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Western Cleddau (0839)

Appropriate Assessment (AA)





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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 the scheduled remedial works to the Western Cleddau Bascule Rail Bridge, within Milford Haven.
- 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 MGroup, the principal contractor, working on behalf of Network Rail, the client and asset owner.
- 1.1.4 Due to the requirements of stable weather conditions, daytime working hours and working with and around changing fluvial influences, a confident estimate of working periods cannot be provided at this time, however it is anticipated that works will be undertaken over a maximum period of 4 weeks.
- 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 mentioned above, the works necessitate the working within proximity to a main river, a separate FRAP application will be submitted.
- 1.1.8 The main statutory designated site which requires consideration under the Habitats Regulations has been identified as:
- ◆ Western Cleddau River - Special Area of Conservation (SAC).
 - ◆ Western Cleddau River – Site of Special Scientific Interest (SSSI).
 - ◆ Pembrokeshire Marine - Special Area of Conservation (SAC).
 - ◆ Milford Haven Waterway – Site of Special Scientific Interest (SSSI).
- 1.1.9 Following review and consensus, this document will form part of the working methodology for the project, supporting working within a designated site.
- 1.1.10 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'.



1.2 PROJECT BACKGROUND

- 1.2.1 The rail bridge is situated east of Freemans Way, A4076, spanning over the Afon Cleddau. Access to the structure was off a lane from New Road south of the Territorial Army centre 100m northwest of the rail bridge. A footpath runs along the bank of the Afon Cleddau Northwest into the town, with a small footpath bridge allow access to both shores and the potential watercourse access area (figure 1). The area is close to the centre of Haverford West, however a distinct opening into natural habitat occurs to the East of the structure.
- 1.2.2 The bridge structure is a three-span bascule rail bridge design. The original wooden frame structure has been upgraded with a steel supporting structure, with a wooden platform supporting the rail line. Stone brick abutments support the far side of the structure along each shore. The bridges ability to move appears to no longer be part of the design, with only the original pulleys of the lifting equipment and wooden frame remaining below the supporting structure.

