



A465 CLYDACH UNDERBRIDGE SCOUR REPAIR AND PROTECTION MEASURES

Notice

This document and its contents have been prepared and are intended solely as information for South Wales Trunk Road Agent and use in relation to Marine Licence Application.

AtkinsRéalis UK Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 26 pages including the cover.

Document history

Document title: Habitat Regulations Assessment

Document reference: FD11_201-ATK-SGN-SWTRA-RP-CB-000001

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	HRA Screening	JM	JHR	MB	FO'D	May 2024

Client signoff

Client	South Wales Trunk Road Agent
Project	A465 Clydach Underbridge Scour Repair and Protection Measures
Job number	5223107
Client signature/date	



Contents

Abbreviations	4
1. Introduction.....	5
1.1 Proposed Scheme.....	6
2. Proposed Works and Programme	8
2.1 Proposed Access and Construction Method	8
2.1.1 Proposals covered by the Marine Licence application.....	8
2.1.2 Proposed works and methodology.....	8
2.1.3 Photos of existing features.....	10
2.1.4 Site Access	11
2.1.5 Site Compound and storage area	12
2.1.6 Plant and Equipment to be used (with typical example photos)	12
2.1.7 Outline construction programme	13
2.2 Operation	14
2.3 Decommissioning	14
3. Pre consultation	15
4. Habitats Regulations.....	16
5. Baseline	17
5.1 Statutory Designated Sites	17
6. Site Interest Features	18
6.1 Crymlyn Bog / Cors Crymlyn SAC	18
6.2 Crymlyn Bog Ramsar	18
7. Conservation Objectives	20
7.1 Site Conservation Objectives	21
8. Stage 1 – Screening	24
8.1 Likely Significant Effects – Alone	24
8.2 Likely Significant Effects – In-combination.....	25
8.3 Stage 1 Screening Conclusion.....	25

Tables

Table 6-1 – Qualifying Features of Crymlyn Bog/ Cors Crymlyn SAC	18
Table 6-2 – Crymlyn Bog Ramsar Criterion.....	19
Table 7-1 – Crymlyn Bog / Cors Crymlyn Conservation Objectives for SAC Special Features	21
Table 8-1 – HRA Screening Table of Likely Significant Effects.....	24



Figures

Figure 1-1 – Site location and boundary.....	5
Figure 1-2 – Extract of scour protection general arrangement.....	6
Figure 1-3 – Extract of scour protection sections for southwest and northwest piers respectively	7
Figure 2-1 - Site compound and works access	8
Figure 2-2 - Site access route.....	12
Figure 2-4 – Tracked excavator.....	13
Figure 2-5 – Tracked dumper	13
Figure 5-1 – Location Plan of Designated Sites	17

Abbreviations

FCS	Favourable Conservation Status
HRA	Habitats Regulations Assessment
JNCC	Joint Nature Conservation Committee
LSE	Likely Significant Effect
MAGIC	Multi-Agency Geographical Information for the Countryside
MCA	Maritime Coastguard Agency
MHWS	Mean High Water Springs
NPTC	North Port Talbot Council
NRW	Natural Resource Wales
SAC	Special Area of Conservation
TLSE	Test of Likely Significant Effect



This report represents the findings of Stage 1 (Screening) of the Habitats Regulations Assessment (HRA) process and aims to identify the potential impacts and any likely significant effects of the Scheme against the qualifying features of the designated conservation sites and address these impacts.

1.1 Proposed Scheme

The Scheme involves implementation of scour protection works consisting of rock mattresses and rock rolls. This is to prevent ongoing scour of the bridge pier pile cap protection panels and therefore protect the piled foundations. The rock mattresses are to be laid in an arrangement around the protection panels and up the riverbanks as illustrated in the extract of the general arrangement design drawing provided in **Figure 1-2**. Along the river face they are to abut the concrete protection panels to cover the existing undermining as shown in **Figure 1-3**.

