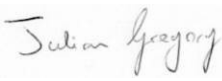
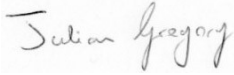


2024

Carmarthen Swing Bridge – Fender Removal Habitat Regulations Assessment





DOCUMENT INFORMATION			
Project	Carmarthen Swing Bridge – Fender Removal		
Location	Address: White Bridge, A40, Llangunnor, Carmarthen, Carmarthenshire, SA31 3BH ELR: SWM2 Grid Ref: SN 40516 19254		
Title	Habitat Regulations Assessment		
Document Ref	EV000991/HRA-1	Issue / Revision	1
File reference	EV000991/3/HRA-1		
Start Date	06/2024		
	Name	Signature	Date
Assessment Undertaken by	Owain Waters		06/2024
Document prepared by	Owain Waters		06/2024
Checked by	Julian Gregory		07/2024
Authorised by	Julian Gregory		07/2024

DOCUMENT CONTROL		
Rev.	Date	Description
0	06/24	Draft
1	07/24	Issued

Disclaimer

No part of this document may be copied or reproduced by any means without prior written permission from EcoVigour. If you have received this report in error, please destroy all copies in your possession or control.

This document has been prepared for the exclusive use of the commissioning party/parties and unless otherwise agreed in writing by EcoVigour, no other party may use, make use of, or rely on the contents of the report.

No liability is accepted by EcoVigour for any use of this document, other than for the purposes for which it was originally prepared and provided.

Opinions and information provided in the document are on the basis of EcoVigour using due skill, care and diligence in the preparation of the same and no explicit warranty is provided as to their accuracy.



CONTENTS

1.	Introduction.....	4
1.1	Assessment Background	4
1.2	Project Background	5
2.	Legislative Context	6
2.1	Overview	6
3.	Methodology.....	7
3.1	Overview	7
4.	Description of The Proposed Activities.....	8
4.1	Site Context	8
4.2	Method Overview – Masonary Wall Repairs	9
4.3	Fender Removal Works.....	10
5.	HRA Methodology Objectives	13
6.	Designated Sites within Proximity to Site	14
7.	Afon Tywi - Special Area of Conservation (SAC)	15
7.1	SAC Overview	15
8.	Afon Tywi SSSI.....	17
8.1	OVERVIEW.....	17
8.2	Site Management Statement.....	17
8.3	Habitat Present within Working Footprint.....	18
8.4	Annex II Species Records - WWBIC.....	20
9.	Physical Processes	22
9.1	Relevant Policies within the Shore Management Plant 2 (SMP2)	22
9.2	Timing, Fish Species And Relative Risk Of Harm/Disturbance	22
10.	Assessment of Potential Impacts Resulting from Specific Activities and Proposed Mitigation Measures – Carmarthen Swing Bridge – Fender Removal.....	23
10.1	Annex I Habitats – Impacts & Mitigation	23
10.2	Annex II Species – Impacts & Mitigation	25
11.	Potential In-Combination Effects	28
11.1	Overview	28
12.	Known Projects Within The Wider Area	28
13.	HRA Conclusion.....	29
14.	Appendix A - Biosecurity Management Plan & Risk Assessment	30
15.	Appendix B - WNMP Signpost Document	31
16.	Appendix C – Supporting Technical Documents	32



FIGURES

Figure 1: Project Location.	5
Figure 2: View of swing bridge and timber fenders (Downstream of structure).	5
Figure 3: Location of project in relation to wider area.....	8
Figure 4: Access ramp to pathway and location for mobile and small welfare units.	9
Figure 5: Ramp to be used at Carmarthen rowing club for support boat.	9
Figure 6: Indicative route of Bullo Marine Vessel, chartered by Kaymac.	10
Figure 7: Example of one of the downstream fenders (all fenders are to be removed in sequence).	11
Figure 8: SAC & SSSI boundary in relation to works site.	14
Figure 9: NRW SAC Map 17 - Afon Tywi.	15
Figure 10: Habitat – Carmarthen Swing Bridge.	18
Figure 11: View of habitat margin on opposite shore.....	19
Figure 12: View at distance of riparian margin upstream of structure during lower tidal and flow conditions.	19
Figure 13: Otter Records within 1km of the project.	20

TABLES

Table 1: Annex I & II features of the SAC.....	16
Table 2: PDO list from NRW Designated Site Finder Tool.....	17
Table 3: Description of WWBIC Records.	20
Table 4: Fish spawning risk matrix in relation to proposed work timing.	22



1. INTRODUCTION

1.1 ASSESSMENT BACKGROUND

- 1.1.1 This document provides information to support an Appropriate Assessment under The Conservation of Habitats and Species Regulations 2017 (hereafter referred to as the 'Habitats Regulations') for scheduled removal of defunct timber fencers from Carmarthen Swing Bridge on behalf of Network Rail (NR).
- 1.1.2 Under the requirements of the European Council Directive 92/43/EEC 'The Habitats Directive', it is necessary to consider whether projects or plans may have significant effects upon areas of nature conservation importance designated/classified under the Directives. This requirement is translated into UK law through the 'Habitats Regulations'.
- 1.1.3 EcoVigour Ltd have been commissioned to produce these documents for Dyer & Butler Ltd (Rail Division), the principal contractor, working on behalf of Network Rail, the client.
- 1.1.4 The project is scheduled to begin at the earliest opportunity upon receipt of the Marine License. Estimate to occur between September 2024 to October/early November 2025. The works will require several weeks to complete. Due to the requirements of stable weather conditions, daytime hours and working with and around changing tidal influences, a longer license period is requested.
- 1.1.5 In addition to serving the Appropriate Assessment (AA) requirements, this document will also serve notice of activities in proximity to a SSSI (S28G Notice).
- 1.1.6 This assessment will be submitted to the competent authority Natural Resources Wales (NRW) due to the structure spanning the or marking the legislative boundary of adjacent designated sites.
- 1.1.7 As the works necessitate removal of material within Mean High Water Spring (MHWS) limits of the Tywi River, combined with the use of plant machinery mounted to a spid barge, a Band 2 License is required.
- 1.1.8 The main statutory designated site which requires consideration under the Habitats Regulations has been identified as:
 - ◆ Afon Tywi - Special Area of Conservation (SAC).
- 1.1.9 Also requiring consideration in relation to seeking Site of Special Scientific Interest (SSSI) Assent for the works from NRW is:
 - ◆ Afon Tywi – Site of Special Scientific Interest (SSSI).
- 1.1.10 Following review and consensus, this document will form part of the working methodology for the project, supporting working within a designated site.
- 1.1.11 Under the requirements of the European Council Directive 92/43/EEC 'The Habitats Directive', it is necessary to consider whether projects or plans may have significant effects upon areas of nature conservation importance designated/classified under the Directives. This requirement is translated into UK law through the 'Habitats Regulations'.
- 1.1.12 In addition to the above the assessment has been compared with the Welsh Nation Marine Plan (WNMP) documentation, which can be found within Appendix D.



