

2026

**Dovey Junction - Tidal Flap
Replacement (0704)
Habitat Regulations Assessment (HRA)**



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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') of scheduled asset replacement of Dovey Junction North Tidal Flap, to be undertaken by MGroup, on behalf of Network Rail (NR). The proposed works will be undertaken between February 2027 and completed by latter February 2027 during a wider rail blockade along the DJP rail line. (exact start date of works dependent on Marine License Assent).
- 1.1.2 This document also provides information to support determination of Site of Special Scientific Interest (SSSI) Assent by Natural Resources Wales (NRW).
- 1.1.3 Dovey Junction Tidal Flap is within the boundaries of the Llyn Peninsula Special Area of Conservation (SAC), and Dyfi Site of Special Scientific Interest (SSSI). While the boundary of the Aber Dyfi Special Protection Area (SPA) is defined by the watercourse downstream of the tidal flap. The Cors Fochno and Dyfi RAMSAR, is situated circa 1km southwest of the works location. Therefore, the main statutory designated site which requires consideration under the Habitats Regulations has been identified as:
- ◆ Pen Llyn a'r Sarnau / Llyn Peninsula and the Sarnau (PLAS) Special Area of Conservation (SAC).
 - ◆ Aber Dyfi Special Protection Area (SPA).
 - ◆ Cors Fochno and Dyfi RAMSAR.
- 1.1.4 Also requiring consideration in relation to seeking SSSI assent for the works from (NRW). These are:
- ◆ Dyfi Site of Special Scientific Interest (SSSI).
- 1.1.5 There are several other designated sites within proximity to the project which are discussed further below in the following sections.
- 1.1.6 This document will be reviewed by the NRW SSSI Team responsible for this section of the Gwynedd Area. Following review and acceptance, this document will form part of the Marine License Application Band 2, which will be submit prior to the commencement of works along with a separate Water Framework Directive (WFD) Assessment undertaken by MGroup.
- 1.1.7 A separate Ordinary Watercourse Consent (OWC) will be applied for the inland side of the project remit, separate to this Marine License Application.
- 1.1.8 EcoVigour Ltd have been commissioned to produce these documents for MGroup Ltd, the principal contractor, working on behalf of Network Rail.
- 1.1.9 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 Network Rail engineers have designated the specific components making up the structure (Railway Tidal Flap) at Dovey Junction as “Operationally Life Expired”, consequently, through the CP7 framework, Network Rail have commissioned the principal contractor (MGroup Ltd) to undertake a full replacement of the tidal flap, headwalls, and reline of the culvert barrel.



Figure 1: Dovey Junction Tidal Flap.

- 1.2.2 The Tidal Flap Replacement is scheduled to be undertaken between February 2027 to March 2027. This will occur during a scheduled rail blockage which will be undertaken along wider sections of the DJP line section.
- 1.2.3 Preparation works and de-mobilisation of project assets will occur before and after the possession dates as those tasks will not relate to an open rail corridor.



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 Ltd on behalf of Network Rail at Dovey Junction Tidal Flap No1.
- 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 Dovey Junction Tidal Flap is located within the PLAS SAC, Dyfi SSSI, SPA and lay directly adjacent to the Cors Fochno RAMSAR, with structures length representing a boundary line of the RAMSAR site.
- 3.1.3 Additionally, there are other SSSI's within proximity to the project which will be discussed in further detail within the scoping-out section below.
- 3.1.4 Non-Statutory sites such as Ancient Semi Natural Woodland (ASNW), Local Nature Reserves (LNR) and National Nature Reserves (NNR) are within proximity to the rail structure and proposed compound area. However, in relation to the ANSW, no works will occur within or directly adjacent to these sites and will not be discussed further.
- 3.1.5 Regarding the LNR and NNR, these sites share similar boundary extents as the above statutory sites and therefore will benefit by proxy, from this assessment and control measures. These sites will not be discussed in further detail as they overlap with above sites.
- 3.1.6 This Habitat Regulations Assessment (HRA) will focus on the potential likely significant effects (LSE) of the rail structure refurbishment on the Lley Peninsula SAC and Afon Mawddach SSSI designated sites.



4. DESCRIPTION OF THE PROPOSED ACTIVITIES

4.1 SITE CONTEXT

- 4.1.1 Dovey Junction Tidal Flap is located on the Dovey Junction to Pwllheli line (DJP) circa 800m Northeast of Dovey Junction Station Platforms approximately 4.5 miles south-west of Machynlleth (Grid Ref: SN 70100 98700).
- 4.1.2 A single project compound is to be utilised, which is situated near an existing Network Rail, Road Rail Access Point (RRAP), approximately 500m west of the structure, accessible from the A487. Figures 2 & 3 below illustrate the sites location in relation to the wider area and PLAS SAC.

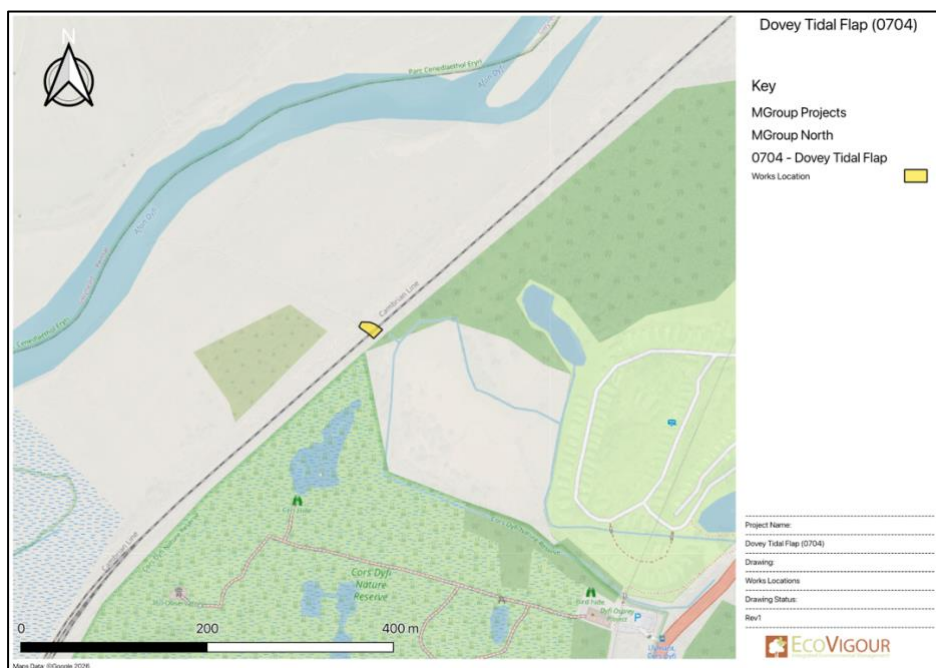


Figure 2: Main works location (OS Map).

