

Superseded

Appendix 7Q

Habitat Regulations Assessment
Report

Superseded

Welsh Government

Global Rail Centre of Excellence

Habitat Regulations Assessment
(HRA) Report

V2 18 January 2021

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 264904

Ove Arup & Partners Ltd
4 Pierhead Street
Capital Waterside
Cardiff CF10 4QP
United Kingdom
www.arup.com

ARUP

Superseded

Document Verification

ARUP

Job title		Global Rail Centre of Excellence		Job number		
				264904		
Document title		Habitat Regulations Assessment (HRA) Report		File reference		
				4-50		
Document ref						
Revision	Date	Filename				
Draft 1		Description				
			Prepared by	Checked by	Approved by	
		Name	Claire Pooley			
		Signature				
Issue	7 Jul 2020	Filename	Updated GCRE HRA 2020.docx			
		Description				
			Prepared by	Checked by	Approved by	
		Name	Pippa Wood	Claire Pooley	Paul Clack	
		Signature				
Version 2	February 2021	Filename	GCRE HRA 2020_Issue_V2			
		Description	Updated further to LPA comments			
			Prepared by	Checked by	Approved by	
		Name	Claire Pooley	Paul Clack	Paul Clack	
		Signature				
Issue Document Verification with Document						☒

Superseded

Contents

	Page
1 Introduction	1
1.1 Purpose of this Document	3
1.2 The HRA Process	3
1.3 Consideration of Mitigation	4
1.4 Structure of this Report	4
2 Project Description	5
2.1 Environmental Baseline	6
3 Guidance and Methodology	8
3.1 Guidance and Policy	8
3.2 Desk Study Information	8
3.3 Habitats Regulations Assessment Methodology	9
3.4 Limitations	10
4 European Sites Potentially Affected by the Proposal	12
4.1 Identification of Other Plans and Projects	16
5 Screening Assessment	18
5.1 Screening of European Sites	18
5.2 Consideration of Likely Significant Effects	18
5.3 In-Combination Assessment	21
6 Conclusion	22

Appendices

Appendix A

Habitats Regulations Assessment Process

1 Introduction

Ove Arup & Partners Ltd (Arup) was commissioned by Welsh Government to undertake a range of consultancy services in relation to the proposed railway test facility known as the Global Rail Centre of Excellence (the Project). A site location plan and red line boundary is provided in Figure 1.

The Welsh Government has developed a concept for a Global Centre of Rail Excellence (GCRE) in Wales. GCRE would be a modern, purpose-built rail testing and R&D facility for the UK. This initiative offers a unique opportunity to provide a centre of excellence for UK rolling stock and infrastructure testing, R&D, high capacity warm storage, maintenance, and decommissioning.

The proposed site is currently being mined by Celtic Energy, who will cease extraction operations in 2021, at which point Celtic Energy will be required to restore the land in accordance with regulatory requirements and agreements with Powys County Borough Council (PCBC) and Neath Port Talbot County Borough Council (NPTCBC)¹. This includes Section 106 planning obligations and planning conditions that need to be discharged.

Celtic Energy has submitted a revised restoration strategy for approval (under Section 73 application under the Town and Country Planning Act 1990) which would change the existing approved restoration scheme (for planning application ref 18/1070/REM). The purpose of the variation is to allow for a *'flexible and adaptable landform for a variety of uses on restoration including agriculture, nature conservation, leisure, tourism and some industrial uses'*².

One such revised restoration proposal was for the use of the site for the Welsh Government's proposal to develop a rail testing and storage facility GCRE at this site together with the adjacent Onllwyn Washery.

A separate planning application (reference no. 20/0738/FUL) and associated Environmental Impact Assessment (EIA) and Habitat Regulation Assessment (HRA) was produced by Arup, on behalf of Celtic Energy and submitted to PCBC and NPTCBC on the 12th May 2020, in relation to the Nant Helen Complementary Earthworks for the provision of GCRE³ (which has now been granted planning permission).

This HRA will accompany an outline planning application and EIA for the GCRE Project, submitted to PCBC and NPTCBC, who will therefore be the competent authorities, in accordance with Regulation 63 of the Habitat Regulations. The information provided here to inform an HRA, does not repeat the HRA completed in relation to the Nant Helen Complementary Earthworks but assesses the construction and operation of the proposed GCRE project.

¹ The site straddles two Local Authorities – Powys County Borough Council (PCBC) and Neath Port Talbot County Borough Council (NPTCBC).

² Celtic Energy s73 application for variation of condition 45 of planning application 18/1070/REM – further addendum to original environmental statement and supporting information submitted under planning reference 18/1070/REM including revised LVIA.

³ Celtic Energy Nant Helen Complementary Earthworks EIA application 20/0738/FUL.

Superseded

Furthermore, the assessment considers the ‘Future Baseline’, which is also described in the accompanying ecology Chapter within the associated EIA. The Future Baseline considers the site at the time of the GCRE Project commencing, including new habitats which will be created as part of the Nant Helen Complementary Earthworks Project in addition to the ecological receptors, which will be retained and protected (and enhanced), and additional habitats in the Washery, an area previously excluded from the Nant Helen application impact assessment but which now forms part of the GCRE project boundary.

Superseded

1.1 Purpose of this Document

This document has been prepared by Arup on behalf of our client, to provide information to inform a HRA report for the project in compliance with the requirements of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019; hereafter referred to as the 'Habitats Regulations'.

The formal assessment required by the Habitat Regulations will be undertaken by Planning Departments of PCBC and NPTCBC in the process of determining the applications in their role as Competent Authority.

1.2 The HRA Process

Regulation 63 of the Habitats Regulations requires a Competent Authority to make an 'Appropriate Assessment' of the implications of the plan or project for that site in view of its conservation objectives, before deciding to undertake or give consent for a plan or project which (a) is likely to have a significant effect on an International Site (either alone or in combination with other plans or project), and (b) is not directly connected with or necessary to the management of that site. In light of the conclusions of the assessment, the Competent Authority may proceed with or consent to the plan or project only after having ascertained that it will not adversely affect the integrity of the International Site.

All plans and projects should identify any Likely Significant Effects early in the plan/project making process and then either alter the plan/project to avoid them or introduce mitigation measures to the point where no adverse effects remain. The 'Competent Authority' shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned, and if appropriate having obtained the opinion of the general public.

The assessment of a project under the Habitats Regulations can be split into several sections as shown in Appendix A; however, there are effectively four stages to the assessment as described below.

