology status of the waterbody is “supports good”. Works will not be undertaken within the marine environment. The proposed works are for repairs of an existing concrete jetty that is above water.	No
	Is the activity in a water body that is heavily modified for the same use as the activity?	No, the waterbody is not heavily modified, the proposed scheme is located in a working port environment area and is for maintenance of the existing jetty. This will involve inspection of the jetty, concrete removal and replacement.	No
	Will the activity significantly impact the hydromorphology of any water body?	The hydromorphology of the waterbody will not be adversely impacted. Works will not be undertaken within the marine environment. The proposed works are for repairs of an existing concrete jetty that is above water. Mitigation measures outlined in Section 2.4 (dust control, leaks and spills and containment measures) will ensure that the waterbody is not adversely impacted.	No
Chemistry	Does the activity use or release chemicals, are the chemicals on the Environmental Quality Standards Directive (EQSD) list?	Concrete will be required for the repairs and replacement of the jetty. Mitigation set out in Section 2.4 will be used to prevent concrete and coating from entering the water body.	No
	Does the activity use or release chemicals, will it disturb sediment with contaminants above Cefas Action Level (AL)1?	To minimise the risk of impacts occurring from leaks and spillages, pollution prevention control measures and measures to deal with any spills or leaks will be implemented during construction activities. This will be managed through the implementation of a Construction Environmental Management Plan (CEMP) by the successful contractor.	
Phytoplankton / Physico-chemistry	Will the activity affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring or neap tidal cycle (about 14 days)?	Works are not anticipated to adversely affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring or neap tidal cycle (about 14 days). Works will not be undertaken within the marine environment. The proposed works are for repairs of an existing concrete jetty that is above water. Mitigation measures outlined in Section 2.4 (dust control, leaks and spills and containment measures) will ensure that the waterbody is not adversely impacted.	No

Project related

Parameter	Scoping question	Activity response	Further Assessment Required
	Is the activity in a water body with a phytoplankton status of moderate, poor or bad?	The phytoplankton status of the water body is high. Works will not be undertaken within the marine environment. The proposed works are for repairs of an existing concrete jetty that is above water. Mitigation measures outlined in Section 2.4 (dust control, leaks and spills and containment measures) will ensure that the waterbody is not adversely impacted.	No
	Is the activity in a water body with a history of harmful algae?	Harmful algae is not assessed for this waterbody. Works will not be undertaken within the marine environment. The proposed works are for repairs of an existing concrete jetty that is above water. Mitigation measures outlined in Section 2.4 (dust control, leaks and spills and containment measures) will ensure that the waterbody is not adversely impacted.	No
Biology – Habitats (flora / fauna / angiosperms / benthic invertebrates / higher and lower sensitivity habitats)	Which type of habitat is likely to be impacted and what percentage of the habitat is impacted within the water body? - is the footprint of the development >0.5km² or 1% or more of a water body's area? - is the activity within 500m of a higher sensitivity habitat? - is >1% of a lower sensitivity habitat in a water body affected?	The works cover an area of 0.020934 km² which is less than 0.5 km. The waterbody covers an area of 35.404 km² the works area covers 0.06% which is less than 1% of the waterbody. The works are located within 500 m of higher sensitivity habitat reef. The habitat is located 2 0m away from the proposed scheme. Works will not be undertaken within the marine environment. The proposed works are for repairs of a concrete jetty that is above water. Mitigation measures outlined in Section 2.4 (dust control, leaks and spills and containment measures) will ensure that the waterbody is not adversely impacted. The works are located within lower sensitivity habitats mudflats and sandflats (0.5482 km²), large shallow inlets and bays and estuaries (46.67034531). The works will not impact more than 1% of the habitat. The works cover an area of 0.020934 km² which is less than 1% of a lower sensitivity habitats mentioned. The works area covers 0.90% % of the mudflats and sandflats and 0.04% of large shallow inlets and bays and estuaries.	No

Project related

Parameter	Scoping question	Activity response	Further Assessment Required
Biology – fish	Will the activity be in an estuary and could affect fish in the estuary, outside the estuary but could delay or prevent fish entering it or could affect fish migrating through the estuary?	Works will not be undertaken within the marine environment. The proposed works are for repairs of an existing concrete jetty that are above water. Mitigation measures outlined in Section 2.4 (dust control, leaks and spills and containment measures) will ensure that fish species are not impacted by the works.	No
	Could the activity impact on normal fish behaviour like movement, migration or spawning?		No
	Could the activity cause entrainment or impingement of fish?		No
Invasive non-native species (INNS)	Could the activity introduce or spread INNS to a water body?	The materials will be delivered by road and water. Transport by water could lead to the introduction of INNS however, the contractor(s) will adhere to best practice to reduce the spread of INNS as far as possible. In particular, the key best practice guidance that are relevant to the proposed scheme are as follows: • To undertake good Biosecurity generally; • To prevent the spread of aquatic invasive species, undertake good biosecurity around water (GB Non Native Species Information Portal Biological Records Centre).	No
WFD Protected Areas	Is the activity within 2km of any WFD protected area?	The proposed scheme is located within Pembrokeshire Marine / Sir Benfro Forol SAC, a Habitats Regulations Assessment has been undertaken and concludes that there will be no adverse effect on site integrity either alone or in-combination with other plans or projects on the Pembrokeshire Marine / Sir Benfro Forol SAC.	No

5 Conclusion

In conclusion, with mitigation measures in place, the proposed scheme is not predicted to have a non-temporary effect on the WER parameters and therefore will not cause a deterioration in the status of the Milford Haven Outer coastal water body (GB641008220000).