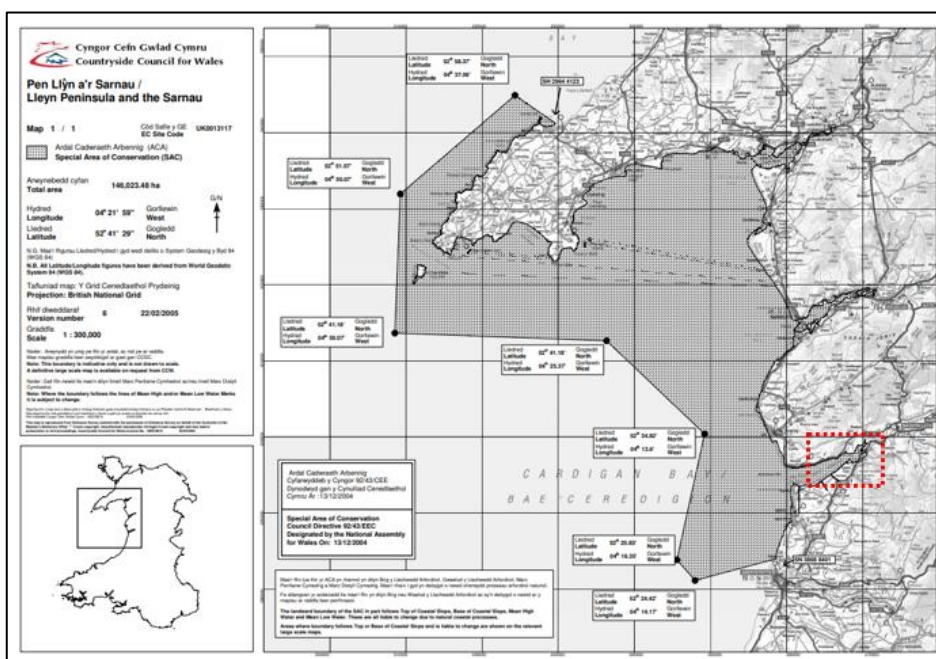


Figure 3: Location within wider context to PLAS site.



4.2 PROJECT OVERVIEW

4.2.1 MGroup will undertake remedial measures to the concrete culvert and tidal flap. These works will broadly involve:

- ◆ Replacement of headwall and provision of new pre-cast wingwalls,
- ◆ Installation of a metal handrail and safety fencing,
- ◆ Rebuilding of cess (if required),
- ◆ Repair or relining of culvert,
- ◆ Localised vegetation clearance for material laydown as required.

4.3 METHOD OVERVIEW – TIDAL FLAP REPLACEMENT & CULVERT RE-LINE

4.3.1 Works are scheduled to commence following receipt of the Band 2 Marine License and setting up of February railway blockade period. Tidal Flap/Headwall replacement and barrel reline will take approximately 1 week. Specific dates will be dictated by available line blocks and weather conditions. The longer license period is requested to account for poor weather conditions and limited available light.

4.3.2 Works periods will be scheduled around daytime shifts primarily. Material for the works, may be delivered and stored within the rail corridor using night-shift to maximise working time during daylight hours.

4.3.3 The project works will be monitored by an Environmental Clerk of Works (ECoW) to ensure abidance to the HRA conditions, undertaking supervision duties when required and undertaking audits throughout the duration of the works. The ECoW has the authority to abort site operations in the event works are causing disturbance to bird species. E.g., during sensitive early morning foraging periods.

Site Preparation

- ◆ The team will create a safe and secure compound within the 3rd party land; where necessary Heras panels will be installed as per the agreed location during the site meeting.
- ◆ Temporary access steps will be set up to allow safe access into the culvert area, with orange barriers erected 2m from the edge of the embankment as a demarcation.
- ◆ A Saturday night possession may be utilised to install ducting below the rail line.
- ◆ Installation of twin wall pipes to be installed under the up and down main to facilitate over pumping of the watercourse ready for relining of the culvert.

Installation of Dams & pumps for de-watering

- ◆ Prior to any works taking place, silt mats must be installed downstream of the physical works as a precautionary measure.
- ◆ The Road Rail Vehicle (RRV) will be used to lift the pumps into place ready for over pumping.
- ◆ A Sandbag or stone tonne bag dam will be installed at the inlet, and outlet ends of the culvert. The bags will be installed account for expected water levels.
- ◆ The hydraulic pump head will sit inside a wooden box with fine mesh fitted to the bottom and all for sides. This is to allow only water through the pump head and no aquatic wildlife and to prevent the pump getting clogged up.
- ◆ As we are on 3rd party land boot washes will be set up at the temporary access steps so that all boots, wellies, and dry suits can be cleaned off to with Virkon aquatic disinfectant to help prevent the spread of diseases and viruses.



Replacement of Tidal Flap & Headwall.

- ◆ Prior to any works taking place, silt mats must be installed downstream of the physical works as a precautionary measure.
- ◆ Once the culvert has been dewatered, the head wall and tidal flap will be removed. Waste material will be removed from site.
- ◆ The new headwall will arrive as a precast unit, and placed directly into position where the original outfall was positioned. Where required, soluform bagging and sandbags will be placed along either side of the new wing wall, to ensure compaction of earth embankment, and provide scour protection.
- ◆ Internal pointing of the barrel to the new outfall will require the use of grouting to ensure a compliant seal.
- ◆ Mixing equipment will consist of a 110v paddle mixer, 3.5kVa generator and mixing buckets. The pieces of equipment can be moved by hand when required.
- ◆ Mortar materials will be mixed in accordance with manufacturer's instructions. Where possible, mixing of material will occur within the rail corridor.
- ◆ Once in place, the new tidal Flap will be affixed to the frame.

Installation of a GRP liner sections and grouting (Barrel Re-Line)

- ◆ Prior to installing the liner, the I-LINE team will review the culvert barrel to ensure that all loose debris have been removed and that any loose or dropped stones are removed or reset to its original location and line.
- ◆ The site team manoeuvre the liner sections into position at the downstream end of the culvert.
- ◆ A winch will then be used to pull the GRP sections through the culvert.
- ◆ The lining contractor will confirm when the liner sections are in its correct location.
- ◆ Once confirmed that the sections are installed as per the design grouting the annulars and the voids between the external of the liner and the internal face of the barrel.
- ◆ Upon completion of the liner installation and grouting works the dams will be removed and the site demobilised.

Safeguards:

- All incidents no matter how minor in nature are to be reported to the Site Manager, the MGroup incident reporting line and the SSW app and the NR Fast Facts procedure implemented.
- All Vegetation Clearance is to be checked ahead of and supervised by an on-site environmental clerk of works (ECoW).
- Works are programmed not to occur between October 2026 to January 31st 2027. This is to avoid potential disturbance to White Fronted Geese.



4.4 SUPPORTING WORKS

Site Welfare - Delivery/Setup

- 4.4.1 No formal compound is required to support the works. Welfare will be provided using mobile welfare vans. These will be moved to suitable locations as the project requires. A small compound will be set up at the access location on Pencoed Isaf Road.

Access

- 4.4.2 Access to the structure will be on foot or using rail mounted equipment only, with no vehicles entering the estuarine environment.

Emergency Plans

- 4.4.3 The contractor will ensure that emergency pollution control plans (superseding the standardised spill control plan) are prepared prior to the commencement of the project.

Emergency Plan Fundamentals:

- ◆ Any disabled or malfunctioning equipment within or near the channel environment will be immediately checked for any potential release of hydrocarbons, and if discovered, spill kits and trays will be used immediately.
- ◆ The on-call emergency engineer provider will be requested to attend site in the event that the fault cannot be resolved by the operator. As all equipment is accrued by hand, any faulty equipment will be carried out of the marine environment.
- ◆ NRW and the on-call Environmental Clerk of Works will be contacted immediately and made aware of the emergency and risk of a pollution event.



5. HRA METHODOLOGY OBJECTIVES

- 5.1.1 Habitats Regulation Assessment is an assessment of the potential effects of a proposed project / construction 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 within proximity to the project.

- ◆ Dyfi Site of Special Scientific Interest (SSSI).
- ◆ Pen Llyn a'r Sarnau / Llyn Peninsula and the Sarnau (PLAS) Special Area of Conservation (SAC).
- ◆ Aber Dyfi Special Protection Area (SPA).
- ◆ Cors Fochno and Dyfi RAMSAR.