Stage 1 is the assessment of the likelihood of a plan or project having a significant effect on an International Site or its features. If a Likely Significant Effect cannot be ruled out this is the trigger for the need for an Appropriate Assessment as set out in Regulation 63(1).

The Appropriate Assessment (Stage 2) is the detailed consideration of the potential effects of the plan or project in relation to the conservation objectives for the International Site(s) to determine if there is likely to be an adverse effect on the integrity of the site (i.e. an effect that would compromise the site meeting its conservation objectives). Providing it can be demonstrated that with appropriate mitigation measures the plan or project would not give rise to an adverse effect on the integrity of an International Site, the plan or project can proceed.

Where this cannot be demonstrated or there is uncertainty, the assessment would then need to consider if there were any other alternatives to the plan or project (Stage 3) that would not give rise to adverse effects on the integrity of the International Site.

If there are no alternatives, Stage 4 would then consider if there are any Imperative Reasons of Overriding Public Interest (IROPI), only at this stage can Compensatory Measures be considered.

1.3 Consideration of Mitigation

With regards to recent case law (Coillte vs People Over Wind⁴) the inclusion of mitigation during Stage 1 is no longer considered appropriate. Mitigation, as considered by the Centre Européen de Coopération Juridique (CECJ) in regard to the case law², is interpreted to mean measures that are intended to avoid or reduce the harmful effects of the envisaged project on the site concerned.

Consequently, any project where a Likely Significant Effect on an International Site cannot be ruled out and where avoidance and mitigation is applicable will need to progress to Stage 2 Appropriate Assessment.

1.4 Structure of this Report

This report uses the following structure:

- Section 2 provides information on the proposed works (the ‘proposed development’) including the environmental baseline and a brief description of the development;
- Section 3 provides information on the data and methodology used in the assessment;
- Section 4 provides information on the European Sites that are considered within the assessment;
- Section 5 provides a screening assessment for the potential pathways for effects; and
- Section 6 provides a conclusion.

⁴ People over Wind, Case C323/17 European Court of Justice, 12th April 2018.

2 Project Description

The Welsh Government is proposing to develop a rail testing, maintenance, research and development and storage facility, known as the Global Centre of Rail Excellence (GCRE) at the site of the Onllwyn Washery and Nant Helen Open

The site for the proposed development is approximately 475 ha and the project boundary is considered in this assessment as the footprint of the development (as shown in Figure 1) and is hereafter referred to as the 'Site'.

The proposed development includes the following components listed:

- Large railroad test loop (outer loop) - Electrified high-speed outer rail testing loop (6.9 km) which would extend around the perimeter of the site to enable the testing of moderate and higher-speed passenger trains up to a maximum 110 mph.
- High tonnage infrastructure test loop (inner loop) - Electrified low speed inner rail testing loop (4.5 km) for testing rail infrastructure. This will include track systems, civil structures, ancillary lineside equipment, signalling, power and telecommunications equipment. Trains will be able to run up to a line speed of 40 mph
- An operations and control centre/office and separate staff accommodation - A multi-storey control building from which testing activities would be managed. Separate staff accommodation which would also act as a general hub for site personnel.
- Research and development centre - The centre would provide opportunities for research, development, education and training / conference facilities including laboratory space.
- 4-road rolling stock maintenance shed - For trains undergoing testing at the facility. Capacity for 2no. 400 m trains and 2no. 230m trains simultaneously with provision of headshunt road at shed rear for increased operational flexibility. Internal provision of light and heavy maintenance roads.
- Warm and Cold Storage sidings - Sets of storage roads for the medium-long term storage of the Angel Trains fleets. Storage capacity for up to 400 vehicles with connections to shore supply units located incrementally along sidings.
- Carriage wash and Controlled Emission Toilet (CET) spine facility- A carriage wash facility to service trains up to 400 m including a (CET) point with canopy to control wash equipment, water and cleaning materials.
- Site Access - Access to the external highway network is proposed to be taken from existing junctions of the A4109 Wembley Avenue with Onllwyn Road, the A4221 Celtic Energy – Nant Helen access road, and the A4221 Washery and Distribution centre access which will be used by HGVs only.
- Decommissioning facility - This is a facility which allow for the decommissioning of rolling stock.

- Associated development - Across the site associated development would include access routes, staff car parking, drainage, lighting, mobile and land-based communications ‘hyper connectivity’, CCTV, fencing (including acoustic mitigation as required), Neath and Brecon Branch Line connection and signalling upgrade.

A full description of the proposed development is given in Chapter 3: Project description of the EIA.

2.1 Environmental Baseline

As described above, this HRA will consider the Future Baseline, which comprises the site subject to earthworks and habitat restoration (in accordance with the Nant Helen Complementary Earthworks planning application (reference no. 20/0738/FUL) and the further restoration works in accordance with a separate planning application (reference no. 19/1899/REM), to restore parts of the Nant Helen site post mining operations. For the purposes of this assessment, it is assumed that the earthworks and restoration works will have been approved and commenced / completed at the time of the GCRE Project commencing.

The future baseline therefore includes new habitats which will be created as part of the Nant Helen Complementary Earthworks Project in addition to the ecological receptors, which will be retained and protected (and enhanced), and those in the washery (not previously included in the Nant Helen Complementary Earthworks application but now form part of the GCRE Project site).

The Future Baseline will comprise the earthworks (including cutting and embankments) and associated infrastructure such as drainage and habitat restoration. The latter comprises the approved habitat restoration plan, required as part of a planning application by Celtic Energy to mitigate for mining activities on the Nant Helen site, and the habitat creation and enhancement plan which was submitted with the Nant Helen Complementary Earthworks application as mitigation for habitats affected by the earthworks.

The Future Baseline will therefore exclude habitats which will be lost as a result of the Nant Helen Complementary Earthworks Project, and which has been assessed within the separate ecology Chapter⁵. However, it will include the enhanced retained habitats and newly created habitats as set out in the Nant Helen Complementary Earthworks habitat creation and enhancement plan and shown in Figure 3.

In summary the habitat creation and enhancement plan include the creation of a habitat mosaic with the newly created landform and retained adjacent habitats. Habitats will include acid grassland, enclosed pasture and broadleaved woodland, heathland, peatland-mire complex, wetland and lichen / fungi rich habitats. The diversity of habitats created will encourage the growth and establishment of increased species numbers and diversity including notable flora which occurs in the adjacent, retained habitats. Further enhancements will be facilitated through

⁵ Arup (2020) Nant Helen Complementary Earthworks Environmental Statement: Ecology Chapter

Superseded

the long-term management of habitats such as conifer and broadleaved woodland, acid and marshy grassland in addition to wetland habitats.