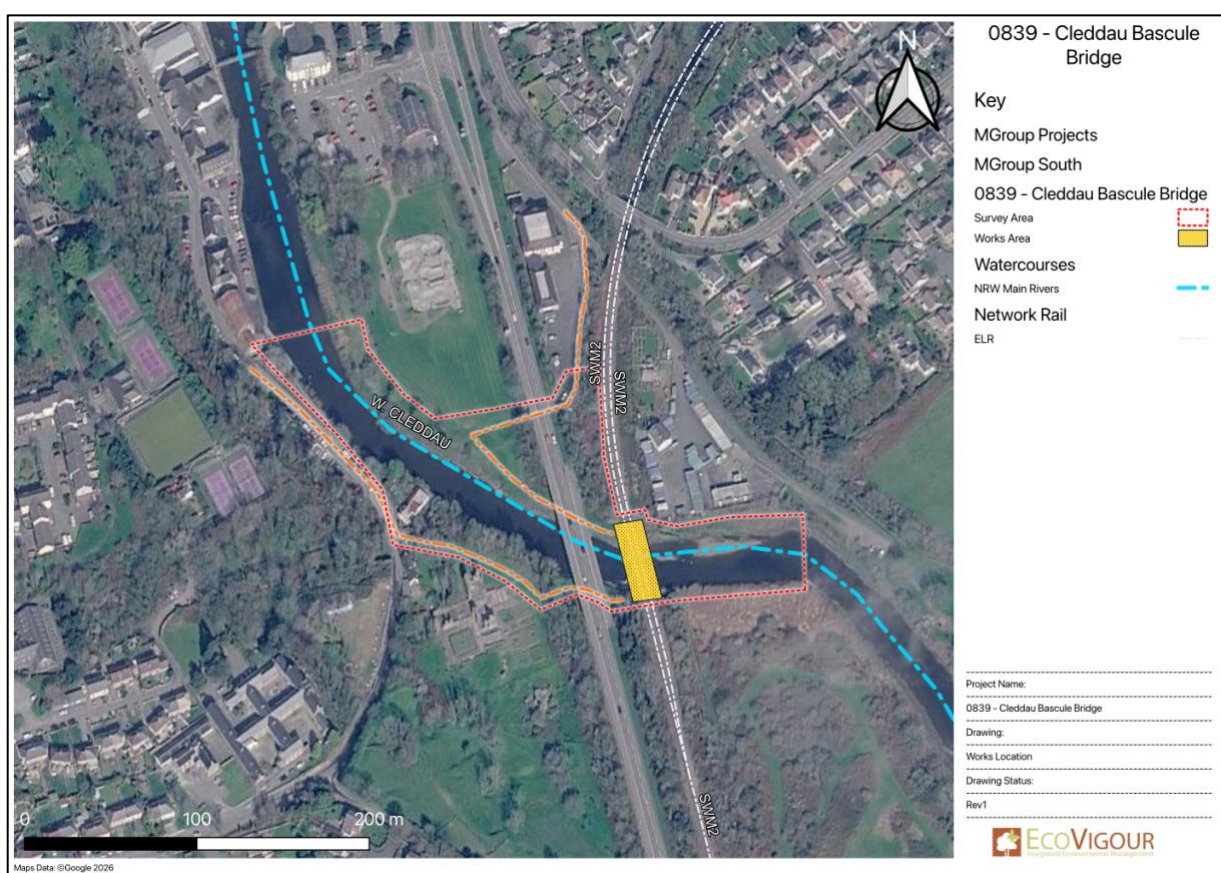


Figure 1: Map of Project Location.

- 1.2.3 The structure requires remedial works to timber and metallic elements. Network Rail & MGroup Ltd engineers therefore require access and a clear working area below the bridge deck, where a scaffolding can be erected to undertake the proposed maintenance activities. These works will include but are not limited to:
- ◆ Removal of vegetation cover.
 - ◆ Install of safe work barriers.
 - ◆ Formalised access and egress routes
 - ◆ Compound creation at hard standing to the northeast.
 - ◆ Delivery and erection of scaffolding equipment.
 - ◆ Localised metallic Repairs and remedial items outlined in the scope of works.



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 MGroup 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 proposed works are situated within the Western Cleddau SAC/SSSI. No additional statutorily designated sites are present within 2km of the proposed works.
- 3.1.3 Non-Statutory sites such as Ancient Semi Natural Woodland (ASNW) are present within a 500m radius of the proposed works area. An NRW priority area of enclosed farmland is also situated within 1km of the proposed works, approximately 825m to the west. However, all sites are located in excess of 200m from the proposed works areas, and no works will occur within or directly adjacent to these sites. These sites will not be discussed further for the remainder of this document.
- 3.1.4 This HRA will focus on the potential likely significant effects (LSE) of the installation of a Sonde and associated telemetry outstation on the Western Cleddau Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI).



4. DESCRIPTION OF THE PROPOSED ACTIVITIES

4.1 METHOD OVERVIEW

Scope of Works

- 4.1.1 This method statement covers structural maintenance, and repair works to the Main Girder and movement monitoring of Span 2. Works comprise the cleaning of the web panel between the end plate and first intermediate stiffener, removal of silt and debris from the abutment shelves on both the internal and external faces of the girder, structural repair by over-plating in accordance with the detailed design.

Access Arrangements

- 4.1.2 Access to the structure will be provided by a purpose-designed scaffolding system erected beneath and alongside the structure, with access towers erected on either shore. Given that the structure spans over water, the scaffolding will be designed to an appropriate loading standard and will incorporate edge protection and debris netting to prevent tools, materials from entering the watercourse below. A working-over-water risk assessment and rescue plan will be in place prior to commencement. Within the central span, a mobile platform will be utilised which will be affected to the lower deck of the structure. All main walk ways and mobile platforms will be situated above the highest flooding level indicated on the rail abutments.
- 4.1.3 Scaffolding material will be delivered to site via 4x4, utilising existing pathways. Where Japanese Knotweed is present, Terram will be placed down to prevent direct interaction with potential ryzomes with the base of the scaffolding. This will be mirrored in the biosecurity plan.