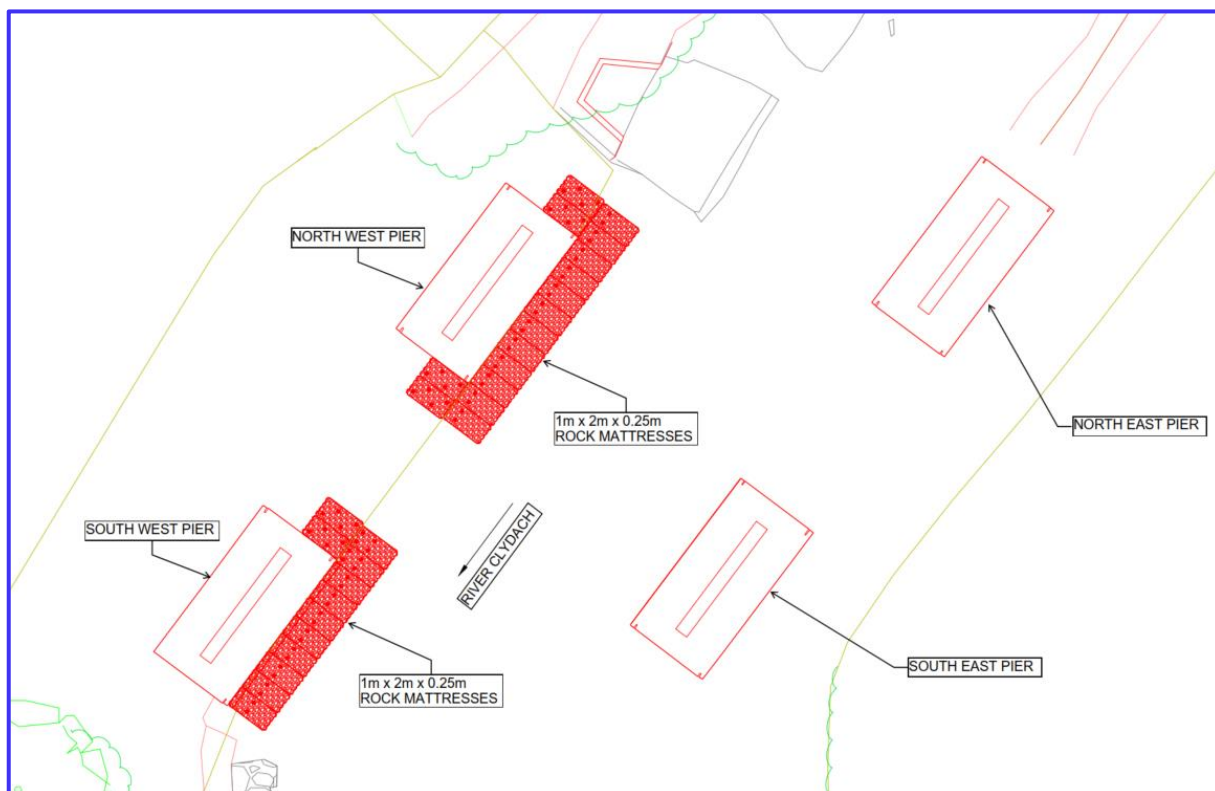


Figure 1-2 – Extract of scour protection general arrangement

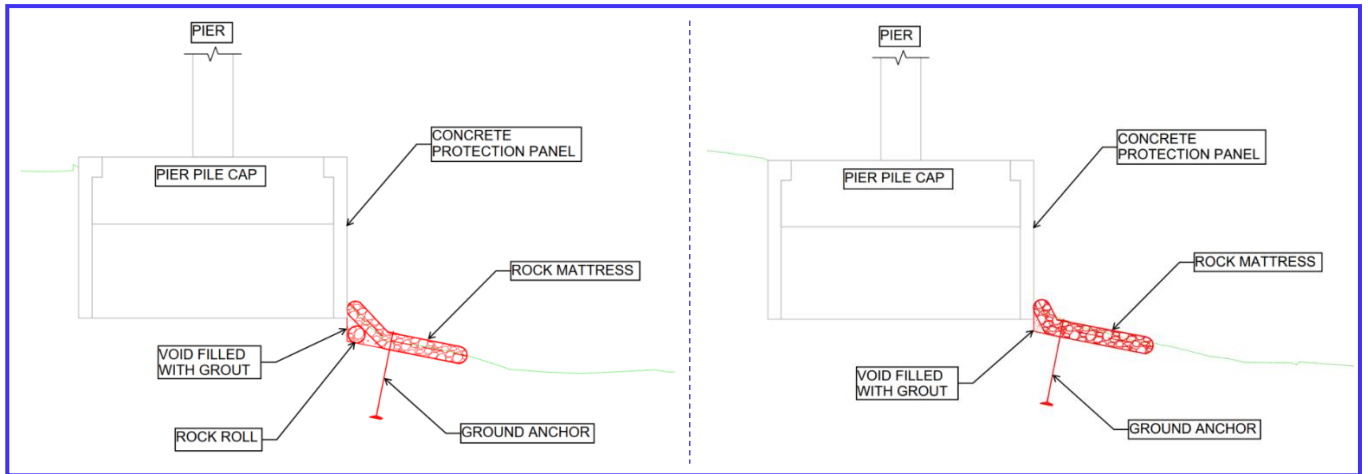


Figure 1-3 – Extract of scour protection sections for southwest and northwest piers respectively

2. Proposed Works and Programme

2.1 Proposed Access and Construction Method

2.1.1 Proposals covered by the Marine Licence application

The proposals are shown in the figures provided in Section 1 above.

2.1.2 Proposed works and methodology

The anticipated methodology for this section of the works is detailed below:

Works required: The works will involve laying scour protection adjacent to the two pile caps of the bridge pier located within the righthand riverbank of the River Clydach.

Reason needed: The scour protection is required to prevent further undermining of the pier protection panels which, if left unchecked, could put the foundation piles at risk.

Plant required: Tracked dumper and tracked 5t excavator with attachment for rock mattress lifting strops, as well as small tools such as drills and disc cutters.

Method for works: The individual aspects of the works for the scour protection are detailed below with any in river work being undertaken on a low tide:

1. The access route to the bridge will be created from the site compound on Monastery Road which are both shown in **Figure 2-1**. Due to the current clearance to the bridge deck some minor regrading of the bank will be required.



Figure 2-1 - Site compound and works access

2. Silt curtains will be placed around each pier to facilitate the removal of silt and loose bed material from the scoured area under the concrete protection panels.
3. Temporary formwork will be placed around the piers ensuring a grout tight seal by embedding the formwork into the ground. This work would be done during periods of low tide.
4. Anti-washout grout will be used to fill the void beneath each concrete protection panel starting as of low tide to enable it to set prior to the tide coming in.