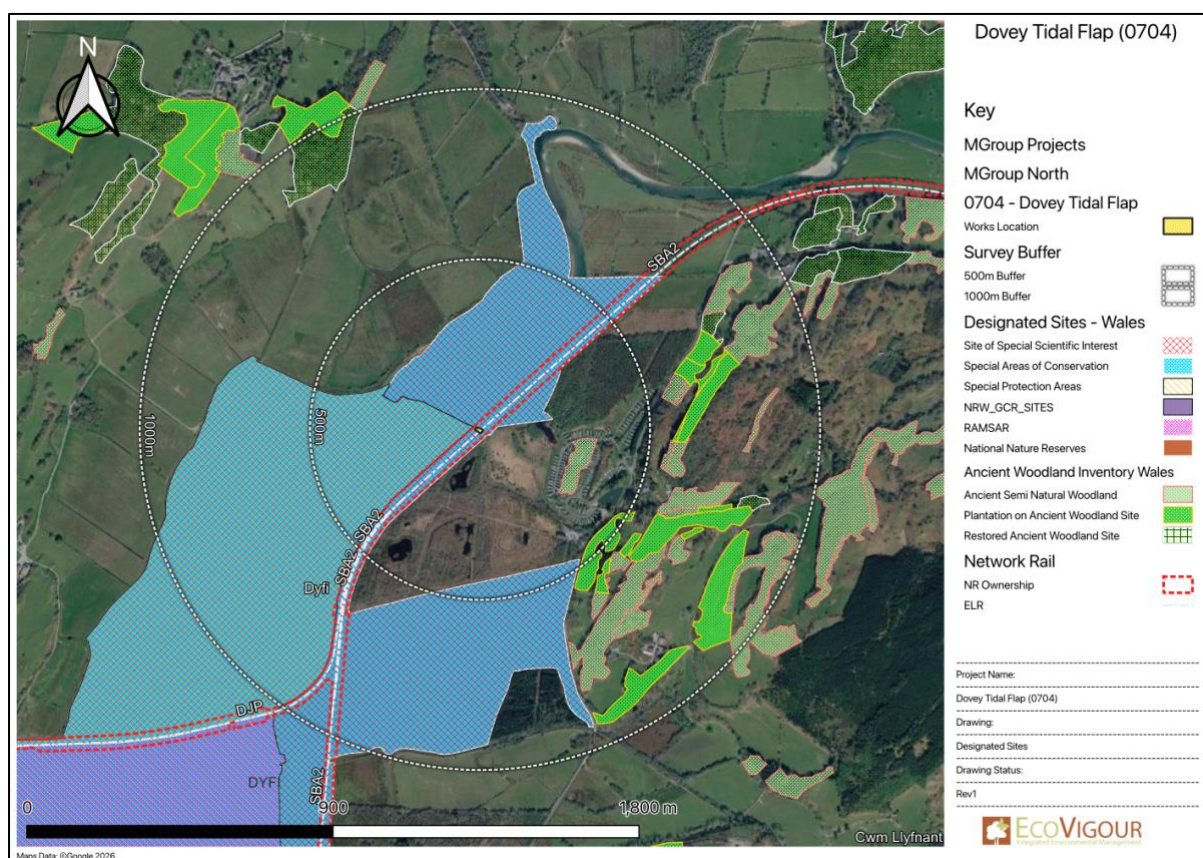


Figure 4: Designated sites in proximity to structure.

- 6.1.2 In regard to the SPA and RAMSAR sites, as the main features overlap, these two designations will be discussed within the same section.
- 6.1.3 The West Wales Marine (WWM) SAC boundary is outside of the project boundary but is however connected via the Dyfi estuary. Although this site will not be discussed specifically, this assessment does acknowledge the importance of the marine site and consequently, the mitigative measures to be implement for the project will ensure the protection of the key habitat and species features outlined within the WWM conservation objectives.



Figure 6: Tidal flap and headwall to be replaced.



Figure 7: Adjacent reed bed habitat.



Figure 8: Downstream tidal flap in distance.



Figure 9: Surrounding Rail Corridor.



8. Dyfi SSSI

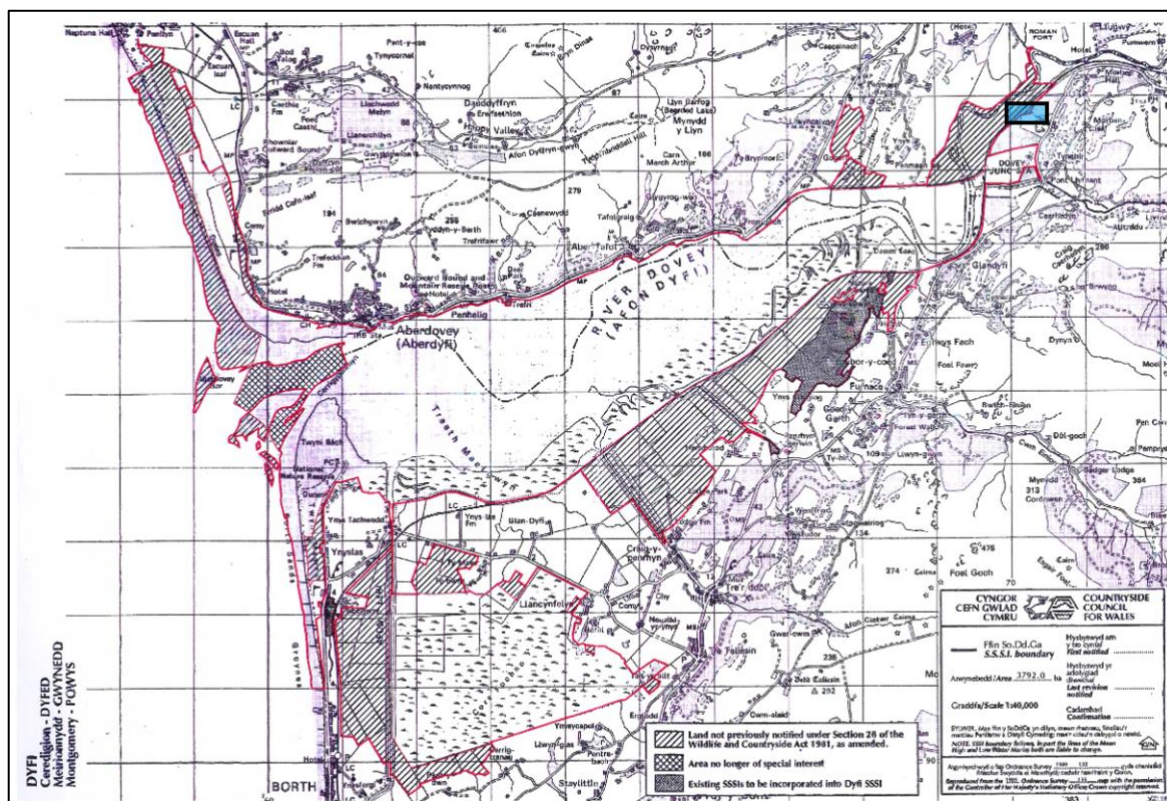


Figure 10: Project in wider context to the SSSI.

- 8.1.1 The Dyfi estuary is designated as a SSSI due to its diverse biological and geological features. It is outstanding for the size, range and the quality of its habitats and their transitions, and for its botanical, entomological and ornithological interest.
- 8.1.2 The estuary of the River Dyfi includes a range of habitats, with river channels and creeks, and extensive areas of sandbanks, mudflats and saltmarsh, including by far the largest area of saltmarsh in Ceredigion.
- 8.1.3 Within the Site Management Statement (SMS), the features below are listed which form the overall status of the designated site:
- ◆ Post-glacial geology
 - ◆ The Estuary
 - ◆ Saltmarshes
 - ◆ Sand-dunes
 - ◆ Estuarine raised bogs
 - ◆ Lower Plants
 - ◆ Higher Plants
 - ◆ Otter populations
 - ◆ Wintering wildfowl populations
 - ◆ Breeding bird assemblage
 - ◆ Reptile assemblage
 - ◆ Invertebrate assemblage of bog/wetland habitats
 - ◆ Invertebrate assemblage of dune habitats
- 8.1.4 From the available habitat data and on-site walkovers, the relevant habitat from the SMS in proximity to the project area are:
- ◆ The Estuary
 - ◆ Intertidal mud flats
 - ◆ Salt marsh



- 8.1.5 There is a list of potential damage vectors to the designated site highlighted within the SMS Potentially Damaging Operations (PDO) list. Below are the activities considered relevant to the proposed project (Table 1 below).