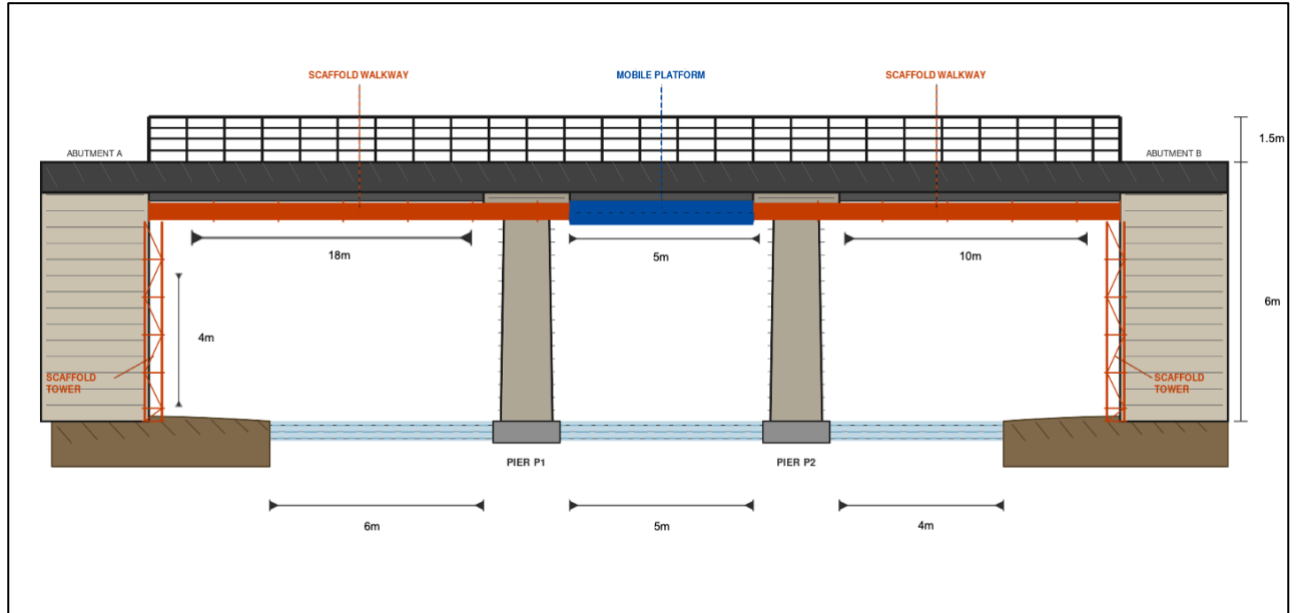


Figure 2: Indicative Dimensions.



Preparatory Works

- 4.1.4 Prior to commencement, the scaffold will be erected and inspected, environmental protection measures put in place, and all relevant permits to work obtained. A site induction will be delivered to all operatives.

Panel Cleaning

- 4.1.5 The web panel between the end plate and first intermediate stiffener will be cleaned down to remove all corrosion, loose material, and contamination. Cleaning method will be confirmed by the supervising engineer but is anticipated to comprise abrasive blasting or mechanical preparation to the specified surface preparation standard. All arising debris will be contained and disposed of in accordance with the site waste management plan.

Abutment Shelf Clearance

- 4.1.6 Silt and debris will be removed from the abutment shelves on both the internal and external faces of the girder. Material will be carefully removed by hand where required to avoid disturbing the bearing arrangement, collected, and removed from site.

Over-Plating Repair

- 4.1.7 Structural repair will be carried out by over-plating in accordance with the detailed design issued. Works will include surface preparation of the parent metal, fitting and alignment of the plate, and connection by the specified method (welding or bolting as detailed).

Health, Safety & Environmental Considerations

- 4.1.8 Key risks associated with these works include working at height, working over water, hot works (if welding is required), noise and vibration, and potential disturbance of silt in the watercourse. Controls will be defined in the full risk assessment and method statement. Environmental mitigation will include containment of debris and wash water, drip trays beneath any over-water works, and adherence to any Environmental Management Plan conditions. Works will be notified to the relevant environmental authority where required under applicable consents.

Working Hours

- 4.1.9 The physical works will take place between the hours of 08:00am – 16:30pm and will run for approx. 10 to 20 days.



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 is one statutory designated site interfacing or within proximity to the works site. Directly concerned with the proposed works are:
- 6.1.2 Site of Special Scientific Interest:
◆ Western Cleddau River (SSSI)
- 6.1.3 Special Area of Conservation:
◆ Western Cleddau River (SAC)
- 6.1.4 The Western Cleddau River is a designated Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). The site is designated primarily for important populations of a variety of protected and notable species. It is also noted for its range of river habitats, and a variety of associated riverside habitats.
- 6.1.5 Due to the works occurring within the Western Cleddau River (SAC/SSSI), an appropriate assessment shall be required; this will be further discussed throughout this document.