1.2 PROJECT BACKGROUND

- 1.2.1 Known as the White Railway Bridge, the rail structure is a standard metallic pier support rail bridge in combination with a Bascule component situated on the western shore of the Tywi. Up and down stream of the structure are now redundant timber constructed fenders. Once important as an additional defence and navigation aide during periods of high vessel traffic along the Tywi. These fenders are no longer required and present a navigational hazard and potential constriction point for debris flowing from upstream sections of the Tywi. Dyer & Butler Rail Division, working with Kaymac have been commissioned by Network Rail to remove the fenders at the earliest opportunity.

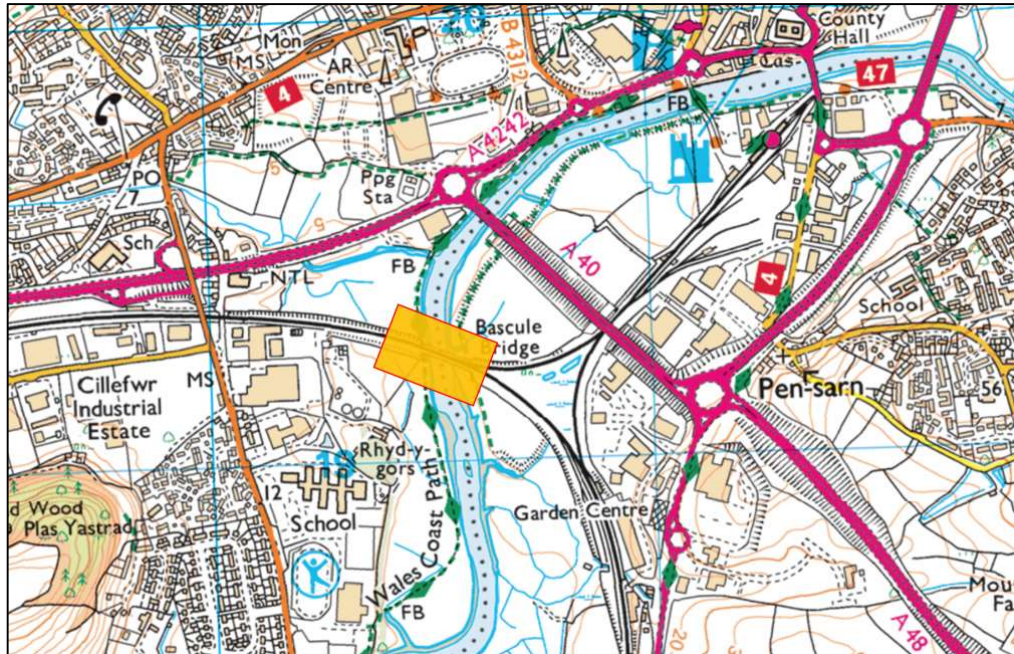


Figure 1: Project Location.



Figure 2: View of swing bridge and timber fenders (Downstream of structure).



2. LEGISLATIVE CONTEXT

2.1 OVERVIEW

- 2.1.1 This document provides information to support an Appropriate Assessment under the Habitats Regulations of the proposed works by (Dyer & Butler) on behalf of Network Rail.
- 2.1.2 The Habitats Directive, transposed into UK legislation through the Conservation of Species and Habitat Regulations (2017) (Article 6 of European Council Directive 92/43/EEC), any plan or project not directly connected with, or necessary to, the management of a European designated site but likely to have a significant effect, either alone or in combination with other plans or projects, shall be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives.
- 2.1.3 If the Appropriate Assessment concludes that the proposed works may have an adverse effect on the integrity of a European Site, or that such an effect cannot be ruled out (in line with the recognised precautionary principle) avoidance and mitigation measures to avoid such an effect must be considered.
- 2.1.4 If it cannot be concluded that the proposed works will not have an adverse effect upon the integrity of the site(s), further measures and assessments would be required. Potentially in the form of compensation.



3. METHODOLOGY

3.1 OVERVIEW

- 3.1.1 This assessment has been produced in-line with Habitats Regulations guidance published by the JNCC (2010), English Nature (now Natural England) (2001) and the Countryside Council for Wales (now Natural Resources Wales) (2008).
- 3.1.2 The asset is situated above and within the Afon Tywi SAC and SSSI.
- 3.1.3 Additionally, there are several SSSI's and a further SAC within proximity and downstream. These other sites will not be assessed directly, but will be accounted for in terms of localised mitigation, which will intern provide mitigation measures to these connected designated sites.
- 3.1.4 This HRA will focus on the potential likely significant effects (LSE) of the rail asset maintenance on the Afon Tywi - Special Area of Conservation (SAC) and Afon Tywi – Site of Special Scientific Interest (SSSI).



4. DESCRIPTION OF THE PROPOSED ACTIVITIES

4.1 SITE CONTEXT

- 4.1.1 The site footprint focuses on the timber fenders up and down stream of the metallic piers. The proposed licensed area accounts for the presence of the spid barge, which may dock along the edges of the Tywi, or close to the rowing club (conditions allowing).
- 4.1.2 Access to the site for vessels will be along the Afon Tywi itself, with the vessel sailing up from Carmarthen Bay, originating from the Severn Estuary at the start of its initial journey. The smaller supporting vessels will be deployed from the rowing club, upstream of the structure.
- 4.1.3 Foot access is possible via the public right of way along the western side of the Tywi. The rail corridor provides a further means of works support, however there are no current requirements to utilise the railway to support works directly.