5. The temporary formwork will be stripped the day after grouting is complete.
6. Excavation of the riverbank to provide a smooth profile on which to lay the scour protection. This will be achieved using the tracked excavator and will include deeper excavation upstream and downstream to provide suitable embedment. This work would be done during periods of low tide.
7. Laying of rock rolls and rock mattresses on the riverbank and in the river channel to reduce erosion due to flood flows. Silt curtains will be placed around the area of works at the start of each shift and the rock rolls/mattresses will be transported down to the works before being lifted into place and hand stitched together.
8. The rock mattresses will be fixed to the riverbank using ground anchors which will be installed by hand. Ahead of the works commencing, to obtain the required stress, test anchors will be inserted and pull tested to failure.

Reinstatement of surfaces: The excavation to embed the rock mattresses will be backfilled with the excavated material. Any remaining excavated material from the bank regrading and this process will be spread over the rock mattresses, with any large material deposited at the edges of the mattresses.

Other relevant information: The plant and equipment used at the construction of the works will be tracked to reduce the risk of damaged to the existing surface of the structures.

Photos: As of the existing site features are as follows.



2.1.3 Photos of existing features



Photo 1 – Northwest pier within right-hand riverbank



Photo 2 – Southwest pier within right-hand riverbank



Photo 3 – Pier situated in left-hand riverbank (no associated works)



Photo 4 – Possible access from track down left-hand riverbank

2.1.4 Site Access

To facilitate deliveries of plant, equipment, and materials, access to the site will be via the unnamed roads west of the site between the A465 and Tenant Canal as shown in **Figure 2-2**.