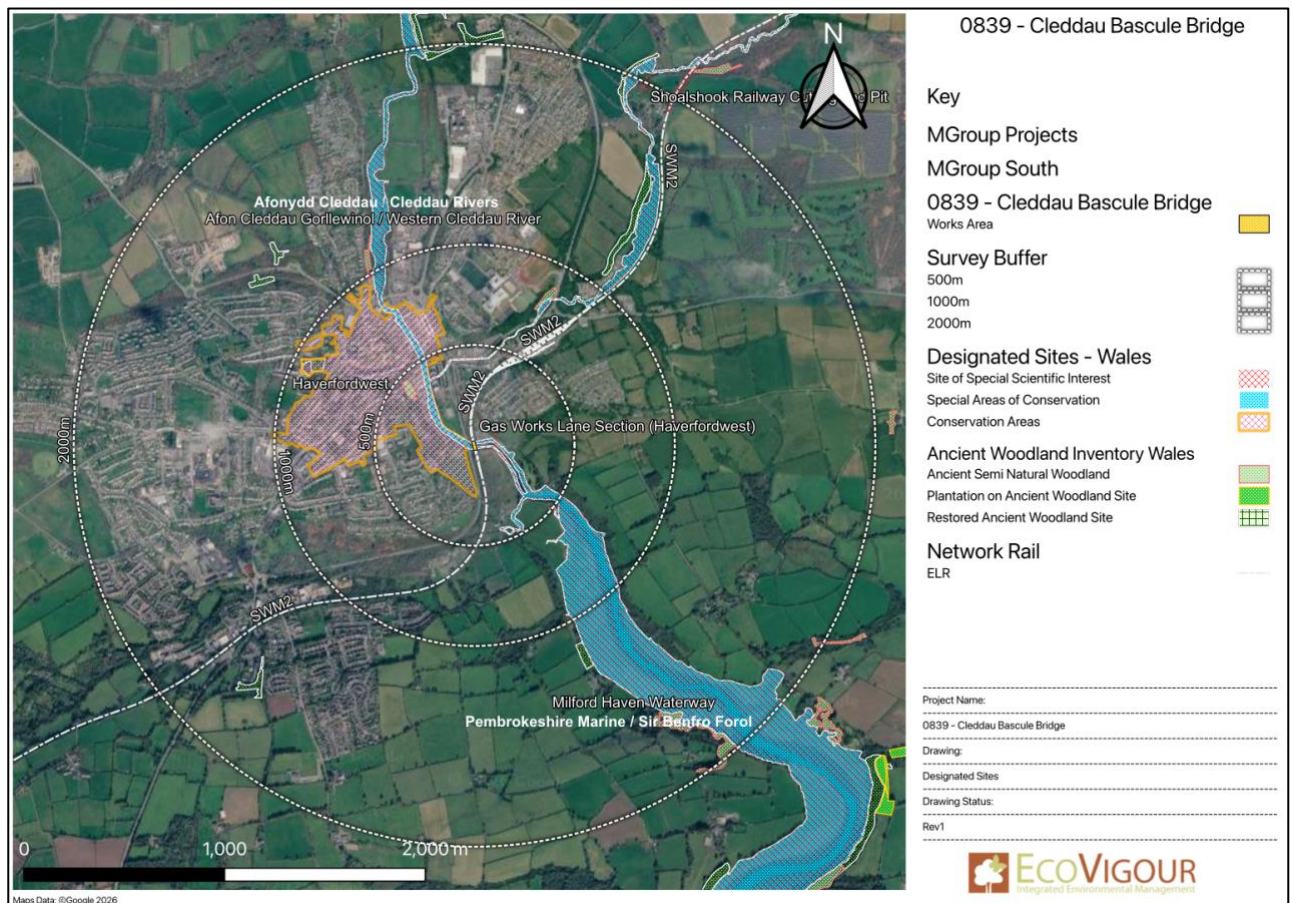


Figure 3: SAC & SSSI boundary in relation to works sites.



6.2 WESTERN CLEDDAU RIVER - SPECIAL AREA OF CONSERVATION (SAC)

SAC OVERVIEW

- 7.1.1 The main channel of the western Cleddau river extends for 30km between its source at Mathry to the tidal limit of the Daugleddau Estuary at Haverfordwest. The tributaries included within the Western Cleddau are the Afon Cleddau, Nant-y-bugail, Afon Anghof, Nant-y-coy Brook, Spittal Brook, Rudbaxton Water, Camrose Brook and Cartlett Brook. The river is designated primarily for important populations of otter (*Lutra lutra*), bullhead (*Cottus gobio*), river lamprey (*Lampetra fluviatilis*) brook lamprey (*Lampetra planeri*) and sea lamprey (*Petromyzon marinus*). It is also noted for its range of river habitats, including beds of submerged aquatic plants often dominated by water-crowfoot (*Ranunculus spp.*), as well as a variety of associated riverside habitats.
- 7.1.2 The Western Cleddau river is considered to be one of the best rivers in Britain for bullhead, brook lamprey and river lamprey, and supports a significant population of sea lamprey. Bullhead are found throughout the Western Cleddau. Although not of special interest regarding designation, the Western Cleddau is also a locally important migratory salmonid river, the principal species being sea trout (*Salmo trutta trutta*) with a small but well distributed population of salmon (*Salmo salar*). Non-migratory brown trout (*Salmo trutta fario*) are also common.
- 7.1.3 The Western Cleddau is one of the best rivers in Britain for otter, which are found on all the tributaries within the site. The river and associated habitat is also an important feeding corridor and resting site for an assemblage of bat species, and an aging population of the nationally scarce freshwater pearl mussel (*Margaritifera margaritifera*), which is recorded from only nine Welsh rivers.
- 7.1.4 Dense riverside vegetation, particularly woodland, scrub and tussocky vegetation is highly important to the otter, as these habitats provide safe, concealed breeding and resting sites.