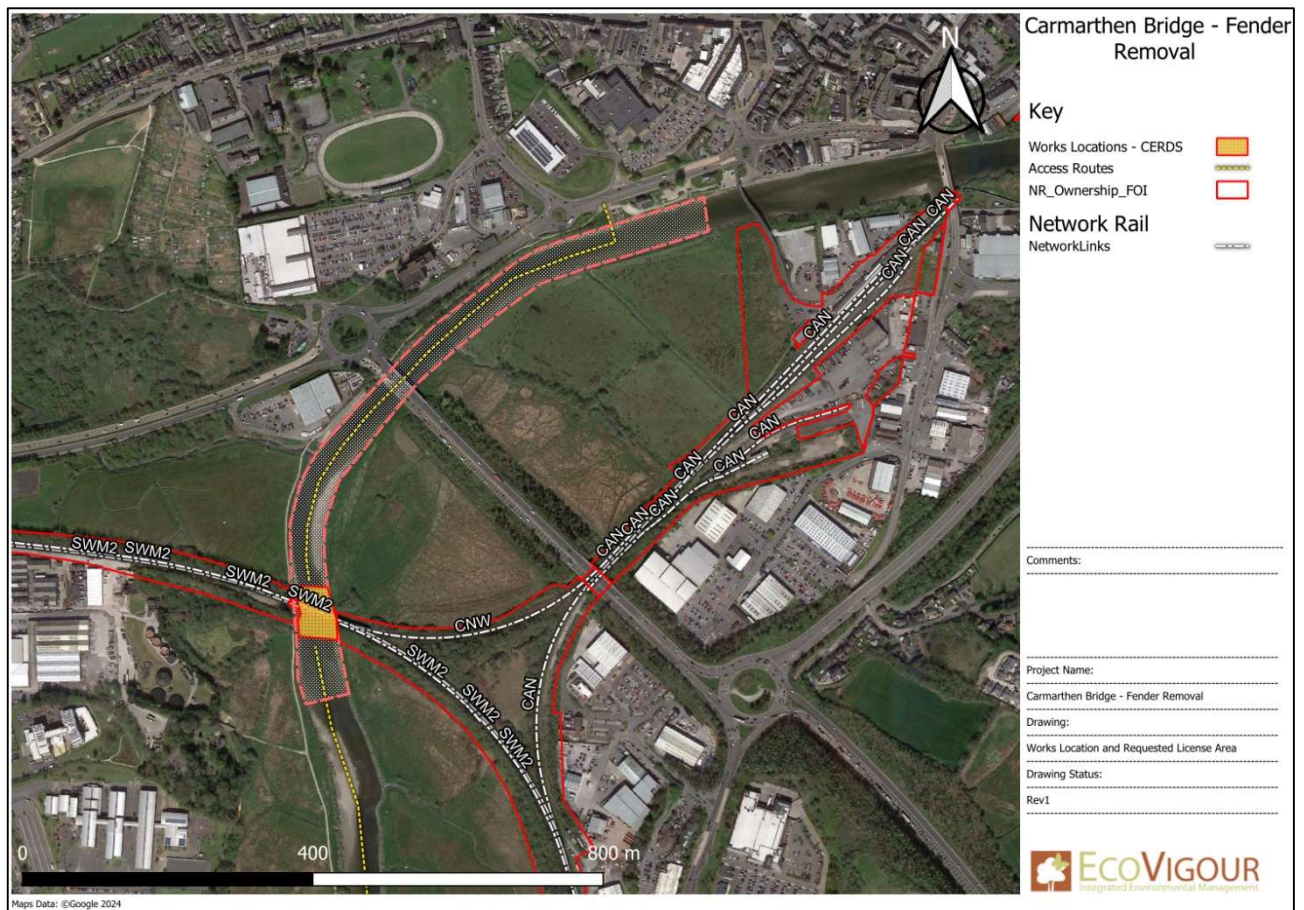


Figure 3: Location of project in relation to wider area.



4.2 METHOD OVERVIEW – MASONARY WALL REPAIRS

- 4.2.1 This subsection details the equipment, general condition of the fenders, mean of access, and broad method of works outlined within the formal method statement. Please see Appendix C for fall Dyer & Butler Kaymac method statement.

Access to Site:



Figure 4: Access ramp to pathway and location for mobile and small welfare units.



Figure 5: Ramp to be used at Carmarthen rowing club for support boat.



Figure 6: Indicative route of Bullo Marine Vessel, chartered by Kaymac.

4.3 FENDER REMOVAL WORKS

- 4.3.1 Upon receipt of marine license and confirmation from Network Rail to proceed. Weather dependant Bullo Marine Ltd. Will mobilise from Bullo Pill, Newham (GL14 1ED) on the, with the view of arriving at Carmarthen Swing Bridge two days later.
- 4.3.2 The Kaymac team will also mobilise to site on the morning of the likely arrival date and liaise with the skipper and deck hand. The scope and methodology will be discussed and agreed prior to the commencement of the debris removal.
- 4.3.3 Before commencing any work, the Kaymac Site Supervisor will contact the Dyer & Butler's responsible persons. The Kaymac Site Supervisor will carry out a safety briefing informing the site team of everyone's roles and responsibilities, emergency procedures in the event of an on-site incident, and the hazards and control measures relevant to the tasks required. All personnel in attendance will be required to sign the Briefing Attendance Record in section 9.0 of the method statement (see attachments)
- 4.3.4 If they haven't done so already, Bullo Marine Ltd. will orientate their working platform so that the works can commence. Bullo Marine Ltd. are to instruct Kaymac on the appropriate location of the working platform. Both Kaymac and Bullo Marine Ltd. are then to jointly confirm that the working platform is a sufficient distance from the fender and Carmarthen Bridge.