Table 1: Potentially Damaging Operations (PDO) list.

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.
24.	Modification of natural or man-made features (including cave entrances) and clearance of boulders, large stones, loose rock or scree and the battering, buttressing or grading of geological exposures.
26.	Use of vehicles or craft.

- 8.1.6 Note: All the above operations occur outside of the designated boundary, with no physical works interacting with the designated or highlighted intertidal habitat above.
- 8.1.7 Mitigation measures for SSSI features which overlap SAC are discussed further in section 13.



9. LLEYN PENINSULA AND THE SARNAU (SAC)

9.1.1 The Llyn Peninsula and the Sarnau SAC is comprised of sea, coast and estuary that supports a wide range of marine habitats and dependant wildlife. The nature of the seabed and coast including the range of environmental conditions present vary throughout the SAC. (See figure 3) for project location in relation to the SAC boundary). For the qualifying habitats and species listed in the table below (table 4), the Llyn Peninsula and the Sarnau SAC is one of the best areas in the United Kingdom.

Table 2: PLAS SAC Features.

EU Code	Feature
Annex I habitats that are a primary reason for selection of this site	
1110	Sandbanks which are slightly covered by sea water all the time
1130	Estuaries
1150	Coastal lagoons (* Priority feature)
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	
1140	Mudflats and sandflats not covered by seawater at low tide
1310	Salicornia and other annuals colonizing mud and sand
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
8330	Submerged or partially submerged sea caves
Annex II species present as a qualifying feature, but not a primary reason for site selection	
1349	Bottlenose dolphin (Tursiops truncatus)
1355	Otter (Lutra lutra)
1364	Grey seal (Halichoerus grypus)

9.1.2 As the project occurs directly adjacent to the SAC, it is necessary to identify any Annex I & II features that could be impacted.

9.1.3 Annex II species will be assumed as these species are highly mobile. The Annex I habitat however are discussed in the following subsections.

9.2 ANNEX I HABITAT ADJACENT PROJECT AREA

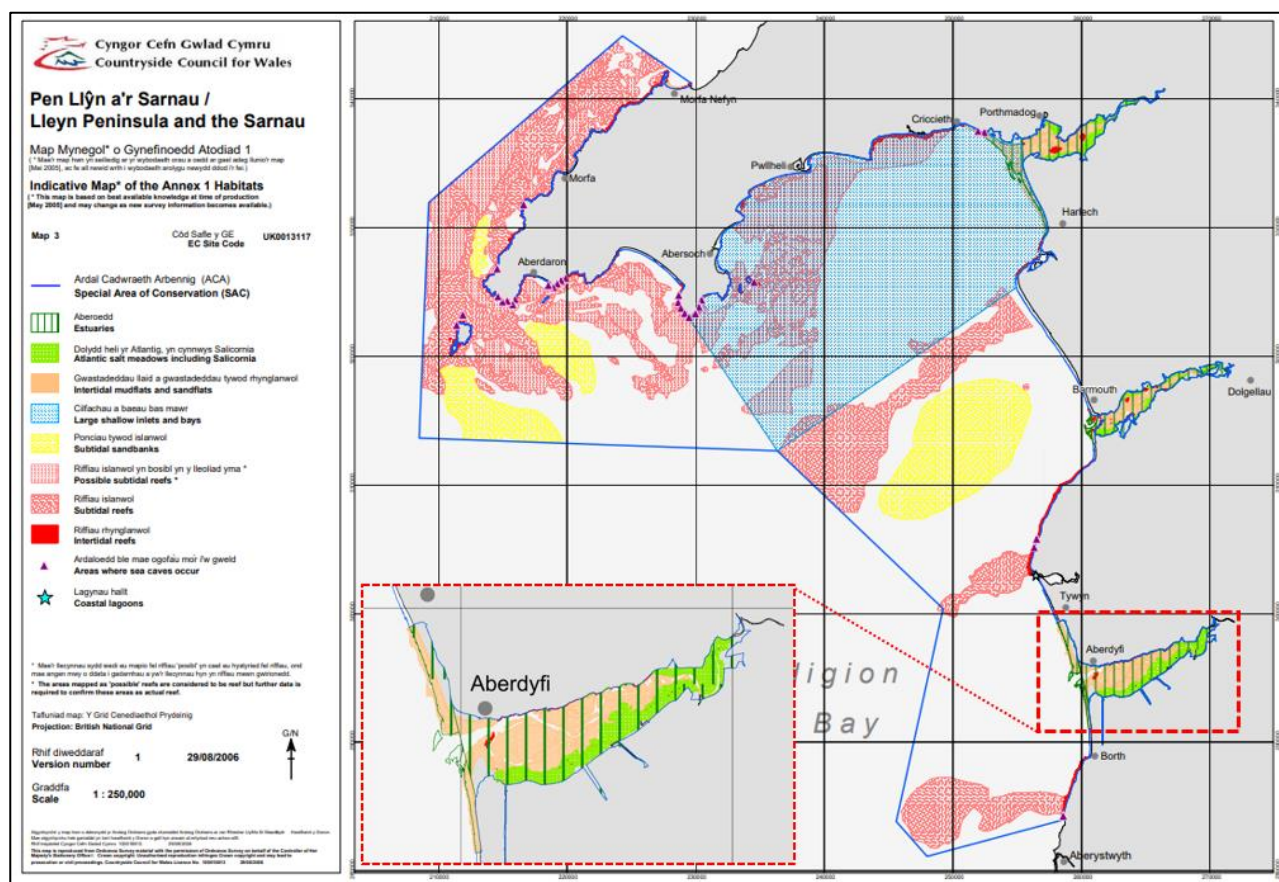


Figure 11: PLAS Annex I Habitats.

9.2.1 Using the available data from the CCW now NRW Designated Habitat Map (Figure 20 above), the relevant Annex I Habitats in relation to the project footprint are:

- ◆ 1130 Estuaries
- ◆ 1140 Mudflats and sandflats not covered by seawater at low tide
- ◆ 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritima*)

9.2.2 Again, as previously conceded in this assessment, there are designated habitat features further afield such as large shallow inlets/bays and subtidal sandbanks which would be vulnerable to pollution events, which could impact the Favourable Conservation Status (FCS) of these features. However, as the immediate features to the structure will be protected by robust measures, these further afield features will benefit from the proposed measures in this assessment.



9.3 ANNEX I & II – NRW INDICATIVE CONDITION REPORT

9.3.1 The tables below are extracted from the PLAS SAC - Indicative site level feature condition assessments 2025, NRW Report No: 908. These tables describe the current status the Annex I features relevant to the project (Table below).

Table 3: Annex I & II Condition Assessment Summaries.

