

Note

**HaskoningDHV UK Ltd.
Water & Maritime**

To: Natural Resources Wales
From: Royal HaskoningDHV on behalf of Milford Haven Port Authority
Date: 14 November 2024
Copy:
Our reference: PC1477-RHD-ZZ-ZZ-FN-EV-0002
Classification: Project related
Checked by

Subject: WER Compliance Assessment: Port Authority Jetty Improvements

1 Introduction

1.1 Background

The Milford Haven Port Authority (MHPA) Port Authority Jetty (PAJ) is situated on Milford Haven's northern shore, approximately 7.5km from the estuary mouth (See **Figure 1.1**). The original jetty structure was installed in the 1960's and while the installation date of the pontoons is not known, it has been in service for an excess of 20 years. Operations at the jetty are on a 24/7 basis with daily operation by the pilot boats and currently the jetty provides permanent berthing for the pollution response capabilities of the port. The RNLI all-weather lifeboat (ALB) is currently operating under a temporary agreement from PAJ due to operational constraints at their normal base at Angle. To secure the capability of their service, RNLI hope to be expected to shift their base of operation from Angle to the north shore, with a permanent berth allocation at PAJ.

With the development in the Port's pilot fleet seeing increases in vessel size over time, the current berthing arrangements are not designed to accommodate the current fleet as effectively as possible. With a larger 22m pilot boat expected to be operational from November 2025, the existing berthing arrangements will be insufficient to accommodate the new vessel alongside the existing fleet. A redesign is therefore required to maximise berthing capability (primarily for the ports own fleet) and to identify opportunities for further developments to accommodate third party vessel including RNLI.

1.2 Legislation and Purpose

The Water Framework Directive (WFD) (Council Directive 2000/60/EC establishes a framework for community action in the field of water policy) and requires that EU Member States prevent deterioration and protect and enhance the status of aquatic ecosystems. This means that EU Member States must ensure that new schemes do not adversely impact upon the status of aquatic ecosystems, and that historical modifications that are already impacting it need to be addressed.

While the UK is no longer an EU Member State, the Water Environment (Water Framework Directive) (England and Wales) (as amended) Regulations (WER) 2017, transposes the WFD into UK Law and requires the WFD to be considered at all stages of the planning and development process in England and Wales. The consideration of the proposals under the WER therefore applies to all water bodies that have the potential to be affected by the proposed works.

This note considers the proposed PAJ improvement works (see **Section 1.3**) against the WER compliance criteria to ensure the compliance with these regulations. This assessment has been produced in support of the marine licence application for these works.