4.3.5 It is assumed that the working platform will be in the location denoted in the images below:

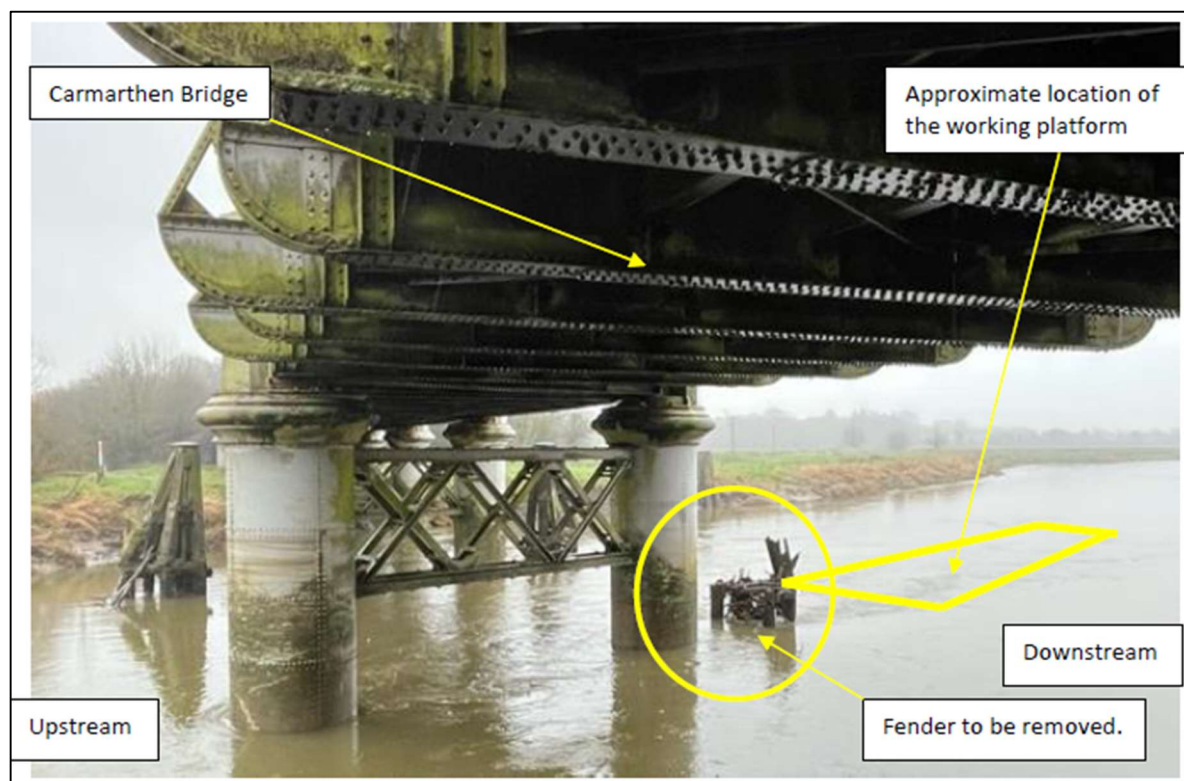


Figure 7: Example of one of the downstream fenders (all fenders are to be removed in sequence).

- 4.3.6 While the platform is being prepared for the demolition works, Kaymac operatives will make their way to Carmarthen Rowing Club and launch the safety boat. The safety boat along with 2 No. boat operatives will then make their way to Carmarthen Bridge. Prior agreement to use the rowing club as a means of access for the safety boat will be undertaken by Dyer & Butler. Kaymac operatives utilising the safety boat will ensure that they don all the relevant PPE before launching. The safety boat will then make its way downstream to Carmarthen Bridge.
- 4.3.7 Before the demolition work commence, the safety boat team are to inspect and subsequently photograph the condition of the Carmarthen Bridge pier. With the working platform now prepared to conduct its demolition works, the safety boat will position itself a sufficient distance outside the slue radius of the platforms onboard excavator and away from any perceived demolition risks.
- 4.3.8 Bullo Marine Ltd. and Kaymac are to agree on the location of the safety boat, when considering the slue radius of the excavator, risks associated with demolition and river conditions. Bullo Marine Ltd. are to be always made aware of the safety boat. Two-way radios are to be used to communicate any required movements.
- 4.3.9 It is worth noting that the safety boat will also carry out a watching brief throughout the work. Ensuring that the Network Rail asset (Carmarthen Swing Bridge) is not in any way damaged.
- 4.3.10 Utilising the hydraulic saw on the excavator, Bullo Marine will then begin its demolition of the fender, ensuring that the fender is cut incrementally, and that all debris is pulled downstream of Carmarthen Bridge. The above water elements will be cut first, followed by the lower elements. To cut the lower elements, Bullo Marine Ltd. will use a falling tide.



- 4.3.11 The safety boat is to continue its inspection of the Carmarthen Bridge's downstream pier throughout the demolition works. As noted above photographs of the pier will be taken at regular intervals.
- 4.3.12 All sections of the fender along with any debris trapped within the fender will as far as reasonably practicable will be retrieved and placed within the working platform for offsite removal.
- 4.3.13 As noted above, the safety boat personnel will provide a watching brief throughout the demolition work ensuing that Carmarthen Bridge is not damaged.
- 4.3.14 The above will be repeated until the upper elements of the fender are removed. The safety boat is to make its way back to Carmarthen Rowing Club at the end of each working shift where it will either be moored overnight or removed from the water all together. Conversely, the safety boat will be launched at the start of each working shift. The safety boat must be in position before any demolition works at Carmarthen Bridge can commence.
- 4.3.15 When considering the lower fender elements i.e. sections interfacing closely with the river invert, Bullo Marine Ltd. will as far as reasonably practicably cut them as closely to the invert as possible.
- 4.3.16 Dyer & Butler are to confirm their acceptance of the level of the fender elements in relation to the invert before demobilising from site. Furthermore, and following the regular inspections carried out by the safety boat team, Dyer & Butler are also to confirm that the bridge has not in any way been adversely affected by the demolition work. The above must be confirmed before demobilising.
- 4.3.17 If possible, and at low tide the safety boat team may be required to confirm the extents of the remaining piles within the watercourse. This will be carried out from within the safety boat only.
- 4.3.18 On completion of the works, the safety boat operatives will make their way back to Carmarthen Rowing Club and continue demobilising. Kaymac are to notify Dyer & Butlers Responsible Persons that the works are complete.
- 4.3.19 Simultaneously, and given adequate tides, Bullo Marine Ltd. will also demobilise from site. Furthermore, remaining onsite elements such as the welfare will also be demobilised. Kaymac are to ensure that site is left clean and tidy.



5. HRA METHODOLOGY OBJECTIVES

- 5.1.1 Habitats Regulation Assessment is an assessment of the potential effects of a proposed project / maintenance activity on a European site(s) (alone and/or in combination with other plans and projects). The Habitats Regulations promotes a hierarchy of avoidance, mitigation and compensatory measures. First, the project should aim to avoid significant adverse effects by identifying potential measures to avoid these effects.
- 5.1.2 Where adverse effects remain, mitigation measures should be applied to a point where these effects are no longer significant. If sufficient mitigation measures cannot be applied, the project should not be taken forward in its current form. In such a scenario, the project will require an assessment to identify alternative solutions that deliver the project in a form that avoids any significant adverse effects.
- 5.1.3 Where significant adverse effects remain, compensatory measures will be required if the project is to proceed. However, the application of such measures will only be permitted if no alternative solutions exist and the project is required for imperative reasons of overriding public interest (the 'IROPI' test).



6. DESIGNATED SITES WITHIN PROXIMITY TO SITE

6.1.1 There are several statutory designated sites interfacing or within proximity to the Sea Wall. Directly concerned with the Sea Wall are:

- ◆ Afon Tywi - Special Area of Conservation (SAC).
- ◆ Afon Tywi – Site of Special Scientific Interest (SSSI)

6.1.2 The SSSI contains overlapping features and therefore will be viewed in combination with the SAC in terms of mitigation highlighted in the latter sections within this document.

6.1.3 There are additional designated sites further downstream (South) of the structure, these are:

- ◆ Carmarthen Bay and Estuaries - Special Area of Conservation (SAC).

6.1.4 The closest site outside the main scope of this assessment is the up stream section of the Carmarthen Bay and Estuaries - Special Area of Conservation (SAC). Where the Tywi component of the three rivers that converge into the Bay, transitions into the Tywi SAC element, which gradual becomes the freshwater part of the Afon Tywi.