Feature	Condition assessment	Confidence in assessment
Reefs	Unfavourable	High
Large shallow inlets and bays	Favourable	Medium
Sandbanks which are slightly covered by seawater all the time	Favourable	Medium
Estuaries	Favourable	Medium
Coastal lagoons	Unfavourable	Low
Mudflats and sandflats not covered by seawater at low tide	Favourable	Low
Atlantic salt meadows <i>Glauco-Puccinellietalia maritima</i>	Unfavourable	Low
Salicornia and other annuals colonising mud and sand	Favourable	Low
Submerged or partially submerged sea caves	Unknown	Not applicable
Grey seal <i>Halichoerus grypus</i>	Favourable	Medium
Bottlenose dolphin <i>Tursiops truncatus</i>	Favourable	Low
Otter <i>Lutra lutra</i>	Unfavourable	Medium

9.3.2 Surveys indicate regular otter use of the Glaslyn/Dwryd and Dyfi estuaries as well as signs of otters by the Mawddach estuary. Otters living on the coast must have access to freshwater streams and pools for drinking and washing. Otters need to wash in freshwater in order to maintain the insulating properties of their fur. The lack of available freshwater might explain the restricted distribution of otters living along the coast in some areas of the UK, however the SAC is well served with rivers and streams throughout its length.

9.3.3 Habitat essential for otters, i.e. well vegetated stream and river valleys, access to the shore, access to freshwater, secluded resting habitats, is high throughout much of the site. The structural and functional integrity of this essential habitat is considered to be good.

9.3.4 Whilst good quality essential habitat is available within the SAC and adjacent area, the quality and suitability of this habitat can be reduced in a variety of ways, including:

- ◆ the presence and persistence of artificial inert materials (e.g. plastics, synthetic fibres, static fishing gear) leading to entanglement and smothering;
- ◆ decrease in seclusion because of noise and visual disturbance as a result of increased human access, habitation and waterborne activities;
- ◆ the presence and persistence of toxic contaminants, including the risk of fur contamination from oil discharged into freshwater and marine environments;
- ◆ availability and quality of prey.



10. Dyfi RAMSAR & SPA

10.1 SITE OVERVIEW

10.1.1 The Dyfi Estuary is located on the west coast of Wales on the boundary between Ceredigion, Gwynedd and Powys.

10.1.2 The SPA comprises the estuary, with adjoining saltmarsh, marshy grassland and improved grassland. In relation to management plan, the SPA core management plan is representative of RAMSAR objectives also in this specific section of the Dyfi estuary site.



10.1.3 The site is of importance as a traditional wintering area for Greenland White-fronted Goose (*Anser albifrons flavirostris*) – the most southerly regularly used area for this population in the UK. Until the early 1980s the geese roosted on the estuary and flew inland either to the Cambrian mountains or to the raised bog of Cors Fochno to feed. The geese now use the saltmarsh and grasslands for feeding and roost on the sandbanks and mud-flats.

10.1.4 In combination with the multiple designations, the site is of high importance to breeding and wintering wader assemblages.

10.1.5 Within the SPA Core management Plan (CMP), the designated site is split into management sections, to target essential species and habitats that contribute to the site as a whole. The project is situated in management units 1, 7 and 8.1 (see figure 13 below).

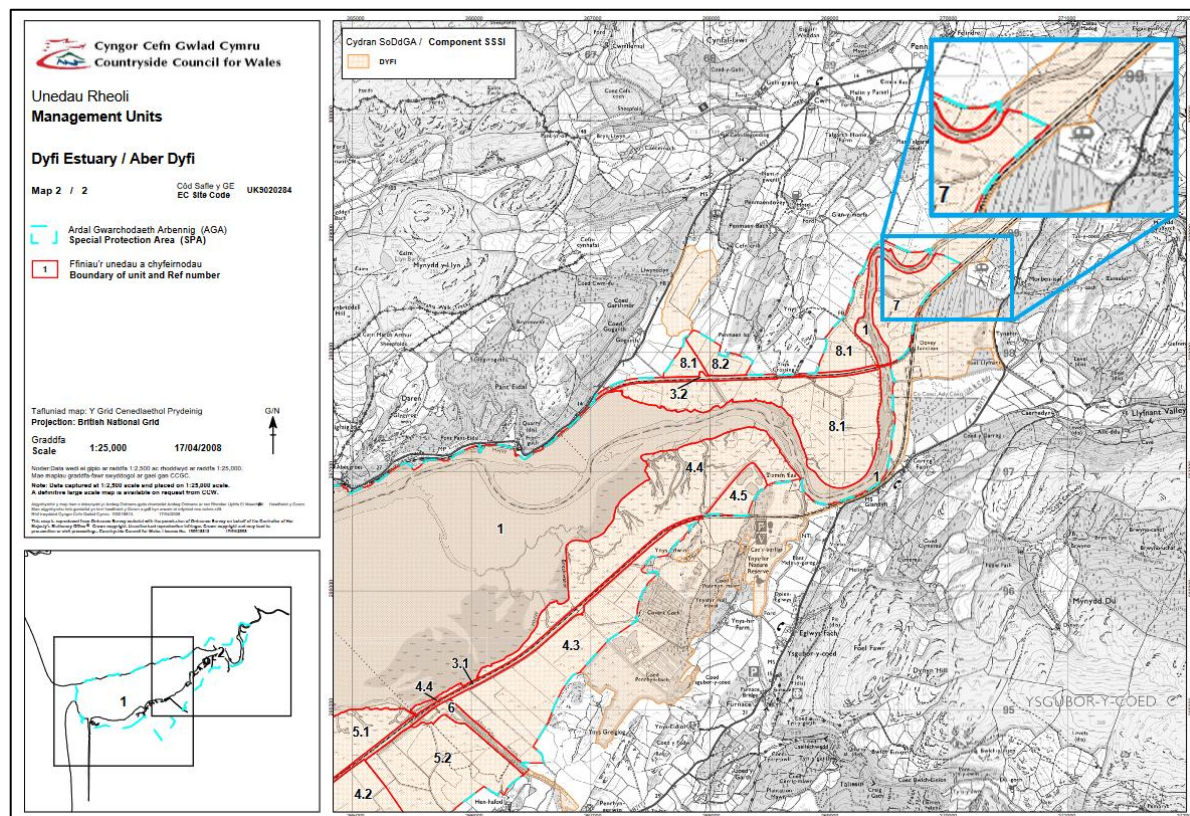


Figure 12: SPA Management Unit.

Table 4: SPA Management Units

Dyfi SPA	Management Unit		
	1	7	8.1
SAC	Yes		
SSSI	Yes		
SPA Feature			
Greenland white-fronted goose	KS	KS	KS
SAC Feature			
Inter-tidal mudflats & sandflats	KH	X	X
Salicornia and other annuals	KH	X	X
Atlantic salt meadow	Sym	KH	KH
SSSI Feature			
Higher plant assemblage	X	Sym	Sym
European wigeon	Sym	Sym	Sym
Breeding waders	Sym	KS	KS
Otters	Sym	Sym	Sym
Invertebrate assemblage	X	Sym	Sym

10.1.6 The table above highlighted the white fronted geese Key Species (KS) status throughout all the management units relevant to the project. The Key Habitats for the management units on site corresponds to the on-site conditions. Inter-tidal mudflat below the structure (management unit 1) and salt marsh habitat to the east and west of the structure (management units 7 & 8.1).

10.1.7 The proposed access route will be situated within management unit 8.1



10.1.8 Regarding the status of Key habitats, please refer back to section 7.3, as the SAC and SPA habitat features overlap.

10.2 SPA KEY FEATURE CONSERVATION STATUS

10.2.1 The current status of the sites key feature is unfavourable.

Table 5: RSPB bird counts (1990-2008).

Year	1990/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00
	152	179	134	160	155	142	125	106	167	112
Year	2000/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08		
	134	97	126	116	92	102	90	76		

10.2.2 Consequently the management requirements at within these policy units centres around:

- ◆ maintaining the extent and quality of grazing;
- ◆ ensuring minimum disturbance of feeding and roosting areas.