Figure 2-2 - Site access route

2.1.5 Site Compound and storage area

The site compound location has previously been illustrated in **Figure 2-1** and is shown to be away from any of the existing watercourses.

The site compound will be used to store construction materials, plant and machinery, site offices and basic welfare facilities (self-contained kitchen/toilets) for the contractors. The site compound will also contain a bunded storage area for diesel and fuels and all refuelling of plant will take place in the site compound. All fuels will be stored and handled in accordance with best practice procedures.

On completion, the site compound will be removed following construction activities and the area will be returned to its existing condition.

All materials for this Scheme, including the site compound units, will be delivered to site by road.

The site compound area for storage of the main plant is envisaged to be at the location illustrated in **Figure 2-1** with plant and materials being transported from here to the bridge location.

2.1.6 Plant and Equipment to be used (with typical example photos)

No vessels are required for the works and all work will be undertaken using land-based machinery. The works are proposed to take place from the riverbanks and out of the water at low tide.

Typical plant that will be used to construct these works are shown below.



Figure 2-3 – Tracked excavator



Figure 2-4 – Tracked dumper

2.1.7 Outline construction programme

It is envisaged that the duration of the works to the bridge piers is likely to take 2 months but is highly dependent on the weather and tidal state during the construction phase. Works are planned to take place between the start of September 2024 to the end of October 2024 with in river works being completed prior to the river embargo which prohibits in-channel works during the fish spawning season (17th October to 15th May).

It is anticipated that all construction activities will be limited to daytime hours (for example, 7:30am to 6:00pm from Monday to Friday, and from 8:00am to 1:00pm on Saturdays, or similar).

2.2 Operation

No works are expected once the site is in operation. Once established, the Scheme will be owned and managed by the South Wales Trunk Road Agent (SWTRA).

2.3 Decommissioning

No decommissioning works are planned as part of the Scheme. Therefore, there are no potential pathways for impacts associated with decommissioning, and they have not been considered as part of the assessment.

3. Pre consultation

Pre-consultation correspondence was undertaken with NRW Marine Advisory Officer Delyth Rowlands who confirmed that there's one protected site located downstream of the proposed works, the Crymlyn Burrows Site of Special Scientific Interest (SSSI), designated for its sand dune, saltmarsh and assemblage of invertebrates features. The correspondence highlighted that from a marine perspective, provided that suitable pollution prevention and biosecurity measures are employed during construction, NRW do not believe that the works would have a significant impact on the site's special interest features. However, it was also pointed out that NRW's Environment Team may have further comments to make on this designation, but at the time of this report it had not been received.

4. Habitats Regulations

In the UK there is a network of conservation sites for rare and threatened species of birds and habitats. The network is comprised of Special Areas of Conservation (SAC) and Special Protection Areas (SPA). These sites are protected by the Conservation of Habitats and Species Regulations 2017 as amended (known as the Habitats Regulations). Following the UK's exit from the European Union (EU), the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 made changes to the 2017 Habitats Regulations so that the European sites no longer form part of the EU's ecological network but now form part of a UK national site network. They continue, however, to be referred to as 'European Sites' as they are part of the UK's international commitments to conservation conventions. The list of habitat types and species for which existing sites were designated, however, remain listed in Annexes I and II for the EU Habitats Directive (92/43/EEC) and the EU Birds Directive (79/409/EEC).

In addition to the UK network of SACs and SPAs, many of the SPA sites are also designated as Ramsar sites. The Ramsar Convention on Wetlands of International Importance is an international mechanism which aims to protect internationally important wetlands, of particular importance to migratory bird species. In the UK, Ramsar sites are extended the same protection as SACs and SPAs and are therefore also considered in this HRA assessment.

The Habitats Regulations require 'competent authorities' to undertake an 'appropriate assessment' of plans, Schemes and strategies that are not connected to the management of the site and are likely to have a significant effect on the site. There is a similar requirement in relation to sites designated under the Ramsar Convention (Ramsar sites).