The Future Baseline will also include additional land unaffected by the Nant Helen Complementary Earthworks (and which is also detailed in the existing baseline). In particular, land in the Washery which occurs within the GCRE Project boundary but was excluded from the Nant Helen Complementary Earthworks Project boundary. In addition, all the ecological receptors which are retained as part of the Nant Helen Complementary Earthworks Project, and which remain in the zone of influence (ZOI) of the GCRE Project will be included within the future baseline i.e. protected sites, habitats and species; which with the incorporation of mitigation as part of the Nant Helen Complementary, will continue to occur in the site, and adjacent areas. More information on these ecological receptors is detailed in the GCRE ecology ES chapter⁵.

3 Guidance and Methodology

This section sets out the guidance and evidence base used in assessing the potential effects of the proposed works.

3.1 Guidance and Policy

This information has been informed by the following guidance and policy documents:

- Planning Policy Wales - Technical Advice Note (TAN) 5: Nature Conservation and Planning⁶;
- The Planning Series: 16 – Habitats Regulations Assessment. National Assembly for Wales 2017⁷;
- Assessment of plans and projects significantly affecting Natura 2000 sites⁸, European Commission 2001⁹;
- Managing Natura 2000 sites, European Commission 2000¹⁰; and
- The Habitats Regulations Assessment Handbook, May 2019 edition, UK: DTA Publications Limited¹¹.

These documents and publications are intended to improve understanding of how projects are regulated under the Habitats Directive.

3.2 Desk Study Information

In addition to the guidance noted above, the following websites were used to gather information on the European Protected Sites;

- Natural Resources Wales (NRW) website¹²;
- MAGIC (Multi-Agency Geographic Information for the Countryside) website¹³, and;

⁶ Welsh Government. (2009). Planning Policy Wales - Technical Advice Note 5: Nature Conservation and Planning. Cardiff: Welsh Government.

⁷ Research Briefing: The Planning Series: 16 – Habitats Regulations Assessment. December 2017. National Assembly for Wales.

⁸ Natura 2000 sites are known as the National Network of Site in accordance with the latest Habitat Regulations: The Conservation of Habitats and Species (Amendment) (Eu Exit) Regulations 2019.

⁹ Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. (2001) European Commission.

¹⁰ Managing Natura 2000 sites. The provisions of Article 6 of the ‘Habitats’ Directive 92/43/CEE. (2000). European Commission.

¹¹ Tyldesley & Chapman, 2017. The Habitats Regulations Assessment Handbook, January 2017 Edition, UK: DTA Publications Limited.

¹² <http://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/find-protected-areas-of-land-and-seas/designated-sites/?lang=en>

¹³ <https://magic.defra.gov.uk/>

- Joint Nature Conservation Committee (JNCC)¹⁴.

The Core Management Plans for European Sites, and Regulation 35 information¹⁵ containing advice on European Sites were also obtained and have been used to inform this assessment.

These documents provide the main elements of NRW's management plan for European Sites along with the Conservation Objectives for the qualifying features. The qualifying features will be considered to be in Favourable Conservation Status only when the conservation objectives are being met. These objectives therefore provide an indication of the type of effects which could affect the features of European Site. An effect which could affect the ability of a site or feature meet its objective could be considered to be an adverse effect on the integrity of the European Site concerned.

3.3 Habitats Regulations Assessment Methodology

3.3.1 Identifying sites

In order to understand the potential implications for European Sites from the proposed project it is necessary to identify those sites that are located close to the project or are linked by pathways, such as hydrological connections.

All European Sites within 10 km and all Special Areas of Conservation (SACs) designated for the presence of marsh fritillary *Euphydryas aurinia* within 10-15 km and for the presence of Annex II bat species within 15-30 km of the project were identified using Geographic Information System data from datasets downloaded from the JNCC and NRW.

3.3.2 Understanding qualifying interests and conservation objectives

For each of the sites identified, the qualifying features were established and the conservation objectives for each feature were obtained. Information was also sought to understand the potential vulnerability of the features to any effects that might arise from the project.

3.3.3 Identification of the potential effects of the project

Any potential pathways for effect on European Sites resulting from the project were identified prior to consideration of best practice procedures (for example, Guidelines for Pollution Prevention¹⁶ and Construction Industry Research and

¹⁴ <https://jncc.gov.uk/our-work/special-areas-of-conservation-overview/>

¹⁵ <http://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/find-protected-areas-of-land-and-seas/advice-for-developers-and-marine-planners/?lang=en>

¹⁶ <http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppps-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/>

Information Association (CIRIA) guidance) or the integration of any mitigation measures.

3.3.4 Identification of plans or projects considered for in-combination effects

An ‘in-combination’ assessment is required where the project may have an effect on a European site, but on its own the effects would not be significant. The potential effects of the project should be considered in-combination with other plans or projects that similarly may have an effect, but where on their own those effects would not be significant. The combined effects may therefore become significant.

Details of other plans and projects which are currently proposed or consented within the vicinity of the European Sites identified were obtained to inform the in-combination assessment of the proposed project.

3.3.5 Consideration of the significance of potential effects

The significance of potential effects was assessed in the absence of avoidance or other mitigation measures other than those which are standard construction practices such as pollution control or those incorporated into the scheme. The assessment has been made with awareness of the conservation objectives for the features of the European Sites, although as stated in the relevant guidance the assessment of the project against the conservation objectives is not required until the Appropriate Assessment stage of the HRA process.

In the assessment of the significance of effects, professional judgement was applied using the following criteria, as often insufficient information about the elements and interests is available:

- The vulnerability/sensitivity of the receiving environment/features of interest;
- When the risk of effects is likely to occur (e.g. construction and/or operation);
- The likely geographical extent of the effects; and
- Likelihood of significant effects (e.g. those above negligible in magnitude) occurring based on previous experience with similar elements, where available.

Where there was not enough information about the risk of qualifying interest being present, or of the risk of effects, the assessment used the precautionary principle to inform the judgement. This principle means that the conservation objectives should prevail where there is uncertainty or that harmful effects will be assumed in the absence of evidence to the contrary.

3.4 Limitations

Information provided by third parties, including publicly available information and databases, is considered correct at the time of publication. Due to the dynamic

Superseded

nature of the environment, conditions may change in the period between the preparation of this report, and the construction and operation of the project.

The HRA has been undertaken in as detailed a way as possible, using available data sources. However, the conclusions drawn from this is necessarily limited by the age, type, coverage and availability of data. Any uncertainties and the limitations of the assessment process are acknowledged and highlighted. Recommendations for mitigation measures to address the potential adverse effects on International Site integrity identified by this report are also based on the information available at the time of the assessment.