SAC ANNEX FEATURES

- 7.1.5 Each SAC contains a mixture of Key features that inform the sites designation. Key Habitats (KH), Key Species (KS) or Sym (features that are of importance in a unit but are not the main focus of management or monitoring) features are identified. The table overleaf 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 present within the designated site.

Annex I habitats that are a primary reason for selection of this site	
N/A	None Listed.
Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site	
3260	Watercourses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation
7110	Active raised bogs (Priority Habitat)
91E0	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) (Priority Habitat)
Annex II species that are a primary reason for selection of this site	
1095	Sea lamprey <i>Petromyzon marinus</i>
1096	Brook lamprey <i>Lampetra planeri</i>
1099	River lamprey <i>Lampetra fluviatilis</i>
1163	Bullhead <i>Cottus gobio</i>
1355	Otter <i>Lutra lutra</i>
Annex II species present as a qualifying feature, but not a primary reason for site selection	
N/A	None Listed.



CORE MANAGEMENT PLAN UNITS

- 7.1.6 One of the roles of the Competent Authority charged with overseeing the development of a SAC is to produce and implement a Core Management Plan (CMP). CCW now NRW produced the initial CMP in 2012 and has been updated to Version 3 in 2022.
- 7.1.7 The works are situated within the SAC management unit 1009 (NRW Internal Ref: 1) (Western Cleddau SSSI), with the relevant Annex features that occur within the specific unit being outlined in the table below.

Table 2: Annex Features and Important Features within Management Unit.

Western Cleddau	
Management Unit	1009
SAC	YES
SSSI	YES
SAC Features	
Brook lamprey	KS
River lamprey	Sym
Sea lamprey	Sym
Bullhead	Sym
Otter	KS
Alluvial forests	Sym
Ranunculus habitat	KH
Table Key	
KH - a 'Key Habitat' in the management unit, i.e. the habitat that is the main driver of management and focus of monitoring effort, perhaps because of the dependence of a key species KS – a 'Key Species' in the management unit, often driving both the selection and management of a Key Habitat Sym - habitats, species and earth science features that are of importance in a unit but are not the main drivers of management or focus of monitoring. These features will benefit from management for the key feature(s) identified in the unit. These may be classed as 'Sym' (sympathetic) features because: (a) they are present in the unit but may be of less conservation importance than the key feature; and/or (b) they are present in the unit but in small areas/numbers, with the bulk of the feature in other units of the site; and/or (c) their requirements are broader than and compatible with the management needs of the key feature(s), e.g. a mobile species that uses large parts of the site and surrounding areas; and/or (d) key features (KH, KS) are closely associated with these features, and the conservation of key features depends on them being managed appropriately.	

CURRENT CONDITION OF KEY MEASURED UNITS

- 7.1.8 From the most recent updated assessment, the known status of the Key Features within the Core Management Plans, highlighted within unit 1009 are:
- ◆ Sea lamprey - Current Status: Unfavourable - Unclassified
 - ◆ Brook lamprey – Current Status: Unfavourable - Recovering
 - ◆ River lamprey - Current Status: Unfavourable – Recovering
 - ◆ Bullhead - Current Status: Unfavourable – Unclassified
 - ◆ European Otter - Current Status: Favourable – Maintained
 - ◆ *Ranunculus* habitat – Current Status: Unfavourable - Unclassified
 - ◆ Alluvial forests – Current Status: Unfavourable - Unclassified
- 7.1.9 Note, these statuses are based on the designated site as a whole and does not indicate whether specific areas are failing or succeeding in the necessary criteria.



7.2 WESTERN CLEDDAU - SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

OVERVIEW

8.1.1 The Western Cleddau SSSI is designated primarily for its populations of otter (*Lutra lutra*), bullhead (*Cottus gobio*), river lamprey (*Lampetra fluviatilis*), and brook lamprey (*Lampetra planeri*). It demonstrates a variety of river habitats, including (but not limited to) beds of submerged aquatic plants dominated by *Ranunculus spp.*

SITE MANAGEMENT STATEMENT

8.1.2 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 6 special features that inform the site in question:

- ◆ River habitats including water crowfoot habitat
- ◆ Associated riverside habitats (including semi-natural broadleaved woodland, scrub, marshy grassland, swamp and mire)
- ◆ Otter
- ◆ Bullhead
- ◆ Brook Lamprey
- ◆ River Lamprey
- ◆ Sea Lamprey

8.1.3 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.

8.1.4 Below are the activities considered relevant to the proposed project (Table 3 below).

Table 3: PDO list from NRW Designated Site Finder Tool.