There are four distinct stages in the HRA process:

- **Stage 1:** Screening – the process which initially identifies the likely potential impacts on a European site, either alone or in combination with other plans or Schemes and considers whether these potential impacts are likely to be significant. This is often called a Test of Likely Significant Effect (TLSE).
- **Stage 2:** Appropriate Assessment (or AA) – the detailed consideration of the impact on the integrity of a European site of the plan or Scheme, with respect to the site's conservation objectives and its structure and function. This is to determine whether there will be adverse effects on the integrity of the site.
- **Stage 3:** Assessment of alternative solutions – the process which examines alternative ways of achieving the objectives of the plans or Schemes that avoid adverse potential impacts on the integrity of the European site.
- **Stage 4:** Assessment where no alternative solutions exist and where adverse potential impacts remain – an assessment of whether the development is necessary for imperative reasons of overriding public interest (IROPI) and, if so, of the compensatory measures needed to maintain the overall coherence of the site network.

On the basis of the above, this document presents the findings of Stage 1 (Screening) to support the Competent Authority making an AA of the Scheme.

5. Baseline

5.1 Statutory Designated Sites

Information on European designated sites² located within 10 km of the Scheme was obtained from the MAGIC³ and Natural Resources Wales (NRW)⁴ websites in July 2023. One Statutory Designated Site was identified within this 10 km search area; Crymlyn Bog/ Cors Crymlyn SAC (which is also designated as a Site of Special Scientific Interest (SSSI), Ramsar Site, and National Nature Reserve (NNR)), located approximately 3.2 km south-west of the Scheme (**Figure 5-1**). Apart from approximately 35 hectares of land at the northern end of Crymlyn Bog, the majority of the SAC shares the same boundary as the Ramsar site.



Figure 5-1 – Location Plan of Designated Sites

² Including: Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites.

³ <https://magic.defra.gov.uk/>

⁴ <https://datamap.gov.wales/>

6. Site Interest Features

6.1 Crymlyn Bog / Cors Crymlyn SAC

The Annex I and Annex II habitat and species qualifying features of the Crymlyn Bog/ Cors Crymlyn SAC are presented in **Table 6-1** below.

Table 6-1 – Qualifying Features of Crymlyn Bog/ Cors Crymlyn SAC

Feature	Quality and Importance
Crymlyn Bog / Cors Crymlyn SAC Selection (JNCC, 2015)	
Annex I Habitats that are a primary reason for selection	
Transition mires and quaking bogs	Internationally significant The condition of feature has been assessed as unfavourable, declining (in 2012)
Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	Nationally significant Priority feature The condition of feature has been assessed as unfavourable, declining (in 2012)
Annex I Habitats present as a qualifying feature (but not a primary reason for selection)	
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)	Nationally significant Priority feature The condition of feature has been assessed as unfavourable, recovering (in 2012)
Annex II species that are a primary reason for selection	
Not applicable	Not applicable
Annex II species present as a qualifying feature (but not a primary reason for selection)	
Not applicable	Not applicable

6.2 Crymlyn Bog Ramsar

The Ramsar criterion for the Crymlyn Bog Ramsar are presented in **Table 6-2** below.

Table 6-2 – Crymlyn Bog Ramsar Criterion

Feature	Quality and Importance
Crymlyn Bog Ramsar (JNCC 1993)	
Ramsar Criterion 1	
Largest example of valley floodplain topogenous mire in South Wales, and one of the largest surviving fens in the west of Britain. Very few other sites are known to support a comparable complexity and diversity of vegetation. Habitats Directive Annex I features present on the SAC include: H7140 Transition mires and quaking bogs H7210 Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> H91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>	Internationally significant Equates to topogenous fen SSSI feature. Includes above two SAC fen features (Features 1 and 2)
Ramsar Criterion 2	
Supports a substantial population of the nationally-rare slender cotton-grass <i>Eriophorum gracile</i>, and a rich invertebrate fauna including many rare and highly localised species.	Nationally significant Equates to slender cotton grass SSSI feature Equates to invertebrate assemblage SSSI feature
Ramsar Criterion 3	
The site supports 199 vascular plant species including 17 regionally-uncommon and one nationally rare.	Nationally significant

7. Conservation Objectives

The conservation objectives for a European protected site are intended to represent the aims of the Habitats and Birds Directives in relation to that site. NRW provide advice on the conservation objectives and operations that may cause deterioration of the habitats or species, or disturbance of the species for which sites have been designated. This advice is in the form of 'Regulation 35 advice' for marine SACs (i.e. SACs with a marine component) or 'management plans' for other sites.