10.2.3 The mitigations for this project will look to control any potential impact vectors that could be detrimental to the above management objectives.



11. PHYSICAL PROCESSES

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

- 11.1.1 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. The structure is contained within Coastal Area D – PDZ10, specifically 10.7 and opposite 10.10.
- 11.1.2 Management units are defined within epochs, with epoch 1 referring to periods from present to 2025, epoch 2 referring to years between 2025-2055 and epoch 3, 2055-2105.

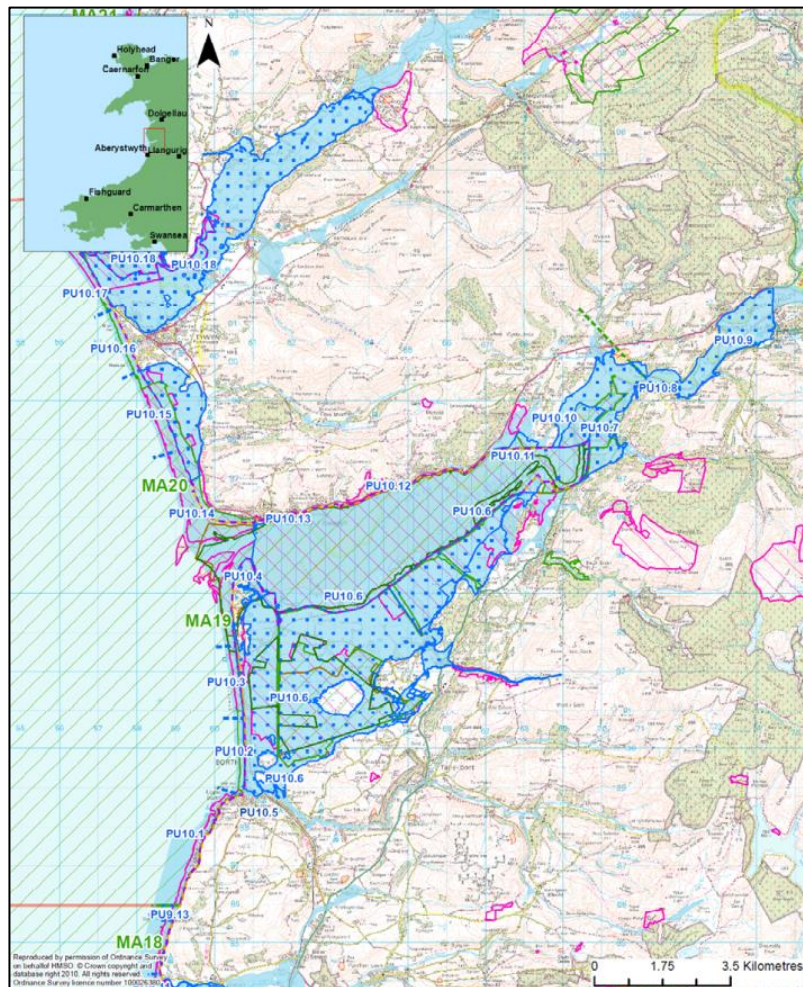


Table 6: SMP2 Relevant policy unit summary.

Policy Unit		Policy Plan			Comment
		2025	2055	2105	
10.07	Pennal Valley	HTL	HTL	MR	With the intent to maintain the transport routes.
10.10	Dyfi Junction	MR	MR	MR	
Key: HTL - Hold the Line, A - Advance the Line, NAI – No Active Intervention MR – Managed Realignment					



Table 7: Projected habitat loss during epochs.

Designated Site	Policy Unit	Habitat Type	Extent of Loss of Habitat (ha)			
			Epoch 1	Epoch 2	Epoch 3	Total
PLAS SAC	10.7	Intertidal sandflat	0.87	13.09	No data	13.96
PLAS SAC	10.10	No Data	No data	No data	No data	No data

11.1.3 As a result of the preferred policy there will be a reduction in the intertidal habitat (sandflats) within the boundary of the SAC. There will, however, be no adverse effect on the integrity of the other SAC features.

11.1.4 In regard to coastal squeeze related to this project, as the works are constrained to the asset itself, nor represents an increase in the structure's footprint. The works can be undertaken within the definition of maintenance (as the replacement achieves a like for like function), recently outlined in the Welsh Government position statement on coastal squeeze relation to infrastructure maintenance.



12. TIMING, FISH SPECIES AND RELATIVE RISK OF HARM/DISTURBANCE

12.1.1 As the project necessitates the working across the span of the upper estuary. It is necessary to compare the proposed working period and likely intensity against the spawning periods of notable fish species present within the designated site.

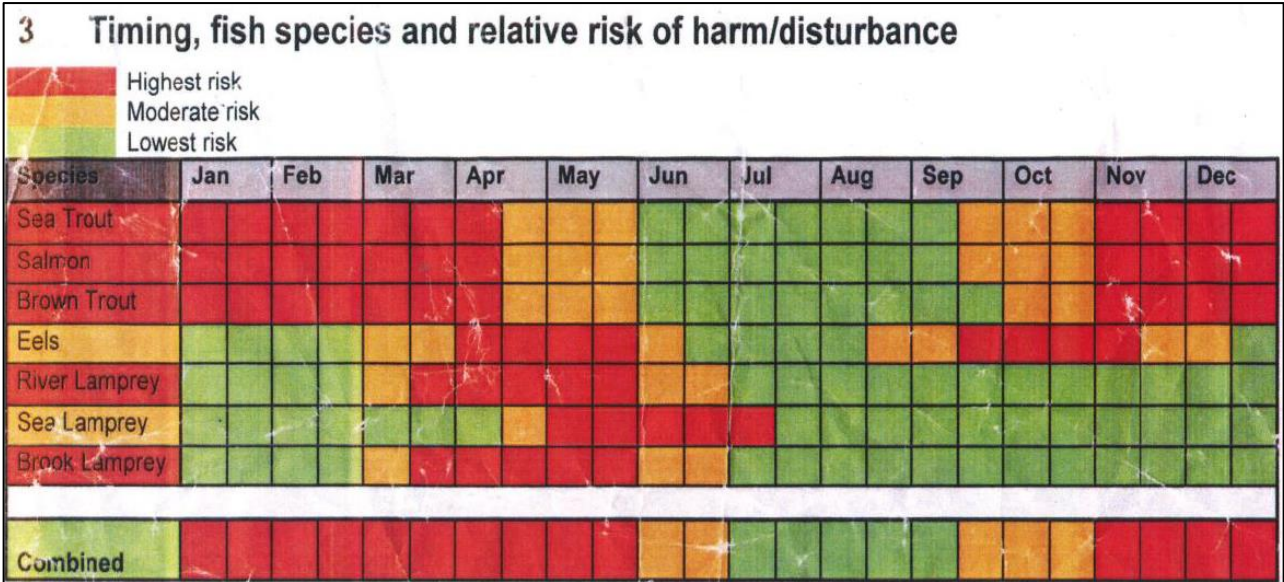


Figure 13: Fish Spawning period chart (provided by NRW during previous works within the PLAS).