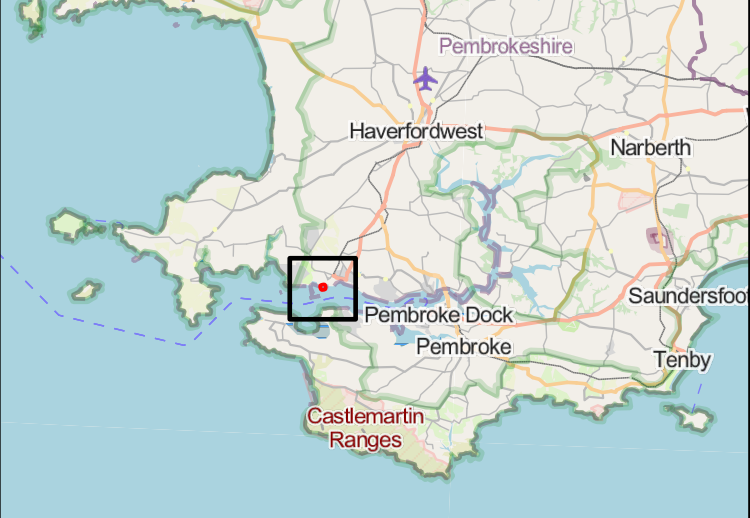
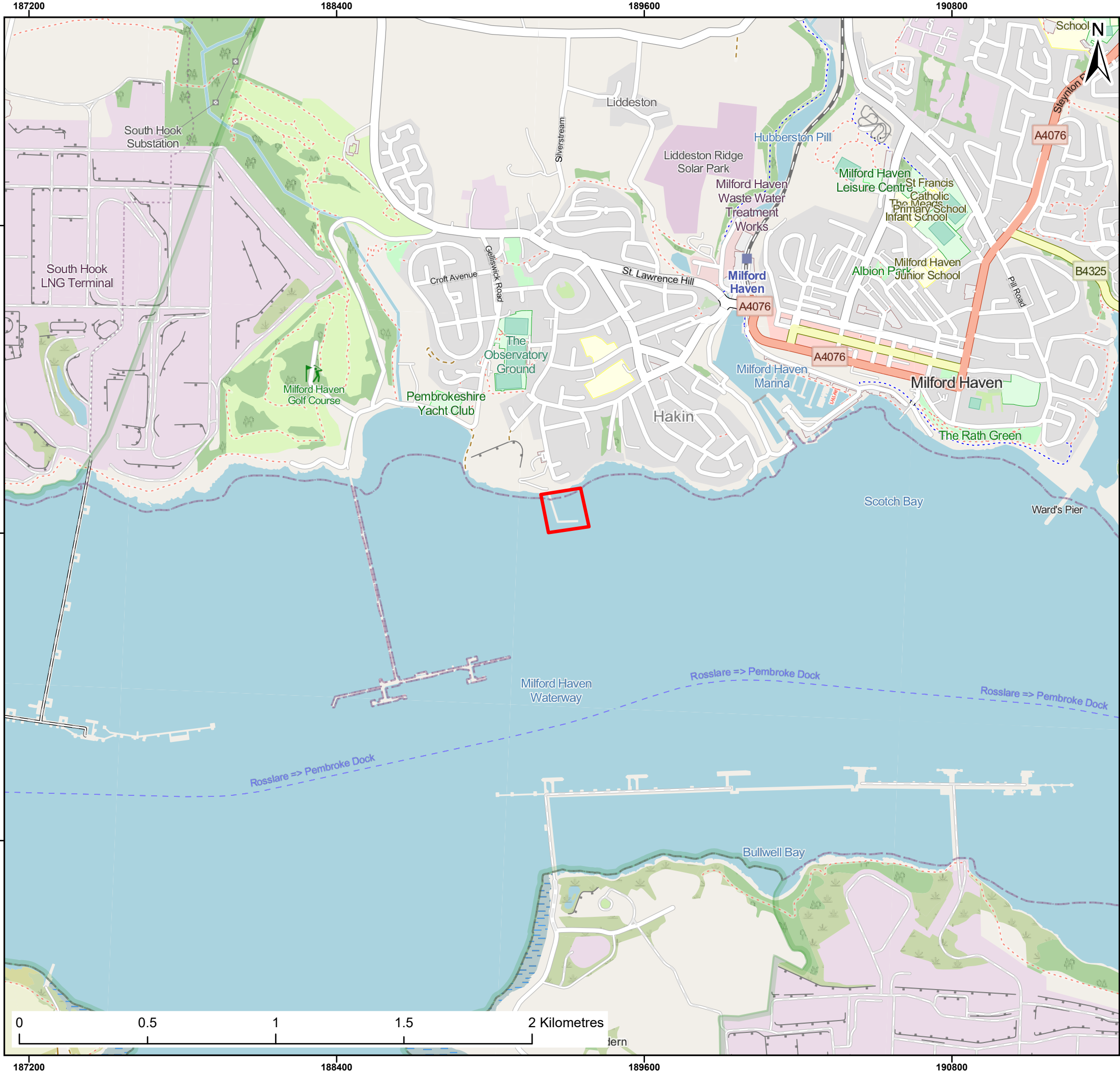
1.3 Proposed Works

MHPA is planning works to the PAJ at Milford Haven to improve its berthing capabilities. Section 2 of the Environmental Report provides details of the improvement works which are summarised here:

- Removal of the existing welfare cabin, gangway, pontoons and two restraining piles.
- Installation of a new gangway and full-length pontoon (West-East leg of jetty) adjacent to the jetty head extending its full length supported by up to 16 piles. Based on 70m available length and a generous pile distribution at 3m intervals. The pile diameter is anticipated to be up to 600mm in diameter.
- Installation of a new finger pontoon, extending perpendicular from the North-South jetty leg at its northern extent, supported by up to 8 piles also up to 600mm in diameter.
- Installation of a full-length pontoon (North-South) adjacent to the jetty head extending its full length supported by up to 8 piles. Based on 30m available length and a generous pile distribution at 3m intervals. The pile diameter is anticipated to be up to 600mm in diameter.
- Installation of one new and one replacement welfare cabins on the jetty deck. One on the short leg and the other on the long leg.
- Installation of a replacement diesel fuel hose as part of the existing fuel dispensing station on the jetty head as well as one additional fuel dispenser and an onshore diesel storage tank.
- Reinstallation of water and electrical systems from existing landside services

A plan of the proposed works is presented in **Drawing CPS-MHP-020-CS-1000**.

Works will be undertaken in line with standard industry practice, such as NRW's Guidance for Pollution Prevention for work or maintenance in or near the water, to protect the marine environment from accidental spills or pollution events and ensure navigational safety throughout.



Legend:

Area of works

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Client:	Project:
Milford Haven Port Authority (MHPA)	Port Authority Jetty MLA

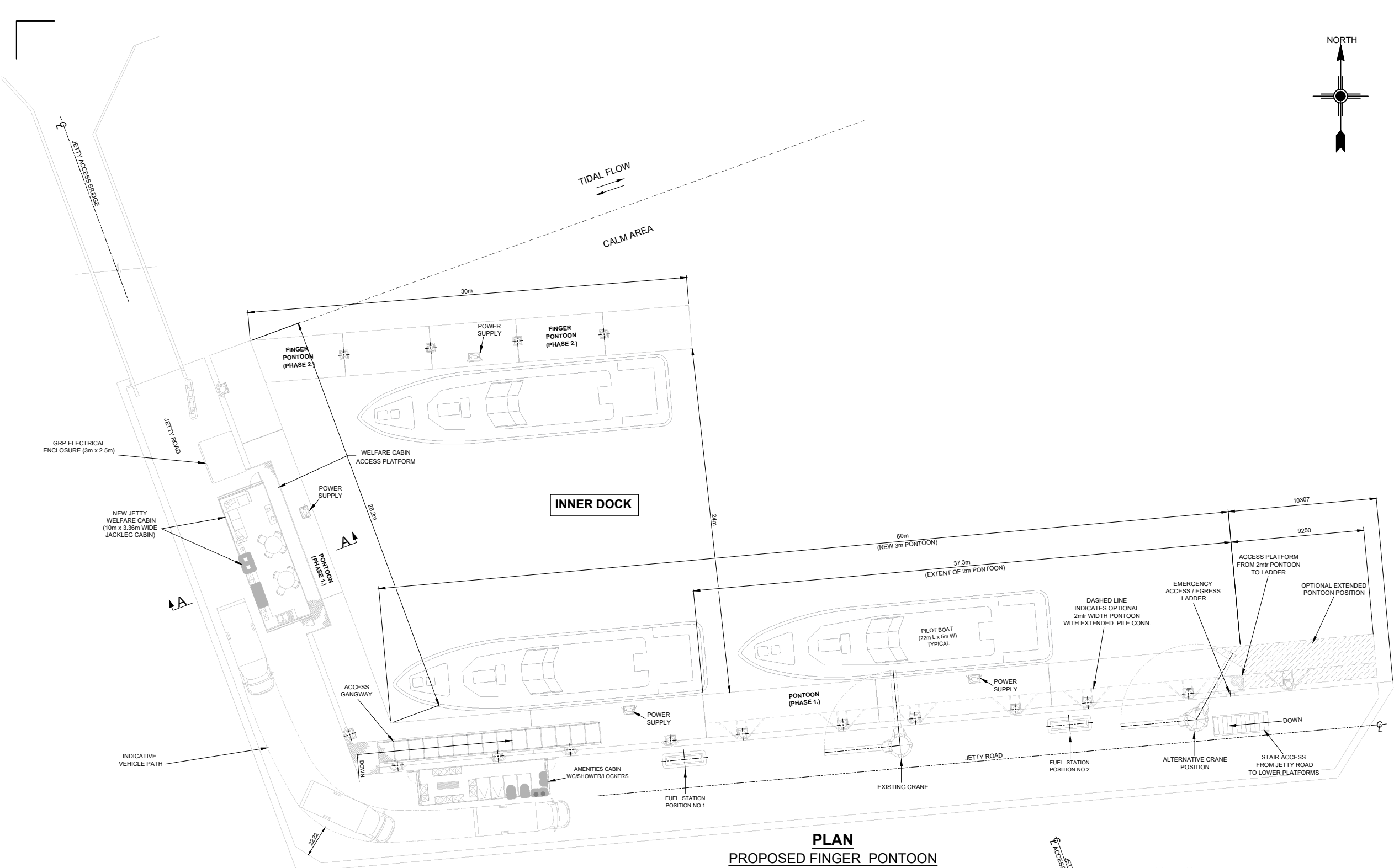
Title:

Area of proposed works

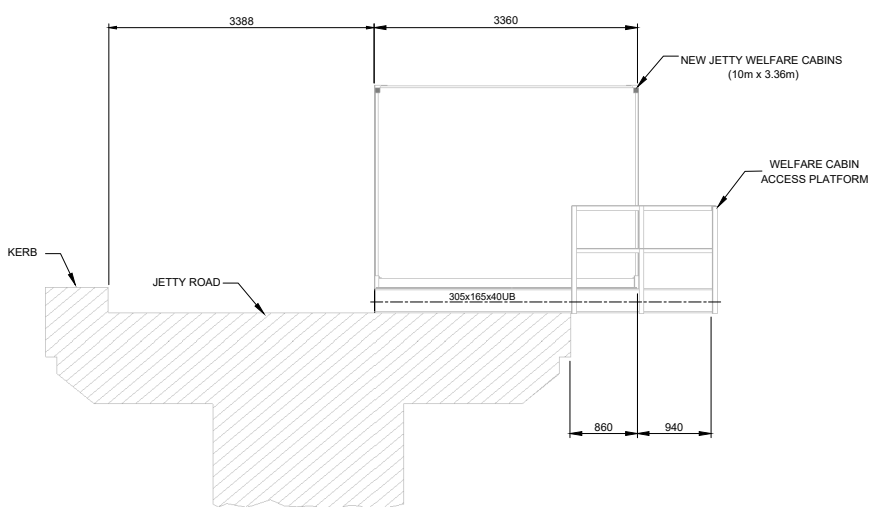
Figure:	1	Drawing No:	PC1477-RHD-ZZ-XX-DR-EV-0001			
Revision:	Date:	Drawn:	Checked:	Size:	Scale:	
P01	04/10/2024	CM	SM	A3	1:15,000	

Co-ordinate system: British National Grid



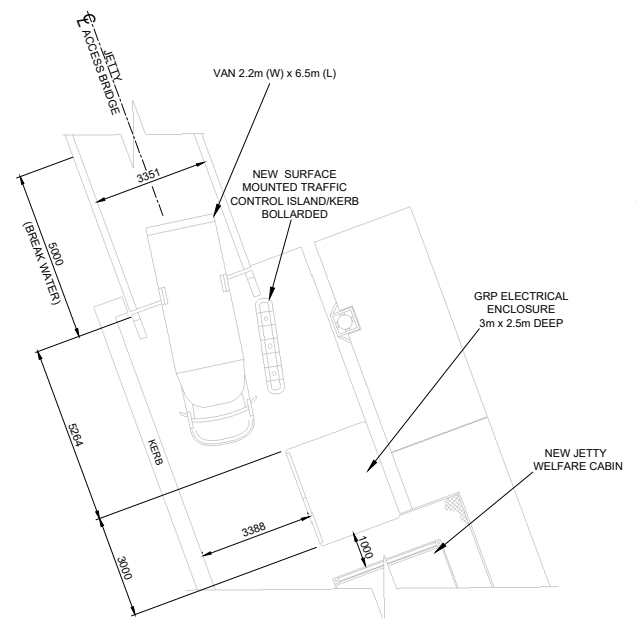


PLAN
PROPOSED FINGER PONTOON
(SCALE 1:150)

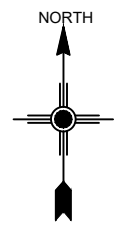


VIEW ON A-A
NEW WELFARE CABINS
RE-POSITIONED

OPTION 1



VEHICULAR ACCESS
FROM BRIDGE
TO JETTY



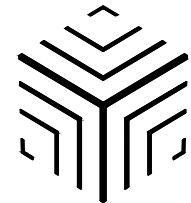
NOTES

1. ALL DIMENSIONS ARE GIVEN IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE GIVEN IN METRES AND ARE RELATIVE TO ORDNANCE SURVEY DATUM.