Measures taken under the Habitats Directive should be designed to maintain or restore habitats and species of European Community importance at / to "favourable conservation status" (FCS). The conservation objectives for a site set the standards which must be met if the features of the site (habitats and species) are to be at FCS.

FCS is defined in Article 1 of the Habitats Directive as:

Conservation status of a natural habitat means the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species within the territory referred to in Article 2.

The conservative [sic] status of a natural habitat will be taken as 'favourable' when:

- Its natural range and the areas it covers within that range are stable or increasing;
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and
- Conservation status of typical species is favourable as defined in [Article] 1(i).

The conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term natural distribution and abundance of its populations within the territory referred to in Article 2.

The conservation status of a species will be taken as 'favourable' when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The conservation objectives recognise and acknowledge that the features are part of a complex, dynamic and multi-dimensional environment which human activity has already modified and continues to modify to varying degrees and at varying spatial and temporal scales, either acutely or chronically.

The conservation objectives seek to prevent further negative modification of the extent, structure and function of natural habitats and species' populations by human activity and to ensure that degradation and damage to the features that is attributable to human activities or actions is prevented.

The conservation objectives, therefore, seek to:

- Encompass inherent dynamism rather than to work against it;
- Safeguard features and natural processes from those impacts of human activity that cause damage to the features through the degradation of their range, extent, structure, function or typical species; and
- Facilitate, where necessary, restoration of features or components of features that are currently damaged or degraded and in unfavourable condition.

The conservation objectives for the European protected sites and their features within a 10 km radius or potential area of the Scheme are set out below.

Although neither the Birds Directive nor the Ramsar Convention refer to FCS, Natural Resources Wales considers that the overall aim of both those legal instruments is sufficiently similar to FCS to make it practical and proportionate to use the same guiding principle when establishing the conservation objectives for SPAs and Ramsar sites, as well as SACs. Therefore, the Habitats Directive definition of FCS is considered to provide the overarching framework for conservation objectives for all SACs, SPAs and Ramsar sites in Wales.

7.1 Site Conservation Objectives

The Site Conservation Objectives have been drawn directly from the NRW documents listed in Chapter 8 of the Core Management for Crymlyn Bog.

The habitat features designated as part of Crymlyn Bog/ Cors Crymlyn SAC are as follows:

- Transition mires and quaking bogs
- Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*; and
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)

Table 7-1 – Crymlyn Bog / Cors Crymlyn Conservation Objectives for SAC Special Features

To achieve favourable conservation status all the following, subject to natural processes, need to be fulfilled and maintained in the long-term. If these objectives are not met restoration measures will be needed to achieve favourable conservation status.
Crymlyn Bog / Cors Crymlyn Special Area of Conservation (NRW, 2014)⁵
Habitat Features
Transition mires and quaking bogs
The transition mire should be of high quality throughout and composed of typical native species. The stands should be species-rich, with little or no rank vegetation or scrub encroachment. Non-native species and indicators of eutrophication and/or changing water levels should be largely absent. Providing these broad quality standards are met across the whole feature area, some

⁵ Core Management Plan Including Conservation Objectives for Crymlyn Bog / Cors Crymlyn Special Area of Conservation (SAC)/Crymlyn Bog RAMSAR Site (2014), Natural Resource Wales. Available online at: <https://naturalresources.wales/media/675011/crymlyn-bog-sac-english.pdf> [Accessed July 2023]

heterogeneity in condition is both natural and acceptable, but the bulk (at least 60%) of the habitat should be referable to good quality transition mire, where:

- Bottle Sedge is present at high cover; or, where the vegetation is composed of mixtures of: Bogbean, Marsh Cinquefoil, Water Horsetail, Common Cottongrass, Slender Cottongrass, Bottle Sedge, Bog Sedge, Star Sedge, Lesser Water-parsnip, Branched Bur-reed and the bog mosses *Sphagnum squarrosum* and *S. subnitens*;
- Common Reed *Phragmites australis* is not dominant;
- Purple Moor-grass, Greater tussock sedge, Tufted-sedge and Great Fen-sedge are not abundant;
- Scrub is absent; and
- Non-native species including Himalayan Balsam are absent.

In addition to the above typical plant species, the transition mire areas will also contribute to the wider fen environment of Crymlyn Bog in supporting a range of typical fenland bird and invertebrate species.

Factors affecting the extent and quality of the transition mire habitat (including water quality, atmospheric pollution, water levels, successional change, scrub encroachment and nonnative species) should be under appropriate control.

Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*

The calcareous fen should be of high quality throughout. At Crymlyn Bog the calcareous fen occurs in two forms: tall vegetation dominated by Great Fen-sedge *Cladium mariscus* and more open calcareous fen. The *Cladium* dominated areas should continue to be present as a minimum extent but should not increase at the expense of the open calcareous fen; ideally they should be opened up to allow increased plant diversity within them. The open calcareous fen should be species-rich, with little or no rank vegetation. Non-native species and indicators of eutrophication and/or changing water levels should be largely absent. Providing these broad quality standards are met across the whole feature area, some heterogeneity in condition is both natural and acceptable, but the bulk (at least 70%) of the open calcareous fen should be referable to good quality calcareous fen habitat, where:

- Tufted-sedge is present, with associates such as Yellow Loosestrife, Greater Spearwort, Blunt-flowered Rush, *Cyperus* Sedge, Lesser Bulrush, Water Dock, Purple-loosestrife, Hemp-agrimony, Marsh Cinquefoil and Royal Fern;
- Common Reed or Great Fen sedge are not dominant;
- Scrub is absent; and
- Non-native species including Himalayan Balsam are absent.

In addition to the above typical plant species, the calcareous fen areas will also contribute to the wider fen environment of Crymlyn Bog in supporting a range of typical fenland bird and invertebrate species.

Factors affecting the extent and quality of the calcareous fen habitat (including water quality, atmospheric pollution, water and non-native species) should be under appropriate control.

Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)

The transition mire should be of high quality throughout and composed of typical native species. The stands should be species-rich, with little or no rank vegetation or scrub encroachment. Non-

native species and indicators of eutrophication and/or changing water levels should be largely absent. Providing these broad quality standards are met across the whole feature area, some heterogeneity in condition is both natural and acceptable, but the bulk (at least 60%) of the habitat should be referable to good quality transition mire, where:

- Bottle Sedge is present at high cover; or, where the vegetation is composed of mixtures of: Bogbean, Marsh Cinquefoil, Water Horsetail, Common Cottongrass Slender Cottongrass, Bottle Sedge, Bog Sedge, Star Sedge, Lesser Water-parsnip, Branched Bur-reed and the bog mosses *Sphagnum squarrosum* and *S. subnitens*;
- Common Reed is not dominant;
- Purple Moor-grass, Greater tussock sedge, Tufted-sedge and Great Fen-sedge are not abundant;
- Scrub is absent; and
- Non-native species including Himalayan Balsam are absent.

The Ramsar features for Crymlyn Bog SAC are open to interpretation at present. They will be subject to a 'quality control' exercise in the future, to confirm the qualifying features. Hence the following list of Ramsar features is only provisional at present. Conservation objectives for the Ramsar features will be developed once the confirmed list of features has been agreed.

The features designated as part of the Crymlyn Bog Ramsar Site are as follows:

- Topogenous fen (equates to topogenous fen SSSI feature);
- Slender cotton-grass (equates to slender cotton-grass SSSI feature);
- Peatland invertebrate assemblage (Equates to invertebrate assemblage SSSI feature); and
- Plant species assemblage

Conservation objectives for Ramsar features are currently to be developed, excluding topogenous fen which are to be developed with reference to the conservation objectives for transition mires and quaking bogs, and calcareous fens as listed for the SAC in **Table 7-1** above.

8. Stage 1 – Screening

8.1 Likely Significant Effects – Alone

The A465 Clydach Underbridge Scour Repair and Protection Measures will take place 3.2 km northeast of the Crymlyn Bog/ Cors Crymlyn SAC and Ramsar site.

Table 8-1 sets out the features of the SAC and Ramsar site, the potential impacts and the potential mechanism of impact and the screening result.

Table 8-1 – HRA Screening Table of Likely Significant Effects

Site	Potential Impact	Potential Cause of Impact	LSE? (Y/N)
Crymlyn Bog / Cors Crymlyn SAC - Transition mires and quaking bogs - Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> - Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)	Habitat loss / Physical damage	None of the works will take place in the SAC. Due to the distance of the SAC from the footprint of the Scheme, no direct or indirect loss of habitat will occur.	N
	Disturbance (e.g. physical)	None of the works will take place in the SAC. Due to the distance of the SAC from the footprint of the Scheme, and the work being confined to the area of the bridge piers, no physical disturbance to habitats within the SAC is anticipated.	N
	Accidental pollution during construction, maintenance and repair works	Due to the distance of the SAC from the footprint of the Scheme, accidental pollution during construction, maintenance and repair works is not anticipated to have an impact on habitats within the SAC. Although there is the potential for hydrological connectivity of the Scheme to the SAC, via the river and through groundwater flows, best practice measures for reducing pollution events would be in place during construction and work would be undertaken at low tide further reducing the risk of pollutants being carried downstream.	N
Crymlyn Bog Ramsar Habitats - Topogeneous mire - Transition mires and quaking bogs	Habitat loss / Physical damage	None of the works will take place in the Ramsar. Due to the distance of the Ramsar from the footprint of the Scheme, no direct or indirect losses of habitat is anticipated.	N

Site	Potential Impact	Potential Cause of Impact	LSE? (Y/N)
- Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> - Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) Species - Slender cotton-grass - Priority vascular plant species	Disturbance (e.g. physical)	None of the works will take place in the Ramsar. Due to the distance of the Ramsar from the footprint of the Scheme and the works being confined to the area of the bridge piers, no physical disturbance to habitats is anticipated.	N
	Accidental pollution during construction, maintenance and repair works	Due to the distance of the Ramsar from the footprint of the Scheme, and the low impact nature of the works, no accidental pollution during construction, maintenance and repair works is anticipated to have an impact on habitats or species within the Ramsar. Although there is the potential for hydrological connectivity of the Scheme to the SAC, via the river and through groundwater flows, best practice measures for reducing pollution events would be in place during construction and work would be undertaken at low tide further reducing the risk of pollutants being carried downstream.	N

8.2 Likely Significant Effects – In-combination

At the time of writing this report, no other schemes have been identified in areas near to the A465 Clydach Underbridge Scour Repair and Protection Measures that have the potential for combined LSE to the Crymlyn Bog/ Cors Crymlyn SAC and Ramsar site.

8.3 Stage 1 Screening Conclusion

The Scheme is not anticipated to have any LSE on the Crymlyn Bog/ Cors Crymlyn SAC and Ramsar site due to distance of the European designated site from the footprint of the Scheme in combination with the low impact nature of the works. Therefore, a Stage 2 – Appropriate Assessment for HRA is not recommended to be undertaken.

In-combination effects have been considered as part of this assessment and it has been concluded that there are no other plans or projects that could have the potential for any LSE in-combination with the Scheme.

AtkinsRéalis



James Richards
AtkinsRéalis UK Limited
West Glamorgan House
12 Orchard Street
Swansea
SA1 5AD

Tel: +44 (0)1792 641172
Fax: +44 (0)1792 472019
James.Richards@atkinsrealis.com

© AtkinsRéalis UK Limited except where stated otherwise