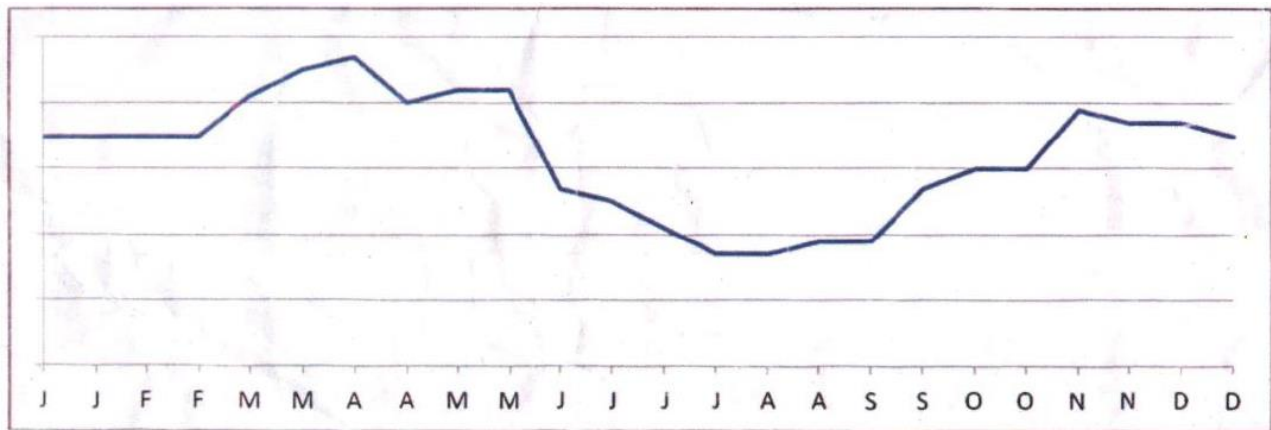


Figure 14: Graphical representation of combined fish sensitivity.

12.1.2 In addition, the Welsh Marine Planning Portal was used to identify any environmental aspects that could be impacted by the works to Dovey Junction Tidal Flap. The Portal showed that the works area falls within a Salmon, Sea Trout and Brown Trout latter spawning period.

12.1.3 Impact assessment and mitigations in regard to fish spawning periods and commercial spawning grounds are detailed in the section below.



13. ASSESSMENT OF POTENTIAL IMPACTS RESULTING FROM SPECIFIC ACTIVITIES AND PROPOSED MITIGATION MEASURES – DOVEY JUNCTION - TIDAL FLAP REPLACEMENT (0704)

13.1 ANNEX I HABITATS – IMPACTS & MITIGATION

Receptor	Affected Site	Potential Hazard	Mitigation Measures	Likelihood of Impact
Annex I habitats: Estuaries. Salt marshes (also part of estuarine habitat). Mudflats and sandflats not covered by seawater at low tide. Habitat outside Designated sites.	SAC/SSSI/SPA/RAMSAR	Loss of habitat from project activities.	Although unlikely, a physical works occurring within any of the designated Annex I Habitats that make up any of the sites assemblages will not be permanently removed. All welfare, storage, parking and general works will occur within either pre-existing Network Road Rail Access Point (RRAP) or within the proposed compound area outside of the protected site. Some excavation work is required around the base the existing tidal flap and headwall to safely remove the redundant elements of the culvert. Which will be replaced with a new pre-cast concrete headwall and tidal flap within the extended rail shift.	Negligible likelihood of significant impacts.

Receptor	Affected Site	Potential Hazard	Mitigation Measures	Likelihood of Impact
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<p>Annex I habitats:</p> <p>Estuaries.</p> <p>Salt marshes (also part of estuarine habitat).</p> <p>Reefs.</p> <p>Mudflats and sandflats not covered by seawater at low tide.</p> <p>Habitat outside Designated sites.</p>	<p>SAC/SSSI/SPA/RAMSAR</p>	<p>Contamination of the estuary and wider environment from spillage of hydrocarbons during refuelling of plant and equipment or due to equipment failure.</p>	<p>Plant Machinery will only operate within the existing rail corridor and above the structure in the specific locations required.</p> <p>No refuelling of plant machinery or equipment will occur within the estuary habitat. All equipment should be filled and prepared at the compound ahead of a given shift pattern.</p> <p>All items of static plant will be paced within a plant nappy when in use or being stored.</p> <p>Plant will be checked for defects and leaks prior to the start of each shift. Within the compound, 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 using equipment specifically designed for that purpose.</p> <p>Network Rail have a spillage plan and specialised contractor in place to respond to and clean up spills.</p> <p>Mitigation has been put in place for the use of this equipment within the project Environmental, Social Management Plan (ESMP). This document has been developed using guidance from:</p> <ul style="list-style-type: none">◆ GPP 2: Above ground oil storage tanks,◆ GPP 5: Works and maintenance in or near water and◆ GPP 6: Working at construction and demolition sites,◆ GPP 7: Safe storage – The safe operation of refuelling facilities,◆ GPP 21: Pollution incident response planning,◆ GPP 22: Dealing with spills,◆ GPP 26: Safe storage – drums and intermediate bulk containers. <p>This includes controls for the operation of plant using biodegradable hydraulic oil (where this is within the manufacturers permitted specification), the re-fuelling of plant and equipment, inspection and maintenance routines for plant to identify defects which could result in the release of liquids, biosecurity protocols, silt mitigation procedures, waste management procedures.</p> <p>The Contractor will develop and implement an Emergency Awareness and Response Plan.</p>	<p>Negligible likelihood of impacts with mitigation in place.</p>
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			This 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.	
Annex I habitats: Estuaries. Salt marshes (also part of estuarine habitat). Reefs. Mudflats and sandflats not covered by seawater at low tide. Habitat outside Designated sites.	SAC/SSSI/SPA/RAMSAR	Confirmation as a result of cement filling of voids for new outfall linking to barrel,	<p>As much as practically possible, the mixing of mortar material will be undertaken within the rail corridor (track side).</p> <p>No mixing equipment, plant or machines will be used without a supply of spill kits, plant nappies and pre-works checks.</p> <p>All mixing to occur will be undertaken within the rail corridor and not within the saltmarsh intertidal area.</p> <p>Spill kits, drip trays and plant nappies will be placed below and near the 110v generators during operation.</p> <p>Plastic screening will be placed on the base of the wall to capture material broken off from the asset during deconditioning and replacement.</p> <p>Every practical effort will be made to collect all loose broken mortar material arising from from the designated site environment.</p> <p>Should the paddle mixer not be of sufficient volume to readily repair the void noted within the scoping reports, then grout or cement will be pumped from a source situated outside of the marine environment.</p> <p>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 be fuelled at the layby areas indicated prior to use. No refiling is permitted within or adjacent to the Salt Marsh habitats.</p>	Negligible likelihood of impacts with mitigation in place.
Receptor	Affected Site	Potential Hazard	Mitigation Measures	Likelihood of Impact



All identified within the project area and proximity.	SAC/SSSI/SPA/RAMSAR	Release or spread of INNS into the estuary	All machines will undergo biosecurity control measures before entering the estuarine environment. Please see attached Biosecurity Management Plan in Appendix D.	Negligible likelihood of impacts with mitigation in place.
All receptors within estuary environment.	SAC/SSSI/SPA/RAMSAR	Contamination of the estuary from spillage and increased sediment loading.	<p>Works will be undertaken at low tide and hence these will not be immediately released into the estuary but there is some potential for incoming tides to wash out small volumes of mobilised sediment. To quantify this, it is likely that works will be undertaken on a maximum of two piers per tidal cycle using two teams of operatives.</p> <p>The footprint of each work site will be approximately 350m².</p>	Negligible likelihood of impacts with mitigation in place.