KEY PLAN

REFERENCE DRAWINGS

REV	DATE	DESCRIPTION OF REVISION
A1	15.04.24	UPDATE DIMENSIONS
A2	28.06.24	CLIENT UPDATE
A3	22.10.24	CLIENT UPDATE



6 Cedar Court,
Havens Head Business Park,
Milford Haven,
Pembrokeshire,
SA73 3LS

DRAWN SW DATE 28.06.24	CHECKED LC DATE 28.06.24	APPROVED NC DATE 28.06.24
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MILFORD HAVEN PORT AUTHORITY
PILOT JETTY IMPROVEMENTS
OPTION 1

PROJECT No C3D-MHP-24-020	Sht No 01	SCALE AS NOTED
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DRAWING NUMBER C3D-MHP-024-CS-1000	REVISION A3
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2 WER Compliance Assessment

2.1 Method of Assessment

This WER compliance assessment has been carried out in line with the 'Clearing the Waters For All' guidance (Environment Agency, 2017) and NRW guidance note OGN72 (NRW, 2018).

The assessment consists of three stages:

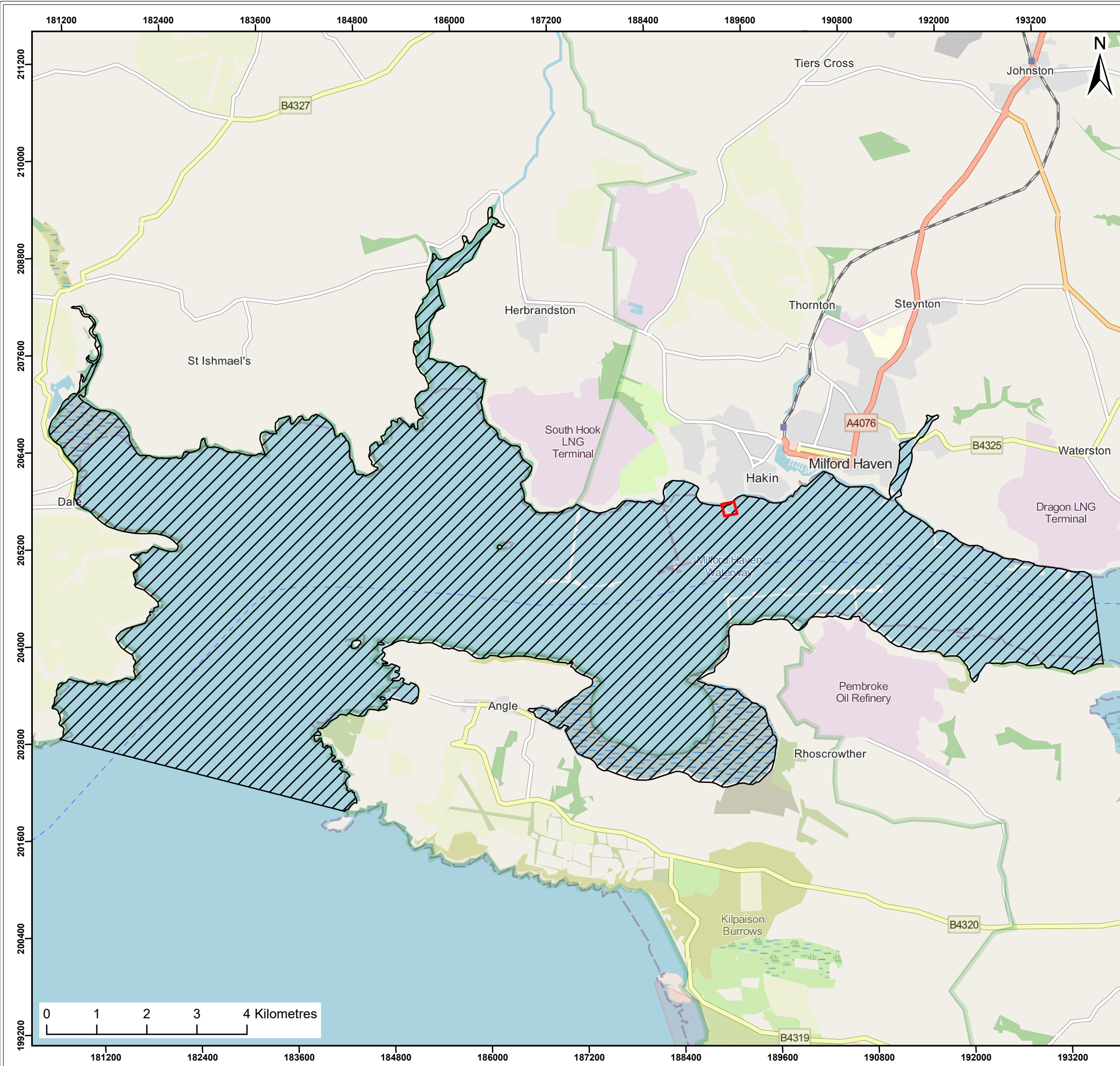
1. **Screening** – excludes any activities that do not need to go through scoping or impact assessment stages.
2. **Scoping** – identifies the receptors that are potentially at risk from the activity and require impact assessment.
3. **Further assessment** – considers the potential effects of the activity, identifies ways to avoid or minimise those effects, and determines if the activity may cause deterioration or jeopardise the water body achieving good status.