SMS Ref No:	Type of operation
11.	Destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, waterweed, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould, turf or peat
12.	Tree and/or woodland management including planting, felling, pruning and tree surgery, thinning, coppicing, changes in species composition and removal of fallen timber.
20.	Extraction of minerals including peat, shingle, hard rock, sand and gravel, topsoil, subsoil and spoil.
21.	Destruction, construction, removal, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, bridges, dams, weirs, ditches or other earthworks, including soil and rock exposures and bank protection works.
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.



8.2 SIR BENFRO FOROL / PEMBROKESHIRE MARINE - SPECIAL AREA OF CONSERVATION (SAC)

- 8.2.1 The SAC extends from just north of Abereddy on the north Pembrokeshire coast to just east of Manorbier in the south. It includes the coast of the islands of Dewi / Ramsey, Sgomer / Skomer, Grassholm, Sgogwm / Skokholm, the Bishops and Clerks and The Smalls.
- 8.2.2 The SAC encompasses a range of marine habitats and species, some of which are unique in Wales. Habitat and biological diversity are of great importance throughout the site, particularly the well documented reef habitats and the Aberdaugleddau / Milford Haven ria-estuary

Table 4: Annex I & II Features present within the designated site.

Annex I habitats that are a primary reason for selection of this site	
1130	Estuaries
1160	Large shallow inlets and bays
1170	Reefs
Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site	
1110	Sandbanks which are slightly covered by sea water all the time
1140	Mudflats and sandflats not covered by seawater at low tide
1150	Coastal lagoons * Priority feature
1330	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)
8330	Submerged or partially submerged sea caves
Annex II species that are a primary reason for selection of this site	
1364	Grey seal <i>Halichoerus grypus</i>
1441	Shore dock <i>Rumex rupestris</i>
Annex II species present as a qualifying feature, but not a primary reason for site selection	
1095	Sea lamprey <i>Petromyzon marinus</i>
1099	River lamprey <i>Lampetra fluviatilis</i>
1102	Allis shad <i>Alosa alosa</i>
1103	Twaite shad <i>Alosa fallax</i>
1355	Otter <i>Lutra lutra</i>

8.3 MILFORD HAVEN WATERWAY - SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

- 8.3.1 Milford Haven Waterway is of special interest for its geology, ancient woodland, marine biology, saltmarsh, swamp, saline lagoons, rare and scarce plants and invertebrates, nationally important numbers of migratory waterfowl, greater and lesser horseshoe bats *Rhinolophus ferrumequinum* and *R. hipposideros*, and otter *Lutra lutra*. The site extends from the mouth of the Haven at Dale Point and Thorn Island to the upper reaches of the Daugleddau at Haverfordwest in the west and Blackpool Mill in the east.



7. HABITAT PRESENT WITHIN WORKING FOOTPRINT

- 8.3.2 The on-site habitat predominantly comprises dense ruderal vegetation with species such as common nettle (*Urtica dioica*), cleavers (*Galium aparine*), broadleaved dock (*Rumex obtusifolius*), marsh marigold (*Caltha palustris*) and cow parsley (*Anthriscus sylvestris*) all noted beneath the bridge. Dense stands of Japanese knotweed (*Fallopia japonica*) were noted throughout the site on both banks of the Western Cleddau river, which runs through the centre of the site. The vegetation beneath the bridge is dense, with varying sward heights noted across the site.
- 8.3.3 The surrounding habitat predominantly comprises amenity grassland to the northwest and lines of trees bordering the river. The surrounding environment is well-developed, with residential estates extending to the north and west.



Figure 4: Japanese knotweed beneath structure



Figure 5: Underside of bridge and surrounding habitat



Figure 6: Japanese knotweed beneath structure



Figure 7: Sections of steelwork requiring replacement



Figure 8: Dense vegetation on-site (dominant Japanese knotweed)



Figure 9: Western Cleddau river



Figure 10: Overview of survey area



Figure 11: Indicative Annex I Habitats in proximity to works.

8.3.4 Using the available data from the CCW (now NRW) Designated Habitat Map Data (Figure above), the relevant Annex I Habitats in relative proximity to the project footprint are:

- ◆ 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- ◆ 1130 Estuaries

8.3.5 The above habitats will be directly discussed in the latter sections, however other Annex I habitat further downstream will benefit indirectly from proposed mitigation measures.