13.2 ANNEX II SPECIES – IMPACTS & MITIGATION

Receptor	Affected Site	Potential Hazard	Mitigation Measures	Likelihood of Impact
Aggregations of non-breeding birds such as Red Shank & Snipe	SSSI	Noise disturbance / Visual Disturbance / Habitat Destruction.	<p>Project activities will create a source of light and noise over 24 hours. Times will vary due to the variation in the tide.</p> <p>It is likely that local bird populations are habituated to a level of disturbance from human activities, given the proximity of the rail platform, running rail and holiday camping grounds to the southeast of the tidal flap. However, as with below, works are programmed towards the end of the main winter period. During a limited time window.</p>	Negligible likelihood of impacts with mitigation in place.
Individual wintering birds White Fronted Goose	SSSI	Noise disturbance / Visual Disturbance / Habitat Destruction.	<p>Works are set to be commenced after the end of the essential winter bird period.</p> <p>Demobilisation works may continue after this date, however these will occur during daytime hours only and noise output can be better controlled / monitored.</p>	Impact Not Likely to be Significant
Potential Bat species	SAC & SSSI Bat Sites	Noise disturbance / Visual Disturbance / Habitat Destruction.	<p>No trees require removal for the project to take place. Site lighting will be limited to lighting of safety critical areas and task lighting</p> <p>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.</p>	Impact Not Likely to be Significant, with appropriate mitigation.
Otters	SAC & SSSI	Noise disturbance / Visual Disturbance / Habitat Destruction.	<p>Toolbox Talks will inform site personnel on identifying the Annex II Species. No otter holts have been noted to date within proximity to the structure and access route. The project does not represent a hard boundary preventing access to the wider estuary by this species.</p> <p>Habitat pertaining to Otters being impact is limit, however there may be a temporary impact to prey species disturbed by ongoing works. It is not anticipated that these works will have an impact on the population.</p> <p>Additionally, no equipment or excavation will be left in such a manner that during high tide an animal could become snared and trapped within the working area.</p>	Impact Not Likely to be Significant, with appropriate mitigation



			<p>Should an Otter be encountered during works, personnel will temporarily stand down until the animal has vacated the immediate area under its own volition.</p> <p>The contractor will abide by the Gwynedd Marine Code of Conduct. Salmon, 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 an impassable barrier to salmon migrating to spawn.</p> <p>Directional lighting measures as with those proposed for bat species will be implemented for Otter population to limit disturbance. Task specific lighting will be used and the use of flood lights will be avoided.</p> <p>Vehicles will be loaded during the day as often as possible to reduce overall nighttime disturbance.</p> <p>Steps will be undertaken to ensure that otters, mammals and birds do not become trapped within working and storage areas. This will take the form of compound barriers reaching ground level and attachments to gates to prevent access by otters or other mammals such as badgers from entering the compounds.</p> <p>24hr working is projected to be limited to only the rail blockade in 2027. Night shifts will generally be limited to Saturday nights. These works will only take place from the structure itself and will not feature machine access to the estuary during low tide.</p> <p>Pre-works Otter recording will be taken during the month of June/July to inform the project's methodology and undertake a thorough check for potential holds within the impact radius of the works. Should an Otter hold be found near the works footprint, then an EPS License will be discussed with NRW.</p>	
Fish Assemblage	SAC/SSSI	Noise disturbance / Visual Disturbance / Habitat Destruction.	The works within the fish spawning season for migratory fish such as salmon, trout and eel (mid Oct – Mid April). However, the works themselves are within a small tributary, with little likelihood of blocking or directly disturbing migratory fish species moving along the Dyfi.	Impact Not Likely to be Significant, with appropriate mitigation



			<p>No works within the designated sites will occur until formal assent as been granted by Natural Resources Wales.</p> <p>Works will be undertaken during the 2027 early winter spawning season for protected and migratory fish. Mitigation of impacts from these works will be difficult but the largest mitigating factors are:</p> <ul style="list-style-type: none">♦ Works within the estuary during low tide at bed level will be localised and low impact and will not involve deep excavation or dredging. No increase in structure footprint is envisaged.♦ The Tidal Flap is currently used by trains. This implies that fish within the estuary are habituated to noise and vibration from the structure. Noise and vibration during the works will be of a greater magnitude and longer duration, particularly during the blockades.♦ Complete mitigation of these impacts will be difficult but best practice will be used in terms of the construction methodology to limit this i.e. no site radios, modern well silenced plant.♦ Night works are likely during rail blockades. Task lighting will be designed to illuminate the works area but limit light spill into the estuary. This will be achieved through the use of LED flat glass luminaires set at a low level to the Tidal Flap.♦ Any unfinished excavations along the estuary edge will be backfilled to prevent entrapment.	
Commercial Fishing		Noise disturbance / Visual Disturbance / Habitat Destruction.	<p>The works will avoid working within the marine environment as much as possible.</p> <p>The only works that interact with the water environment are the during localised damming and over pumping.</p>	Impact Not Likely to be Significant, with appropriate mitigation
Eurasian Beaver	Wider Context	Noise disturbance / Visual Disturbance / Habitat Destruction.	Although not an Annex II species of the SAC. This species has been recorded to be moving southwards into the region. Anecdotal evidence and site walkovers suggest Beavers are not currently present within the confines of the survey area. However, pre-works assessments, will again look for evidence of this species. If found, then further consultation with NRW will be sought.	Impact Not Likely to be Significant, with appropriate mitigation



14. POTENTIAL IN-COMBINATION EFFECTS

14.1 OVERVIEW

- 14.1.1 It is necessary to consider the potential for significant effects from this project in-combination with other plans or projects.
- 14.1.2 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.
- 14.1.3 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 works (so that these effects may occur in-combination) and where similar potential impact pathways may exist.
- 14.1.4 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.

15. KNOWN PROJECTS WITHIN THE WIDER AREA

- 15.1.1 There is no known other large-scale project within proximity to Dovey Junction Tidal Flap project.



16. HRA CONCLUSION

This section will combine the key features and challenges highlighted in the (Core Management Plan) CMP's with the proposed activities to ascertain whether likely significant impacts to the designated site could occur.

Encountering Annex II species during the project is a possibility, however it is likely that these occurrences will be relatively infrequent.

As the project is project to last a little over 1 week in duration, there will be a limited period continuous disturbance from the project as a whole during the full rail blockage.

The overall footprint of the project is relatively low, and the footprint of the structure will not be increased as a result of the works.

Pollution control measures and emergency response plans will allow for robust controls over hydrocarbon pollution events, which are unlikely. These are further detailed in the attached Construction Plan, which references GPP supporting documentation.

Fish species are also unlikely to be heavily impacted with the limited scale of the works in relation to spawning periods, combined with the duration of the works and not being directly along the banks of the Dyfi, further reduces potential direct impact vectors. At no point will the permanently flowing portion of the estuary be impeded.

Regarding long term SMP2 policy and Coastal Squeeze. As the project concerns only the replacement of the tidal flap and failing headwall, there will be no contribution to coastal squeeze as a result of the replacement of this structure.

Mobilisation of sediment is likely to be limited as a result of removing and replacing the redundant headwall/tidal flap.

Control of INNS is ensured using the Biosecurity Risk Assessment Plan and Management Plan. Visual identification of this invasive species will be disseminated to personal working on the structure and a pre-works inspection of all existing components will be undertaken.

The Biosecurity measures in place at the compound 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 Appendix A.

The location of the works in relation to otters is unlikely to impact overall habitat availability, given the proximity to the Talgarth Drain, Afon Pennal, riparian habitat confluences upstream. The Afon Llyfnant confluence is the closest downstream confluence to the tidal flap. Pre-works surveys to account for any changes in conditions since the initial Ecological Appraisal will be undertaken.

The timing of the project is outside of the peak wintering wader season. Consequently, impacts to the vulnerable populations of Greenland White Fronted Goose is considered unlikely.

From the available information, it is not evident that the Annex I Habitat & Annex II Species that compromise the designate sites overall, will be significantly impacted during the proposed replacement. There will be a temporary elevation in noise and visual pollution vectors during the project, for a short period of time.

Viewing the overall scope of this project, this assessment suggests that Likely Significant Impacts the PLAS SAC, Dyfi SSSI, SPA and Cors Fochno & Dyfi RAMSAR is unlikely



17. APPENDIX A – BIO-SECURITY PLAN