4 European Sites Potentially Affected by the Proposal

A 10 km search area is considered sufficient to identify any potential impacts on the majority of European Sites, except sites which have mobile qualifying features (and which may have ranges that extend beyond 10 km).

The European Sites identified within 10 km of the proposed works are as follows (distances and direction are measured as a straight line from the Project location to the European Site):

- Coedydd Nedd a Mellte SAC: approximately 2.9 km south-east; and
- Cwm Cadlan SAC: approximately 9.5 km east.

In addition, a search was undertaken of European Sites designated for marsh fritillary, within 10-15 km of the project, since this species is known to range up to 15 km from its primary habitat (and due to records of this species being present in vicinity of the site). European Sites designated for marsh fritillary are detailed below.

- Blaen Cynon SAC: 4 compartments, with the closest being approximately 9.2 km east.

In addition, a search was undertaken of European Sites designated for Annex II bat species within 10-30 km of the project, since some species of bats are known to range up to 30 km from roost site locations. No bat SACs are within 30 km of the project.

Figure 2 shows the location of the project in relation to European Sites within 15 km of the project. The features for which these Sites are designated are summarised in Table 1.

Table 1 Qualifying Features of the European Sites identified within 10 km and 10-15 km for marsh fritillary SAC.

Site	Qualifying Features	Importance	Conservation Objectives Summary	Vulnerability
Coedydd Nedd a Mellte SAC	<i>Tilio-Acerion</i> forests of slopes, screes and ravines. Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles.	Tilio-Acerion forests of slopes, screes and ravines for which the area is considered to support a significant presence. Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles for which this is considered to be one of the best areas in the United Kingdom.	• Upland ash woodland will occupy at least 18 ha of the total site area. • The canopy should be predominantly ash and the following trees will be common in the woodland. • Ferns will be common ground flora species. • Although they may be present in the canopy in small quantities, sycamore and beech should not become dominant at the expense of ash. • Introduced invasive species will be absent and any conifers seeding in from adjoining plantations will be removed whilst at the seedling/sapling stage. • Damage to the ground flora and soil erosion due to public pressure will be at a minimum. • All factors affecting the achievement of these conditions are under control.	Livestock grazing, non-native species, woodland management, Access and Visitor management and human and grazing induced bare ground.
Cwm Cadlan SAC	Molinia meadows on calcareous, peaty or clayey-silt-laden soils	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) for which this is considered to	• Fen-meadow will occupy at least 26 ha of a total area of marshy grassland habitat which itself will cover at least 42 ha. • The remainder of the site will mainly consist of other semi-natural habitat, including alkaline fen. • Typical fen-meadow plants will be common.	Human induced changes in hydraulic conditions, air pollution, air-borne pollutants, problematic native species, biocenotic evolution,

Superseded

Site	Qualifying Features	Importance	Conservation Objectives Summary	Vulnerability
	(<i>Molinion caeruleae</i>). Alkaline fens.	be one of the best areas in the United Kingdom. Alkaline fens for which this is considered to be one of the best areas in the United Kingdom.	• Plants indicating agricultural modification or alteration to hydrology and drying of soils will be absent or present at only low cover. • Although rushes are frequent, the more bulky species will not exceed 33% cover. • Bare ground will generally not exceed 5% cover and vegetation litter 25%. • Dense scrub will be largely absent from the fen-meadow, but it is probably desirable for invertebrates and birds to have a sparse scattering of shrubs or trees. • All factors affecting the achievement of these conditions are under control. • Alkaline Fen will occupy about 11 ha or more. • The remainder of the site will mainly consist of other semi-natural habitat including fenmeadow. • Typical alkaline fen plants will be common. • Plants indicating agricultural modification or alteration of hydrology and drying of soils will be absent or present only at low cover. • Although rushes are frequent, the more bulky species will not exceed 33% cover. • Bare ground will generally not exceed 5% cover and vegetation litter 10 %. • Scrub species will be largely absent from the alkaline fen. • At selected springheads, water should flow in all but the most severe drought conditions. • All factors affecting the achievement of these conditions are under control.	succession, fertilisation and grazing.

Superseded

Site	Qualifying Features	Importance	Conservation Objectives Summary	Vulnerability
Blaen Cynon SAC	Marsh fritillary butterfly (<i>Euphydryas aurinia</i>)	<i>Eurodryas aurinia</i> which this is considered to be one of the best areas in the United Kingdom.	The site will contribute towards supporting a sustainable metapopulation of the marsh fritillary in the Penderyn/Hirwaun area. This will require a minimum of 50 ha of suitable habitat, of which at least 10 ha must be in good condition, although not all is expected to be found within the SAC. Some will be on nearby land within a radius of about 2km. • The population will be viable in the long term, acknowledging the extreme population fluctuations of the species. • A minimum of 30% of the total site area will be grassland suitable for supporting marsh fritillary. (As the total area of the SAC is 66.62 ha, 30% represents approximately 20 ha.) • At least 40% of the suitable habitat (approximately 8 ha) must be in optimal condition for breeding marsh fritillary. • Suitable marsh fritillary habitat is defined as stands of grassland where <i>Succisa pratensis</i> is present and where scrub more than 1 metre tall covers no more than 10% of the stands. • Optimal marsh fritillary breeding habitat will be characterised by grassland where the vegetation height is 10-20 cm, with abundant purple moor-grass <i>Molinia caerulea</i>, frequent “large-leaved” devil’s-bit scabious <i>Succisa pratensis</i> suitable for marsh fritillaries to lay their eggs and only occasional scrub. In peak years, a density of 200 larval webs per hectare of optimal habitat will be found across the site.	Owner objectives, weather conditions, parasites.

4.1 Identification of Other Plans and Projects

In January 2021, planning applications¹⁷ were searched for within 500 m of the proposed works and within the last year. These are included below:

- Land At And Surrounding Nant Helen Open Cast Coal Site Powys And Onllwyn Distribution Centre, Neath Port Talbot. Ref. No: 20/0738/FUL Validated: Fri 15 May 2020 | Status: Pending Consideration: Construction of complementary restoration earthworks to create 2 looped landform platforms (part in cutting and part on embankment) with associated drainage infrastructure and areas of landscaping and habitat creation to create a flexible and adaptable area of land that could be used for a variety of uses including agriculture, nature conservation, leisure, tourism and industrial, research and development/business uses (potentially including a proposed rail testing, research and development and storage facility). (Cross-boundary application, see Neath Port Talbot CC Application ref. P2020/0362)
- Ref. No: 19/1899/REM | Validated: Mon 11 Nov 2019 | Status: Unknown: Section 73 application to vary condition 45 of planning permission 18/1070/REM in relation to restoration scheme. Nant Helen Surface Mine Coelbren Neath Powys
- Ref. No: 20/0325/HH | Validated: Fri 06 Mar 2020 | Status: Pending Consideration: Erection of an extension, 2 Moorside Villas Onllwyn Road Coelbren Neath SA10 9NR
- Request for scoping opinion (under Regulation 14 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 in respect of a proposed application for a rail testing and storage facility, known as the Global Centre of Rail Excellence (GCRE), and incorporating:- a Rolling Stock and Infrastructure Testing Facility (consisting of two test tracks of loop configuration, one 4.5km, inside a larger loop of 6.9km in length), New buildings including Test Platform/Station, Control Building, Research and Development Centre, Rolling Stock Maintenance Shed, Decommissioning facility and Rail Sidings, Winch-propelled facility for testing of track and track systems, Carriage Wash facility, plus ancillary development including land reformation, landscaping, infrastructure works and access (affecting land within Neath Port Talbot and Powys County Council administrative boundaries). Land at and surrounding the Nant Helen open cast coal site, Powys and Onllwyn distribution centre, SA10 9NN. Pending decision.
- P/2018/0524: Outline-proposed replacement dwelling (some matters reserved), Glendale. A building has been proposed for demolition.

¹⁷ <https://pa.powys.gov.uk/online-applications> and <https://www.npt.gov.uk/1617> [accessed 20.11.2019]

Superseded

Ecological surveys have been undertaken and no protected species have been found using the building.

- 19/1520/HH: Erection of a single storey side extension at Tynyant farm caehopkin Abercrave, SA9 1UE. Pending decision.
- 19/0625/AGR: Erection of an agricultural building at Tynyant farm Caehopkin Abercrave, SA9 1UE.

5 Screening Assessment

5.1 Screening of European Sites

The European Sites identified in Section 4, and potential pathways for impact and Likely Significant Effects have been considered within the following assessment. These Sites include:

- Coedydd Nedd a Mellte SAC;
- Cwm Cadlan SAC; and
- Blaen Cynon SAC.

5.2 Consideration of Likely Significant Effects

Potential effects on Coedydd Nedd a Mellte SAC and Cwm Cadlan SAC are limited to 1) water quality effects: pollutants (fuel, chemical spills, dust and vehicle emissions) from construction or during operation of GCRE or high sediment load in surface water runoff from construction areas; and 2) air quality effects during both construction and operation: increases in levels of nitrogen oxides (NOx), sulphur dioxide (SO2) and ammonia (NH3), which can be absorbed directly or indirectly i.e. through deposition, which affects the soil pH or causes nutrient enrichment of the soil.

There are also potential effects on Blaen Cynon SAC, marsh fritillary metapopulations should be present within vicinity of the Site. Marsh fritillary habitats could be affected indirectly through air or water quality effects, or marsh fritillary affected directly through construction or operational activities on the Site.

Coedydd Nedd a Mellte SAC – Construction and Operational Impacts

Coedydd Need a Mellte SAC is located 2.9 km from the Site. It is designated for its important Tilio-Acerion forests of slopes, screes and ravines and ols sessile oak woods with Ilex and Blechnum. Air quality assessments¹⁸ have screened out potential impacts on air quality from vehicle emissions during construction and operation, although it has been shown that there is a low risk of air quality effects to nearby receptors as a result of dust during construction and train emissions during operation.

Due to the distance / spatial separation of the SAC from the proposed works, and nature of likely air quality impacts, it is considered that any changes in air quality would not result in any effects to Coedydd Need a Mellte SAC. This is supported in the air quality assessment.

¹⁸ Arup (2020) Nant Helen Complementary Earthworks Environmental Statement: Air Quality Chapter

There is the potential for changes in water quality to adversely affect Coedydd Nedd a Mellte SAC, since it is located in the downstream catchment of the Site during construction and or operation, although at 2.9 km from the proposed works it is considered that any pollution / sedimentation of connecting watercourses would have been diluted, and any effects would not be significant to the SAC.

Additionally, Coedydd Nedd a Mellte SAC is not designated for any qualifying species which are known to or could occur with the Site.

Due to the lack of pathways and likely significant effects on Coedydd Nedd a Mellte SAC, no specific mitigation or Appropriate Assessment are required. It is acknowledged however that standard best practice pollution control measures will be implemented during construction to protect habitats within and in connectivity to the Site.

Cwm Cadlan SAC – Construction and Operational Impacts

Cwm Cadlan SAC's closest point is 9.5 km from the proposed works. The SAC is designated for its important *Molinia* meadows and alkaline fen habitat.

The SAC is not hydrologically connected to the Project area, and therefore there is no pathway for effects from changes in water quality. Due to the distance / spatial separation of the SAC from the proposed works it is considered that any changes in air quality would not result in any effects. As discussed above, in relation to Coedydd Nedd a Mellte SAC, air quality effects from the Project are considered likely to be limited to dust during construction and train emissions during operation and this is only considered likely to affect nearby receptors.

Additionally, Cwm Cadlan SAC is not designated for any qualifying species which are known to or could occur with the Site.

Due to the lack of pathways for likely significant effects on Cwm Cadlan SAC, no specific mitigation or Appropriate Assessment are required. It is acknowledged however that standard best practice pollution control measures will be implemented during construction to protect habitats within and in connectivity to the Site.

Blaen Cynon SAC – Construction and Operational Impacts

The closest compartment of Blaen Cynon is located 9.2 km from the Site. It is designated for its population of marsh fritillary; a species which exists in metapopulations and are known to range up to 15 km from its primary habitat¹⁹. The SAC is not hydrologically connected to the Site, and at such a distance, any air quality effects would not be significant (as discussed above in relation to Cwm Cadlan SAC and Coedydd Nedd a Mellte SAC).

Although purple moor grass and rush pasture (or Rhos pasture) that supports the larval foodplant devil's-bit scabious (and therefore the habitat often used by this

¹⁹ Warren M.S. 1994. The UK status and suspected metapopulation structure of a threatened European butterfly, the marsh fritillary *Eurodryas aurinia*. Biol. Conserv. 67: 239–249

Superseded

species) is present within and adjacent to the Site, invertebrate surveys²⁰ found no evidence of marsh fritillary using habitats within the Site. Surveys assessed the majority of Rhos pasture habitat within the Site as being unsuitable for this species (due to being in poor condition as a result of agricultural improvement and overgrazing and having little or no growth of the larval food plant). Devil's-bit-scabious was, however, abundant in the south west of the Nant Helen site (adjacent to the Afon Dulais, approximately 1km south of the Site), as well as occasional plants being present in other areas of marshy grassland.

Marsh fritillary are however known to be present in the SINC: Land at Marigold Place, approximately 900 m south of the Site, the Wildlife Trust Nature Reserve, approximately 1.5 km north west of the Site, at Rhos Common, Crynant, approximately 3.5 km south west of the Site, in addition to being present in Ystradgynlais further to the north. These marsh fritillary sites are considered to contribute to a significant metapopulation within the region (pers comm, PCBC ecologist).

Potential effects could occur to this species, if they were to occur within any habitats of the Site or adjacent habitats, and due to being within the dispersal range, affected species could be connected to the Blaen Cynon SAC. In addition, indirect effects to these habitats within the wider area could occur as a result of changes in water quality. Air quality effects are not anticipated due to the distance of these sites / habitats. It is also not anticipated that the proposed works will result in any changes to the groundwater regime, or groundwater dependant ecosystems which would include marshy grassland habitats suitable for marsh fritillary.

During construction of the GCRE project it is not anticipated that marsh fritillary will be present on Site, considering the current absence and absence of suitable habitat. Although it is acknowledged that impacts are being assessed against the future baseline, and the Site will be subject to habitat enhancements as part of the Nant Helen Complementary Earthworks, it is unlikely that in the short-term habitats would become suitable to support marsh fritillary.

In the longer term, there is the potential for marsh fritillary to be present within the Site as a result of the Nant Helen Complementary Earthworks habitat management, which will aim to enhance areas of marshy grassland. Therefore, it is possible that these areas would support a higher abundance of devil's bit scabious and be more suitable for marsh fritillary. Any marsh fritillary present in the Site would be at risk from collision with train and or vehicle traffic, during the operation phase of GCRE.

Impacts on butterfly mortality from collision with trains, has not been well researched although studies on vehicle traffic collision have shown that there can be a significant risk of mortality to butterflies is dependent on various factor such as the presence of adjacent species rich verges²¹. It is acknowledged, however,

²⁰ Further ecological details provided in the: Nant Helen Invertebrate Report; Arup (2019) prepared for Celtic Energy

²¹ Skórka, Piotr & Lenda, Magdalena & Moroń, Dawid & Kalarus, Konrad & Tryjanowski, Piotr. (2013). Factors affecting road mortality and the suitability of road verges for butterflies. Biological Conservation. 159. 148–157. 10.1016/j.biocon.2012.12.028

that the risk of collision with train traffic is likely to be significantly lower than with road / highway traffic, due to the lower number of trains travelling at one location on a track. In addition, potential collision with vehicles on roads within the Site, is considered to be a very low risk since the proposed roads will not be used frequently.

Therefore, despite the potential presence of marsh fritillary within habitats adjacent to the train tracks and roads, during the operation phase of GCRE, the anticipated low volume of train and vehicle traffic (relative to highways) is not considered to be a significant collision risk to local marsh fritillary populations, or metapopulations. In addition, there would be no potential adverse impacts on the Blaen Cynon SAC metapopulations. More importantly, the enhancement of marshy grassland within the Site for marsh fritillary is considered to be a significant benefit to important metapopulations of this species and which will outweigh the potential low risk of species mortality from collision.

5.3 In-Combination Assessment

No effects are anticipated from the proposed improvement works alone; as such, there cannot be an in-combination effect with other plans and projects. It is therefore reasonable to conclude that the application will not have a Likely Significant Effect in-combination with other plans and projects.

Superseded

6 Conclusion

Based on results presented above, it is reasonable to conclude that there are **no effects**, either alone or in-combination with other plans and projects, resulting from the proposed improvement works.

Given the conclusion that the proposal is not likely to have a significant effect on European Sites, nor are mitigation measures proposed to avoid, reduce, or cancel potential effects, the requirement to complete a Stage 2: Appropriate Assessment has not been triggered.

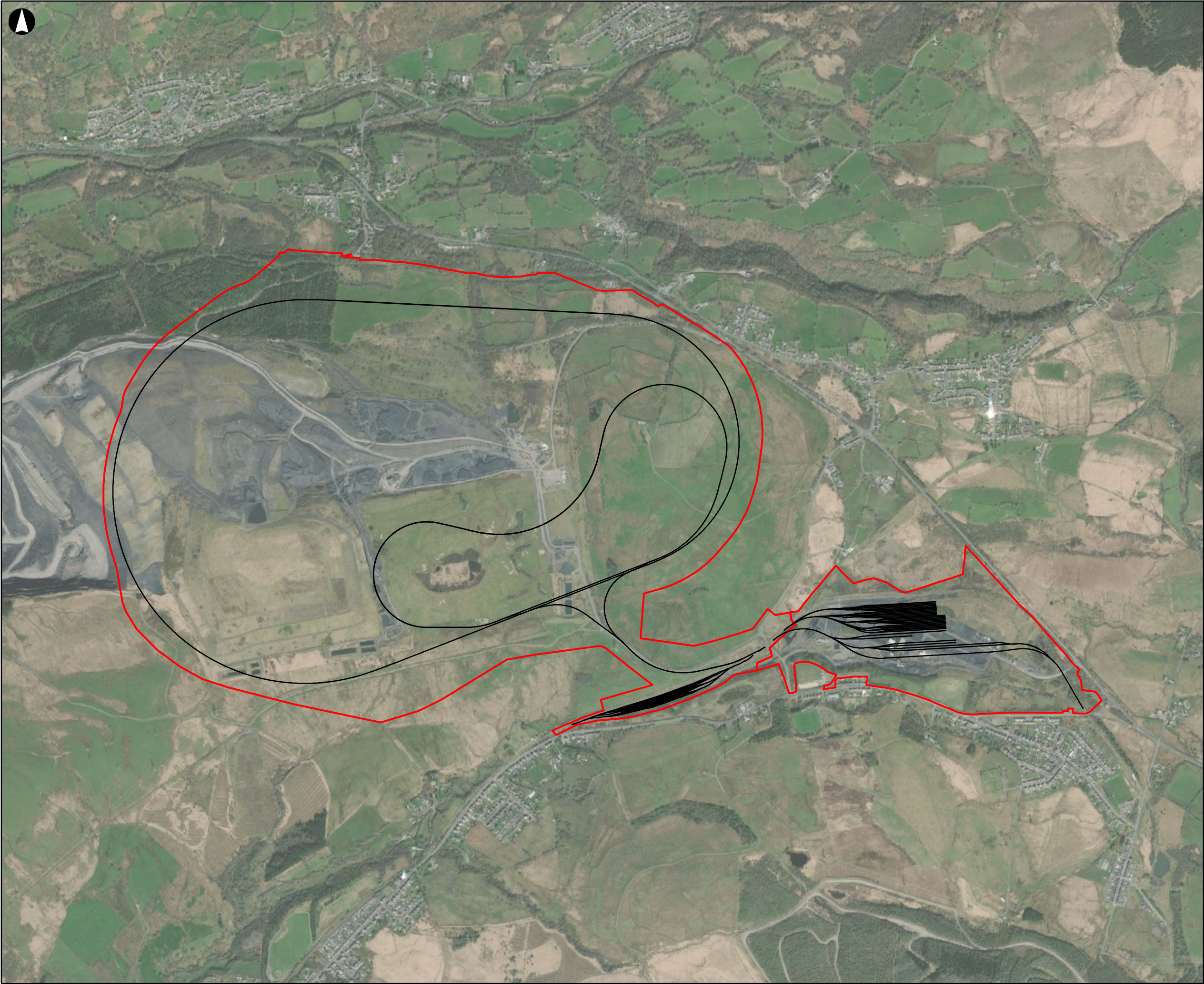
As a consequence, the proposed works are not considered to be contrary to the provisions of Regulation 63 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

Superseded

Figures

Superseded

A3



Legend

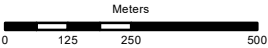
Planning Development Boundary

Site Layout Plan

Proposed Access Road

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

P01.3	2020-08-05	KD	CP	NH
Issue	Date	By	Chkd	Appd



ARUP

4 Pierhead Street
Cardiff CF10 4QP
Tel +44 29 2047 3727 Fax +44 29 2047 2277
www.arup.com

Client


Llywodraeth Cymru
Welsh Government

Job Title

Global Centre of Rail Excellence

Figure Title

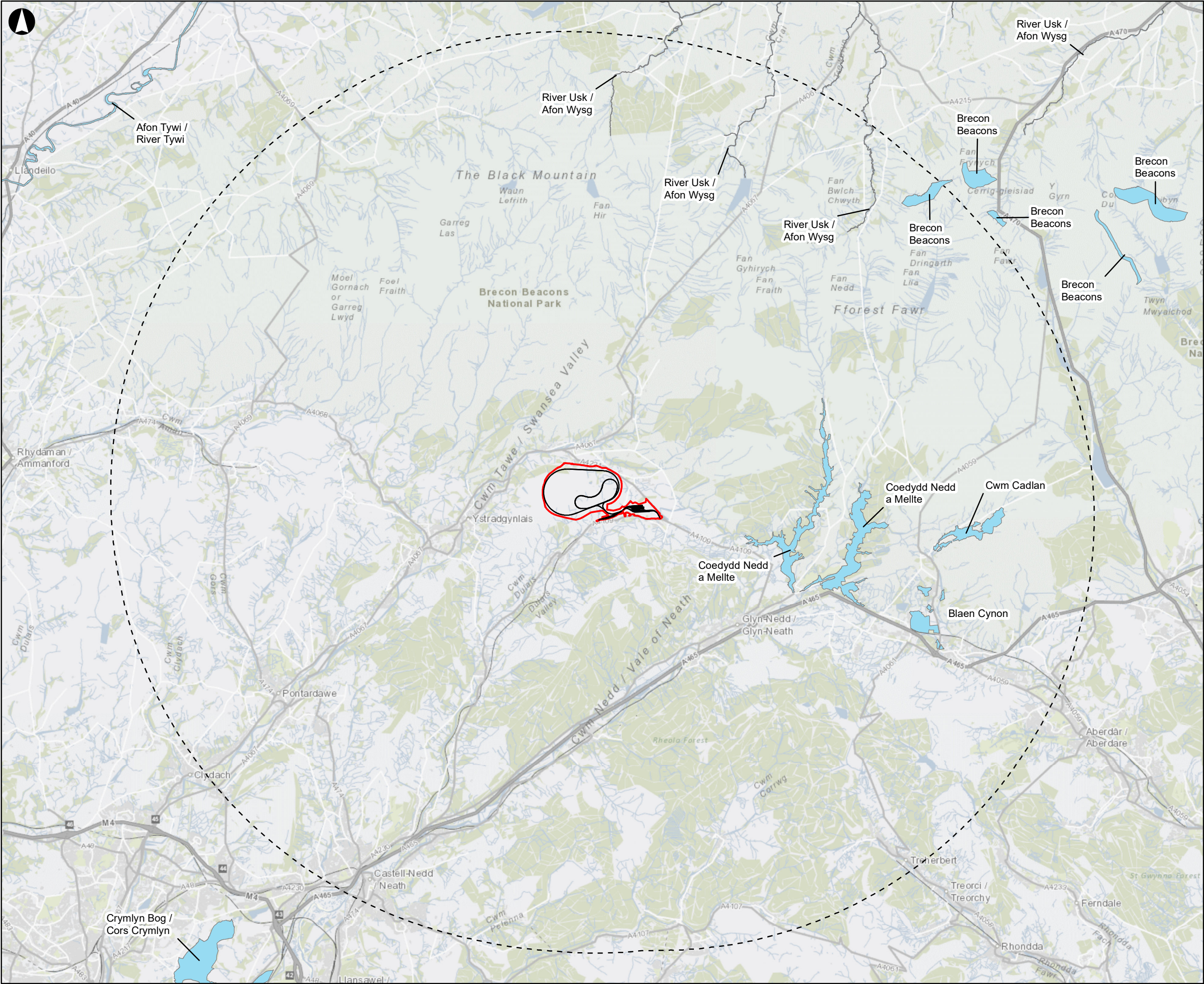
SITE LOCATION

Scale at A3

1:15,000

Job No	Drawing Status
264904	For Issue

Drawing No	Issue
Figure 7.1	P01.3

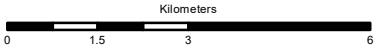


Legend

- Planning Development Boundary
- Site Layout Plan
- Proposed Access Road
- Study Area - 15km Buffer
- Special Area of Conservation (SAC)

Contains OS data © Crown Copyright and database right 2020
Contains public sector information licensed under the Open Government Licence v3.0.

P01.3	2020-08-05	KD	CP	NH
Issue	Date	By	Chkd	Appd



ARUP

4 Pierhead Street
Cardiff CF10 4QP
Tel +44 29 2047 3727 Fax +44 29 2047 2277
www.arup.com

Client

Llywodraeth Cymru
Welsh Government

Job Title

Global Centre of Rail Excellence

Figure Title

INTERNATIONAL STATUTORY DESIGNATED SITES

Scale at A3

1:125,000

Job No	Drawing Status
264904	For Issue

Drawing No	Issue
Figure 7.2	P01.3

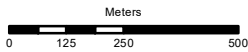
A3



- Legend**
- Planning Development Boundary
 - Site Layout Plan
 - Access Road
 - EXISTING WATERCOURSE
 - MIXED WOODLAND POTENTIAL FOR ENHANCEMENT
 - ACID GRASSLAND POTENTIAL FOR ENHANCEMENT
 - MARSHY GRASSLAND POTENTIAL FOR ENHANCEMENT
 - PEATLAND
 - WET HEATH
 - HEATH EXISTING
 - INOCULATED HEATH/ACID GRASSLAND
 - ACID GRASSLAND
 - ACID GRASSLAND EXISTING
 - ACID GRASSLAND LICHEN HEATH
 - BROADLEAF WOODLAND
 - BROADLEAF WOODLAND EXISTING
 - CONIFEROUS WOODLAND
 - CONIFEROUS WOODLAND MANAGED FOR BROADLEAVED WOODLAND
 - CONIFEROUS WOODLAND EXISTING
 - ENCLOSED PASTURE
 - HEATH/ACID GRASSLAND EXISTING
 - MARSHY GRASSLAND
 - POTENTIAL SPHAGNUM-RICH / FEN-MIRE
 - POND
 - WETLAND
 - Landscape Mitigation
 - Restoration Watercourse
 - Restoration Watercourse to be removed/discontinued
 - Proposed Cut Off Ditch
 - Proposed Carrier Drain
 - Proposed Culvert
 - Proposed Filter Drain
 - Proposed Ponds

P01.3	2020-08-04	KSJ	CP	RE
-------	------------	-----	----	----

Issue	Date	By	Chkd	Appd
-------	------	----	------	------



ARUP

4 Pierhead Street
Cardiff CF10 4QP
Tel +44 29 2047 3727 Fax +44 29 2047 2277
www.arup.com



Job Title
Global Centre for Rail Excellence

Figure Title
HABITAT CREATION AND ENHANCEMENT

Scale at A3
1:16,500

Job No 264904	Drawing Status For Issue
-------------------------	------------------------------------

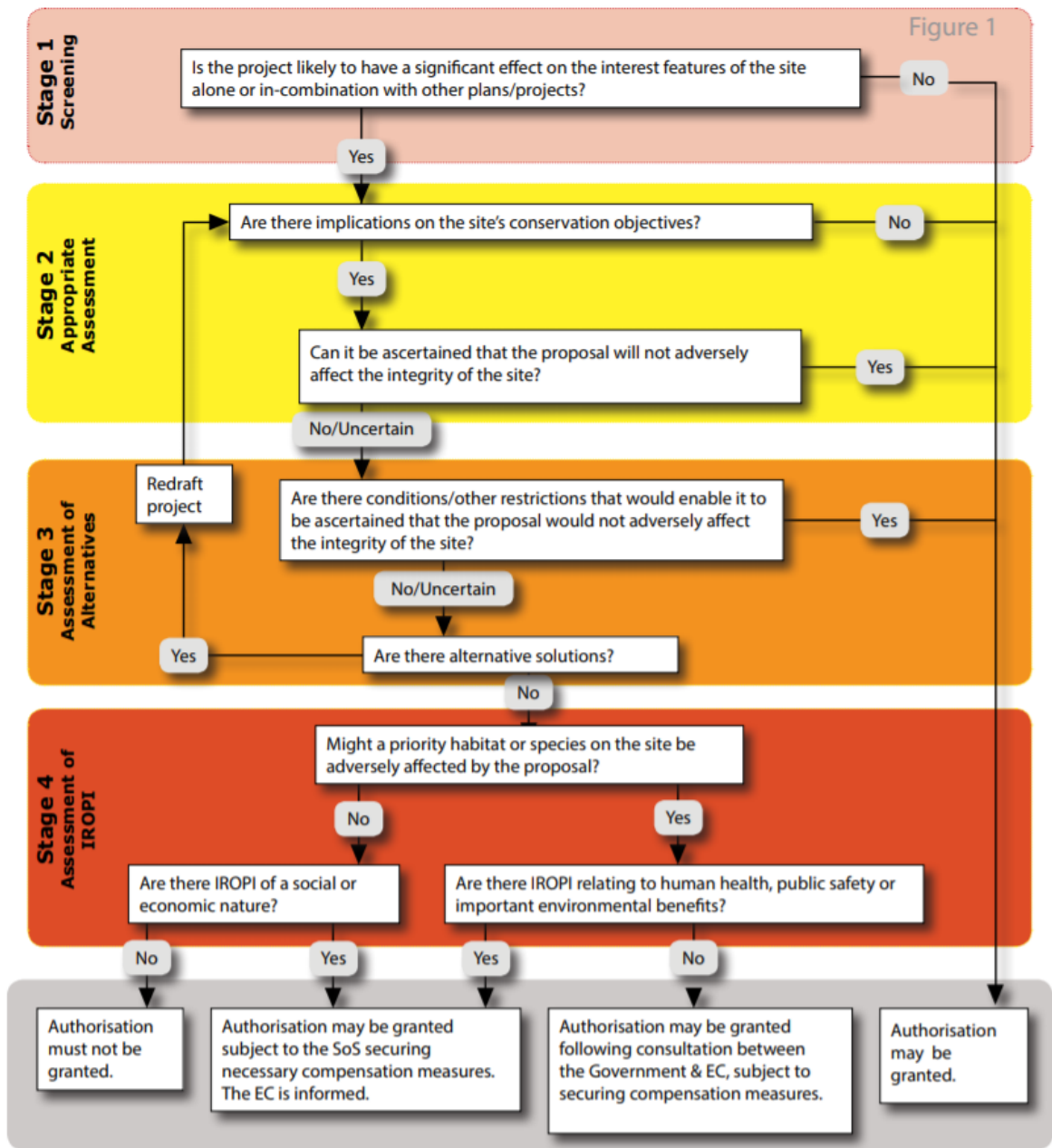
Drawing No Figure 7.9	Issue P01.3
---------------------------------	-----------------------

Superseded

Appendix A

Habitats Regulations Assessment Process

A1 Habitat Regulations Assessment Process



Copied from: The Planning Inspectorate, 2017. Habitat Regulations Assessment relevant to nationally significant infrastructure projects. Version 8, November

Superseded