2.2 WER Waterbody

The proposed works are located within the Milford Haven Outer coastal water body (GB641008220000) (see **Figure 2.1**). The information available from DataMapWales (NRW, 2024) for the water body is presented in **Table 2.1**.

Table 2.1 Milford Haven Outer coastal waterbody summary

Detail	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
Overall waterbody status (2015)	Good
Ecological status	Moderate
Chemical status	Good
Target water body status (and deadline)	Good (2027)
Hydromorphology status	Supports Good
Heavily modified water body and for what use	No
Phytoplankton status	High
History of Harmful Algae	Not monitored
WER protected areas within 2km	Yes



Legend:

- Area of works
- Milford Haven Outer coastal waterbody (GB641008220000)

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Client:		Project:			
Milford Haven Port Authority (MHPA)		Port Authority Jetty MLA			

Title:

Relevant waterbody in relation to the area of proposed works

Figure:	2.1	Drawing No: PC1477-RHD-ZZ-XX-DR-EV-0001				
Revision:	Date:	Drawn:	Checked:	Size:	Scale:	
P01	04/10/2024	CM	SM	A3	1:75,000	

Co-ordinate system: British National Grid

2.3 Screening

The screening process can be used to exclude activities from the WER compliance assessment which are deemed 'low risk'. Comparison of the proposed scheme to the screening criteria outlined within the 'Clearing the Waters for All' guidance (Environment Agency, 2017) is provided below in **Table 2.2**.

Table 2.2 WER Screening criteria and assessment

Low risk activity screening criteria	Assessment
Is the activity a self-service Marine Licence or an accelerated Marine Licence activity that meets specific conditions?	No
Is the proposed activity associated with maintaining pumps at pumping stations?	No
Is the activity the removal of blockages or obstacles like litter or debris within 10m of an existing structure to maintain flow?	No
Is the activity the replacement or removal of existing pipes, cables or services crossing over a waterbody (but not including any new structure or supports, or new bed or bank reinforcement)?	No
Does the activity comprise 'over water' replacement or repairs to, for example a bridge, pier and jetty surfaces – if you minimise bank or bed disturbance?	No

Based on the above, it is concluded that the proposed activities would not be classed as low risk and are therefore carried through to the Scoping stage.

2.4 Scoping

Scoping has been carried out against the parameters contributing to the WER compliance to determine whether there is a risk to the WER water body in which the activity would occur, the results of which are presented in **Table 2.3**. The Milford Haven Outer coastal water body is not designated as heavily modified and as such mitigation measures for the water body are not required.

