

DCWW

Morfa Bychan Outfall Repair

Habitats Regulations Assessment Screening Report

COMMERCIAL IN CONFIDENCE



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1. Introduction

1.1 Overview

Proposed plans or projects that have the potential to affect designated European Sites (defined in Section 3.1.1 and 3.1.2) are required to be considered through the Habitats Regulations Assessment (HRA) process according to The Conservation of Habitats and Species Regulations 2017 (as amended¹) (the Habitats Regulations).

This report considers the activities involved in the emergency outfall repair works at Morfa Bychan, Pendine, Carmarthenshire, through the stages of the HRA process (as required), and provides the information required by the relevant Statutory Consultee (and advisors) to fulfil its function as a 'competent authority' under the Habitats Regulations and determine if the proposed works are likely to have a significant effect on the conservation objectives of a European Site.

1.2 Project Details

Dŵr Cymru Welsh Water (DCWW) identified a stream diversion outfall pipe that has become blocked with rocks at the outfall onto Morfa Bychan beach, Pendine. As a result, the stream water is discharging from a manhole onto the access lane behind the beach and has caused flooding of the surrounding area. This is presenting health and safety and operational risks due to limiting the access to the borehole. DCWW intend to remove the rocks and debris that is blocking the outfall and consideration is also being given to placing a culvert guard, mounted onto the existing concrete outfall, to prevent rocks blocking the outfall in the future.

1.3 Habitats Regulations Assessments

The Habitats Regulations require that an Appropriate Assessment of the implications of any development consent must be made by the relevant competent authority, in this case NRW, if a project (or plan) is likely to have a significant effect on the conservation objectives of a European Site, either alone, or in-combination with other plans or projects.

HRA is generally understood to be a progressive, four stage process which determines Likely Significant Effect (LSE) and, where required, assesses potential adverse impacts on the integrity of a European Site. If it cannot be concluded with certainty that the proposal will not result in any adverse effect on the integrity of any European Site, it is necessary to examine alternative solutions and provides justification of Imperative Reasons of Overriding Public

¹ <https://www.legislation.gov.uk/uksi/2017/1013/contents/made>

Interest (IROPI) (Planning Inspectorate 2017). Further detail on the process followed and the definition of particular terms, is provided in the methodology section (Section 3).

1.4 Structure and purpose of the report

This report provides information on the work activities and the HRA Screening and Appropriate Assessment process. It then carries out that process and presents the results and conclusion.

The report provides information to allow NRW (as the competent authority) to determine whether there will be an adverse effect on the integrity of any European Site(s) in view of their conservation objectives (COs) as a result of the project.

In the context of an HRA, where the potential for likely significant effects cannot be excluded for a Site, a competent authority must make an Appropriate Assessment of the implications of the plan or project for that site, in view of the Site's conservation objectives. The competent authority may agree to the plan or project only after having ruled out adverse effects on the integrity of the European Site. Where an adverse effect on the site's integrity cannot be ruled out, and where there are no alternative solutions, the plan or project can only proceed if there are IROPI and if the necessary compensatory measures can be secured.

2. The proposed works

2.1 Location and context

The outfall is located at Morfa Bychan beach, approximately 1 km west of Pendine, Carmarthenshire.