8.4 ANNEX II SPECIES - WALKOVER/WATERCOURSE ASSESSMENT

- 8.4.1 During the initial site walkover, a search for evidence of Annex II species was undertaken. The survey primarily focused Eurasian Otter, however species such as Crayfish and the broader fish assemblage was considered, given the potential indirect impact vectors (e.g. pollution events etc).
- 8.4.2 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).
- 8.4.3 Broadly, the habitats downstream of the proposed works areas are considered suitable for holts or resting sites, with large patches of scrub and areas of overgrown vegetation present along the riverbank. No signs of otters were observed during the ecological walkover; however, records of otter sightings and activity (eg. Spraints, footprints) were returned by the environmental data search within 100m of the proposed works site. The survey area is considered optimal for habitat for otters, providing high-quality resting, foraging and commuting habitat.
- 8.4.4 Should any licensable features be found within or in proximity to the works, then a specialist consultancy will lead formal EPS Licensing applications to support the remedial works. Any EPS application determination periods would be dependent on NRW species licensing, which would dictate additional timing constraints on elements of the overall project.



8. BIOLOGICAL PROCESSES

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

- 9.1.1 The figure below 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 5: 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											

- 9.1.2 Viewing the table above, in terms of potential impacts to specific species spawning times, the primary species of concern listed under Annex II (Primary) are: Sea lamprey (April-July), brook lamprey (March-June), and river lamprey (March-June).
- 9.1.3 Consequently, mitigative measures to account for this timing are proposed below in section 10 below.



9. ASSESSMENT OF POTENTIAL IMPACTS RESULTING FROM SPECIFIC ACTIVITIES AND PROPOSED MITIGATION MEASURES – WESTERN CLEDDAU (0839)

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 habitats (non-Annex I and Annex I)	SAC/SSSI	Contamination of the watercourse from spillage of hydrocarbons during refuelling of equipment or due to equipment failure. Or, concrete/mortar contamination as a result of masonry repairs.	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. MGroup will have a spillage plan and specialised contractor in place to respond to and clean up spills. The Contractor will develop and implement an Emergency Preparedness 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 principal contractor will 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. Every practical effort will be made to collect all loose and broken material arising from the installation works and remove them from the watercourse environment. All hand tools for vegetation clearance will be checked prior to use and stored in secure areas and on spill mats when not in use. Equipment will	Negligible likelihood of significant impacts.



Receptor	Affected Site	Potential Hazard	Mitigation Measures	Likelihood of Impact
			be fuelled at the storage areas indicated prior to use. No refiling is permitted within or adjacent to the watercourse.	
Estuarine habitat	SAC/SSSI	Loss of habitat from project activities.	Overall, there will be a short term impact to the estuarine habitat during the entire project. Vehicle movement will be restricted to the existing roads, or along areas of amenity grassland to the north, and managed grass within to the south. Saltmarsh will be avoided at all times. Vehicles will not deviate from the designated routes at any time. Personnel will walk along the available public footpath or access route. No walking over the saltmarsh is permitted. The Tractor and Trailer is the only machine permitted to undertake resupply activities. 360 plant Vehicles (only to be used to deliver heavy material such as scaffolding) are only permitted for access and egress to their specific work areas and not undertake unnecessary movements to collect material. The contractor will remain diligent to any signs of visual impact on this habitat with immediate consultation with NRW to ascertain the most appropriate and feasible way to mitigate impact, should signs of damage to this habitat become apparent.	Negligible likelihood of significant impacts.
Salt marshes (also part of estuarine habitat)	SAC/SSSI	Loss of habitat from project activities.	No loss of habitat is projected to occur as all site access takes place along the existing road surface predominantly.	Negligible likelihood of 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 river from spillage	See comments under riparian habitat	Negligible likelihood of significant impacts.
Aggregations of fish species	SAC/SSSI	Noise disturbance / Visual Disturbance / Fragmentation of Commuting and Foraging Habitat	Works are proposed to be undertaken during favourable conditions outside of the peak spawning season for migratory fish such as trout and shad (assuming works are able to commence between September and October 2026). No works within the designated sites will occur until formal assent has been granted by Natural Resources Wales. Noise levels are unlikely to exceed current ambient levels, given the proximity of the dual carriageway crossing upstream of the structure, with wildlife in the area likely being habituated to a level of noise and human activity due to traffic and footpath along the river bank. Noise levels will be minimised through the use hand held vibrating drivers to drive pins into the river bank as opposed to hammering of steel pins and the post for the telemetry cabinet. All works will be undertaken during daytime between 08:00 and 17:00 during the least noise sensitive periods of the day. Toolbox talks will be provided by the Works Manager prior to works commencing. These will be based on the mitigation set out within this document, plus guidance within GPP5 and MGroup procedures.	Negligible likelihood of significant impacts.
Otter (<i>Lutra Lutra</i>)	SAC/SSSI	Noise disturbance / Visual disturbance / Habitat disturbance	Otter populations are known to be present along the Western Cleddau river. Works shall be restricted to daylight hours when inland Otters are less active. 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.	Negligible likelihood of significant impacts.



Receptor	Affected Site	Potential Hazard	Mitigation Measures	Likelihood of Impact
			No equipment or material will be left in such a manner that an animal could become snared and trapped within the working area. All equipment and materials will be removed from the riverbank at the end of each shift and all excavations will be backfilled. Should an Otter be encountered during works, personnel will temporarily stand down until the animal has vacated the immediate area under its own volition. Mirroring guidance in DMRB HA 88/91 is relevant: "It is important to recognise any water course, water body or wetland as a habitat and wildlife corridor and that all these areas have potential as otter habitat. It is also important not to create barriers to the re-colonisation of habitat by otter populations." A pre-works check by an experienced ecologist prior to the commencement of works will ensure the appropriate method of works are undertaken. In the unlikely event that a licensable feature is subsequently identified, the appropriate methodology and mitigations measures will be incorporated into the project methodology and, where necessary, a formal European Protected Species (EPS) license application will be submitted. The project programme will be modified in such an event. These measures will ensure that there are no long-term detrimental impacts to this Annex II Primary species feature of the surrounding designated sites.	
Bats	Local	Noise disturbance / Visual Disturbance/ Fragmentation of Commuting and Foraging Habitat	No trees require removal for the project to take place. Any security site lighting will be limited to lighting of safety critical areas and task lighting Other lighting will be PIR activated and will hence operate for short durations only. Task lighting will be low level flat glass LED luminaires and will be focused onto the task area, with minimal light spill. The project footprint occurs a significant distance away from the defined bat Sites.	Negligible likelihood of significant impacts.



Receptor	Affected Site	Potential Hazard	Mitigation Measures	Likelihood of Impact
			The structure itself has not yielded viable PRF's to date, however once access is granted by the scaffolding. An ecologist will be present to inspect the structure ahead of repair works.	
Individual nesting birds	Local	Noise disturbance / Visual Disturbance / Habitat Destruction.	Works are programmed outside of the main nesting season. Although no roosting has been noted at the structure to date, an ecologist will check the structure prior to scaffolding erecting.	Negligible likelihood of significant impacts.



10. 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 within the surrounding area.
- 11.1.2 In addition, the plan or project must have been subject to an 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 & SSSI species and does not consider projects that could cause different effects.

11. 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 FRAP's or Marine Licenses (via connected watercourses) in place that are soon to be undertaken or currently being undertaken, then the project will be undertaken at a period that achieves the least in-combination impacts possible.



12. HRA CONCLUSION

- 13.1.1 This section will combine the key features and challenges highlighted in the CMP's and proposed 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 limit the potential creation of underwater noise, by limiting working hours to daytime periods only and avoid dawn and dusk.
- 13.1.3 There will be no impediment of likely migratory foraging locations or blockage to upstream habitats.
- 13.1.4 Robust activity and habitat assessment in relation to Otters will ensure no potential features not yet identified (e.g. holts or confirmed layups or access routes) are impacted upon.
- 13.1.5 Should any licensable feature be identified, then a separate methodology and EPS license application, if required, will be sought with the NRW licensing team. This framework will ensure that the assessment of unlikely significant effects outlined within section 10 remain true.
- 13.1.6 Refuelling and emergency response procedures as per Management Plan (MP) preparations. The implementation of this will be monitored and audited by Project Managers and Environmental Coordinators from MGroup.
- 13.1.7 The position of the scaffolding walkways will be affixed to the upper structure predominantly above the highest level of the visual waterline guide on the structure abutments. Only the required access towers will make contact with the ground on the upper riverbanks. No portion of this supports will enter the normal tidal range of the river.
- 13.1.8 The ECoW will undertake a precheck of the access route and immediate working areas, with auditing during the works as required.
- 13.1.9 From the available information and proposed mitigation measures, it is assessed that the proposed works site will not be significantly impacted, nor species or features relevant to the designated site as a whole, provided that the on-going actions outlined are abided by and any findings or changes to the project are discussed with an experienced ecologist.
- 13.1.10 Annex I habitats within proximity of the works will not be directly impacted. Pollution controls will ensure Annex I habitats of the connected designated sites are protected from indirect impact vectors.
- 13.1.11 Biosecurity measures will make sure that all equipment and vehicles delivered to site have been cleaned and disinfected prior to deployment into the SAC/SSSI environment. This forms part of the guidance outlined in the Biosecurity Risk Assessment & Management Plan.
- 13.1.12 The exact timings of the works are yet to be confirmed. Works will be undertaken during optimal weather windows.
- 13.1.13 In conclusion, the proposed mitigation measures will ensure that no significant impact to the designated sites will occur as a result of the proposed works.