Table 2.3 WER Scoping phase

Consider if your activity:	Risk issue	Scoped in (yes/no)
Hydromorphology		
Could impact on the hydromorphology (for example morphology or tidal patterns) of a water body at high status	The water body is not at a high status.	No
Could significantly impact the hydromorphology of any water body	There will be no change to hydromorphology of the water body. While the proposed works are expected to involve changes in pile number, type and location, significant changes to coastal processes and hydrodynamics once the jetty is operational are not anticipated particularly due to the sheltered nature of the Waterway.	No
Is in a water body that is heavily modified for the same use as your activity	The water body is not heavily modified.	No
Biology		
Is 0.5km ² or larger	The area of works is not greater than 0.5km ² nor will the works impact 1% or more of the water body (35.39km ²).	No
Is 1% or more of the water body's area		

Consider if your activity:	Risk issue	Scoped in (yes/no)
Is within 500m of any higher sensitivity habitat	The area is located within 500m of a higher sensitivity habitat – subtidal kelp beds. However, the construction works are more than 100m from this habitat and indirect effects will be minimal and once constructed little to no effects on coastal processes will occur that would affect this habitat.	No
Is 1% or more of any lower sensitivity habitat	The works will not impact 1% or more of any lower sensitivity habitat.	No
Biology (fish)		
Is 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	Changes in underwater noise resulting from the piling activities included in the proposed works have the potential to impact migratory fish.	Yes
Could impact on normal fish behaviour like movement, migration or spawning (for example creating a physical barrier, noise, chemical change or a change in depth or flow)	Changes in underwater noise as a result of piling can result in lethal effects, physical injury or behavioural effects on fish.	Yes
Could cause entrainment or impingement of fish	While the proposed works are expected to involve changes in pile number, type and location as well as installation of new pontoon structures, the changes are not significant and are not expected to cause entrainment or impingement of fish.	No
Water Quality		
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)	The improvements to the PAJ would not disturb significant volumes of sediment therefore effects on water quality associated with physio-chemical parameters are not predicted. Any sediment disturbed by the proposed works would be temporary in nature and minimal in comparison to ongoing operations undertaken throughout Milford Haven Waterway. Therefore, no significant impact to water quality is expected as a result of the proposed works.	No
Is in a water body with a phytoplankton status of moderate, poor or bad	WER phytoplankton classification is high.	No
Is in a water body with a history of harmful algae	The works will not impact water quality parameters that encourage algal growth.	No
If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if: The chemicals are on the Environmental Quality Standards Directive (EQSD) list	The works will be undertaken in accordance with standard operating and best practice procedures to prevent/minimise the release of any chemicals that are on the Environmental Quality Standards Directive (EQSD) List. Piling activities have the potential to resuspend sediments and therefore any chemicals within the sediment. However, due to the small scale of the proposed piling activities, any plume of suspended sediment will be small and release of any chemicals into the water column would be negligible.	No
If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if: It disturbs sediment with contaminants above Cefas Action Level 1		
Protected Areas		
Within 2km of any protected area	The works are within 2km of the following WER protected areas: - Pembrokeshire Marine / Sir Benfro Forol Special Area of Conservation (SAC) - Milford Haven Waterway Site of Special Scientific Interest (SSSI) Potential impacts on these sites have been assessed within the Habitats Regulations Assessment submitted alongside this application. The assessment	No

Consider if your activity:	Risk issue	Scoped in (yes/no)
	concluded there is no risk to designated sites because of the works, so this has been scoped out of further assessment for the WER.	
Invasive species		
Introduce or spread Invasive Non-native Species (INNS)	Vessels required to undertake the proposed works are expected to be sourced from the European fleet and should present no greater risk than typical shipping. Vessels will follow International Maritime Organisation rules to prevent introduction of non-native species.	No

2.5 Further Assessment

The scoping process identified one potential risk to be taken forward to Further Assessment.