Figure 8: SAC & SSSI boundary in relation to works site.



7. AFON TYWI - SPECIAL AREA OF CONSERVATION (SAC)

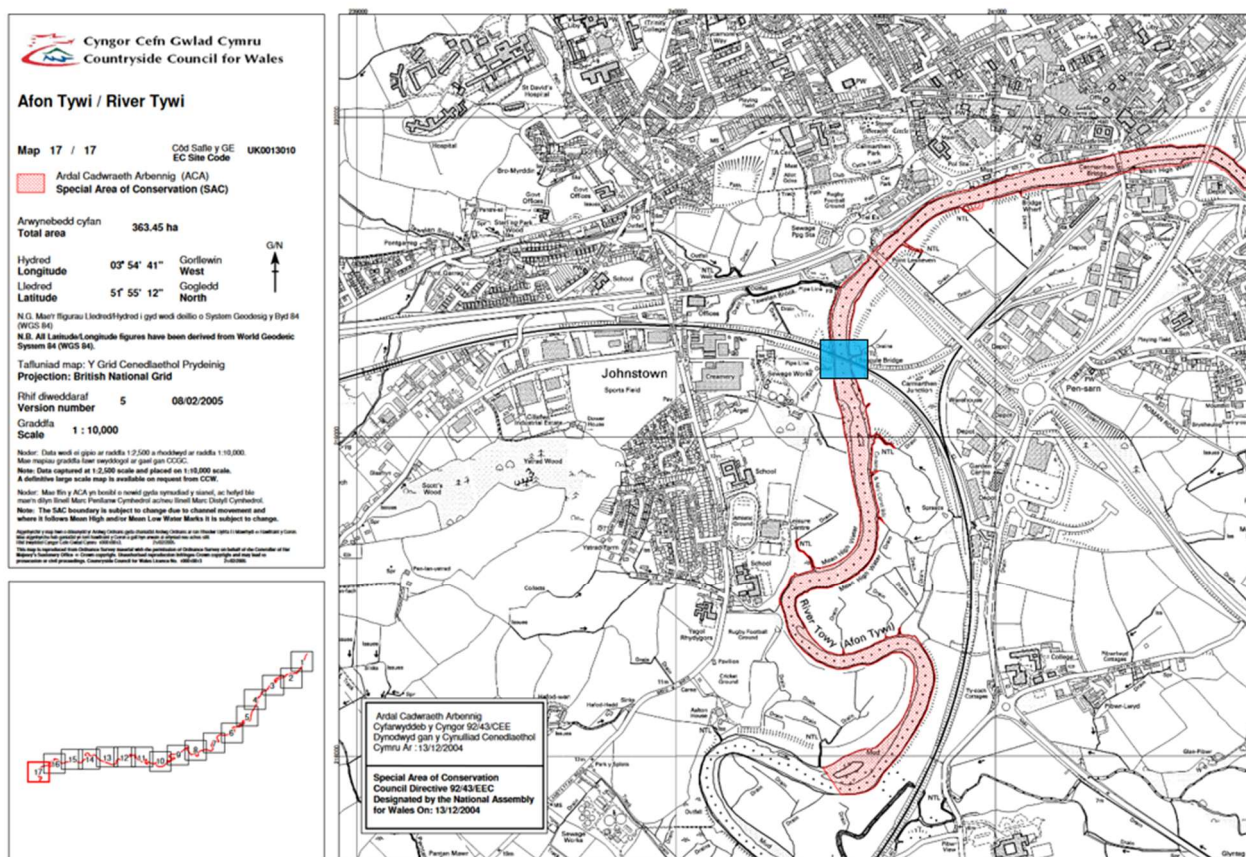


Figure 9: NRW SAC Map 17 - Afon Tywi.

7.1 SAC OVERVIEW

- 7.1.1 Within NRW documentation, The Afon Tywi SAC boundary terminates in the tidal reaches just south of Carmarthen, where it enters the Carmarthen Bay & Estuaries SAC.
- 7.1.2 The freshwater reaches of the Tywi are some 110km long, with just short of 80km designated as SAC. Within the SAC its course is more characteristic of a mature river, falling just 65m between Llandovery and the sea.
- 7.1.3 As a meandering river, the boundary of Afon Tywi SAC is necessarily a fluid one. It incorporates the whole of the main river channel between Llandovery road bridge and the southern boundary with Carmarthen Bay and Estuaries SAC below Carmarthen.
- 7.1.4 The ecological structure and functions of the site are dependent on hydrological and geomorphological processes (often referred to as hydromorphological processes), as well as the quality and connectivity of riparian habitats. The more mobile species, such as migratory fish and otters, may also be affected by factors operating outside the site.
- 7.1.5 The table below details the qualifying habitats and species of the SAC, which is considered to be one of the best areas in the UK for:



Table 1: Annex I & II features of the SAC.

EU Code	Feature
Annex I habitats that are a primary reason for selection of this site	
	Not Applicable
Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site	
	Not Applicable
Annex II species that are a primary reason for selection of this site	
1103	Twaite shad <i>Alosa fallax</i>
1355	Otter <i>Lutra lutra</i>
Annex II species present as a qualifying feature, but not a primary reason for site selection	
1095	Sea lamprey <i>Petromyzon marinus</i>
1096	Brook lamprey <i>Lampetra planeri</i>
1099	River lamprey <i>Lampetra fluviatilis</i>
1102	Allis shad <i>Alosa alosa</i>
1163	Bullhead <i>Cottus gobio</i>



8. AFON TYWI SSSI

8.1 OVERVIEW

- 8.1.1 Afon Tywi Site of Special Scientific Interest extends downstream from Llandovery to the confluence with the Afon Taf and Pembrey Coast SSSI in Carmarthen Bay.
- 8.1.2 It is an actively eroding river meandering across a wide flood plain which is composed of alluvium, glacial sands and gravels.
- 8.1.3 This has resulted in extensive shingle banks being formed. These are important for birds and invertebrates, and the river is also of special interest for its fish species and otters, and in its lower reaches for its saltmarsh vegetation.

8.2 SITE MANAGEMENT STATEMENT

- 8.2.1 The competent authorities (NRW & NE) both produce Site Management Statement's (SMS's), which outline the features that inform the overall status of a designated site. There are 8 special features that inform the site in question are:
- ◆ Saltmarsh
 - ◆ Allis shad
 - ◆ Twaite shad
 - ◆ Otter (*Lutra lutra*)
 - ◆ Little ringed plover
 - ◆ Sand Martin
 - ◆ Club-tailed Dragonfly
 - ◆ A community of beetles, flies and other invertebrates inhabiting the river and shingle banks.
- 8.2.2 In addition to the highlighted features of importance. The SMS also outlines potential damaging vectors to a designated site feature, summarised as Potentially Damaging Operations (PDO) lists.
- 8.2.3 Below are the activities considered relevant to the proposed project (Table 2 below).

Table 2: PDO list from NRW Designated Site Finder Tool.

SMS Ref No:	Type of operation
21.	Destruction, construction, removal, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and rock exposures.
22.	Storage of materials.
23.	Erection of permanent or temporary structures or the undertaking of engineering works, including drilling or the laying, maintenance or removal of pipelines and cables, above or below ground.
26.	Use of vehicles, or craft.



8.3 HABITAT PRESENT WITHIN WORKING FOOTPRINT

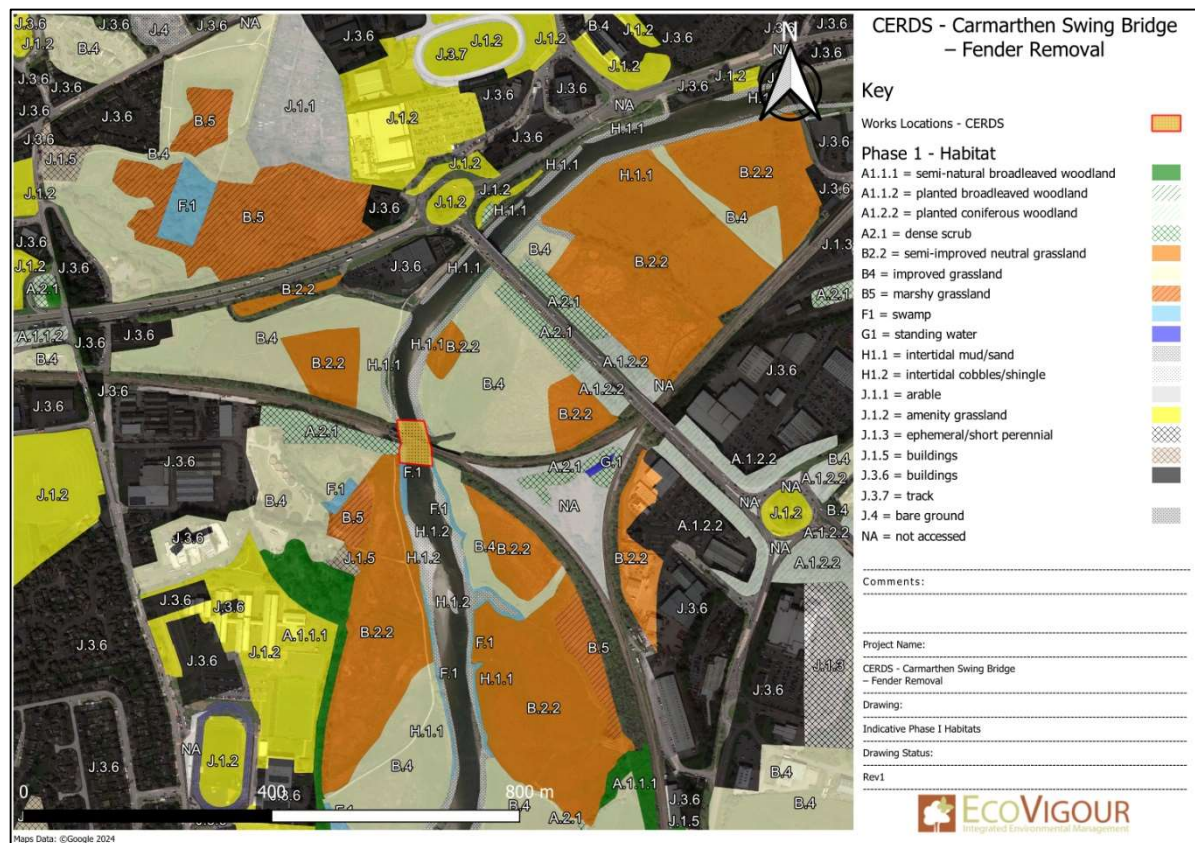


Figure 10: Habitat – Carmarthen Swing Bridge.

- 8.3.1 The habitat in which the works will take place and along the proposed access route is predominantly intertidal mud/sand, intertidal rock/shingle and the flowing watercourse itself. Along the margins of the watercourse of areas of reedbeds, broadleaf riparian margins, inundate swamp habitat and improved grassland within the floodplain.
- 8.3.2 There are no Annex I Primary or Secondary Habitats as part of the SAC's designation. However, the SSSI does define Saltmarsh has a key habitat feature, however the working area does not interact with any established or emerging saltmarsh habitat.
- 8.3.3 No vehicles will traverse any non-artificial terrestrial habitats, while the spid barge will maintain its position within the watercourse or will moore against habitats such as intertidal mud or shale as these are more resistant to temporary impacts from vessels.
- 8.3.4 Japanese Knotweed stands are present along the upper banks below the swing bridge component, which will be added to the Biosecurity Control Document (Appendix B).



Figure 11: View of habitat margin on opposite shore.



Figure 12: View at distance of riparian margin upstream of structure during lower tidal and flow conditions.



8.4 ANNEX II SPECIES RECORDS - WWBIC

- 8.4.1 An up to date, West Wales Biological Information Centre data request was submitted to provide additional information to inform the known presence of Annex II species in proximity to the project. Annex II Fish species were not returned within the specific dataset, but will all be assumed to be present.
- 8.4.2 **Please note:** Otter records, especially their dependent static features (e.g Holts) are highly sensitive. This information must not be shared with the general public or those outside of the Marine Assessment or Project Team.



Figure 13: Otter Records within 1km of the project.

Table 3: Description of WWBIC Records.

Location Number	Species	Date	Description
1	Eurasian Otter (Lutra lutra)	11/01/2018	3 otters playing at the waters edge
2	Eurasian Otter (Lutra lutra)	11/09/2004	Planning Authority: CCC; Community: Carmarthen; Site Owner: ; River: Nant Tawelan Note: .
3	Eurasian Otter (Lutra lutra)	2 records, between 2004 and 2006	Scrub and reedbed; River: Tawelan Brook; Site Code:TAW01Section Length: 0; Habitat: Scrub and reedbed; Natal Den: Bramble scrub; reedbed; Disturbance Type: Dog walkers; Improvement: Try to limit public access; Note: .
4	Eurasian Otter (Lutra lutra)	01/01/1996	Planning Authority: CCC; Community: Carmarthen; Site Owner: ; River: Nant Tawelan Note: .
5	Eurasian Otter (Lutra lutra)	28/02/2018	ID: 4916; Time: 8am; Alive; Coastal: FALSE; Built up area: FALSE; Cardiff: FALSE; Trunk road: FALSE
6	Eurasian Otter (Lutra lutra)	15/02/2013	Three otters in the Tywi heading upstream from the Towi Works bridge



7	Eurasian Otter (Lutra lutra)	06/02/2018	ID: 4888; Time: 3.30pm; Alive; Coastal: FALSE; Built up area: FALSE; Cardiff: FALSE; Trunk road: FALSE; Notes: 3 otters (1 adult 2 cubs) playing on the north river bank about 50 meters north east of the river bridge forming part of the A484 in the town
8	Eurasian Otter (Lutra lutra)	09/11/2006	Otter casualty: Male; Sub-adult; Cause of death: RTA
9	Eurasian Otter (Lutra lutra)	19/06/1995	
10	Eurasian Otter (Lutra lutra)	19/06/1995	Habitat: River; Community: Carmarthen Note: Adult; otters seen regularly
11	Eurasian Otter (Lutra lutra)	02/12/2012	Otter casualty: Female; Sub-adult; Cause of death: RTA
12	Eurasian Otter (Lutra lutra)	22/12/2005	Otter casualty: Female; Sub-adult; Cause of death: RTA

8.4.3 During the initial site walkover along the western shore, no features pertaining to Otters were observed.

8.4.4 Signs of otter that were searched for included:

- ◆ spraints (droppings) and anal jelly;
- ◆ footprints;
- ◆ feeding remains;
- ◆ slides (into water);
- ◆ holts (breeding places); and
- ◆ couches/lay-ups (resting places).

8.4.5 It was noted that due to difficult to access banks during the time of survey, small temporal features such as sprain, footprint and feeding remains would be difficult to identify. Broadly however, the habitat along eastern shore is of poor suitability for sustainable holts, given the exposed nature and the banks in this location. However, downstream banks connected to ordinary watercourse, with links to dense habitat and woodland blocks may provide suitable locations.

8.4.6 Bank protection is present along sections of the western shore near the structure, while further upstream, hard engineering flood defence walls and elevated infrastructure are present (towards Carmarthen Centre and Rowing Club). It is likely that sections of Tywi downstream and upstream of Carmarthen where the habitat more naturally meanders and features denser riparian woodland margins or large reed beds are more viable locations for features such as holts.

8.4.7 However, given the records of activity, especially that of feature 1 in the table above. Reinforce the need to assume presence and mitigative measure will be proposed in section 10.



9. PHYSICAL PROCESSES

9.1 RELEVANT POLICIES WITHIN THE SHORE MANAGEMENT PLAN 2 (SMP2)

- 9.1.1 As part of the Appropriate Assessment, it is necessary to compare the proposed works against the long-term policies outlined within the Shore Management Plan 2 (SMP2). Within the SMP2 there are several policy units relevant to this section of coastline and estuary.

9.2 Timing, Fish Species And Relative Risk Of Harm/Disturbance

- 9.2.1 The figure above illustrates the period of works and relative intensity, in relation to the traffic light system provided by NRW on previous projects. EcoVigour has added Twaite shad and Allis shad to this matrix based on best available information.

Table 4: Fish spawning risk matrix in relation to proposed work timing.

Species Name	Jan	Feb	March	April	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Salmon												
Twaite Shad												
Allos Shad												
River Lamprey												
Sea Lamprey												
Brook Lamprey												
	Highest Risk											
	Moderate Risk											
	Lowest Risk											

- 9.2.2 Viewing the table above, in terms of potential impacts to specific species spawning times, the primary species of concern listed under Annex II (Primary) is Twaite Shad spawning between February to July. This is outside of the desired commencement of works period for latter September 2024 into October 2024 while conditions allow. However, this timing does fall within the beginning of the Salmon spawning period, which enters its peak periods between November to mid-April.
- 9.2.3 Consequently, mitigative measures to account for this timing are proposed below in section 10 below.



10. ASSESSMENT OF POTENTIAL IMPACTS RESULTING FROM SPECIFIC ACTIVITIES AND PROPOSED MITIGATION MEASURES – CARMARTHEN SWING BRIDGE – FENDER REMOVAL

This section outlines the receptors of potential damaging vectors as a result of the proposed works and proposes appropriate mitigative measures to ensure that there is not a significant likelihood of impacts.

10.1 ANNEX I HABITATS – IMPACTS & MITIGATION

Receptor	Affected Site	Potential Hazard	Mitigation Measures	Likelihood of Impact
Broad Riparian Tidal Reach habitats (non-Annex I)	SAC/SSSI	Contamination of the Tywi from spillage of hydrocarbons during refuelling of equipment or due to equipment failure.	All works set up and audited on a regular basis by the Environmental Clerk of Works (ECoW). A refuelling procedure will be implemented, whereby plant nappies will be placed beneath fuelling apertures during fuelling and refuelling will only be undertaken by designated, trained individuals. NR have a spillage plan and specialised contractor in place to respond to and clean up spills. The Contractor will develop and implement an Emergency Awareness and Response Plan. GPP5 Guidance for Pollution Prevention - Works and maintenance in or near water, will be referenced to. These will include: ◆ GPP 5 - Works and maintenance in or near water ◆ GPP 7 - Safe storage – The safe operation of refuelling facilities, ◆ GPP 21 - Pollution incident response planning, ◆ GPP 22 - Dealing with spills The marine contractor describe how spills will be contained and cleaned up. The emergency plan will appoint an Incident Coordinator, define roles and responsibilities during an incident, detail response procedures and contain an inventory of response equipment to be maintained on site. The vessels, when not in use, will be situated offshore, in regards to the rescue vessel and along less sensitive portions of the river bank in relation to the spid barge.	Negligible likelihood of significant impacts.



Receptor	Affected Site	Potential Hazard	Mitigation Measures	Likelihood of Impact
Salt marshes (also part of estuarine habitat)	SSSI	Contamination of the estuary from spillage of hydrocarbons during refuelling of equipment or due to equipment failure.	There are no areas of Saltmarsh within the working footprint. See comments above under estuarine habitat.	Negligible likelihood of significant impacts.
Broad Riparian Tidal Reach habitats (non-Annex I)	SAC/SSSI	Loss of Habitat as a result of vehicle movement.	The proposed use of the spid barge is limited to the removal of fenders only, limiting the potential impact footprint considerable. Furthermore, it is expected that any disturbed mud or shingle within the river habitat will be temporary, with sediment material remobilising following incoming tides and will quickly be deposited into its previous alignment. The removal of the fenders will in fact improve the overall volume of natural river habitat. In terms of long-term impact. The repairs represent maintenance as outlined in the Welsh Government position statement on coastal squeeze and does not deviate from the Shore Line Management Plan 2 – preferred policy of Hold the Line.	Negligible likelihood of significant impacts.



10.2 ANNEX II SPECIES – IMPACTS & MITIGATION

Receptor	Affected Site	Potential Hazard	Mitigation Measures	Likelihood of Impact
Fish Assemblage	SAC/SSSI	Contamination of the estuary from spillage	See comments under estuarine habitat	Negligible likelihood of significant impacts.
Vascular plant assemblage associated with salt marsh (part of estuarine habitat)	SSSI	No impact	See comments under estuarine habitat	Negligible likelihood of significant impacts.
Otter (Lutra Lutra)	SAC/SSSI	Noise disturbance / Visual Disturbance / Habitat Destruction.	Otter populations are known to be present near Ferryside North embankment. Toolbox Talks (TBTs) will inform site personnel on identifying the Annex II Species. No otter holts have been noted to date within proximity to the structure and are unlikely to be found during works on the seaward facing wall sections. Habitat impact is limited, and it is not anticipated that these works will have an impact on the wider population and Otter policy objectives of the Core Management Plan. Additionally, no equipment will be left in such a manner that an animal could become snared and trapped within the working area. Should an Otter be encountered during works, personnel will temporarily stand down until the animal has vacated the immediate area under its own volition. The contractor will abide by the Gwynedd Marine Code of Conduct. Salmon and other species of the assemblage, which are a prey of Otter will not be prevented from travelling up the estuary during the project. Although there will be an elevated human presence around the structure, it is unlikely that this will present a significant determinantal impact to	Negligible likelihood of significant impacts.



Receptor	Affected Site	Potential Hazard	Mitigation Measures	Likelihood of Impact
			salmon and other species of fish migrating to spawn during the coming winter months, provided the limited working hours are adhered to.	
Fish Assemblage	SAC/SSSI	Noise Disturbance / Visual Disturbance / Habitat Destruction.	Work are proposed to be undertaken during favorable conditions ahead of the peak spawning season for migratory fish such as salmon, trout and shad, but will fall within the initial transitional spawning period for salmon (assuming works are able to commence towards the end of September 2024). No works within the designated sites will occur until formal assent has been granted by Natural Resources Wales. Maintenance work will result in a period of noise and visual disturbances for approximately 4-5weeks. However, the working window is highly dependent on water levels and flow speeds within the river. Noise levels are unlikely to exceed those currently generated by rail traffic and nearby human activity, although the temporary source will be of a different output. Consequently, works will only occur during the daytime hours, when background noises created by normal human activity is most prominent during these times and thereby avoiding essential night time periods. Wildlife will be habituated to activity within the river due to the adjacent rowing club and other leisure activities. The works will only work on one section of an individual fender at a given time, ensuring that there is ample opportunity for migrating fish species to avoid the location of works and utilise another section of the flowing river. Toolbox talks will be provided by the Environmental Clerk of Works prior to works commencing. This will identify potential impacts and direct localised mitigation where required.	Impact Not Likely to be Significant, with appropriate mitigation



Receptor	Affected Site	Potential Hazard	Mitigation Measures	Likelihood of Impact
			A reduction in the overall footprint of the structure will occur. Best practice will be used in terms of the construction methodology to limit this i.e., modern well silenced vessel propulsion.	





11. POTENTIAL IN-COMBINATION EFFECTS

11.1 OVERVIEW

- 11.1.1 It is necessary to consider the potential for significant effects from this project in-combination with other plans or projects.
- 11.1.2 In addition, the plan or project must have been subject to a HRA, which has confirmed that the plan or project is not likely to have a significant effect or demonstrates that the effects have been sufficiently assessed so as to be reasonably understood.
- 11.1.3 The assessment of in-combination effects must also focus on other projects that have the potential to cause the same types of effects as the proposed maintenance (so that these effects may occur in-combination) and where similar potential impact pathways may exist.
- 11.1.4 Therefore, this assessment has focused on other projects that could give rise to noise, visual or physical impacts on the SAC species and does not consider projects that could cause different effects.

12. KNOWN PROJECTS WITHIN THE WIDER AREA

- 12.1.1 There is currently no known large-scale project in a proximity to the proposed maintenance areas which could cause in combination effects.
- 12.1.2 However, should NRW have other upcoming Marine Licenses in place that are soon to be undertaken or currently being undertaken, then the project will be undertake at a period that achieves the least in-combination impacts possible.



13. HRA CONCLUSION

- 13.1.1 This section will combine the key features and challenges highlighted in the CMP's and proposed to mitigation to ascertain whether likely significant impacts to the designated features could occur.
- 13.1.2 In terms of terms of the fish assemblage, the works will limited the potential creation of underwater noise, by limiting working hours to daytime periods only and avoid dawn and dusk. There will be no impediment of likely migratory foraging locations or blockage to upstream habitats.
- 13.1.3 Pre-works assessment in relation to Otters will be undertaken to ensure no potential features not yet identified (e.g. holts) are impacted upon. Currently no features have been identified to date.
- 13.1.4 Refuelling and emergency response procedures as per Management Plan (MP) preparations. The implementation of this will be monitored and audited by an Project Managers from Dyer & Butler and Environmental specialist (EcoVigour).
- 13.1.5 Any intertidal mud or shingle habitat disturbed is anticipate regenerate in a short timeframe.
- 13.1.6 The project does not interfere with any known Shore Line Management Plan policies.
- 13.1.7 The ECoW will undertake a pre check of the access route and immediate working areas.
- 13.1.8 From the available information and proposed mitigation measures, it is assessed that the high tide habitat below the rail corridor at the works site will not be significantly impacted, nor species or features relevant to the designated site as a whole. There are no Annex I habitats within proximity of the works which may be impacted. Pollution controls will ensure Annex I habitats of connected designated sites are protected.
- 13.1.9 The exact timing of the works will be agreed with NRW, dependent on whether there are further in combination impacts that require specific working dates. However the desired timing does benefit the project movements of most fish species indicated in the Annex II list.
- 13.1.10 In conclusion therefore, the proposed mitigation measures will ensure that no significant impact to the designated site will occur as a result of the proposed works.



14. APPENDIX A - BIOSECURITY MANAGEMENT PLAN & RISK ASSESSMENT





15. APPENDIX B - WNMP SIGNPOST DOCUMENT





16. APPENDIX C – SUPPORTING TECHNICAL DOCUMENTS

Carmarthen Bridge - Fender Removal Method Statement - May 2024