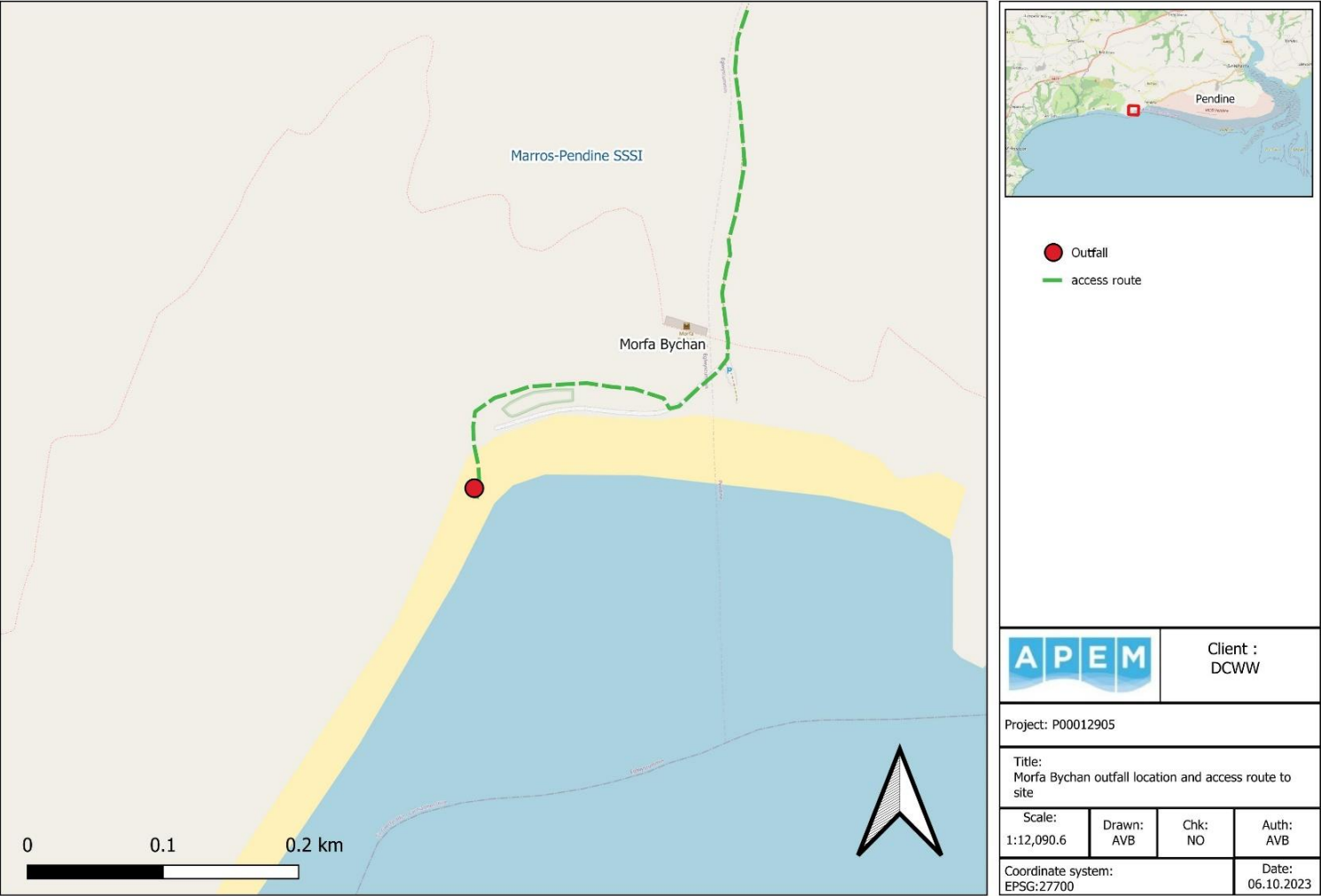


Figure 1. Morfa Bychan outfall location and access to works site.

2.2 Summary of works

DCWW plan to remove the rocks blocking the outfall face and relocate the material to one side of the concrete outfall. See Appendix 1 for site photographs of the material blocking the outfall. Smaller rocks will be removed from within the outfall using hand tools. Larger rocks will be moved by a tracked excavator and all removed material will be loaded into a dumper. The rocky area in front of the outfall will be levelled off to allow plant and equipment access to the outfall face and all the removed material will be deposited to one side of the outfall, which currently consists of the same rocky material that will be moved from around the outfall. Once the outfall has been cleared, the culvert guard will be fixed to the existing concrete outfall face and within the footprint of the current structure.

All mechanical equipment will remain localised to the outfall site within the upper rocky area of the beach and will not require access to the lower sandy areas for any reason. To access the site, the site plant and vehicles will require access through the Marros-Pendine Coast / Arfordir Marros-Pentywyn Site of Specific Scientific Interest (SSSI) (Figure 2). A temporary barrier will be placed around the outfall works site to restrict pedestrian access during the planned works, and barriers will be removed at the end of each working day. More information on the proposed works methodology can be found in the Method Statement/Risk Assessment (MS/C1274M/01) provided by DCWW (2023).

3. Assessment Methodology

3.1 Legislative and Policy Context

3.1.1 *UK (domestic) legislation*

This section describes the legislation as it applies now that the UK has left the European Union (EU). Guidance from Defra has been provided on the application of the relevant legislation in the post-Brexit period in their policy paper published on 1st January 2021 available at <https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017>. The Habitats Regulations provide for the protection of particular habitats, plants and animals through the creation of, and specific decision-making procedures applied to, the 'national site network', which consists of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

Since those particular parts of the Habitats Regulations relating to the HRA process continue to refer to the designated sites collectively as 'European Sites', rather than as the 'national site network', that approach has been followed in this HRA Screening Report.

3.1.2 *Policy requirements additional to domestic legislation*

It is UK Government policy that all competent authorities should treat candidate SACs (cSACs) and potential SPAs (pSPAs) as being within the requirements of the Habitats Regulations. In the UK this is identified in paragraph 176 of the National Planning Policy Framework (Ministry of Housing, Communities and Local Government, 2019).

Accordingly, in this report the term 'European Site' is used to refer collectively to SACs, cSACs, SPAs and pSPAs.

3.1.3 *International legal and policy obligations*

The UK is a contracting party to the Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Ramsar, Iran, 1971 (the 'Ramsar Convention'), which seeks to protect wetlands of international importance, especially those wetlands utilised as waterfowl habitat.

It is UK Government policy that all competent authorities should treat Ramsar Sites in their decision-making processes as if they are SACs or SPAs and hence Ramsar Sites are considered within the requirements for HRA of the Habitats Regulations. In the UK this is identified in paragraph 176 of the National Planning Policy Framework (MHCLG 2019). As a consequence, in this report Ramsar Sites are referred to alongside European Sites collectively as European

and Ramsar Sites. UK Government policy (ODPM Circular 06/2005) states that internationally important wetlands designated under the Convention on Wetlands 1971, called the Ramsar Convention (Ramsar sites) are afforded the same protection as SPAs and SACs for the purpose of considering development proposals that may affect them.

3.1.4 Land that is functionally linked to European and Ramsar Sites

Animals that are interest features of European and Ramsar Sites may be mobile and not confined to the boundary of the designated site. For example, wintering waterbirds may forage or roost on agricultural land outside of the designated site. Although that agricultural land is not part of the European or Ramsar Site, it is 'functionally linked' because it serves a function for waterfowl that are interest features of the designated site. Account has to be taken of such functionally linked land in the HRA process since, for instance, the loss of such land to development could potentially adversely affect the survival of those wintering waterbirds and lead to a reduction in the population of birds within the designated site.

Functionally linked land has been defined as follows (Chapman & Tyldesley 2016):

'the term 'functional linkage' refers to the role or 'function' that land or sea beyond the boundary of a European Site might fulfil in terms of ecologically supporting the populations for which the site was designated or classified. Such land is therefore 'linked' to the European Site in question because it provides an important role in maintaining or restoring the population of qualifying species at favourable conservation status.'

3.2 The HRA Process

3.2.1 Overview

The requirements of the Habitats Regulations regarding the implications of plans or projects are set out within Regulation 63. The step-based approach implicit within this Regulation is referred to as a 'Habitats Regulations Assessment' (HRA), which is the term that has been used throughout this report.

It is a requirement of any public body, referred to as a 'competent authority' within the Habitats Regulations, to carry out a HRA when they are proposing to carry out a project, implement a plan or authorise another party to carry out a plan or project. Competent authorities are required to record the process undertaken, ensuring that there will be no adverse effects on the integrity of any European or Ramsar Site as a result of a plan or project whether alone or in combination with other plans or projects.

3.2.2 Assessment stages

The assessment of a plan or project goes through a number of stages, with guidance having been published to aid competent authorities to fulfil their responsibilities. Those stages are summarised in Table 1.

Table 1. Stages in the HRA process

Stage	Description	Legislative Context
Purpose	Determines if the purpose of the plan or project is directly connected with, or necessary, to the management of a European or Ramsar Site. If it is, then no further assessment is necessary	Regulation 63(1)(b)
Scoping	The identification of any European or Ramsar Site that might be within scope of a HRA i.e., those sites that should be taken forward to the screening stage based on a wide consideration of spatial and ecological factors. Such a site may be located within the plan or project area but may also include sites located in neighbouring authority areas.	
Screening	Assessment of whether a plan or project, either alone or in combination with other plans or projects, is likely to have a significant effect on any qualifying feature (habitats and species) and the achievement of the conservation objectives of a European or Ramsar Site. This is also known as the 'test of likely significant effect' (ToLSE).	Regulation 63(1)(a)
Appropriate Assessment	Consideration of the effects of the proposals to determine whether or not it is possible to conclude with certainty that the development will not result in any adverse effect on the integrity of European or Ramsar Site, either alone or in combination with other plans or projects and with reference to the conservation objectives of the European or Ramsar Site. This is also known as the test of 'adverse effect on integrity' (AEoI). At this stage consent may be granted for the plan or project if it is possible to conclude with certainty that the proposal will not result in any adverse effect on the integrity of any European or Ramsar Site, either alone or in combination with other plans or projects.	Regulation 63(5)
If it cannot be concluded with certainty that the proposal will not result in any adverse effect on the integrity of any European or Ramsar Site then proceed to:		
Assessment of alternative solutions	Assess whether there is an alternative solution to the plan or project i.e. one that better respect the European or Ramsar Sites. If no such alternative solution exists, the process continues to Assessment of IROPI.	Regulation 64(1)
Assessment of IROPI	Assess whether a plan or project can be justified as being needed for 'imperative reasons of overriding public interest' (IROPI).	Regulation 64(1)
Compensatory measures	Identify and secure any necessary compensatory measures to ensure that the overall coherence of the 'national site network' is protected.	Regulation 68

3.2.3 *In-combination assessment*

The Habitats Regulations, taken with Government policy, require the consideration of the potential effects of a project on European and Ramsar Sites both alone and in-combination with other plans or projects.

The identification of plans and projects to include in the in-combination assessment will be based on:

- approved plans;
- approved, but as yet unconstructed projects; and
- projects for which an application has been made, are currently under consideration and will be consented before the proposed development begin.

3.3 **Guidance on the HRA process**

In preparing this report, consideration has been given to the relevant guidance issued by a number of Governmental, statutory and industry bodies.

Guidance from Government bodies includes:

- Ministry of Housing, Communities and Local Government online Guidance on the use of Habitats Regulations Assessment <https://www.gov.uk/guidance/appropriate-assessment>
- Defra, NE, Welsh Government and NRW guidance on Habitat Regulations Assessments <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>

Guidance from the Statutory Bodies includes:

- NRW online guidance on HRA in the marine licensing process <https://naturalresources.wales/permits-and-permissions/marine-licensing/marine-licence-habitats-regulations-assessment/?lang=en>

4. Identification of Sites and Features

4.1 European and Ramsar Site Identification Process

For the screening process, European and Ramsar Sites in the vicinity of the proposed works activities which could potentially be influenced by the proposed works were identified. The different interest features within these sites were then considered individually.

It only requires one site interest feature to be considered to be potentially impacted by the work activities for the European and/or Ramsar Site to be screened into the HRA, along with each of its associated interest features.

This screening used the conceptual 'source-pathway-receptor' model. The model was used to identify potential environmental effects resulting from the works activities. This process provides an easy-to-follow assessment route between impact sources and potentially sensitive receptors ensuring a transparent impact assessment. The parameters of the model are defined as follows:

- source – the origin of a potential effect (noting that one source may have several pathways and receptors);
- pathway – the means by which the effect of the activity could impact a receptor; and
- receptor – the element of the receiving environment that is impacted.

Where there is no pathway, or the pathway is so long that the effect from the source has dissipated to a negligible level before reaching the receptor, there is justification for the screening out of that particular receptor.

Where the receptor (site interest feature) only occurs in the area on a seasonal basis and/or that receptor is not present in the period in which particular activities of the proposed works are a source of a potential effect, there is justification for the screening out of that particular receptor.

Potential adverse effects of the proposed works on European and Ramsar Sites were identified using a combination of the following:

- Advice on Operations (AoO) from Natural England was considered for the Fal and Helford SAC for the activity 'Coastal Infrastructure: Outfalls / Intake pipes (maintenance / construction / usage)²'. The Fal and Helford SAC and the Plymouth Sound and Estuaries

² Accessed via <https://designatedsites.naturalengland.org.uk/>

SAC were chosen as proxies for the Carmarthen Bay designated sites (for which recent AoO was not available) as they have similar interest features;

- Natural Resources Wales & the Countryside Council for Wales' advice given under Regulation 33(2)(a) of the Conservation (Natural Habitats, &c.) Regulations 2017 for Carmarthen Bay R33 European Marine Site, which provides AoO for the designated features, was also used to determine potential adverse effects of the proposed works, however, this source did not specify advice on outfall maintenance. Therefore, as indicated above, AoO for the Fal and Helford SAC was used as a proxy to provide more up-to-date evidence on the sensitivity of features to the impact pathways exerted by similar activities;
- Professional judgement based on experience of conducting numerous assessments of similar projects in the vicinity of European and Ramsar Sites; and
- Advice from Natural Resources Wales in relation to the proposed works.

Impact pathways indicated as being of Medium-High Risk which could be associated with the proposed works and that could affect European and Ramsar Site features were considered in this screening, in line with the AoO guidance. These impact pathways were as follows:

- Abrasion / disturbance of the substrate on the surface of the seabed;
- Above water noise;
- Visual disturbance.

Low risk pressures would not usually be taken through to screening. However, for some pressures indicated as low risk for habitats within the SAC, the feature habitats are indicated to be sensitive to these pressures in the AoO and there is a potential pathway between the features and the pressure. Consequently, a precautionary approach has been taken and the following low risk pressure was also considered in this screening:

- Hydrocarbon & Polycyclic Aromatic Hydrocarbon (PAH) contamination.

The following medium-high risk pressures that were not anticipated to be associated with the proposed works and / or did not have the potential to affect designated site features were not included in the screening, in line with the AoO guidance:

- Habitat structure changes – removal of substratum (extraction);
- Penetration and / or disturbance of the substratum below the surface of the seabed, including abrasion;
- Physical loss;
- Release of contaminants from excavation;

- Smothering and siltation rate changes (Light)
- Changes in suspended solids (water clarity);

4.2 Potential European and Ramsar Sites (receptors)

An initial exercise was undertaken to identify all European and Ramsar Sites within 5 km of the site of the proposed works. Given the nature of the works, the Zone of Influence (Zoi) is anticipated to be very limited (largely restricted to within the area of the works), so the 5 km buffer is considered highly precautionary.

The sites that fall within the screening criteria described above are listed below and are displayed in Figure 2:

- Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC (UK0020020)
- Bristol Channel Approaches / Dynesfeydd Môr Hafren (UK0030396)
- Carmarthen Bay Dunes / Twyni Bae Caerfyrddin SAC (UK0020019)
- Carmarthen Bay / Bae Carmarthen SPA (UK9014091)

These protected sites are designated for a variety of habitats and / or species as listed in European Site features of interest

The interest features of the screened in European Sites are indicated in Table 2.

Table 2. No Ramsar Sites were identified within the 5 km buffer.

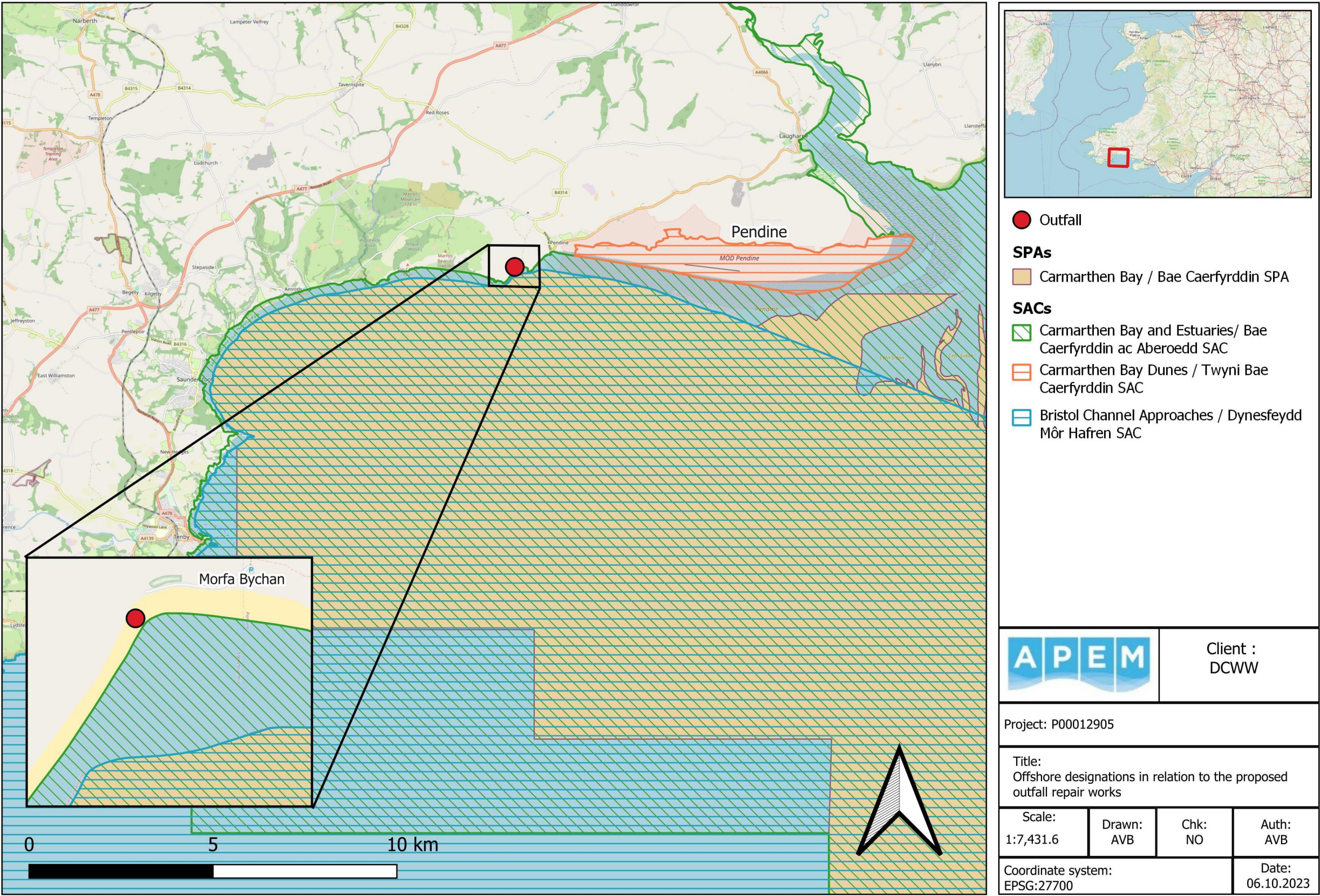


Figure 2. Protected Sites Overview.

4.1 European Site features of interest

The interest features of the screened in European Sites are indicated in Table 2.

Table 2. Features of Interest.

Site	Interest feature
Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC (UK0020020)	Marine areas, Sea inlets (82.1%) Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins) (13.7%) Salt marshes, Salt pastures, Salt steppes (4.1%) Shingle, Sea cliffs, Islets (0.1%) [1110] Sandbanks which are slightly covered by sea water all the time [1130] Estuaries [1140] Mudflats and sandflats not covered by seawater at low tide [1160] Large shallow inlets and bays [1310] <i>Salicornia</i> and other annuals colonizing mud and sand [1330] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1103] Twaite shad <i>Alosa fallax</i> [1095] Sea lamprey <i>Petromyzon marinus</i> [1099] River lamprey <i>Lampetra fluviatilis</i> [1102] Allis shad <i>Alosa alosa</i> [1355] Otter <i>Lutra lutra</i>
Bristol Channel Approaches / Dynesfeydd Môr Hafren (UK0030396)	[1351] Harbour porpoise <i>Phocoena phocoena</i>
Carmarthen Bay Dunes / Twyni Bae Caerfyrddin SAC (UK0020019)	Coastal sand dunes, Sand beaches, Machair (90%) Inland water bodies (Standing water, Running water) (1%) Bogs, Marshes, Water fringed vegetation, Fens (4%) Broad-leaved deciduous woodland (5%) [2110] Embryonic shifting dunes [2120] "Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")" [2130] "Fixed coastal dunes with herbaceous vegetation ("grey dunes")" [2170] Dunes with <i>Salix repens</i> ssp. <i>Argentea</i> <i>Salicion arenariae</i> [2190] Humid dune slacks [1014] Narrow-mouthed whorl snail <i>Vertigo angustior</i> [1395] Petalwort <i>Petalophyllum ralfsii</i> [1903] Fen orchid <i>Liparis loeselii</i>
Carmarthen Bay / Bae Carmarthen SPA (UK9014091)	[A065] Common scoter <i>Melanitta nigra</i>

5. Screening: Testing for LSE

The table below shows the test for LSE for the qualifying features within the European Sites taken forward for assessment.

Table 3. HRA Screening for European Sites Within the Vicinity of the Project.

Site name (Distance from works)	Qualifying feature or species (include sub-features and supporting habitats)	Pressure	LSE?	Justification
Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC (0.02 km)	• [1130] Estuaries • [1140] Mudflats and sandflats not covered by seawater at low tide • [1160] Large shallow inlets and bays • [1310] <i>Salicornia</i> and other annuals colonizing mud and sand • [1330] Atlantic salt meadows <i>Glauco-Puccinellietalia maritima</i> • [1110] Sandbanks which are slightly covered by sea water all the times. • [1103] Twaite shad <i>Alosa fallax</i> • [1095] Sea lamprey <i>Petromyzon marinus</i> • [1099] River lamprey <i>Lampetra fluviatilis</i> • [1102] Allis shad <i>Alosa alosa</i>	Abrasion / disturbance of the substrate on the surface of the seabed;	No	There is no overlap between the work activities and the qualifying habitat features 'Sandbanks which are slightly covered by seawater all the time', 'Estuaries', 'Mudflats and sandflats not covered by seawater at low tide', 'Large shallow Inlets and bays', 'Salicornia and other annuals colonizing mud and sand' and 'Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)'. The proposed activities will take place immediately in the vicinity of the outfall and at no point will the lower Annex I sandy/mudflat areas of the intertidal be accessed by vehicles or equipment. There are no saltmarsh or areas of <i>Salicornia</i> or other annuals in the area. Therefore, there would be no LSE on the qualifying features of Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC as a result this pressure.
		Visual disturbance	No	All work activities will take place in the upper intertidal area at low tide. As such, the works will not cause visual disturbance to the designated fish species of the Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC). Within the SAC, otter have been sighted in the Taf, Tywi and Lougher estuaries, with the potential use of Pendine Marshes and the nearby estuaries as breeding sites (Liles 2010). The proposed works will take place during daylight hours and as otter are most active at night and have not been sited within 5 km of the works area (NBN Atlas 2023), it is unlikely that otter will be in the vicinity during the proposed work activities. Furthermore, the proposed

Site name (Distance from works)	Qualifying feature or species (include sub-features and supporting habitats)	Pressure	LSE?	Justification
	[1355] Otter <i>Lutra lutra</i>			activities will be minimal in both space and time and any visual disturbance is unlikely to be substantially different to baseline conditions in the area. Consequently, it is considered that there would be no LSE on the features of the Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC as a result of this pressure.
		Above water noise	No	All work activities will take place in the upper intertidal area at low tide. As such, the works will not cause noise disturbance to the designated fish species of the Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC. Within the SAC, otter have been sighted in the Taf, Tywi and Lougher estuaries, with the potential use of Pendine Marshes and the nearby estuaries as breeding sites (Liles 2010). The proposed works will take place during daylight hours and as otter are most active at night and have not been sighted within 5 km of the works area (NBN Atlas 2023), it is unlikely that otter will be in the vicinity during the time of the proposed work activities. Furthermore, the proposed activities will be minimal in both space and time and any noise disturbance is unlikely to be substantially different to baseline conditions in the area. Consequently, it is considered that there would be no LSE on the features of the Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC due to this pressure.
		Hydrocarbon & Polycyclic Aromatic Hydrocarbon (PAH) contamination.	No	During removal of the materials, there is potential for Hydrocarbon and PAH contaminants to be released into the water column through oil/fuel spillage from vehicles, which may result in ecotoxicological effects on qualifying features. However, best practice measures will be in place to reduce the risk of accidental spills occurring. All static plant will be placed in trip trays to prevent spillages, an emergency spill kit will be maintained on site, and at no point will any of the plant and equipment be refuelled in the beach area. Therefore, it is considered that there would be no LSE on qualifying features

Site name (Distance from works)	Qualifying feature or species (include sub-features and supporting habitats)	Pressure	LSE?	Justification
				of the Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC as a result of this pressure.
Bristol Channel Approaches / Dynesfeydd Môr Hafren SAC (0.2 km)	[1351] Harbour porpoise <i>Phocoena phocoena</i>	Visual disturbance	No	The Bristol Channel Approaches SAC is designated for its importance to harbour porpoise in winter months (October – March; NRW 2019). Although harbour porpoise have the potential to be in the intertidal area adjacent to the proposed works at high tide, the work activities will take place at low tide in the upper intertidal area, therefore, individuals are not expected to be in the vicinity during the work activities. Furthermore, the works site is situated on the outskirts of a built-up area with high levels of anthropogenic activity and harbour porpoise would likely be well habituated to visual disturbance in the upper intertidal area. The potential for visual disturbance due to the works is limited given that all works will be undertaken at the top of the beach with no in-water works. As such, it is considered that there would be no LSE on harbour porpoise within the Bristol Channel Approaches / Dynesfeydd Môr Hafren SAC from this pressure.
		Hydrocarbon & Polycyclic Aromatic Hydrocarbon (PAH) contamination.	No	During removal of the materials, there is potential for Hydrocarbon and PAH contaminants to be released into the water column through oil/fuel spillage from vehicles, which may result in ecotoxicological effects on qualifying fish features. However, best practice measures will be in place to reduce the risk of accidental spills occurring. All static plant will be placed in trip trays to prevent spillages, an emergency spill kit will be maintained on site, and at no point will any of the plant and equipment be refuelled in the beach area. Consequently, it is considered that there would be no LSE on qualifying features of the Bristol Channel Approaches / Dynesfeydd Môr Hafren SAC from this pressure.
		Above water noise	No	Although harbour porpoise have the potential to be in the intertidal area adjacent to the proposed works at high tide, the work activities will take place at low tide in the upper intertidal area, therefore, individuals are not expected to be in the vicinity during the work activities. Furthermore, the works site is situated on the outskirts of a built-up area with high levels of anthropogenic

Site name (Distance from works)	Qualifying feature or species (include sub-features and supporting habitats)	Pressure	LSE?	Justification
				activity and harbour porpoise would likely be well habituated to above water noise in the upper intertidal area. Similarly, the proposed activities leading to above water noise disturbance will be minimal and are unlikely to be substantially different to baseline conditions in the area. Furthermore, the proposed works will be undertaken at the top of the beach, so individual harbour porpoise are unlikely to be close enough to the works to be affected by above water noise. As such, it is considered that there would be no LSE on harbour porpoise within the Bristol Channel Approaches / Dynesfeydd Môr Hafren SAC from this pressure.
Carmarthen Bay Dunes / Twyni Bae Caerfyrddin SAC (1.7 km)	[2110] Embryonic shifting dunes [2120] "Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")" [2130] "Fixed coastal dunes with herbaceous vegetation ("grey dunes")" [2170] Dunes with <i>Salix repens</i> ssp. <i>Argentea Salicion arenariae</i> [2190] Humid dune slacks	Abrasion / disturbance of the substrate on the surface of the seabed	No	There is no overlap between the work activities and the qualifying features of the Carmarthen Bay Dunes / Twyni Bae Caerfyrddin SAC. The distance of the proposed works to the European Site (km) is too great for the qualifying features to be affected by Abrasion / disturbance of the substrate on the surface of the seabed. Consequently, it is considered that there would be no LSE on the features of the Carmarthen Bay Dunes / Twyni Bae Caerfyrddin SAC as a result of this pressure.
		Hydrocarbon & Polycyclic Aromatic Hydrocarbon (PAH) contamination.	No	During removal of the materials, there is potential for Hydrocarbon and PAH contaminants to be released into the water column through oil/fuel spillage from vehicles, which may result in ecotoxicological effects on qualifying features. However, best practice measures will be in place to reduce the risk of accidental spills occurring. All static plant will be placed in trip trays to prevent spillages, an emergency spill kit will be maintained on site, and at no point will any of the plant and equipment be refuelled in the beach area. Furthermore, the distance of the proposed works to the Carmarthen Bay Dunes SAC is too great for the qualifying features to be affected by Hydrocarbon and PAH contamination. Consequently, it is considered that there would be no LSE

Site name (Distance from works)	Qualifying feature or species (include sub-features and supporting habitats)	Pressure	LSE?	Justification
	[1014] Narrow-mouthed whorl snail <i>Vertigo angustior</i> [1395] Petalwort <i>Petalophyllum ralfsii</i> [1903] Fen orchid <i>Liparis loeselii</i>			on qualifying features of the Carmarthen Bay Dunes/ Twyni Bae Caerfyrddin SAC due to this pressure.
Carmarthen Bay / Bae Carmarthen SPA (0.2 km)	[A065] Common scoter <i>Melanitta nigra</i>	Visual disturbance	No	As the area of proposed works are outside the designated site (0.2 km), it is considered that wintering sites within the Carmarthen Bay SPA would not be subject to visual disturbance. This is due to the proposed works being very limited in both space and time, with activities being localised to the area adjacent to the outfall and undertaken within a five-day period. Additionally, the proposed works are situated on the outskirts of a built-up area with high levels of activity, meaning that birds in the area will already be habituated to anthropogenic visual and aural disturbance. Therefore, the proposed works are expected to lead to no discernible increase in visual disturbance of populations of common scoter and there will be no LSE.
		Above water noise	No	It is considered that any above water noise associated with the proposed works would not affect wintering sites within the designated site due to the works being limited in both space and time. Additionally, the proposed works are situated on the outskirts of a built-up area with high levels of activity, meaning that birds in the area will already be habituated to anthropogenic noise disturbance. Therefore, the proposed works are expected to lead to no discernible increase in disturbance as a result of noise disturbance and there will be no LSE.

5.1 LSE Conclusion

Following the test for LSE on the European Sites, the following sites have been screened out of further assessment:

- Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC (UK0020020) – **No LSE**
- Bristol Channel Approaches / Dynesfeydd Môr Hafren SAC (UK UK0030396) – **No LSE**
- Carmarthen Bay Dunes / Twyni Bae Caerfyrddin SAC (UK0020019) – **No LSE**
- Carmarthen Bay / Bae Carmarthen SPA (UK9014091) – **No LSE**

Based on these conclusions the proposed works have not been carried through to Stage 2 Appropriate Assessment.

5. In-combination Assessment

5.1 Projects considered

The identification of plans and projects to include in the in-combination assessment is based on:

- Approved plans;
- Approved but as yet unconstructed projects; and
- Projects for which an application has been made, are currently under consideration and will be consented before the proposed works begin.

To identify the projects or plans a combination of local knowledge, the Data Map Wales portal and the Natural Resources Wales Public Register were used.

No plans or projects within 5 km of the proposed works were identified at the time of writing this report. It is therefore concluded that there is no potential for the proposed works to have in-combinations effects with other plans or projects on nearby European Sites and there would be no LSE.

6. Conclusions

The proposed repair works at Morfa Bychan have the potential to interact with European Sites. As part of this assessment, protected sites in the vicinity of the proposed works which could potentially be influenced by effects arising from the works were identified. Designated features within these sites were then considered individually. Screening used the conceptual 'source-pathway-receptor' model.

Potential effects of the works were identified using the AoO from Natural England for the Fal and Helford SAC for the activity Coastal Infrastructure: Outfalls/Intake pipes (maintenance/construction/usage). The Fal and Helford SAC and the Plymouth Sound and Estuaries SAC was used as a proxy for the Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC as it has similar qualifying features and no recent AoO was available for the Carmarthen Bay and Estuaries SAC.

Following reference to this guidance the following impact pathways were assessed:

- Above water noise;
- Abrasion / disturbance of the substrate on the surface of the seabed;
- Hydrocarbon & PAH contamination; and
- Visual disturbance.

The test for LSE carried out on the European Sites concluded that there would be no LSE on the European Sites identified in Section 4. The assessment therefore did not progress to Stage 2 of the HRA process (Appropriate Assessment).

It was also concluded that there is no potential for LSE from the proposed works in combination with other plans or projects on nearby European Sites.

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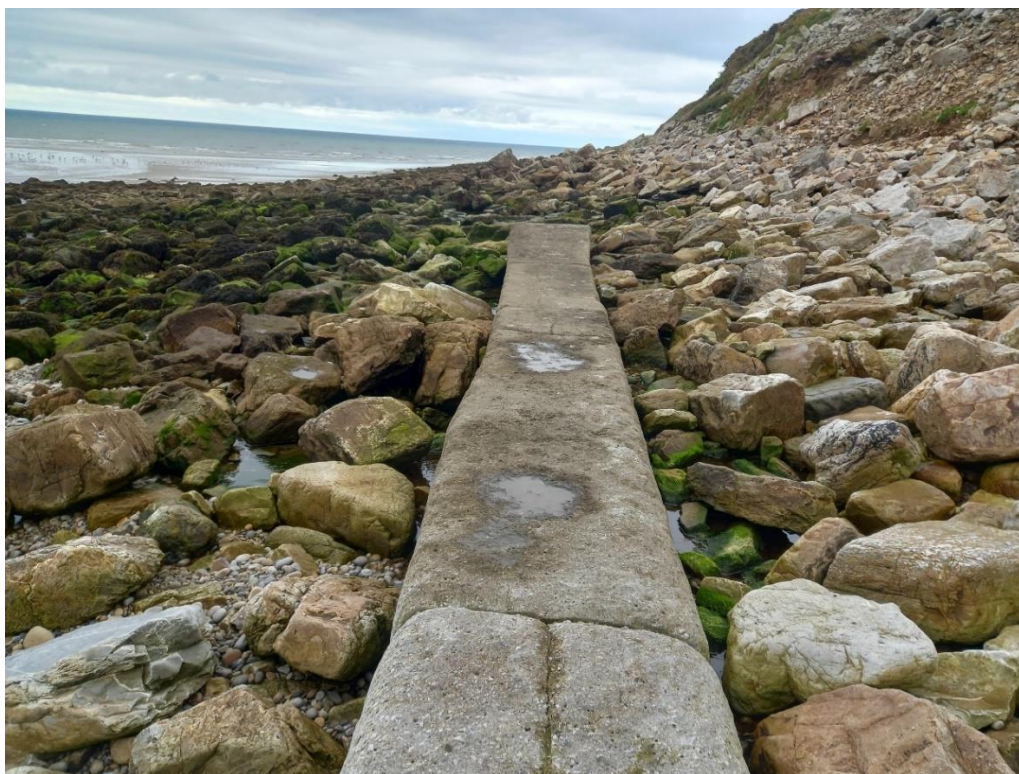
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Appendix 1 Site Photographs



Morfa Bychan outfall facing seaward.



Rocky substrate to be levelled off and relocated from in front of the outfall.



Substrate blocking outfall opening (a)



Substrate blocking outfall opening (b)



Flooding at manhole caused by outfall blockage.



Flooding at the back of the beach caused by outfall blockage.