2.5.1 Biology: fish

The Milford Haven Waterway is known to support populations of migratory fish including sea and river lamprey (*Petromyzon marinus* and *Lampetra fluviatilis*), Atlantic salmon (*Salmo salar*), sea trout (*Salmo trutta*), Allis shad (*Alosa alosa*), Twaite shad (*Alosa fallax*) and European eel (*Anguilla anguilla*). These species are UK BAP Priority Species and species of principal importance under the NERC Act 2006. The European Eel is also listed as Critically Endangered on the IUCN Red List.

River and sea lamprey migrate from North Atlantic coastal waters to spawn in the upper and middle reaches of many rivers in the UK. There are limited records of lamprey within the Pembrokeshire Marine SAC however populations have been identified in the Eastern and Western Cleddau rivers that flow into the Milford Haven Waterway. As lamprey are qualifying and the primary features of the Afonydd Cleddau/ Cleddau Rivers SAC, they are expected to pass through the Milford Haven Waterway. Young adults of both species migrate downstream during darkness to estuaries between July and September. Migration of both species at both stages occurs at night when conditions are suitable, hiding under stones and vegetation during the day.

Twaite shad are known to occur in a few rivers in England and Wales so may be present in the Milford Haven Waterway. However, the Tamar estuary in Devon is the only confirmed spawning population of Allis shad although some individuals may occasionally pass through the Milford Haven Waterway.

Atlantic salmon typically enter the river between August and October followed by their young passing back through the river from February to June. Sea trout enter the river earlier with peak migration in June. Based on NRW monitoring the stock status for Atlantic salmon has decreased since 2006 and the species is classed as 'at risk' (NRW, 2022).

European eels are widely distributed throughout European estuaries and inland waters. The species enter UK estuaries during the spring and migrate upstream into freshwater as part of their lifecycle. The Milford Haven Waterway is a known migratory route for European eels.

Underwater noise

Significant increases in underwater noise can result in lethal effects, physical injury or behavioural effects on fish. The sensitivity of fish species to underwater noise is dependent on the presence and use of a swim bladder. River and sea lamprey are considered to have a low sensitivity to noise as a swim bladder is not present. European eel, Atlantic Salmon and sea trout have a medium sensitivity to noise as a swim

bladder is present but does not aid hearing. Allis shad and Twaite shad have a high sensitivity to noise as a swim bladder or other air cavities are used to aid hearing.

Changes in underwater noise resulting from the piling activities included in the proposed works has the potential to impact migratory fish. However, the majority of piling will be undertaken using a vibrating hammer and the use of percussive piling will be minimal and would only be used in combination with other methodologies to fully secure the piles where required. With a pile diameter of up to 600mm, it is expected that minimal percussive piling will be required to fully secure the piles, representing a short-term and temporary impact on the ecology of the Waterway. Though percussive piling is considered unlikely to have a significant effect on migratory fish due to the short-term and temporary nature of the impact and limited pathway for effect, to minimise the potential for impacts, the following mitigation measures will be implemented:

- All percussive piling will be undertaken in line with Joint Nature Conservation Committee (JNCC) guidance¹, to minimise the potential for impacts to migratory fish that may be present in the vicinity of the works.
- All percussive piling will be undertaken using soft-start procedures to ensure incremental increase in pile power over a set time period until full operational power is achieved. The soft-start duration will be a period of no less than 20 minutes. Should piling cease for a period greater than 10 minutes, then the soft start procedure will be repeated.

Use of these mitigation measures will remove the potential for non-temporary effects on migratory fish during the construction of the project and the proposed works will not cause a deterioration in the status of the Milford Haven Outer coastal waterbody.

3 Conclusion

In conclusion, with mitigation measures in place, the proposed improvement works to the PAJ are 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.

4 References

Environment Agency (2017). Clearing the Waters for All [Online] Available at: <https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters>.

JNCC, 2010. Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise.

NRW, 2018. Guidance for assessing activities and projects for compliance with the Water Framework Directive. OGN 72.

NRW, 2022. Salmon Stocks and Fisheries in England and Wales, 2021. [Online] Available at: <https://assets.publishing.service.gov.uk/media/62dff4628fa8f5649a4010e3/SalmonReport-2021-assessment.pdf>

NRW, 2024. DataMapWales [Online] Available at: <https://datamap.gov.wales/>.

¹ JNCC, 2010. Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise.