Appendix 2A
Scoping Report

NGED

UPPER OGMORE GRID CONNECTION

Scoping Report

APRIL 2025

PUBLIC

NGED

UPPER OGMORE GRID CONNECTION

Scoping Report

PUBLIC

PROJECT NO. UK0028130.1329

DATE: APRIL 2025

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1 INTRODUCTION

1.1 DESCRIPTION OF THE PROJECT

1.1.1. This Scoping Report is in relation to the Upper Ogmore Wind Farm electricity network infrastructure connection (herein after referred to as the 'Project' or 'Site'). The Project will comprise of both underground cables (UGC) and 66kV (kilovolt) overhead lines (OHL) which will provide a connection between Upper Ogmore wind farm and the wider national grid. The Project is located mainly within Bridgend County Borough Council (BCBC), though partially traverses through Neath Port Talbot County Borough Council (NPTCBC) (see **Figure 1-1** and **Figure 1-2**).

1.1.2. National Grid Electricity Distribution (NGED) (the Applicant) has requested consultancy support to prepare and submit an application for a development of national significance (DNS). The application will be to construct and operate a proposed grid connection connecting the DNS consented Upper Ogmore Wind Farm to the National Grid. The connection will consist of approximately 4.2km of underground cabling and approximately 4.8km of OHL. Whilst the requirement for a DNS application is triggered by the overhead section, the whole of the connection will require DNS consent.

1.1.3. In relation to the England and Wales High Court (Administrative Court) Decisions (2019)[1], the Project is considered to be relevant to the following factor:

- "*iii. Functional interdependence - where one part of a development could not function without another, this may indicate that they constitute a single project (Burridge at [32], [42] and [78])*".

1.1.4. The Environmental Statement (ES) will therefore consider in each ES chapter the in-combination effects between the consented Upper Ogmore Wind Farm, and the proposed electricity connection (the 'Project' which is subject to this Scoping Report).

1.1.5. *The wider context of the Project should also be considered, and is outlined below in relation to the nearby Foel Trawsnant Grid Connection:*

- *The Project will connect into the Foel Trawsnant Grid Connection (FTNGC), which is subject to a separate DNS and is being progressed by a different applicant (reference: CAS-02505-N3T6M4; applicant: Pennant Walters).*
- *The FTNGC is a scheme to connect the approved Foel Trawsnant Wind Farm to a point of connection (PoC) identified by National Grid approximately 4km north of Pyle.*
- *FTNGC and the Project will share the same PoC.*
- *While the FTNGC is a stand-alone scheme, this Project relies on the delivery of the FTNGC to connect to the PoC.*
- *As a result, the intention is that the Project would run from the Upper Ogmore Wind Farm to a connection point within the FTNGC, at which point the connection would run to the PoC.*

[1] Wingfield, R (On the Application Of) v Canterbury City Council (2019) EWHC 1975 (Admin). [online]. Available at: https://www.bailii.org/ew/cases/EWHC/Admin/2019/1975.html [Accessed: 07 February 2025].

- *The application for this Project is for the grid connection section between the Upper Ogmore Wind Farm and the FTNGC only.*
- *Accordingly, the ES for this Project will consider the cumulative environmental effects resulting from the FTNGC, as well as the Upper Ogmore Wind Farm.*

1.1.6. *We trust the above is acceptable to PEDW and that acceptance of this approach is confirmed in the subsequent Scoping Direction.*

1.1.7. In order to support the application, a number of environmental studies will need to be undertaken. The extent of these studies will be confirmed via this Scoping Report, which will be submitted to Welsh Ministers. The subsequent studies and assessments will be reported within an ES. Other documents may also be required to accompany the submission of the Environmental Statement, such as a Construction Traffic Management Plan (CTMP) and Construction Environmental Management Plan (CEMP).

LOCATION

1.1.8. Starting at the western-most section (see **Figure 1-1**), the route begins to the west of the A4063 near Caerau, as an OHL for approximately 1.1km. As the route reaches Caerau, the route then transitions into UCG, following the existing highway network for approximately 1.7km to the north. Immediately before reaching Brynheulog Road, the route goes back to OHL for approximately 3.7km to the east. To the northwest of Blaengarw, close to Mynydd Caerau, the route transitions back into UGC and continues west for approximately 2.5km.

1.1.9. The western-most OHL section predominately travels through a mix of gorse scrub, modified grassland and upland acidic grassland. The northern section of the UCG travelling through Caerau is predominantly through built environment, consisting mainly of residential properties. Once the cable transitions back to an OHL, it traverses through a mosaic of several habitat types. Initially, it passes through purple moor-grass and rush pastures for approximately 0.81km to the south of Brynheulog Road. The OHL then passes through an area of other broadleaved woodland for approximately 0.13km, to the south of Croeserw, before continuing through areas of upland acidic grassland and upland rush pasture.

Figure 1-1 - Site Location

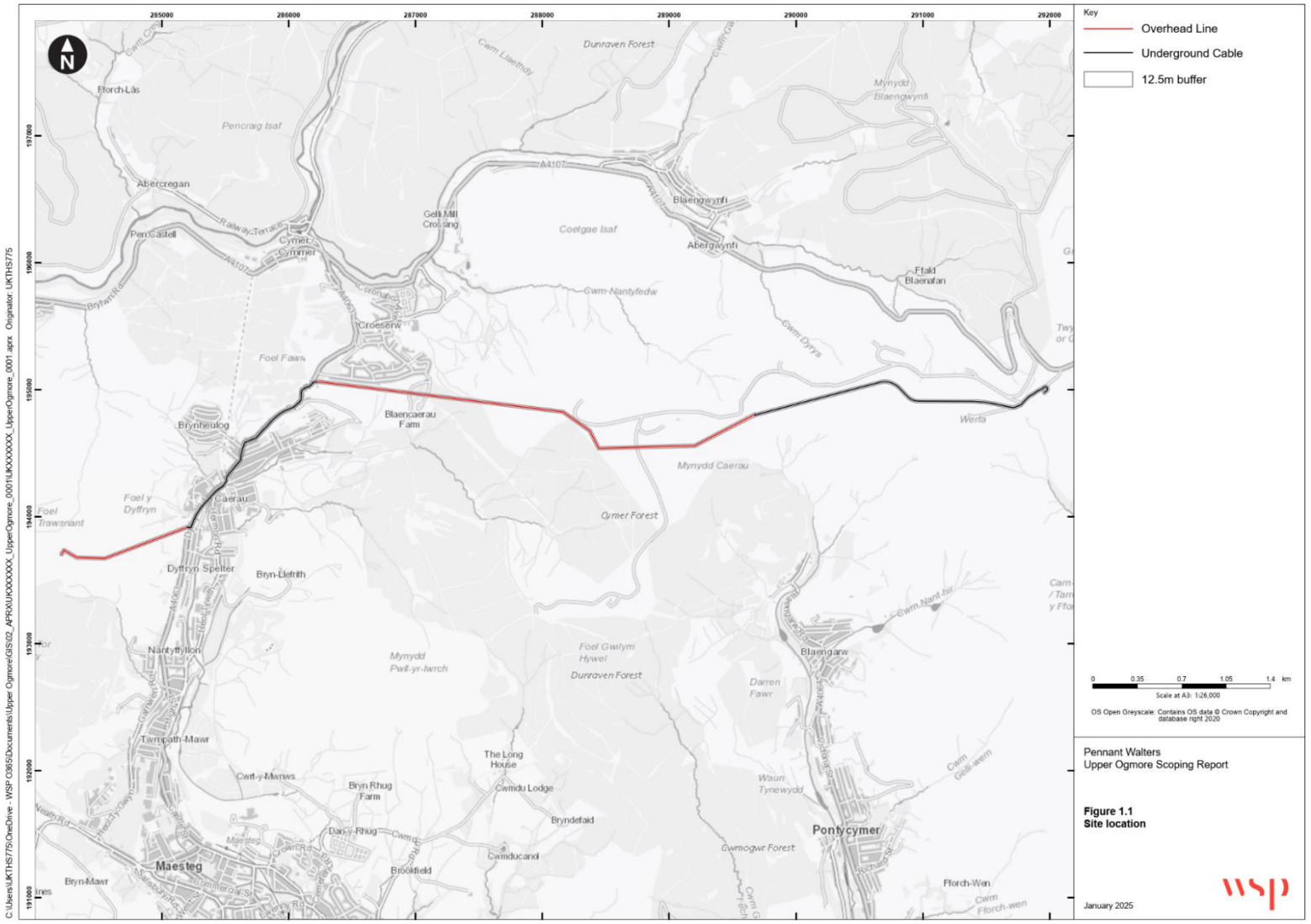
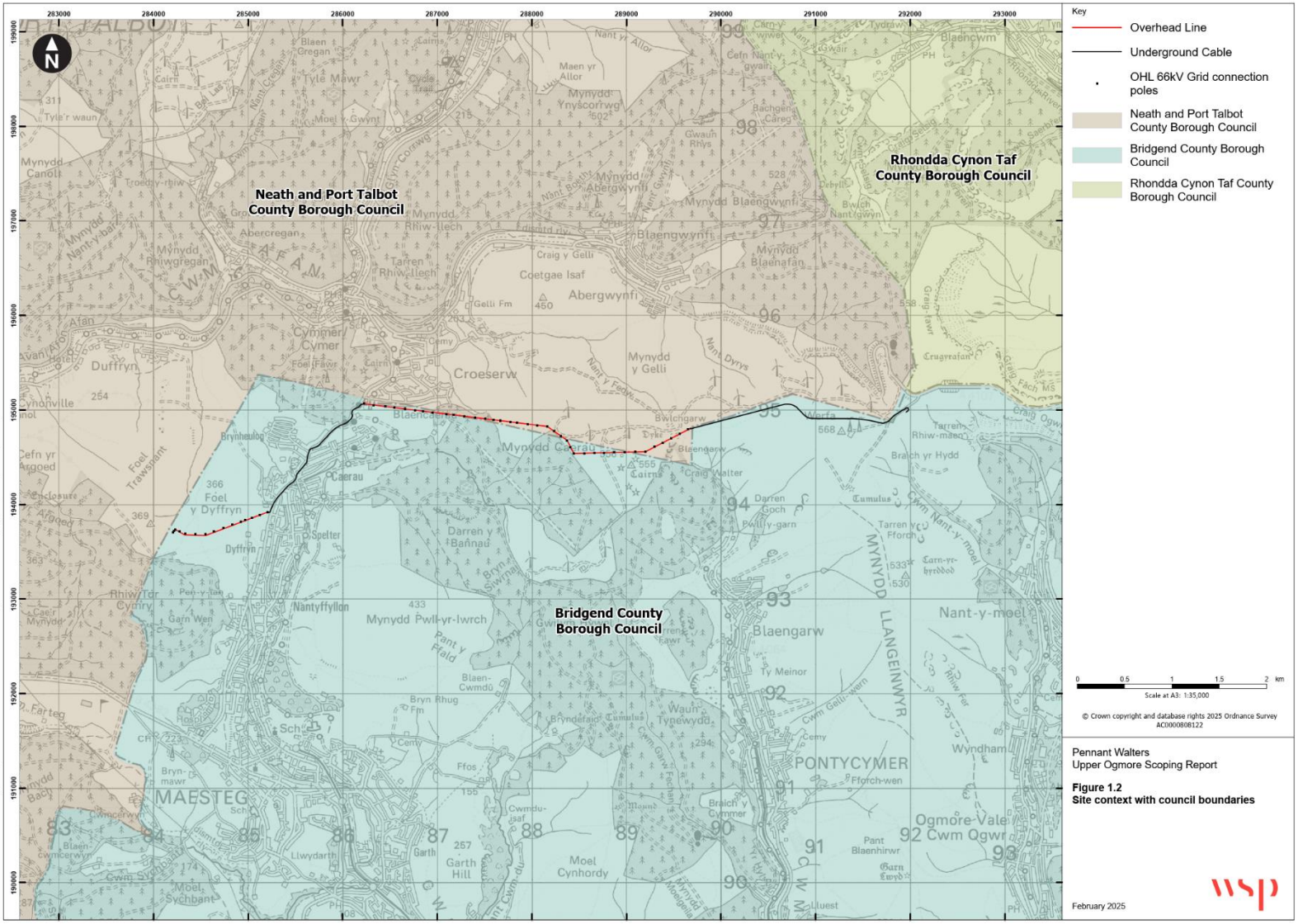


Figure 1-2 - Site context with council boundaries



CONSTRUCTION

Underground Work

Existing track and highways

1.1.10. The highway works will be mainly confined to the highways boundary and adhere to standard practice. The exact nature of underground cabling construction works is to be confirmed between NGED and local highways authority, though an outline is provided below.

1.1.11. UGCs can be laid directly into a trench or placed within ducts. The most common way of laying an UGC is to use an open cut method whereby the cable is laid directly into a trench of up to 1.5m depth. The exact width of the trench can depend upon the final specification proposed for the cable, but it can be in the region of 600mm widening to approximately 1.5m closer to the surface to enable access (see **Figure 1-3**). The cables are placed at the bottom of the trench, and the excavation around the cables is then filled with sand before the remaining excavation is backfilled with the excavated material. If a cable is required to be laid alongside a highway, instead of beneath, a maintenance strip of approximately 1m on the outside of the verge is required for future access. Cables are jointed at approximately 250m intervals. The joint boxes are generally 1.2m deep and 5m x 3m (see **Figure 1-4** and **Figure 1-5**).

1.1.12. An alternative to placing the cables directly into the trench is to use ducts within which the cables would be placed. These would also require joint bays at similar intervals to the open cut method.

1.1.13. It is anticipated the highway works will take between five to six months to complete. The works have been assumed to take place between 07:00 to 19:00 hours on weekdays and 07:00 to 13:00 on Saturdays. In exceptions, there may be a requirement for a 7-day work week. This would be agreed with the local council as appropriate.

1.1.14. NGED and the NGED will agree either a road closure with the local highways' authority and/or implement appropriate traffic management measures for the works associated with the highways.

Cable plough

1.1.15. Laying underground cable in areas outside the highway's boundary may follow the construction works outline above. However, a cable plough could also be used to lay underground cable in sections which lie outside the existing highway network and built environment – see eastern most UGC section in **Figure 1-1**.

1.1.16. A Cable Plough could be used to place the cable ducts into the ground at a depth of up to 1.5m. The works are relatively unintrusive, and briefly outlined below:

- a power winch will be sited safely ahead of the Cable Plough;
- a blade connected to the Cable Plough will cut through the earth, creating a channel that forms the installation bed;
- as the Cable Plough continues forward, the cable ducts are laid;
- the opening is then firmly closed, to approximately half its depth and the earth forms a bridge over the cable; and
- the lower part of the cut remains open and is gradually filled by the penetration of silt.

1.1.17. As a result of the method outlined above, there will be no changes to topography or geology. Also, considering the immediate closure of the narrow cut, the land is able to return to its original state in only a short time period.

1.1.18. No haul roads would be required, and traffic movements would be minimal. It is anticipated that any works undertaken by the cable plough would take up to two days to complete. The works have been assumed to take place between 07:00 to 19:00 hours on weekdays and 07:00 to 13:00 on Saturdays. In exceptions, there may be a requirement for a 7-day work week.

Overhead Line Work

1.1.19. The exact nature of OHL construction works is to be confirmed between the NGED and the local authorities, though an outline is provided below.

1.1.20. An OHL would be carried on wooden H-poles, consisting of two single wooden poles (most likely Scots Pine) joined by a crossarm with bracing. At the termination points only, two sets of H-poles will be located side-by-side. Terminal ends may be located at the start and end of the underground section of the connection. **Figure 1-6** and **Figure 1-7** provide examples of a typical OHL structure and termination point respectively, though the final structures may vary during detailed design stage.

1.1.21. Whilst the intention is for the route to be as straight as possible, there will be some deviation to avoid environmental features, such as trees. At points of deviation, angle poles will be used; these are likely to be H-pole structures. In all locations where the line deviates, there will be the requirement to provide cable stays to the poles. The poles are not typically stayed, and are unlikely to require concrete foundations. However, pre-cast wooden kicking blocks will be installed below ground, to provide the poles with adequate structural support.

1.1.22. The height of the wooden poles will be up to 15m above ground. This is due to the foundation depths with the amount of wood pole below ground typically being between 1.8m to 2.4m. Minimum ground clearance will be 6.3m. An assumed minimum clearance to trees from the conductors is 4m from the nearest part of the tree.

1.1.23. The poles are designed to carry the conductor wires. It is currently proposed to install a single circuit made up of one conductor per phase. Telemetry and monitoring capabilities, such as fault detection, will be provided by a microwave link. The poles will carry the cross arms onto which the insulators are attached. Conductor wire will be used for all the OHL sections. For the purposes of the Scoping Report, it has been assumed that a maximum span length between poles of 90m to 130m could be achieved. The actual span between poles will be influenced by topography and the surrounding environment.

1.1.24. The construction compounds for the consented wind farm development will be used for the construction of the northern OHL section. Up to two laydown areas may be required along the southern section of the overhead line. They will need to be sited in accessible locations; the intention will be to use areas of existing hardstanding where these are available.

1.1.25. A CEMP will be produced to draw together the statutory controls required during the construction phase. The CEMP will also set out standard best practice measures to manage the construction phase of the development.

Operation

1.1.26. The Project will integrate the consented Upper Ogmore Wind Farm with the current NGED via a 66kV connection. It will remain active for the duration of the wind farm's operation; for the purposes of the assessment, it is assumed to be up to 30 years. However, it is noted the duration of the proposed overhead line and underground cable could extend beyond 30 years, dependant on potential future uses.

Underground Cable

1.1.27. In the normal course of operation there is no requirement to inspect UGCs, although they are regularly tested at the joint bays.

Overhead Line

1.1.28. During the operation phase, duties are limited to resilience tree cutting to retain clearance distances and regular inspection. Pole inspections will be carried out in line with company policies and procedures.

1.1.29. Conductors and insulators have a design life of approximately 40 years. Faults on an OHL are infrequent. When they do occur, the vehicles used are likely to be similar to those needed for the construction of the line. Fault repair is quick and relatively straightforward.

Decommissioning

1.1.30. Following the operational phase, the connection (underground and overground) will be left in situ as it has the potential to become integrated into the NGEDs wider distribution network. This would also avoid further disruption to the surrounding environment.

Figure 1-3 - Typical 66kV Cable Depths

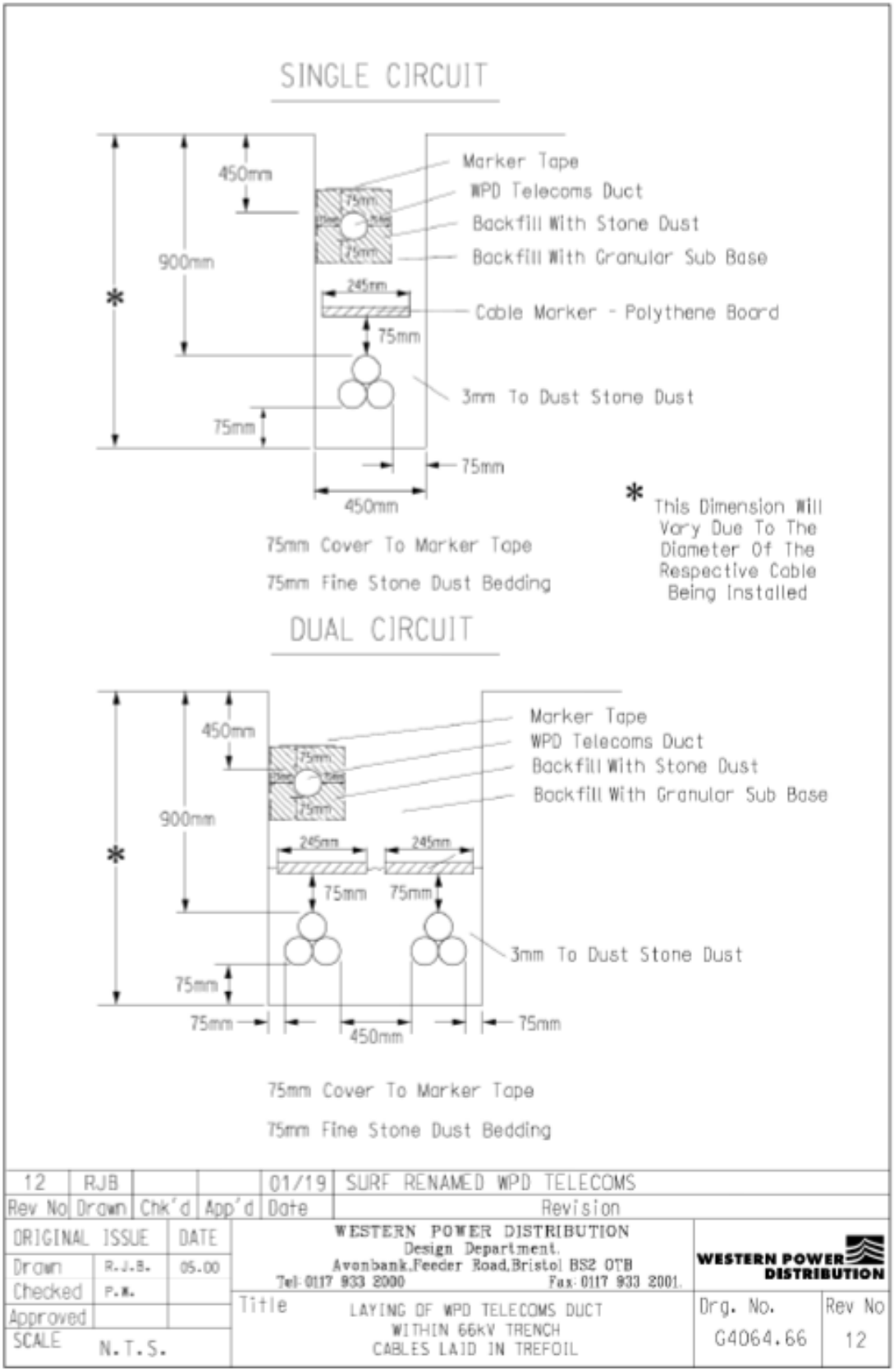


Figure 1-4 - Typical 66kV Joint Bay Layout

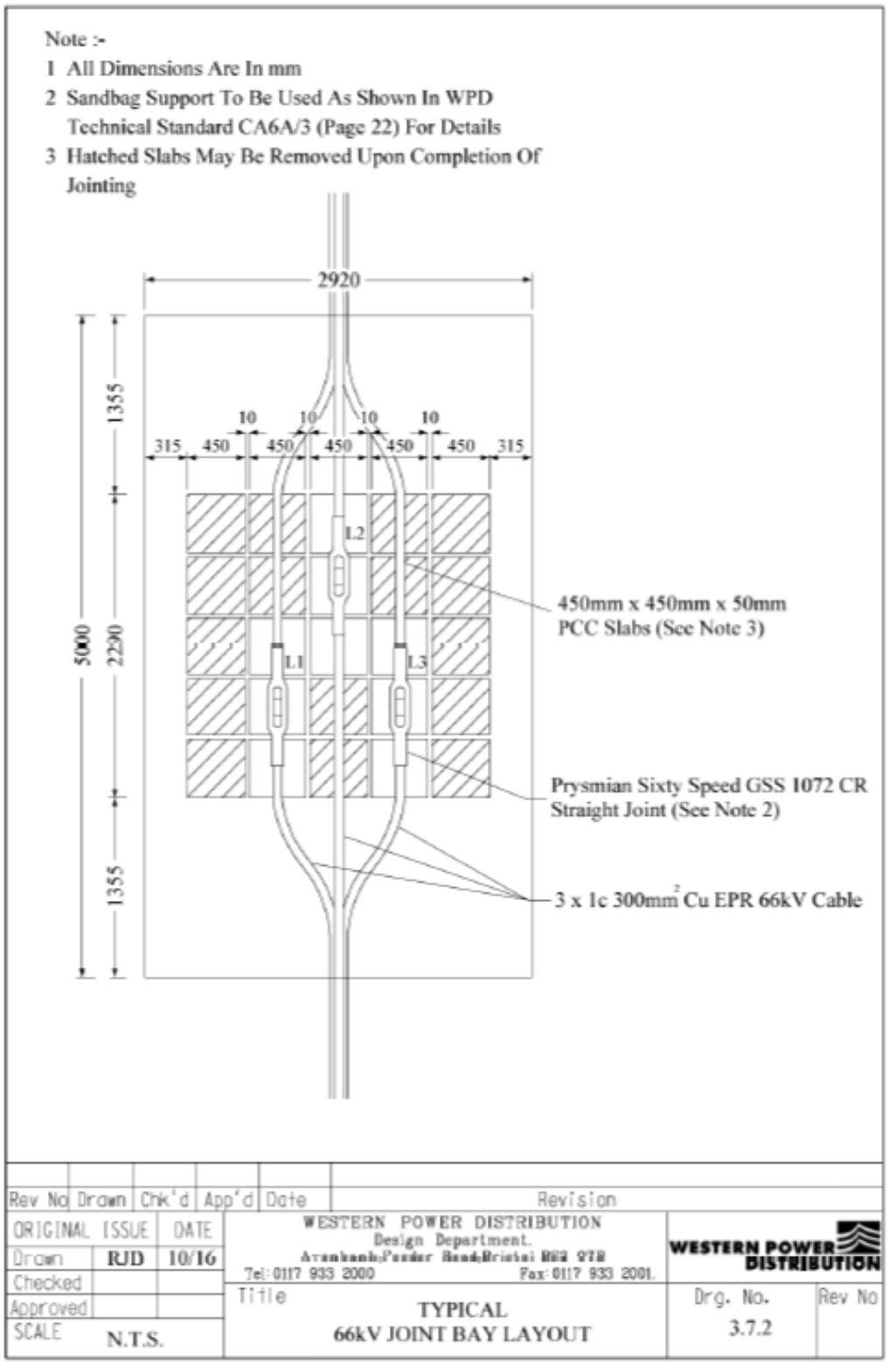


Figure 1-5 - Typical 66kV Joint Bay Cross Section

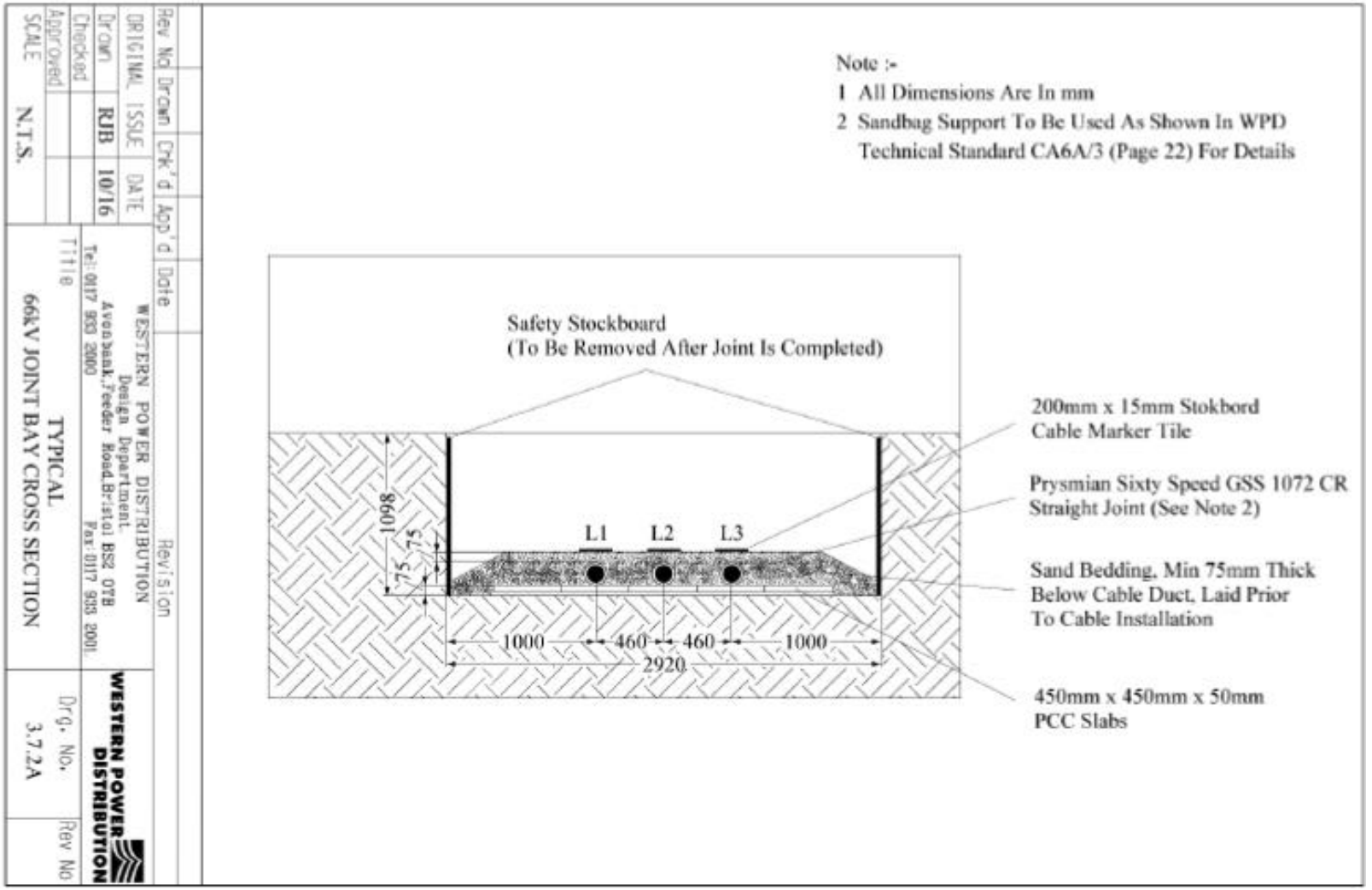


Figure 1-6 - Intermediate Overhead Line (H-Pole)

Figure 1-7 - Overhead Line to Underground Cable Terminal Connection Point (H-Pole)

1.2 NON-TECHNICAL SUMMARY

1.2.1. The potential significant effects identified within this scoping report, and therefore to be considered further within the ES, have been summarised in **Table 1-1**. The effects scoped out of further assessment have also been included in **Table 1-1.**

1.2.2. It should be noted that the potential significant effects of climate change will be considered within each individual chapter of the ES, as appropriate.

Table 1-1 - Summary table of potential significant effects

Discipline	Potential Significant Effects Scoped In	Potential Significant Effects Scoped Out
Landscape	▪ Construction: • Land preparation (site clearance, earthworks). • Presence of cranes, other machinery, vehicle movements, contractors' facilities and site access. ▪ Operation/ decommissioning: • Land preparation (site clearance, earthworks). • Presence of overhead power line. •	N/A
Traffic and Transport	▪ Construction • Impacts of the Project construction traffic on highways that form the traffic and transport study area during the construction phase.	▪ Construction: • Impacts during the construction phase on navigable waterway and the rail network, due to the Proposed route not crossing any of these. • Impacts resulting from AIL movements or the movement of hazardous loads, as none are anticipated ▪ Operation/ decommissioning: • Impacts during the operational phase of the development, due to the minimal traffic movements generated during this phase • Impacts during the decommissioning phase of the development, due to the lower traffic movements generated

Discipline	Potential Significant Effects Scoped In	Potential Significant Effects Scoped Out
		during this phase than in the construction traffic phase.
Ecology	▪ Construction • Habitat loss (temporary or permanent). • Removal of trees • Habitat degradation. • Noise, vibration and visual disturbance from construction traffic and personnel. • Changes in air quality - dust. • Changes in light levels. ▪ Operation • Noise and visual disturbance from traffic and people during routine maintenance.	▪ Loss or disturbance of common and widespread habitats of negligible nature conservation importance; and ▪ Temporary disturbance of common and widespread species of negligible nature conservation importance such as rabbits.
Ornithology	▪ Construction • Direct habitat loss/fragmentation (temporary or permanent), including removal of trees and/or woodland. • Damage and/or destruction of nests • Disturbance and/or displacement of bird species • Noise, vibration and visual disturbance from construction traffic and personnel. ▪ Operational • Injury or mortality of birds via collision and/or strike • Displacement through indirect loss of habitat if disturbance causes birds to avoid the Site and surrounds, i.e. foraging.	▪ Temporary disturbance of common and widespread ornithological species of negligible nature conservation importance ▪ Loss or disturbance of common and widespread habitats likely to be used by ornithological species of negligible conservation importance; ▪ Effects on common and widespread habitats and species ▪ It is considered that an HRA for the Project will not be required There are no statutory designated sites of international importance (SPAs or Ramsar sites supporting ornithological interest features) within 20km of the Site.
Historic Environment	▪ Construction: • Direct disturbance to, or loss of, historic assets located within the development footprint.	▪ Direct disturbance to historic assets within the section of the underground cable route proposed within existing road network

Discipline	Potential Significant Effects Scoped In	Potential Significant Effects Scoped Out
	▪ Operation/ decommissioning: • Changes to the heritage significance of assets through changes to their settings	▪ Direct disturbance to historic assets during the operation phase of the underground cable and overhead powerline ▪ Direct disturbance to historic assets outside of the scoping boundary ▪ Adverse effect through change to their settings on historic assets not listed in **para 6.5.9** ▪ Direct disturbance to historic assets arising during decommissioning
Hydrology, Geology and Hydrogeology	▪ Construction: • Temporary watercourse crossings required for construction access, etc. • Temporary works – direct/indirect effects on water quality from construction surface runoff/discharges. ▪ Construction, Operation and Decommissioning: • Direct/indirect effects on groundwater, including on private water supplies and GWDTE.	▪ Construction, Operation and Decommissioning: • Direct/indirect effects on flood risk. ▪ Operation: Maintenance: use of machinery for non-intrusive inspection and repairs.
Coal Mining	▪ Presence of coal seam outcrops. ▪ Recorded past shallow coal mining. ▪ Areas of probable (unrecorded) shallow coal mining. ▪ Mine entries (shafts).	N/A
Noise	Scoped Out – qualitative assessment recommended. To be captured in the CEMP.	▪ Construction • Construction noise (including construction traffic noise). • Construction vibration. ▪ Operation/ decommissioning ▪ Noise and vibration.
Socio-Economics	Scoped Out.	▪ Construction, Operation and Decommissioning

Discipline	Potential Significant Effects Scoped In	Potential Significant Effects Scoped Out
Major Accidents and Disasters	▪ Severe weather: extreme temperatures (to be considered in Project Description ES chapter) ▪ Transport accidents (to be considered in Transport ES chapter) ▪ Industrial accidents (to be considered in Project Description ES chapter)	▪ Biological hazards: epidemics ▪ Biological hazards: animal and insect infestation. ▪ Earthquakes ▪ Tsunamis / tidal waves / storm surges ▪ Volcanic eruptions ▪ Famine / food insecurity ▪ Displaced populations ▪ Severe weather: storms ▪ Severe weather droughts ▪ Terrorist incidents ▪ Cyber attacks ▪ Disruptive industrial action ▪ Public disorder ▪ Wildfires ▪ Severe space weather ▪ Poor air quality events ▪ Urban fires
Land Quality	Scoped Out – commitment to follow standard construction practices, develop an unexpected contamination protocol and complete a Phase 1 Desk Study to support the planning application.	▪ Soil (and agricultural land) ▪ Geology ▪ Minerals ▪ Land contamination ▪ Risks to Construction Workers
Air Quality	Scoped Out.	▪ Construction • Dust Emissions. ▪ Operation/ decommissioning • Impacts on residential properties. • Impacts to sites designated for nature conservation (including ancient woodland).
Greenhouse Gas Emissions	N/A – considered in individual ES chapters as appropriate	N/A – considered in individual ES chapters as appropriate

1.3 ALTERNATIVES

1.3.1. The EIA Regulations require that the ES contains a description of ‘reasonable alternatives’ considered as part of the design process. This may include alternatives designs which are relevant to the objectives of the Project and its specific characteristics. The ES will report the main reasons for selecting the chosen option, including a comparison of the environmental effects.

1.3.2. The environmental disciplines scoped into the ES will include consideration of the options considered prior to the final route being chosen. The environmental performance of each option will be presented to the Applicant and described within the Design Evolution and Alternatives chapter of the ES.

1.4 CONSULTATION

1.4.1. As part of the EIA process, consultation with be undertaken in line with best practice and aims to extend beyond the statutory minimum requirements. The key statutory requirements for pre-application consultation associated with the Project stem from provisions of the Planning (Wales) Act 2015 and the Developments of National Significance (Procedure) (Wales) Order 2016.

1.4.2. Given the nature of the proposals, the Applicant will engage with neighbours, businesses, landowners, and communities surrounding the Project in the first instance. Where appropriate, interested parties, groups and individuals from any identified surrounding areas will also be informed about the proposals.

1.4.3. Consultation is an essential element of the EIA and DNS application processes and will be reported within the ES and Pre-Application Consultation (PAC) Report to be submitted as part of the DNS application, in line with DNS procedural guidance.

1.5 APPRAISAL SCOPE AND METHODOLOGY

OVERVIEW OF THE PROCESS

1.5.1. Environmental Impact Assessment (EIA) is a process for identifying the likely significant environmental effects (positive and adverse) of a project to inform the decision-making process for development consent to be granted. The EIA process will culminate in the provision of an ES written in accordance with the Town and Country Planning (Environmental Impact Assessment) (Wales) regulations 2017 (hereafter referred to as the 'EIA Regulations') and will provide an overview of the likely significant effects associated with the Project.

1.5.2. The EIA Report will identify the assessment methodologies, based on recognised good practice and guidelines specific to each of the relevant environmental topic areas where the Project could result in significant effects. The EIA process should be systematic, analytical, impartial, consultative and iterative allowing opportunities for environmental concerns to be addressed in the design of a project. Typically, a number of design iterations take place in response to environmental constraints identified during the EIA process prior to the final design being reached.

1.5.3. Under the EIA Regulations, the Project is not a Schedule 2 development. However, a precautionary approach has been taken to ensure any potential significant effects will be effectively mitigated.

1.5.4. Although not a statutory requirement, the EIA regulations make provision for obtaining a scoping direction from Welsh Ministers on the information to be included in the ES. The Applicant wishes to seek a formal scoping direction from Planning and Environment Decision Wales (PEDW). This document is the Scoping Report, which contains the necessary information as required under Regulation 33 of the EIA regulations.

CUMULATIVE EFFECTS

1.5.5. Cumulative effects can arise from the interaction between a proposed development and other developments proposed or under construction. In line with standard practice, for the purpose of the

EIA, other developments which are operational, subject to planning approval or subject to a full and validated planning application will also be included in the consideration of potential cumulative effects (subject to a cut-off point to allow assessments to be undertaken). It should be noted that not all of the cumulative developments would necessarily have a cumulative effect in respect of any particular environmental topic.

1.5.6. The requirements for developments to be considered in a cumulative assessment are likely to be as follows:

- Within 2km of the Project;
- Considered to be a major development (subject to DCO, TWA, DNS or Hybrid Bill);
- Over 50 units for residential development; or
- Over 2,500m^2 for commercial development.

1.6 STRUCTURE OF THE SCOPING REPORT

1.6.1. The proposed scope of the EIA for this Project with respect to the relevant policy and environmental topics is set out in **Chapters 2** to **9** of this report and comprises:

- Chapter 2: Landscape;
- Chapter 3: Traffic and Transport;
- Chapter 4: Ecology;
- Chapter 5: Ornithology;
- Chapter 6: Historic Environment;
- Chapter 7: Hydrology, Geology and Hydrogeology;
- Chapter 8: Coal Mining; and
- Chapter 9: Environmental Aspects Scoped Out.

1.7 PLANNING CONTEXT

LEGISLATIVE CONTEXT

1.7.1. This section summarises the main planning legislation relevant to the proposed grid connection. Each of the separate disciplines have outlined the legislative context in each of their sections and further detail will be provided in the ES chapters.

1.7.2. The application will conform to the statutory requirements legislated by the Environmental Impact Assessment (Wales) Regulations 2017.

1.7.3. A Planning Statement will accompany the application for consent and assess the proposed development in a legal and policy context against the relevant legislation and planning policies in force. The Planning Statement will assess such documents at international, national, regional and local levels, where applicable, including but not limited to:

- Future Wales: The National Plan 2040;
- Planning Policy Wales (Edition 12) (2024);
- Developments of National Significance (Wales) Regulations 2016;
- Developments of National Significance (Specified Criteria and Prescribed Secondary Consents)
  - (Wales) Regulations 2016 (as amended);
- Technical Advice Notes; and

- Bridgend County Borough Council Replacement Local Development Plan (RLDP), adopted March 2024. In particular policies:
  - DNP1: Development in the Countryside;
  - DNP4: Special Landscape Areas;
  - DNP 5(2): Local and Regional Nature Conservation Site;
  - DNP 6: Biodiversity, Ecological Networks, Habitats and Species;
  - DNP7: Trees, Hedgerows and Development;
  - SP13: Decarbonisation and Renewable Energy;
  - SP18: Conservation of the Historic Environment; and
  - SP18 (7): Historic Landscape.
- Neath Port Talbot County Borough (NPTCBC) Council Local Development Plan (LDP), adopted January 2016. In particular policies:
  - EN 2 Special Landscape Areas; and
  - Supplementary Planning Guidance: Landscape and Seascape (Published May 2018).

1.7.4. Any other emerging Supplementary Planning Guidance will also be accounted for in the submitted ES with the appropriate weighting given relative to established policies.

2 LANDSCAPE

2.1 INTRODUCTION

2.1.1. This chapter of the Scoping Report describes the methodology to be used within the Landscape and Visual Impact Assessment (LVIA) and provides an overview of the baseline conditions and the datasets to be used to inform the LVIA. An outline of the likely significant effects and design considerations that may be needed to provide mitigation and enhancement of the Project are also described.

2.1.2. This chapter is supported by **Figure 2.1** and **Figures 2.2-2.6** in **Appendix A** and should be read in conjunction with **Chapter 1: Introduction** which includes a description of the Project.

2.2 INFORMATION SOURCES AND STUDY AREA

INFORMATION SOURCES

2.2.1. A summary of the sources of baseline information, together with the nature of that data is outlined in **Table 2-1.**

Table 2-1 - Data sources used to inform the Landscape and Visual Impact Assessment

Source	Data Provided	Description
Ordnance Survey.	Ordnance Survey mapping.	Ordnance Survey (2025) MAPSHOP. Available online at: emapsite | mapshop 1:25,000 mapping providing baseline information on the landscape context including topography, drainage, settlement pattern, land use, tree cover, promoted recreational routes, transport network and infrastructure.
Google Earth Pro.	Aerial photography (imagery date (13/06/2023).	Google Earth Pro. Provides baseline information and Street View images on the landscape context including drainage, settlement pattern, land use, tree cover, transport network and infrastructure.
Natural Resources Wales.	Landscape Character.	**National** Natural Resource Wales, (2021). National Character Areas (NLCA). Available online at: Natural Resources Wales / National Landscape Character Areas (NLCA) [Accessed 31/01/2025]. **Regional** LUC, (2013). Landscape Character Assessment for Bridgend County Borough. Available online at: Microsoft Word - 5627_Bridgend_LCA_20130715_v4_0 [Accessed 31/01/2025]. White Associates, (2004). Neath Port Talbot LANDMAP Landscape Assessment. Available online at: spg_landmap_landscape_assessment_2004.pdf [Accessed 31/01/2025]. **Local** Natural Resource Wales, (2021). Landmap Visual Sensory. Available online at: Natural Resources Wales / LANDMAP - the Welsh landscape baseline [Accessed 31/01/2025].

Source	Data Provided	Description
		Provides baseline information on landscape character at a national level and sets the landscape context for the county and district level assessments (as described in paragraph 5.14 of GLVIA3).
Datamap	Special Landscape Areas	Natural Resource Wales, (2021). Special Landscape Areas. Available online at: New map | DataMapWales [Accessed: 31/01/2025].
Datamap.	Ancient Woodland.	Natural Resource Wales, (2021). WOM21 Ancient Woodland Inventory. Available online at: New map | DataMapWales [Accessed: 31/01/2025].
Datamap.	Registered Parks and Gardens.	Natural Resource Wales, (2021). Registered Historic Parks and Gardens. Available online at: New map | DataMapWales [Accessed: 31/01/2025].
Bridgend County Borough Council.	Landscape Designations Public Right of Way (PRoW).	Bridgend County Borough Council, (No Date). Interactive map. Available online at: Cadcorp SIS WebMap 9 [Accessed: 04/02/2025].
Neath Port Talbot County Borough Council.	Landscape Designations Public Right of Way (PRoW).	Neath Port Talbot Council, (No Date). Adopted LDP (20110226) - Interactive Proposals Map. Available online at: LDP Interactive Mapping [Accessed 04/02/2025] Neath Port Talbot Council, (No Date). Countryside Access Interactive Map. Available online at: NPT Rights of Way [Accessed: 04/02/2025]
Natural Resources Wales	Open Access Land (CRoW Act 2002).	Natural Resource Wales, (2021). Open Access - Open Country. Available online at: Natural Resources Wales / Map of places to visit [Accessed: 04/02/2025].
Sustrans	National Cycle Network	Sustrans, (2021). National Cycle Network Map. Available online at: Maesteg | OS Maps [Accessed 04/02/2025].

STUDY AREA

2.2.2. Institute of Environmental Management and Assessment (IEMA) Guidance (IEMA, 2015, 2017) recommends a proportionate EIA focused on the potential likely significant effects of a development. The LVIA Study Area must therefore be large enough to capture all likely significant effects. However, not so large that it may be considered disproportionate, if it makes understanding the key effects of the Project more difficult by including extraneous baseline information, and hence receptors that are unlikely to be significantly affected by the Project.

2.2.3. This is supported by the Landscape Institute (Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3)) (Landscape Institute, 2013) (paragraph 3.16) which recommends that "*The level of detail provided should be that which is reasonably required to assess the likely significant effects*". Paragraph 5.2 also states that "*The LVIA Study Area should include the site itself and the full extent of the wider landscape around it which the project may influence in a significant manner*".

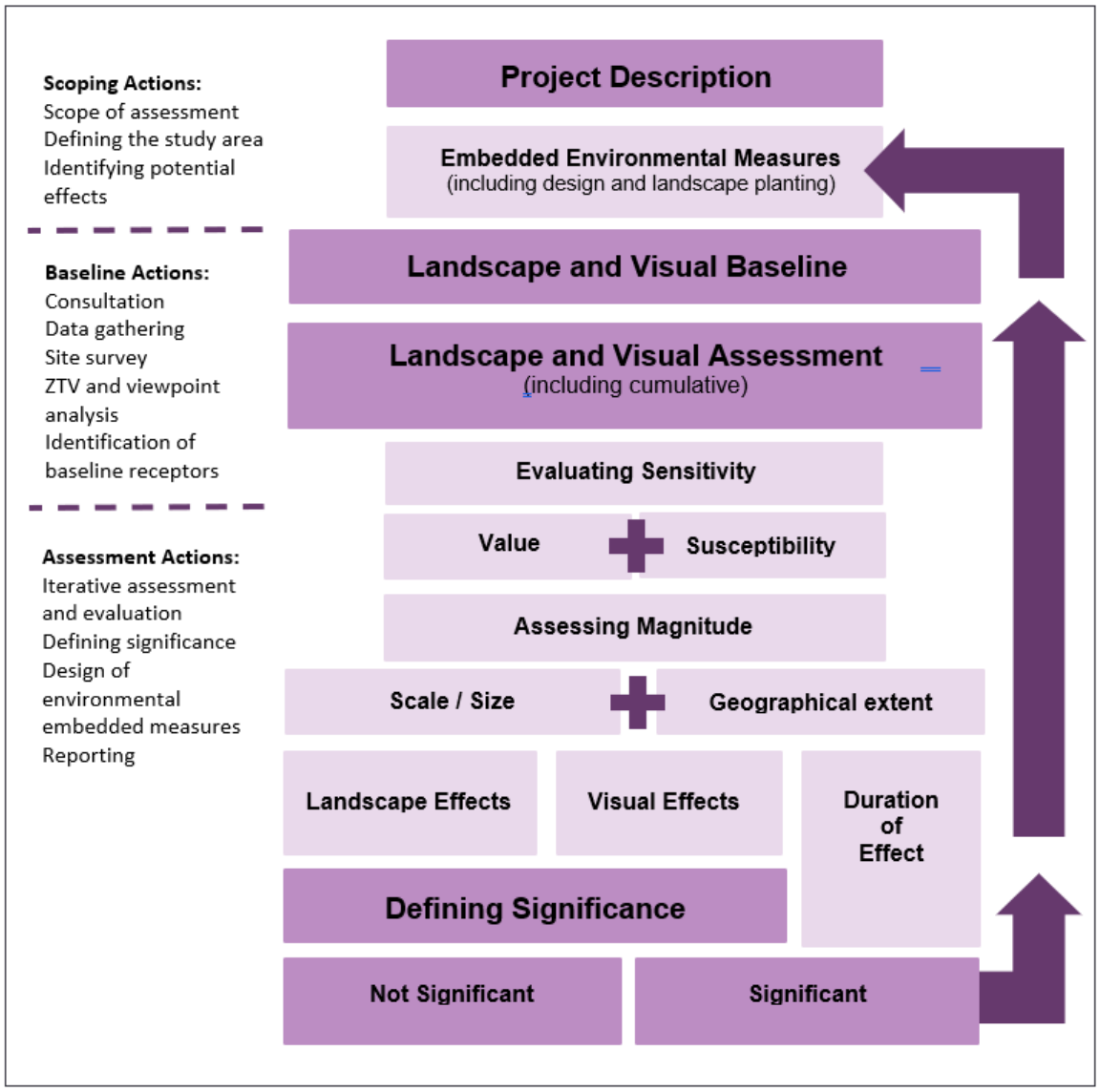
2.2.4. The LVIA Study Area is therefore proposed to be a maximum of 2km radius either side of the alignment of the cable line. This is based on professional judgement which aims to include those areas that are potentially and likely to be significantly affected by the Project. This judgment is based on an early understanding of the local landscape character and the scale of the construction and development proposed within the Site boundary as well as a review of LVIA Study Areas for similar projects. A ZTV (**Figure 2.5**) has been produced to inform the selection of receptors and will form the basis of the LVIA using computer modelling, based on the Ordnance Survey digital terrain model (DTM) and/or the Environment Agency LIDAR digital surface model.

2.2.5. The LVIA Study Area will be reviewed and amended in response to the maturing design and assessment process and where appropriate responses to the consultation. This will result in the confirmation of an LVIA Study Area that will be the focus of the LVIA.

2.3 METHODOLOGY

2.3.1. The LVIA will be undertaken in accordance with best practice and following the Landscape Institute IEMA guidelines (GLVIA3). The assessment approach and process are summarised in the flow diagram below from GLVIA3.

Figure 2-1 - Overview of approach to Landscape and Visual Impact Assessment



2.3.2. An overview of the LVIA methodology is provided below with the detailed methodology to be provided as an appendix to the completed ES.

LANDSCAPE EFFECTS

2.3.3. Landscape effects are defined by the Landscape Institute in GLVIA 3, paragraphs 5.1 and 5.2 as follows:

- *"An assessment of landscape effects deals with the effects of change and development on landscape as a resource. The concern ... is with how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character. ... The area of landscape that should be covered in assessing landscape effects should include the site itself and the full extent of the wider landscape around it which the Proposed Development may influence in a significant manner."*

2.3.4. The landscape effects occurring during the construction and operational periods may therefore include, but are not restricted to, the following:

- Changes to landscape elements: the addition of new elements (OHL with wooden poles and cable line) or the removal of existing elements such as trees, vegetation and buildings and other characteristic elements or valued features of the landscape character;
- Changes to landscape qualities: degradation or erosion of landscape elements and patterns and perceptual characteristics, particularly those that form key characteristic elements of landscape character types/areas or contribute to the landscape value;
- Changes to landscape character: landscape character may be affected through the incremental effect on characteristic elements, landscape patterns and qualities (including perceptual characteristics) and the addition of new features, the magnitude of which is sufficient to alter the overall landscape character within a particular area;
- Changes to designated landscapes that would affect the special landscape qualities underpinning the designation and its integrity; and
- Cumulative landscape effects: where more than one development may lead to a cumulative landscape effect.

2.3.5. Development may have a direct effect on the landscape as well as an indirect effect which would be perceived from the wider landscape, outside the immediate site area and its associated landscape character.

VISUAL EFFECTS

2.3.6. Visual Effects are concerned wholly with the effect of the development on views, and the general visual amenity, and are defined by the Landscape Institute in GLVIA 3, paragraphs 6.1 as follows:

- *"An assessment of visual effects deals with the effects of change and development on views available to people and their visual amenity. The concern ... is with assessing how the surroundings of individuals or groups of people may be specifically affected by changes in the context and character of views."*

2.3.7. Visual effects are identified for different receptors (people) who would experience the view(s) at their places of residence, within their community, during recreational activities, at work, or when travelling through the area. The visual effects may include the following:

- Visual effect: a change to an existing static view, sequential views, or wider visual amenity as a result of development or the loss of particular landscape elements or features already present in the view(s); and
- Cumulative visual effects: the cumulative or incremental visibility of similar types of development may combine to have a cumulative visual effect.

2.3.8. The level of visual effect (and whether this is significant) is determined through consideration of the sensitivity of each visual receptor (or range of sensitivities for receptor groups) and the magnitude of change that would be brought about by the construction and operation of the Project.

DETERMINING THE SIGNIFICANCE OF EFFECTS

2.3.9. The matrix presented in **Table 2-2** is used as a guide to illustrate the LVIA process. In line with the emphasis placed in GLVIA3 upon the application of professional judgement, an overly mechanistic reliance upon a matrix is avoided through the provision of clear and accessible narrative

explanations of the rationale underlying the assessment made for each landscape and visual receptor. Such narrative assessments provide a level of detail over and above the outline assessment provided by use of the matrix alone.

2.3.10. The landscape and visual assessment unavoidably, involves a combination of quantitative and qualitative assessment and wherever possible cross references will be made to objective evidence, baseline figures and / or to photomontage visualisations to support the assessment conclusions. Often a consensus of professional opinion has been sought through consultation, internal peer review, and the adoption of a systematic, impartial, and professional approach. Importantly each effect results from its own unique set of circumstances and have been assessed on a case-by-case basis. The matrix as presented in **Table 2-2** should therefore be considered as a guide and any deviation from this guide will be clearly explained in the assessment.

2.3.11. Significant landscape and visual effects are highlighted in bold, shaded in dark grey and relate to all those effects that result in a '**Substantial**', '**Substantial to Major**', '**Major**' or a '**Major to Moderate**' level of effect. In some circumstances, 'Moderate' levels of effect (shaded light grey in **Table 2-2**) have the potential to be considered as significant, subject to the assessor's opinion. Such exceptions are also highlighted in **bold** and will be explained as part of the assessment where they occur. White or unshaded boxes indicate a non-significant effect.

2.3.12. The type of effect will also be described and may be direct or indirect; temporary or permanent (reversible); cumulative; and beneficial, neutral, or adverse.

Table 2-2 - Evaluation of landscape and visual effects

Magnitude of Change	Landscapes and Visual Sensitivity			
	High	Medium	Low	Very Low
High	**Substantial**	**Major**	Moderate	Not used
High - Medium	**Substantial to Major**	***Major to Moderate***	*Moderate to Minor*	
Medium	**Major**	Moderate	Minor	
Medium - Low	**Major to Moderate**	*Moderate to Minor*	*Minor*	
Low	Moderate	Minor	Negligible	
Low – Very Low	Moderate to Minor	*Negligible*	*Negligible*	
Very Low	Minor	Negligible	Negligible	

Zero	None / No View

CUMULATIVE LANSCAPE AND VISUAL IMPACT ASSESSMENT

2.3.13. The assessment of cumulative effects is essentially the same as for the assessment of the 'solus' landscape and visual effects, in that the level of landscape and visual effect is determined by assessing the sensitivity of the landscape or visual receptor and the magnitude of change. Cumulative assessment however considers the magnitude of change posed by multiple developments.

2.3.14. The Cumulative LVIA (CLVIA) will assess the following types of cumulative effects:

- Cumulative landscape effects: where more than one similar developments may have an effect on a particular area of landscape character or landscape designation; and
- Cumulative visual effects: the cumulative or incremental visibility of similar types of development that may combine to have a cumulative visual effect. These can be further defined as follows:
  - Simultaneous or combined: where two or more developments may be viewed from a single fixed viewpoint simultaneously, within the viewer's field of view and without requiring them to turn their head;
  - Successive or repetitive: where two or more developments may be viewed from a single viewpoint successively as the viewer turns through 360°; and
  - Sequential: where a number of developments may be viewed sequentially or repeatedly at increased frequency, from a range of locations when travelling along a route within the study area.

2.3.15. CLVIA will adopt the same study area as the LVIA. Cumulative developments within the Study Area will be identified as set out in the Planning Inspectorates guidance on cumulative assessment[2] and will include the consented Upper Ogmore Wind Farm.

2.4 BASELINE ENVIRONMENT

2.4.1. The proposed cable route is a combination of overhead line (OHL) and underground cable. A section of OHL would approach Maesteg from the west with an underground section running through the settlement within the existing highways boundary. After emerging from the underground section, the route transfers back into OHL would then run in an easterly direction into the surrounding landscape before the cable would then be sent underground again to terminate just to the west of the A4107. The cable route, both overhead and underground, runs very closely to the administrative boundary between Bridgend and Neath Port Talbot County Borough Councils.

2.4.2. The character of the Study Area is defined by the strong and distinctive valley landscape. This creates a contrast between open and exposed upland plateaus and the enclosed valleys with steep

[2] Planning Inspectorate, (2024). Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. Available online at: Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment - GOV.UK [Accessed February 2025].

slopes, often containing settlement which in this case is the town of Maesteg. Many of the steep slopes are also wooded (mix of deciduous and plantation) creating further enclosure in these locations. Field boundaries within the vicinity of the proposed cable route tend to be stone walls, although it does also pass through groups of trees and some small areas of woodland. Wind turbines are already present in the landscape, notably Llynfi Afan Wind Farm.

LANDSCAPE CHARACTER

National Landscape Character

2.4.3. Natural Resources Wales (NRW) has divided Wales into 48 National Landscape Character Areas (NLCA). The NRW Landscape Character Map for Wales is referred to for a strategic understanding of landscape character within the Study Area. This outlines the wider setting for the Project and provides a context for the description of local landscape character.

2.4.4. The Study Area is contained completely within the **NLCA37 South Wales Valleys**[3] which is described as:

- *"Extensive ribbon development fills many valley bottoms and lower slopes. Their urban and industrial character is juxtaposed with dramatic upland settings with steep hillsides, open moors or forests. Networks of railways and roads connect valley settlements. Topography constrains passage between valleys, and there are only a limited number of high passes between valleys. The noise and business of many valleys contrast with the relatively remote and wild qualities of adjacent hill plateaux."*

2.4.5. The key characteristics of NLCA37 are described as:

- *"Extensive Upland plateaux – typically wild and windswept, often with unenclosed tracts, running roughly north-south as 'fingers' parallel between intervening deep valleys.*
- *Numerous steep-sided valleys - typically aligned in parallel, flowing in southerly directions, shaped by southward flowing glaciers, leaving behind distinctive corrie ('cwm') and crag features. Major rivers include the Tawe, Taff and Rhymney.*
- *Ribbon urban and industrial areas in valleys – in places extending up valley sides and to valley heads. The area is sometimes regarded as being part of a 'city region'. Middle and eastern valleys tend to be the most heavily and continuously developed, e.g Rhondda Valley. The uplands by comparison have little or no settlement.*
- *Extensive remains of heavy industry – with a mix of derelict, preserved and largely redeveloped areas, notably for coal mining. Preserved as heritage (World heritage Site) at Blaenafon this typically includes old railway alignments, buildings and former tips.*
- *Contrast of urban valley activity next to quiet uplands – e.g. busy roads, new developments, traffic noise, night lighting, verses the adjacent wilder, remoter, quieter uplands.*

[3] Natural Resource Wales, (2021). National Character Areas NLCA. Available online at: Natural Resources Wales / National Landscape Character Areas (NLCA) [Accessed February 2025].

- *Large blocks of coniferous plantation and deciduous woodland fringes – covering many steep hillsides and hilltops, most notably in the middle to western portion of the area, providing a softer contemporary landscape where there was once industry.*
- *Heather, rough grassland and steep bracken slopes – dominate many plateaux and are grazed mainly by sheep. Much is common land.*
- *Improved pastures on some lower valley sides - grazed by sheep and some dairy cattle.*
- *Field boundaries - dry stone walls mark the boundary of common land while fields on lower slopes are bounded by dense hawthorn hedges, interspersed with swathes of broadleaved woodland.*
- *Transport routes restricted to valleys – the intervening topography makes valley to valley travel difficult, except at heads and bottoms of valleys. Occasionally there are roads that climb steeply over passes with dramatic views and 'hair pin' bends.*
- *Iconic cultural identify – many popular images of a tough, rugby-playing, religious, radically-minded society still remain associated with the South Wales Valleys, however today's post-industrial, internet-connected reality is somewhat different."*

Regional Landscape Character

2.4.6. As the Project is located on the administrative boundary of two County Borough Councils the Study Area is covered by the Landscape Character Assessment for Bridgend County Borough[4] and the Neath Port Talbot LANDMAP Landscape Assessment[5].

Bridgend County Borough Council

2.4.7. The proposed cable route crosses through or has the potential to affect the character of the following Landscape Character Areas (LCA's) within Bridgend County Borough Council boundary:

- **1 – Llangynwyd Rolling Uplands and Forestry** – *"This LCA is located along the north-western fringes of the County Borough, to the west of Maesteg. All of the landscape is defined as Upland' in LANDMAP's Visual & Sensory aspect (Level 2). The profile highlights that southern ridgelines offer panoramic views across the County Borough, including wind farm developments in distant skylines and that the LCA's tranquil qualities are eroded by the presence of pylon lines, telecommunication masts and urban fringe land close to Maesteg. One of the forces for change in this LCA is identified as prominent pylon lines traversing the southern half of the landscape, intruding into a landscape otherwise devoid of moder development."*
- **3 – Llynfi & Garw Uplands and Forestry** – *"This LCA comprises an exposed upland landscape in the north of the County Borough, sitting to the east of Maesteg. All of the LCA is classified as 'Upland' in LANDMAP's Visual & Sensory aspect (Level 2). The profile highlights that a large proportion of the forest is open access land, accessible by forestry access tracks and public footpaths/bridleways. There is also a significant area of open access land at Mynydd Bach and that there are expansive, panoramic views across the county borough and beyond. One of the*

[4] LUC, (2013). Landscape Character Assessment for Bridgend County Borough. Available online at: Microsoft Word - 5627_Bridgend_LCA_20130715_v4_0 [Accessed February 2025].
[5] White Associates, (2004). Neath Port Talbot LANDMAP Landscape Assessment. Available online at: spg_landmap_landscape_assessment_2004.pdf [Accessed February 2025]

forces for change in this LCA is identified as views from lower levels dominated by development in the valleys and distant views of wind turbines, eroding feelings of remoteness. Also that, high levels of exposure means the landscape itself is likely to be under pressure for wind farm developments."

- **6 – Mynydd Llangeinwyr Uplands** – *"Found in the north-eastern part of the County Borough, this remote, upland LCA is located between the Garw and Ogmore valleys. LANDMAP's Sensory and Visual aspect (Level 2) classifies all of the landscape as 'Upland'. The profile highlights that the uplands are traversed by footpaths and bridleways… and that most of the LCA is designated as statutory open access land. Also, telecommunications masts on the high summit of Werfa and above Blackmill, with long views westwards towards Ffynnon Oer windfarm in Neath Port Talbot and that the LCA has an overall remote and wild landscape, with a great degree of exposure. Forces for change in this LCA are identified as distant views of wind turbines in adjacent counties… eroding feelings of remoteness and that high levels of exposure means the landscape itself is likely to be under pressure for wind farm developments."*

Neath Port Talbot County Borough Council

2.4.8. The proposed cable route crosses through or has the potential to affect the character of the following Character Areas (CA's) within the Neath Port Talbot County Borough Council boundary:

- **11 – Cwm Afan and Cwm Pelenna** – *"This character area follows the upland valleys of the Afan, Pelenna and minor tributaries. These deeply incised U-shaped valleys of sinuous alignment rise from approx. 50m AOD at Port Talbot to approx. 300m AOD at Abergwynfi. The profile highlights that there is substantial recreation use of surrounding woodland [Afan Country Park] and that the valley has a dramatic and at times remote feeling away from the roads and settlement. Yet as views are generally contained within the valley by both vegetation and the topography, an intimate and sheltered nature is created."*
- **13 – Foel Trawsnant** – *"This area of upland grazing ranges from approx. 220m AOD to 371m AOD at the summit. It is bounded to the east by the County Borough boundary, to the south by the woodland of Mynydd Penhrydd and to the north by the Afan Valley. The profile highlights that there are no dwellings or structural development present and the only public access is via a footpath and bridleway. Significant tracts of land surrounding access routes have been provisionally designated open county and that it has a bleak and exposed character."*
- **15 – Mynydd y Gelli** – *"The exposed upland rolling hillsides and valleys, rise from approx. 250m AOD in the upper reaches of the Afan valley, which forms the northern fringe of the area, to 555m AOD to the south. The area is defined to the south by the County Borough boundary, although the character of the landscape continues beyond the assessment area). The profile highlights that this area contains a number of small valleys, tributaries to the Afan. The topography creates an imposing presence, which is enhanced by its simple cover of predominantly coarse grasses. The area provides a contrast to the more complex landscapes of surrounding areas creating a sense of exposure and wilderness after the enclosure of the valley. And that a number of footpaths provide additional access and significant areas around these have been provisionally designated open county."*

Local Landscape Character

2.4.9. The NRW LANDMAP[6] landscape character information has been referred to for an understanding of landscape character within the Study Area. This outlines the setting for the Project within the Study Area. LANDMAP provides an all-Wales resource of landscape characteristics, qualities, and influences, arranged within five aspect layers. For the purposes of Scoping the host Visual and Sensory Aspect Areas have been identified. As part of any ongoing LVIA the filtering process will be applied as per GN46 LANDMAP guidance.

2.4.10. The proposed cable route crosses through or has the potential to affect the character of the following Visual and Sensory Aspect Areas (VSAA's):

- **Mynydd Baedan (CYNONVS473) – Overall Evaluation = *High***
  - *"Northeastern facing slopes, ranging from 120m to 350mAOD, of rough grazing with woodland blocks/forestry providing both structure and dominant mosaic pattern. strong upland character reinforced by northeasterly views of Brecon Beacons. Views out down to urban area and within to scattered farmsteads take edge off what is essentially a wild /upland feel with some views over ridge south to sea adding to sense of place and experience of altitude/elevation. Minor expansion of Maesteg has reduced aspect area at change detection monitoring. One of the Medium Term Guidelines (Q32) is to limit pylons."*
- **Maesteg (CYNONVS351) – Overall Evaluation = *Low***
  - *"Small town with mix of modern and traditional buildings in an upper valley setting between approximately 100m and 200mAOD, the elevation and close proximity of upland imparting a slight ulpland sense of place to the northern area of the town. The town centre dominated by traffic. Variable housing quality on outskirts, and modern developments. some good views to upper valley sides and beyond across urban area in valley floor, particularly from the higher ground in the south looking north. Piecemeal recent expansions on edges, including prominent school."*
- **Upland Settlements (NPTVS215) – Overall Evaluation = *Low***
  - *"Predominantly ex-mining settlements of Dyffryn, Dulais and Amman valleys. Settlements are essentially linear in character strung out along the main valley roads. The original buildings are a mix of stone, red and yellow brick and render with slate roofs. Newer buildings tend to be render and pebbledash. The cores are difficult to define and have a limited number of commercial enterprises. Newer residential areas extend around the core sometimes lying awkwardly on higher ground. The towns as a whole have the appearance of being somewhat run down with some dwellings boarded up and abandoned."*

[6] Natural Resource Wales, (2021). Landmap Visual Sensory. Available online at: Natural Resources Wales / LANDMAP - the Welsh landscape baseline [Accessed February 2025].

- **Garth Hill (CYNONVS811) – Overall Evaluation = *Moderate***
  - *"Westerly facing slopes (reaching from approximately 150m to 350m AOD) of relatively broad valley, - aspect brings views across urban area on valley floor- sharp boundary of urban/rural interface. Upland feel generated through elevation and rough grazing on softly rounded slopes with scattered farmsteads. Conifer clad uplands of Mynydd Morgan dominates views. Change detection monitoring: Lower slopes are reclaimed/regenerated, allocated for development. Recent school conspicuous at edge of Maesteg has altered boundary."*
- **Mynydd y Gelli (NPTVS547) – Overall Evaluation = *High***
  - *"Exposed upland rolling hillsides, rising from approx. 250m AOD in upper reaches of Afan valley to 555m AOD, with small valleys running down its side - tributaries to the Afan. The land cover is predominantly coarse grasses. The A4107 skirts the northern edge of the area, running along the contours of the slope. The topography creates an imposing presence and with its simple land cover provides a contrast to the more complex landscapes of surrounding areas."*
- **Mynydd Llangeinwyr (CYNONVS622) – Overall Evaluation = *High***
  - *"Open upland ridge lying between approximately 250m and 550mAOD, land cover of rough grazing and bracken, with some old stone walls. panoramic and sometimes dramatic views over upland and adjoining valleys. Some visual clutter of pylons slightly detracts from this otherwise wild/exposed typical upland area with a strong sense of place. Not remote as close to valleys and their associated urban areas. Windfarm/mast visual clutter is identified as detracting features in views within the VSAA (Q23) which are not in-keeping with the character of the area (Q21). One of the Medium Term Guidelines (Q32) is to restrict wind energy development."*

LANDSCAPE PLANNING DESIGNATIONS

National Designated Landscapes

2.4.11. There are no nationally designated landscapes (National Parks and National Landscapes (former Areas of Outstanding Natural Beauty) within the Study Area.

Local Designated Landscapes

Special Landscape Areas (SLA's)

2.4.12. The proposed cable route crosses through or has the potential to affect the character of the following Special Landscape Areas[7]:

- **10 – Foel y Dyffryn** (Bridgend Local Plan Policy EN3) – Located to the west of Maesteg with the western OHL section passing through the SLA.

[7] Natural Resource Wales, (2021). Special Landscape Areas. Available online at: New map | DataMapWales [Accessed: February 2025].

- **92 – Foel Trawsnant** (Neath Port Talbot Local Plan Policy EN2) – Located adjacent Foel y Dyfferyn SLA to the west but is across the administrative boundary. While the OHL section does not pass through this area as identified on maps it is likely to be experienced as one SLA.
- **91 – Mynydd Y Gelli** (Neath Port Talbot Local Plan Policy EN2) – Located to the east of Croeserw with part of the longer western OHL section passing through and around the southern boundary of the SLA. The proposed cable route runs close to the administrative boundary so is likely to be experienced together with the Northern Uplands SLA as a single area.
- **11 – Northern Uplands** (Bridgend Local Plan Policy EN3) – Located to the north of Blaengarw with the eastern most underground section running through the SLA close its northern boundary. The proposed cable route runs close to the administrative boundary so is likely to be experienced together with the Mynydd Y Gelli SLA as a single area.

VISUAL AMENITY

2.4.13. A Zone of Theoretical Visibility (ZTV) for the Project is provided on **Figure 2.5**. This has been produced using the proposed OHL section of the cable route as the connection poles will be the main visible elements in the landscape. The linear nature of the proposals in combination with the steeply undulating valley landscape creates patches of visibility across the Study Area, predominantly from the plateaus and ridgelines of the uplands as well as the steep valley slopes facing the Project. The uplands are often exposed and open offering far-reaching, panoramic views of the landscape.

Visual Receptors

2.4.14. A combination of ZTV analysis and desk-based research has been used to establish a visual baseline. The number of PRoW and OAL in the area together with evidence of trails/desire lines on aerial imagery suggests that this is a well-used recreational landscape surrounding the settlement of Maesteg and near to Pontycymer. The ZTV indicates that there is potential for receptors to experience change to their visual amenity from throughout the 2km Study Area. Visual receptors to be considered are set out below.

<u>Settlements and Residential Properties:</u>

- Residents at the northern end of Maesteg, specifically around areas known as Dyffryn, Brynheulog, Blaencaerau and Croesrw (including Community Parks and POS).

<u>People using Recreational Routes:</u>

- Network of PRoW (footpaths, bridleways and byways) throughout the Study Area (the ZTV suggests that no views would be available from any National or Long Distance Walking Routes including St Illtyd's Walk);
- Sustrans National Cycle Network (NCN) Route 885; and
- Open Access Land throughout the Study Area.

<u>Drivers, passengers, and cyclists (where permitted) using the:</u>

- A4063; and
- Network of minor B roads and unclassified roads within the settlement of Maesteg.

Recreational and tourist destinations:

- Afan Forest Park

Proposed Viewpoints

Table 2-2 – Proposed Viewpoints

Viewpoint Reference	Viewpoint Name	Distance and Direction	Receptor
1	Junction of Footpaths MAE/13/2 and MAE/15/3 (upper slopes)	175m south	Recreational receptors (footpaths)
2	Foel y Dyffryn (summit)	370m northwest	Recreational receptors (OAL)
3	A4063	50m northeast	Residents, pedestrians, road users
4	Junction of Footpath MAE/1/2 and Byway MAE/12/1 / 23/37/5	1km north 1.4km southwest	Recreational receptors (footpath, byway and OAL)
5	Rathbone Terrace/Protheroe Street	710m north 900m southwest	Residents, pedestrians, road users, also Caerau Community Park.
6	Footpath MAE/9/1	150m south	Recreational receptors (footpath, OAL and NCN Route 885)
7	Croeserw Social Club carpark	50m northwest	Residents, pedestrians, road users, also Tudor Park.
8	Footpath MAE/3/2	120m south	Recreational receptors (footpath and OAL)
9	Footpath 23/9/1 (Coetgae Isaf)	1.4km north	Recreational receptors (footpath)
10	Bridleway 23/19/1 (Tarren Rhiw-Ilech)	1.1km north	Recreational receptors (bridleway, nearby footpath and OAL)
11	Footpath GWV/63/1 (Werfa)	On underground cable route	Recreational receptors (footpath and OAL)
12	Footpath GWV/103/4 (Mynydd Llangeinwyr / Wefra)	1.6m southeast	Recreational receptors (footpaths and OAL)
13	Footpath MAE/4/3	1.1km south	Recreational receptors (footpath)
14	Footpath MAE/3A/2 (Darren Y Bannau)	865m south	Recreational receptors (footpath and OAL)

Viewpoint Reference	Viewpoint Name	Distance and Direction	Receptor
15	Mynydd Pwll-yr-Iwrch (off Footpath MAE/59/1)	1.6km southeast 1.7km south	Recreational receptors (footpaths and OAL)

2.5 APPRAISAL

2.5.1. Landscape and visual effects are separate but interlinked topic areas. Landscape effects can be defined as the changes in the fabric and quality of the landscape as a result of a development through:

- Direct effects upon specific landscape elements such as individual trees, hedgerows and hedgerow trees, and woodland (including Ancient Woodland);
- Subtler effects upon the overall patterns of elements that give rise to landscape character and regional and local distinctiveness; and
- Effects upon special interests or values such as designated landscapes.

2.5.2. Visual effects can be defined as changes to the visual amenity or quality of the view, particularly for people (visual receptors) for whom enjoyment of the view is a primary part of their activity, such as those engaging in outdoor recreation, or who will be exposed to the view for extensive periods, such as people in their homes. These would be defined as particularly sensitive receptors.

2.5.3. It is not deemed necessary to include photomontages at the ES stage. This is due to the relatively small scale of the works, the extent of the wooden poles and the minimal receptors affected. Annotated viewpoint photographs will be provided as per Type 1 described in the Landscape Institutes guidance on Visual Representation of Development Proposals[8].

Likely Significant Effects

2.5.4. Potential significant landscape and visual effects which are predicted to occur are outlined below.

Construction Activities

- Land preparation (site clearance, earthworks);
  - Removal of landscape elements present under the baseline conditions such as individual trees and woodland;
  - Direct and temporary localised effects on landscape elements may be significant; and
  - Receptors include landscape elements within the Study Area.
- Presence of cranes, other machinery, vehicle movements, contractors' facilities and site access;

[8] Landscape Institute, (2019). Technical Guidance Note 06/19 – Visual Representation of Development Proposals. Available online at: TGN-06-19-Visual_Representation [Accessed: February 2025].

- Direct and temporary effects on the host LCA and LANDMAP Visual and Sensory Aspect Areas (VSAA's) identified in the Baseline information;
- Indirect and temporary effects related to the visibility of the construction activities and their effect on landscape character and the special qualities and characteristics of the landscape;
- Temporary effects on views and visual amenity resulting from visibility of the construction activities within ~2 km distance, subject to detailed viewpoint analysis; and
- Receptors include host County LCA's and LANDMAPS VSAA's, residential properties within Maesteg, local roads and PRoW, OAL, and local visitor attractions and facilities that are within the ZTV.

Operational Activities

- Land preparation (site clearance, earthworks);
  - Residual impacts from removal landscape elements present under the baseline conditions such as individual trees and woodland;
  - Direct and temporary localised effects on landscape elements before establishment of mitigation may be significant; and
  - Receptors include landscape elements within the Study Area.
- Presence of overhead power lines;
  - Changes to the local landscape character (host county LCA's and LANDMAP VSAA's) as a result of the proposed overhead section of cable route during operation; and
  - Changes impacting the composition of key views including from surrounding residential properties within Maesteg, local roads and PRoW, OAL, and local visitor attractions and facilities that are within the ZTV.

2.6 DESIGN AND MITIGATION

2.6.1. The LVIA is part of an iterative EIA process which aims to 'design out' significant effects via a range of environmental measures including avoidance and design that aim to reduce or eliminate significant effects. Design is an integrated part of the LVIA process and environmental measures related to landscape design and management can be an important tool to mitigate significant effects. The EIA process can also call on a range of environmental and technical specialists that contribute other forms of mitigation that may also bring a range of benefits to the Project. Potentially significant landscape and visual effects and the constraints and opportunities connected with their resolution are identified through the LVIA process. Where possible embedded environmental measures such as design modification or landscape planting schemes are incorporated into the Project in order to mitigate landscape and visual effects.

2.6.2. An initial list of mitigation measures are outlined below, which will aim to reduce the extent of landscape and visual effects:

- Design team and contractors to consider the different landscape and visual effects of all elements of the development including vegetation removal, construction practices, and any converter stations;
- Minimise the loss of existing vegetation of ecological value (particularly long established hedgerows and veteran trees);

- Introduce new planting where possible which is sympathetic to the surrounding landscape character and, in consultation with the ecology team, reflective of native species;
- Consider the soil types, seeding mixes and management regimes to create species-rich meadows and glades within areas of new screen planting; and
- Consider the potential for introducing offsite planting in discussion with adjacent landowners to reduce effects of middle and long distance views.

3 TRAFFIC AND TRANSPORT

3.1 INTRODUCTION

3.1.1. This chapter of the EIA Scoping Report sets out the proposed methodology for the assessment of likely significant traffic and transport effects of the Project, including identification of the following: key data sources, the determination method for traffic and transport study area and transport receptors. It also provides an overview of the existing baseline transport context.

3.1.2. The traffic and transport assessment of the effects of the Project will be produced with reference to key national and local policy, legislation and the following technical guidance:

3.1.3. Institute of Environmental Management and Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement (EATM) (IEMA, 2023)[9] which is the current guidance for assessing potentially significant environmental impacts.

3.2 INFORMATION SOURCES AND STUDY AREA

INFORMATION SOURCES

3.2.1. The sources of information used for this scoping chapter are identified in **Table 3-1.**

Table 3-1 – Information sources used for Traffic and Transport

Source	Description
Google Maps[10]/Streetview/Google Earth Pro.	Mapping data and imagery.
Neath Port Talbot Council[11]	Public Rights of Way (PRoWs) information.
Bridgend County Borough Council[12]	PRoWs information.
National Rail[13]	Rail service information.
First bus[14]	Bus service information.

[9] Davis, S., Hoare, D., Howard, R. and Ross, A., (2023). *Institute of Environmental Management and Assessment (IEMA) Guidelines: Environmental Assessment of Road Traffic and Movements (EATM).*

[10] Google, (2025). *Google Maps*. [online]. Available at: https://www.google.co.uk/maps [Accessed January 2025].

[11] Neath Port Talbot Council, (2025). *Rights of Way*. [online]. Available at: https://maps.npt.gov.uk/rights_of_way/index.html [Accessed January 2025].

[12] Bridgend County Borough Council, (2024). *Public Rights of Way*. [online]. Available at: https://maps.bridgend.gov.uk/webmap9/Map.aspx?MapName=OSWMTSBasemap [Accessed January 2025].

[13] National Rail, (2025). *National Rail*. [online]. Available at: https://www.nationalrail.co.uk/ [Accessed January 2025].

[14] FirstBus, (2025). *Timetables*. [online]. Available at: https://www.firstbus.co.uk/south-west-wales/plan-journey/timetables [Accessed January 2025].

Source	Description
Sustrans[15]	National Cycle Network (NCN) route information.

3.2.2. In addition to the sources within **Table 3-1**, the traffic and transport assessment within the EIA will likely refer to the sources set out below:

- Department for Transport (DfT) STATS19 accident data accessed via an in-house WSP tool known as Collision Analysis – UK Wide Dashboard;
- DfT[16] Average Annual Daily Traffic (AADT) flow data from count point locations on local and strategic roads within the traffic and transport study area. It is proposed that DfT AADT data will be used at survey locations where there has been a manual count in 2019 (pre-COVID-19 pandemic) or 2023 (post-COVID-19 pandemic). The COVID-19 pandemic UK travel restrictions impacted traffic flows between 2020 and 2022 and therefore this period does not reflect 'normal' travel conditions;
- Where a 2019 or 2023 DfT manual count data set is not available for roads within the study area that are to be assessed, traffic surveys will be undertaken; and
- Adoption status of roads on the highway network from Council held information.

STUDY AREA

3.2.3. The transport network may be impacted by the Project in the following ways:

- Movement of Project traffic on the road network;
- Crossing of highways by the OHL)/UGC;
- The UGC being routed within or alongside road carriageways; and
- Crossing of PRoWs, navigable waterways and railways.

3.2.4. As will be set out in the methodology within **Section 3.3**, it is proposed that the assessment of traffic and transport effects will be based on the construction traffic routes. These are currently unknown but will likely consist of roads, also referred to herein as highway links, that connect the Project access locations (including the construction compounds and laydown areas) to each other and to the Strategic Road Network (SRN).

3.2.5. In addition, an outline Construction Traffic Management Plan (CTMP) and outline Public Rights of Way Management Plan (PRoWMP) will be prepared, as part of the EIA, to identify impacts on the transport network due to crossings of the OHL/UGC and routing of the line within the highway.

3.3 METHODOLOGY

3.3.1. EATM outlines that the greatest environmental change will generally be when the Project traffic is at the largest proportion of the total flow. Therefore, the assessment of traffic and transport effects

[15] Sustrans, (2025). *The National Cycle Network*. [online]. Available at: https://www.sustrans.org.uk/national-cycle-network/ [Accessed January 2025].
[16] Department for Transport, (2024). *Road traffic statistics*. [online]. Available at: https://roadtraffic.dft.gov.uk/#6/55.254/-6.053/basemap-regions-countpoints [Accessed September 2024].

within the EIA will be undertaken for the construction phase with the largest traffic generation as this will represent the worst-case scenario of traffic and transport effects.

3.3.2. EATM sets out two rules to establish the need for an environmental assessment of traffic and transport effects on highways receptors, relating to the proportional change in traffic flows on highways with the Project traffic:

- *"Rule 1: Include highway links where traffic flows will increase by more than 30% (or where the number of heavy goods vehicles will increase by more than 30%).*
- *Rule 2: Include highway links of high sensitivity where traffic flows have increased by 10% or more".*

3.3.3. Rule 1 and Rule 2 will be used to identify highways within the traffic and transport study area that required detail assessment within the EIA.

TEMPORAL SCOPE

3.3.4. As set out below, the phase of the Project that will generate the most traffic movements will be the construction phase, therefore it is proposed that only the construction phase will be assessed with respect to traffic and transport effects.

Construction Phase

3.3.5. The number of construction traffic movements across the Project construction programme is not currently known. The anticipated peak daily construction traffic movements for the Project will be identified within the EIA traffic and transport chapter and will be assessed as the worst-case scenario of traffic impacts.

3.3.6. The year in which the peak daily construction traffic movements is anticipated to occur will be the year of assessment. Baseline traffic flows will be growthed (increased based on forecasts of future traffic), using growth factors derived from the DfT's Trip End Model Presentation Program (TEMPro), to the future year. The percentage change between the future year baseline traffic flow and future year with the Project peak construction traffic will be assessed against the EATM Rule 1 and Rule 2 thresholds, to determine which highways sections required detailed assessment.

Operational Phase

3.3.7. During the operational phase, traffic movements associated with the Project will be minimal, comprising trips for inspection, repair and maintenance purposes. Vehicles used for repair work are likely to be similar to those used during construction, however, these would be infrequent. Therefore, it is proposed to scope this out of the assessment.

Decommissioning Phase

3.3.8. The operation life of the Project is anticipated to be up to 30 years. Post operation the above and below ground infrastructure is assumed to remain in situ. Therefore, the development traffic movements associated with the Project decommissioning phase will be lower than those associated with the construction phase. Therefore, it is proposed to scope this out of the assessment.

ASSESSMENT

Likely Significant Traffic and Transport Effects and Receptors

3.3.9. The potential likely significant traffic and transport effects of the Project that are identified within EATM are summarised below.

- Severance: the separation of people from places and other people and places or impede pedestrian access to essential facilities;
- Driver delay: traffic delays to non-development traffic;
- Non-motorised user amenity: the effect on the relative pleasantness of a pedestrian journey resulting from changes in traffic flow, traffic composition and pavement width/separation from traffic;
- Non-motorised user delay: the ability of people to crossroads as a result of changes in traffic volume, composition and speed, the level of pedestrian activity, visibility and general physical conditions of the Project;
- Fear and intimidation: the change in fear and intimidation levels experienced by people as a result of an increase in traffic volume and its proximity or the lack of protection caused by such factors as narrow pavement widths;
- Road safety: the risk of accidents occurring where the Project is expected to produce a change in the character of traffic;
- Impacts of Abnormal Indivisible Loads (AILs). AILs are long, wide or heavy loads that cannot reasonably be divided into smaller/lighter loads for road transport. In the UK there are set thresholds for these criteria[17]; and
- Impacts of Hazardous Loads.

3.3.10. These effects will be assessed within the EIA traffic and transport chapter for highway sections that are identified as requiring detailed assessment with the exception of impacts of AIL movements and hazardous load movements. These effects are scoped out of the assessment as no AIL or hazardous load movements are anticipated to be required for the Project.

3.3.11. Transport receptors are the users or beneficiaries of the highways network assets and facilities. EATM identifies the following key user groups: non-motorised users, PRoW users, motorists/freight vehicles, public transport and emergency services. The EATM further identifies sensitive locations or users that may be affected:

- *“People at home;*
- *People at work;*
- *Sensitive and/or vulnerable groups (including young age; older age; income; health status; social disadvantage; and access and geographic factors);*
- *Locations with concentrations of vulnerable users (e.g. hospitals, places of worship, schools);*
- *Retail areas;*

[17] For a summary of criteria see National Highways, (2024). *Abnormal Loads and the ESDAL system.* [online]. Available at: https://nationalhighways.co.uk/road-safety/abnormal-loads-and-the-esdal-system/ [Accessed January 2025].

- *Recreational areas;*
- *Tourist attractions;*
- *Collision clusters and routes with road safety concerns: and*
- *Junctions and highway links at (or over) capacity".*

Determination of Receptor Sensitivity, Magnitude of Change and Significant of Effect

3.3.12. Each highway section that forms part of the construction traffic route will be assigned a receptor sensitivity of high, medium, low or negligible based on the guidance provided within EATM and professional judgement. This includes consideration of proximity of sensitive receptors to the roads to be used by construction traffic and the highway environment, as summarised in **Table 3-2**.

Table 3-2 – Receptor sensitivity summary

Sensitivity	Description/Reason	Receptor
High	Highway links with a high sensitivity to changes in traffic flows include routes: ■ With sensitive receptors alongside them (such as schools, colleges and playgrounds); and/or ■ Where there are land uses which result in high volumes of pedestrian/cycle users and the road is narrow and/or footway provision is poor or non-existent and/or existing traffic volumes are high for the type of road resulting in congestion and road safety issues.	Occupants of land uses alongside the highway link and users of the highway link.
Medium	Highway links with a medium sensitivity to changes in traffic flows include routes: ■ With some sensitive receptors alongside them (such as retail areas); and/or ■ Where there are land uses which result in some pedestrian/cyclist users, road design and footway provision is adequate/appropriate and/or existing traffic volumes can be accommodated for the type of road but approaching capacity.	Occupants of land uses alongside the highway link and users of the highway link.
Low	Highway links with low sensitivity to changes in traffic flows include routes: ■ With no sensitive receptors and some land uses alongside and no/very limited pedestrian/cyclist users and/or road design and footway provision is appropriate and existing traffic volumes can be accommodated for the type of road.	Occupants of land uses alongside the highway link and users of the highway link.

Sensitivity	Description/Reason	Receptor
Negligible	Highway links with negligible sensitivity to changes in traffic flows include routes: ▪ With no sensitive receptors and very few land uses alongside them, which have no direct access or are sufficiently set back from the carriageway, and no/very limited pedestrian/cyclist users and existing traffic volumes can be accommodated for the type of road.	Users of the highway link.

3.3.28. For highways links where the sensitivity is judged as 'High' or 'Medium', Rule 2 is applied (sensitive areas where traffic flows are predicted to increase by 10% or more). For highway links where the sensitivity is judged as 'Low' or 'Negligible', Rule 1 is applied (areas where traffic flows are predicted to increase by more than 30% or where the number of Heavy Goods Vehicles (HGVs) is predicted to increase by more than 30%).

3.3.29. For each highway section that forms part of the construction traffic route, the magnitude of change will be determined (high, medium, low or negligible) based on the guidance provided within EATM and professional judgement. The criteria are summarised in **Table 3-3**.

Table 3-3 – Magnitude of change summary

Traffic and Transport Impact	Magnitude of Change			
	High	Medium	Low	Negligible
Severance	Change in total traffic or HGV flows over 91%.	Change in total traffic or HGV flow of 61% to 90%.	Change in total traffic or HGV flows of 31% to 60%.	Change in total traffic or HGV flows of less than 30%.
	Context should, also, be considered including the local population and number of local facilities potentially impacted. EATM states caution should be applied with applying these thresholds to highway links with low baseline flows.			
Driver delay.	High increase in queuing at junctions and/or congestion on road links.	Medium increase in queuing at junctions and/or congestion on road links.	Low increase in queueing at junctions and/or congestion on road links.	Low or no increase in queuing at junctions and/or congestion on road links.
Non-motorised user amenity.	A halving or doubling of traffic flow (or HGV flow) can be used as a broad threshold when considered in the local context and applied with caution.			

Traffic and Transport Impact	Magnitude of Change			
	High	Medium	Low	Negligible
	Assignment of magnitude is based on a variety of factors including general level of pedestrian activity, visibility, and physical conditions such as traffic flow, traffic composition, crossing points and pavement width/separation from traffic.			
Non-motorised user delay.	Generally, increases in traffic may lead to greater delay, though is dependent on the level of non-motorised users' activity in the area. Magnitude is assigned on pedestrian delay experienced when crossing highways links considering a range of factors including crossing type, pedestrian flows, traffic levels, visibility and general highway condition.			
Fear and intimidation.	Magnitude is assigned based on the scoring system provided in EATM (which is dependent on an 18 hour average traffic flow; 18 hour average HGV traffic flow and vehicle speed). The scores comprise extreme (71+); great (41 to 70); moderate (21 to 40) and small (0 to 20).			
	Two step change in level score of fear and intimidation.	One step change in level score of fear and intimidation and >400 average 18 hour vehicle increase or >500 HGV 18 hour vehicle increase.	One step change in level score of fear and intimidation and <400 average 18 hour vehicle increase or <500 HGV 18 hour vehicle increase.	No change to step in level score of fear and intimidation.
Road safety.	Magnitude is assigned by reviewing existing collision patterns and trends based upon existing personal injury accident records and the forecast increase in traffic that may change the risk of serious and fatal injuries.			

3.3.30. Significance of likely traffic and transport impacts will be derived by considering the receptor sensitivity and the magnitude of change as defined within **Table 3-4** (shading denotes significant impacts).

Table 3-4 – Traffic and transport significance evaluation matrix

Receptor Sensitivity	Magnitude of Change			
	High	Medium	Low	Negligible
High	Major (Significant).	Major (Significant).	Moderate (Significant).	Negligible (Not Significant).
Medium	Major (Significant).	Moderate (Significant).	Minor (Not Significant).	Negligible (Not Significant).
Low	Moderate (Significant).	Minor (Not Significant).	Negligible (Not Significant).	Negligible (Not Significant).
Negligible	Negligible (Not Significant).	Negligible (Not Significant).	Negligible (Not Significant).	Negligible (Not Significant).

Cumulative Effects

3.3.31. As outlined previously, TEMPro will be used to growth the baseline traffic flow data to the future year of assessment. The future year will be defined as the time period in the construction programme when daily construction traffic will be highest. DfT's TEMPro forecasts of traffic growth take into account national projections of population, employment, housing, car ownership and trips rates. Therefore, TEMPro should account for all cumulative and anticipated development within the local plans at the time of its production.

3.3.32. Consideration would be given as to whether any of the identified receptor locations are likely to be subject to cumulative effects due to traffic and transport effects generated by other proposed developments in the area that are included within the TEMPro growth factor (i.e. recently approved development that was not part of a local plan allocation). If this is likely to be the case, a cumulative assessment would be undertaken.

3.4 BASELINE ENVIRONMENT

3.4.1. This section briefly outlines the transport network in the vicinity of the Project. The details within this section will be expanded within the EIA traffic and transport chapter.

LOCAL ROAD NETWORK

3.4.2. The sections of the local road network that form the construction traffic route (between the Project construction access(es) and the SRN and/or point of origin on the local road network) will be descripted within the traffic and transport chapter within the EIA, once these routes are determined.

STRATEGIC ROAD NETWORK

3.4.3. The nearest roads on the SRN are the M4, (south of the Project) and the A465 (northwest of the Project). The M4 provides connections to the east and west and the A465 to the northeast.

PUBLIC TRANSPORT

3.4.4. The nearest railway station to the Project is Maesteg Station. It is served by services to Cardiff Central and Ebbw Vale Town[13]. The railway station location is shown in **Figure 3.1, Appendix B**.

3.4.5. The nearest bus stops to the Project are on the A4063 and Brynheulog Road. The local bus services that route near the Project are as follows[14], the routes of these services are shown in **Figure 3.1, Appendix B**:

- 70 (Firstbus) – operates between Cymmer and Bridgend, with a minimum of 13 services per day per direction Monday to Friday and ten services per direction on Sunday.
- 71 (Firstbus) – operates between Cymmer and Bridgend, Monday to Saturday with 11 services per day per direction.

ACTIVE TRAVEL

3.4.6. The nearest NCN route[15] to the Project is the 885 which currently routes between Maesteg and Cymmer. The majority of the 885 route is off-carriageway with some sections of on-carriageway route. At Cymmer there is connection to NCN route 887, which links to Port Talbot, Aafan Forest Park and other NCN routes. Route 885 is planned to connect south to Bridgend; however, this section is still under development. The section of route 885 near the Project is shown in **Figure 3.1, Appendix B**.

3.4.7. **Figure 3.1, Appendix B** also shows the location of NCN route 884 which is located south of the Project. NCN route 884[15] is a north-south route between Blaengarw and Brynmenyn, the majority of the route is off carriageway.

3.4.8. There are PRoWs in the vicinity of the Project; those that interact with the Project are outlined below in **Section 3.5**.

3.5 APPRAISAL

LIKELY SIGNIFICANT TRAFFIC AND TRANSPORT EFFECTS

3.5.1. The peak daily construction traffic flow and the construction traffic routes will be identified within the ES traffic and transport chapter, and the anticipated likely significant traffic and transport effects will be assessed.

3.5.2. It should be noted that impacts of construction traffic will be temporary in duration, and therefore effects will be temporary.

PROJECT CROSSINGS OF THE TRANSPORT NETWORK AND IN HIGHWAY PROPOSED LOCATIONS

3.5.3. In addition to the likely significant traffic and transport effects assessed within the EIA traffic and transport chapter, there are transport impacts that will be identified within the CTMP and PRoWMP that will be produced as part of the EIA. These management plans will set out mitigation measures to minimise the impact of construction traffic. This section outlines the Project crossings and interactions with the national rail network, navigable waterways, highways network and PRoW network. These crossings and interactions will be reviewed at the EIA stage once the Project design is finalised, and appropriate mitigation set out within the CTMP and PRoWMP.

Rail Network Crossings

3.5.4. The Project line does not cross any of the national railway network lines.

Navigable Waterways Crossings

3.5.5. The Project line does not cross any navigable waterways.

Public Rights of Way Crossings and Interactions

3.5.6. **Table** 3-5 **3-5** summarises the Project's interactions/crossings of the PRoW network within the Neath Port Talbot Council boundary and Bridgend Council Boundary.

Table 3-5 – Project Crossings and Interactions with the Project

PRoW within Neath Port Talbot Council Boundary	
Footpath crossed by, or with a terminus at, the Project OHL.	23/65/1 and unknown path south of Croeserw.
Bridleway crossed by, or with a terminus at, the Project OHL.	23/10/1 and 23/64/1.
Footpath crossed by, or with a terminus at, the Project underground line.	23/70/1.
PRoW within Bridgend Council Boundary	
Footpath crossed by, or with a terminus at, the Project OHL.	MAE/10/2; MAE/3/2 and MAE/13/4.
Footpath crossed by, or with a terminus at, the Project underground line.	GWV/63/1; MAE/9/1; MAE/6/1; OGV/31/1 and OGV/31/2.
Byway Open to All Traffic (BOAT) crossed by, or with a terminus at, the Project underground line.	MAE/12/1.
Bridleway crossed by, or with a terminus at, the Project OHL.	MAE/1/1 and OGV/38/1.

Highways Crossings and in Carriageway Sections

3.5.7. The Project has the potential to impact on highways via crossings of highways by the OHL or UGC and in carriageway sections of the underground line.

Highways Crossings

3.5.8. The draft Project route does not cross any adopted highways. Should changes to the Project route result in crossings of the highway, the impact and required mitigation measures for these crossings will be identified within the outline CTMP.

In Highway Sections

3.5.9. The Project has in highway sections of underground cable along the A4063 from just south of Brynheulog Road (Croeserw) to north of Bedw Street (Caerau).

3.5.10. It should be noted that the sections of in highway cable may be subject to change as the Project design progresses.

3.6 RECOMMENDATIONS AND MITIGATIONS

RECOMMENDATIONS

3.6.1. In summary the following are proposed to be scoped into the traffic and transport assessment within the EIA:

- Impacts of the Project construction traffic on highways that form the traffic and transport study area during the construction phase.

3.6.2. Additionally, impacts of the Project on PRoW and impacts on the highway network due to in carriageway works and crossing of highways by the Project will be identified within an outline CTMP and an outline PRoWMP, where mitigation measures will be set out to ensure impacts are minimised.

3.6.3. It is proposed that the following are scoped out of the assessment of traffic and transport effects:

- Impacts during the construction phase on navigable waterway and the rail network, due to the proposed route not crossing any of these;
- Impacts during the operational phase of the development, due to the minimal traffic movements generated during this phase;
- Impacts resulting from AIL movements or the movement of hazardous loads, as none are anticipated; and
- Impacts during the decommissioning phase of the development, due to the lower traffic movements generated during this phase than in the construction traffic phase.

MITIGATION

3.6.4. Mitigation measures relating to traffic and transport effects are the production of an outline CTMP and an outline PRoWMP which will identify impacts, in addition to those assessed within the EIA traffic and transport assessment, of the Project construction on highways and PRoWs. These plans will provide a comprehensive framework for packages of measures to minimise the impact of the Project construction on the highway and PRoW networks and ensure safety. It should be noted that no permanent effects on PRoWs are anticipated.

4 ECOLOGY

4.1 INTRODUCTION

4.1.1. This section of the Scoping Report sets out the overall approach that will be taken in the EIA for ecology. This section also provides a preliminary assessment of the likely significant effects (LSE) predicted to arise from the Project upon ecology and the potential Zone of Influence (ZoI) for these effects. Ecological receptors considered include protected and notable species, habitats and designated sites.

4.1.2. This chapter is supported by **Figures 4.1** – **4.2**, **Appendix F: Annex 4.1 – 4.5** and should be read in conjunction with **Chapter 2: Landscape**, **Chapter 5: Ornithology** and **Chapter 7: Hydrology, Geology and Hydrogeology**.

4.2 INFORMATION SOURCES AND STUDY AREA

PREVIOUS ECOLOGICAL SURVEYS

4.2.1. Various ecological surveys have been completed by CSA Environmental Ltd in 2024 in support of the Project, including:

- A Preliminary Ecological Appraisal (PEA)[18] (**Appendix F: Annex 4.1**), comprising a desk study and a UKHab survey in April and May 2024. The PEA identified various habitats on Site with suitability to support a range of protected and/or notable species;
- Great Crested Newt survey[19] (**Appendix F: Annex 4.2**) in June 2024, comprising a Habitat Suitability Index (HSI) Assessment and environmental DNA (eDNA) to determine the presence or likely absence of the species;
- Bat survey[20] (**Appendix F: Annex 4.3**), comprising Ground Level Tree Assessment (GLTA) in September 2024; and
- Water vole *Arvicola arvensis* survey[21] (**Appendix F: Annex 4.4**), comprising a search for field signs in June and September 2024[22].

4.2.2. Full details of the assessment and survey methodologies, along with any significant limitations, are detailed within the respective survey reports. A summary of the results of these surveys are provided in **Section 4.4**.

[18] CSA Environmental (2024). Upper Ogmore Wind Farm – Preliminary Ecological Appraisal, August 2024. Report No: CSA/6891/01

[19] CSA Environmental (2024). Upper Ogmore Wind Farm, Maesteg – Great Crested Newt Report, November 2024. Report No. CSA/6891/02

[20] CSA Environmental (2024). Upper Ogmore Wind Farm – Bat Survey Report, November 2024. Report No: CSA/6891/03

[21] CSA Environmental (2024). Foel Trawsnant Wind Farm – Water Vole Survey Report, November 2024. Report No: CSA/7086/04.

[22] The water vole survey was undertaken by CSA Environmental in support of two different development proposals (Upper Ogmore Grid Connection and Foel Trawsnant Grid Connection). Whilst the report title references Foel Trawsnant only, the development boundaries overlap and the water vole survey area encompasses all areas of suitable water vole habitat identified within the Upper Ogmore Site, isolated to the south-western end of the Project. This report and survey data is therefore considered relevant for this Project.

THE STUDY AREA

4.2.3. The overall Study Area for ecology extends up to 10km from the Project (but varies within this Study Area dependant on the ecological receptor being considered). The Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment for the UK and Ireland were used to determine the extent of the Study Area (CIEEM, 2024)[23].

4.2.4. The ecological baseline will be determined through a combination of desk-based study and field surveys for protected and/or notable species. The Study Area may vary for each ecological feature in accordance with best practice guidelines and the likely zone of influence (ZoI), potential to be impacted and where relevant, a consideration of species behaviour including their mobility.

4.3 METHODOLOGY

4.3.1. Assessment methods for all potentially significant effects will be based on the methodology described in the CIEEM Guidelines for Ecological Impact Assessment in the UK (2018), updated September 2024.

SIGNIFICANCE CRITERIA

4.3.2. This section sets out the methodology that will be followed to assess the potential ecological impacts of the Project, considering both the construction and operational phases. The construction phase includes enabling works, clearance, earthworks and construction activities.

4.3.3. The methodology for this assessment is in accordance with guidance provided by CIEEM (2018)[24] and follows the key stages listed below:

- Establishing the Study Area and Survey Area (see Section 4.2, above);
- Collating information on baseline studies of ecological receptors (see Section 4.2, above);
- Identification of Important Ecological Features (IEFs);
- Identification and characterisation of potential impacts;
- Identification and assessment of significant effects from potential impacts upon IEFs; and
- Identification and assessment of residual effects.

IDENTIFICATION OF IMPORTANT ECOLOGICAL FEATURES

4.3.4. The value of sites, species and habitats will be evaluated in line with CIEEM guidelines with reference to their importance in terms of conservation value (which relates to the need to conserve representative areas of different habitats and the generic diversity of species populations); and their legal status. For the purposes of this assessment, sites, species populations, species assemblages and habitats will be valued using the following geographical scale:

- International;
- National (UK or Wales);
- County;

[23] CIEEM, (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3*. Chartered Institute of Ecology and Environmental Management, Winchester.
[24] CIEEM, (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.

- Local;
- Of value within the context of the project; and
- Negligible.

4.3.5. Guidelines on ecological impact assessment note the difficulty of devising valuation criteria that can be consistently applied to designated sites, species and habitats in the same way in all parts of the country. It recommends an approach to valuation that involves teasing apart the different values that can be attached to the ecological features under consideration. However, it is beneficial to give examples of the sorts of criteria used in the valuation process, and these are summarised in **Table 4-1**.

Table 4-1 – Examples of Criteria used to Evaluate Important Ecological Features

Level of Value	Definition
International	An internationally important site, e.g. Special Protection Area (SPA), Special Area of Conservation (SAC), or Ramsar site (or a site considered worthy of such designation); a regularly occurring population of an internationally important species (listed on Annex IV) of the Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora; the 'Habitats Directive'[25]); 1% of the known international population of a particular species.
National/UK or National/Wales.	A nationally designated site, e.g. Site of Special Scientific Interest (SSSI), or a site considered worthy of such designation; a viable area of a habitat type listed in Annex 1 of the Habitats Directive, or smaller areas of such habitat which are essentially to maintain the viability of a larger habitat; any regularly occurring population of a nationally important species, e.g. listed on Schedules 5 and 8 of the Wildlife and Countryside Act (WCA) 1981 (as amended); a feature identified to be a priority habitat or species under Section 7 of the Environment Wales Act 2016[26], 1% of the known UK population of a particular species.
County	Areas of internationally or nationally important habitats which are degraded but are considered readily restored; viable areas of key habitat identified in Local Biodiversity Action Plans (LBAPs), or smaller areas of such habitat which are essential to maintain the viability of a larger whole, a site designated as a Wildlife Site or a Site of Interest for Nature Conservation (SINC), a regularly occurring, locally significant number of a nationally important species; 1% of the known population of a particular species within the county.
Local	Designated sites including: Local Nature Reserves (LNRs) designated in the local context. Trees that are protected by Tree Preservation Orders (TPOs) and areas of habitat that are considered to enrich the

[25] The European Commission. (1992). Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A01992L0043-20130701

[26] Welsh Government. (2016). Environment (Wales) Act 2016. Available at: https://www.legislation.gov.uk/anaw/2016/3/contents

Level of Value	Definition
	habitat resource in the local context (such as veteran trees), including features of value for migration, dispersal or genetic exchange.
Of value within the context of the project.	Woodland plantations, structure planting, small extents of species-rich grassland or another species-rich habitat that is not included in the LBAP.
Negligible	No intrinsic natural conservation value associated with the habitat. Generally, these are areas of hardstanding or buildings.

4.3.6. It is impractical and inappropriate for an assessment of the ecological effects of a development to consider every species and habitat that may be affected. Instead, it focuses on IEFs which are the species and habitats present within the ZoI of the Project that are of sufficiently high value that certain impacts upon them, as a result of the development, could result in a significant effect.

4.3.7. The description and valuation of ecological features will consider any likely changes including, for example:

- trends in the population size or distribution of species;
- likely changes to the extent of habitats; and
- the effects of other proposed developments or land-use changes.

4.3.8. Due consideration will be given to non-important ecological features (i.e. those nature conservation sites, species and habitats below local importance) throughout the construction and operation period, with regard to legislative protection.

IDENTIFICATION AND CHARACTERISATION OF POTENTIAL IMPACTS

4.3.9. Ecological receptors are usually non-statutory designation sites/ nature conservation sites, habitats, species assemblages or communities, or populations or groups of a species. Impacts can be permanent or temporary, direct or indirect, and can be cumulative. These factors are brought together to assess the magnitude of the impact on IEFs and, wherever possible, the magnitude of the impact is quantified. Professional judgement is then used to assign the impacts on the IEFs to one of four classes of magnitude, defined in **Table 4-2**.

Table 4-2 – Magnitude of Potential Impacts

Magnitude	Definition
High	A permanent or long-term effect on the extent or size or integrity of a site, habitat, species assemblage or community, population or group. If adverse, this is likely to threaten its sustainability; if beneficial, this is likely to enhance its conservation status.
Medium	A permanent or long-term effect on the extent or size or integrity of a site, habitat, species assemblage or community, population or group. A short-term effect that will adversely affect the integrity of a receptor in a permanent manner. If adverse negative effect, this is unlikely to threaten its overall sustainability, if positive this is likely to be

Magnitude	Definition
	sustainable but is unlikely to significantly enhance its conservation status.
Low	A permanent or temporary, long-term reversible or short-term effect on a site, habitat, species assemblage or community, population or group whose magnitude is detectable but will not threaten/change its conservation status.
Negligible	A short-term reversible effect on the extent, size or integrity of a site, habitat, species assemblage or community, population or group that is within the normal range of natural variation and has no discernible lasting effect.

4.3.10. Potential impacts are characterised initially in the absence of any mitigation, except where this is integral to the design of the Project (embedded mitigation).

DEFINING SIGNIFICANCE OF EFFECT

4.3.11. The significance of the predicted effects on receptors arising from the identified impacts of the Project is assessed. Significance (which can be either beneficial or adverse) is assessed as **Significant** or **Not Significant** based on the integrity and/or the conservation status of an IEF within a given geographical area.

4.3.12. In considering the integrity and conservation status of the receptor, the key considerations are:

- Will any site/ecosystem processes be removed or changed or subject to disturbance?
- What will be the effect on the nature, extent, structure and function of component habitats?
- What will be the effect on the average population size and viability of component species?

4.3.13. In determining the significance of a potential effect, the above factors including the value of the feature, magnitude of the potential impact, spatial extent of the impact and the duration of the impact are considered.

4.3.14. Where possible, the assessment of these parameters needs to be expressed quantitatively and to be based on research and published information. However, it is also recognised that many ecological effects are complex, therefore professional and qualitative judgements are often required to prescribe the significance of the effect.

SOURCE-PATHWAY-RECEPTOR APPROACH

4.3.15. The source-pathway-receptor approach will be used to understand the mechanisms by which the Project could result in significant effects on ecological resources. The approach starts by identifying potential sources of effects (i.e. impacts), defining the Zone of Influence (ZoI) over which that impact could have a material effect, and then mapping the progression of the impact along potential pathways to the ecological resources being assessed.

4.4 BASELINE ENVIRONMENT

DATA COLLECTION METHODS

4.4.1. The baseline environment on which the assessment scope has been based, was defined during an ecological desk study as detailed in the Preliminary Ecological Appraisal (PEA) report (CSA

Environmental, 2024)[27] and a site visit. A 'Survey Area' was also defined for the purposes of the PEA, which encompassed the Site plus a 25m corridor either side.

4.4.2. Other targeted surveys undertaken include:

- Great Crested Newt survey[28] (**Annex 4.2**) in June 2024, comprising a Habitat Suitability Index (HSI) Assessment and environmental DNA (eDNA) of all ponds within 500m of the Site to determine the presence or likely absence of the species;
- Bat survey[29] (**Annex 4.3**), comprising Ground Level Tree Assessment (GLTA) of all with potential to be affected by the Project in September 2024; and
- Water vole *Arvicola arvensis* survey[30] (**Annex 4.4**), comprising a search for field signs in June and September 2024[31].

4.4.3. Full details of the assessment and survey methodologies, along with any significant limitations, are detailed within the respective survey reports. A summary of the results of these surveys are provided in **Section 4.4**.

4.4.4. Further species surveys are also recommended (to be completed in 2025) and therefore a precautionary approach has been adopted in determining the likely presence of protected and/or notable species and predicted impacts as a result of the Project.

BASELINE CONDITIONS

Statutory Designated Sites

4.4.5. No statutory designated sites fall within the Site.

4.4.6. The desk study identified two statutory designated sites of international importance within 10km of the Survey Area, and one statutory designated site of national importance within 3km of the Survey Area. These are shown in **Figure 4-1** and listed in **Table 4.3**, along with a description of the reasons for designation.

[27] CSA Environmental (2024). Upper Ogmore Wind Farm – Preliminary Ecological Appraisal, August 2024. Report No: CSA/6891/01

[28] CSA Environmental (2024). Upper Ogmore Wind Farm, Maesteg – Great Crested Newt Report, November 2024. Report No. CSA/6891/02

[29] CSA Environmental (2024). Upper Ogmore Wind Farm – Bat Survey Report, November 2024. Report No: CSA/6891/03

[30] CSA Environmental (2024). Foel Trawsnant Wind Farm – Water Vole Survey Report, November 2024. Report No: CSA/7086/04.

[31] The water vole survey was undertaken by CSA Environmental in support of two different development proposals (Upper Ogmore Grid Connection and Foel Trawsnant Grid Connection). Whilst the report title references Foel Trawsnant only, the development boundaries overlap and the water vole survey area encompassed all areas of suitable water vole habitat identified within the Upper Ogmore Site, isolated to the south-western end of the Project and included several small, connected streams and surrounding purple moor grass and rush pasture habitats. This report and survey data is therefore considered relevant for this Project.

Figure 4-1 - Statutory designated sites within 3km and 10km of the Site

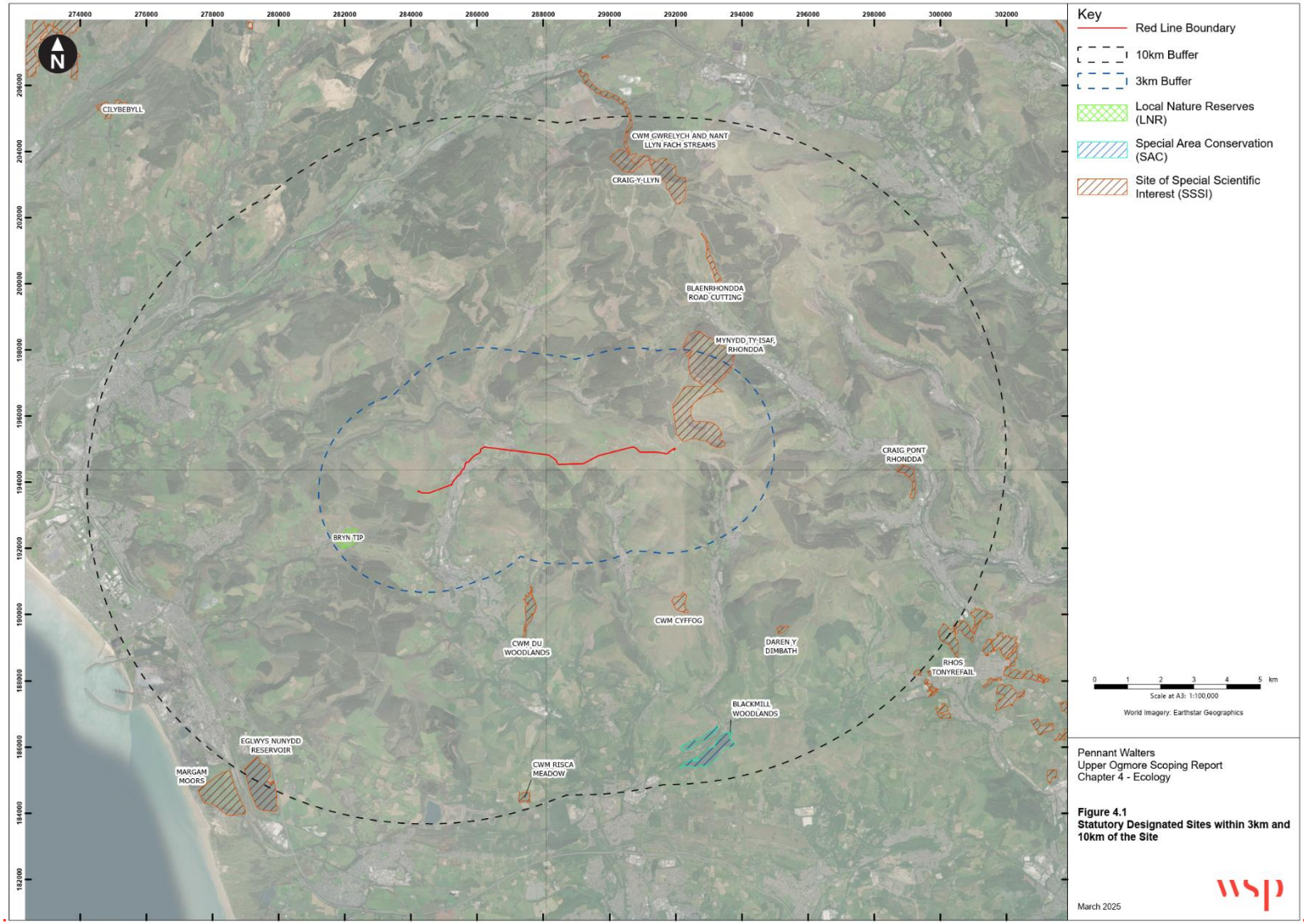


Table 4-3 – Statutory Designated Sites Within 10km of the Project

Site name	Designation	Size (hectares (ha))	Approximate distance and orientation from the Site	Description
Blackmill Woodlands.	SAC	70.56	8.7km SE	Blackmill Woodlands is an example of old sessile oak woods at the southern extreme of the habitat's range in Wales and contributes to representation of the habitat in Wales and in south-west England. Annex I habitats that are a primary reason for site selection: ■ 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles.
Mynydd-Ty-isaf	SSSI	322	0.5km NE	This site is characterised by the cliffs and crags of glacial corries which support a mosaic of vegetation types including *Calluna* dominated heath, *Vaccinium myrtillus* heath, a range of species poor grasslands, bracken-dominated slopes and fern-rich screes and rock outcrops. Parsley fern *Crypogramma crispa*, beech fern *Phegopteris connectillis*, and mountain fern *Oreopteris limbosperma* are examples of some of the fern species found here. The geology of the site supports a number of arctic-alpine and other plant species of local distribution in Wales. The high crags also provide nesting sites for a Schedule 1 raptor.

Non-statutory Designated Sites

4.4.7. The desk study identified 20 non-statutory designated sites within 3km of the Site, comprising Sites of Importance to Nature Conservation (SINCs) and Local Nature Reserves (LNRs). Of these, the Caerau West SINC lies within the Survey Area (but not within the Site).

4.4.8. Due to the nature and scale of the Project, only non-statutory sites within 1km of the Site have been described and assessed within the PEA report[32]. These are listed and described in **Table 4.4**.

Table 4-4 – Non-statutory Designated Sites Within 1km of the Project

Site name	Designation	Approximate distance and orientation from the Survey Area	Description
Caerau West	SINC	Within the Survey Area	Supports a range of different habitats including flush spring and acid/neutral flush, sphagnum blanket bog, and semi-improved acid grassland. A variety of heathland habitats are also present, namely: dry heath acid mosaic, dry dwarf shrub heath, and wet dwarf shrub heath. Marshy grassland and scattered bracken also exist throughout the site.
Caerau North	SINC	0.08km W	A large site with a mosaic of habitats including sphagnum blanket bog, marshy grassland, fen, and semi-improved acid grassland. Wet dwarf shrub heath, acid dry dwarf shrub heath, and broad-leaved semi-natural woodland habitats are also present.
Scotch Street	SINC	0.09km NW	A mosaic of upland fringe habitats on previously disturbed land with important areas of boggy ground and mature heather.
Tudor West	SINC	0.09km NW	A variety of grassland habitats are present; namely, neutral unimproved, marshy, and semi-improved acid grassland. Acid/neutral flush habitats are also found here, and the site supports a large area of ancient semi-natural woodland alongside brad-leaved semi-natural woodland.
Parc Croeserw	SINC	0.2km N	A mosaic of purple moor grass and rush pasture, lowland acidic grassland and lowland heathland supporting a range of flora and fauna with a high suitability for reptiles.
Nant-y-Wern	SINC	0.3km N	Area of ancient woodland and marshy grassland, including priority habitat 'purple moor grass and rush pasture'. The habitats support a diversity array of vascular plants, bryophytes and support a number of important bird species
Bryn Tip	LNR	2.4km SW	A former coal tip containing dry, species rich grassland with a large stand of Gorse *Ulex europeaus*. The site supports a variety of wildlife including the millipede

[32] CSA Environmental (2024). Upper Ogmore Wind Farm – Preliminary Ecological Appraisal, August 2024. Report No: CSA/6891/01

Site name	Designation	Approximate distance and orientation from the Survey Area	Description
			Turdulisoma cf turdulorum, a new species discovered in 2017. Other species found here are dark green fritillary *Argynnis aglaja* and bee orchid *Ophrys apifera*. On-site habitats support breeding birds like stonechat *Saxicola orquate*, and linnet *Carduelis cannabina*. Brown hare *Lepus europaeus*, hedgehog Erinaceus europaeus, badger *Meles meles*, and otters *Lutra lutra* are among the mammal species also found here.

Other Habitats of conservation importance

Priority Habitats

4.4.9. A total of 117 parcels of Priority Habitats were identified within 1km of the Site. Details are mentioned in **Table 4-5** and shown in **Figure 4-2**, including the Priority Habitats which are present within the Survey Area.

Figure 4-2 - NRW Priority Habitats and Ancient Woodland Inventory

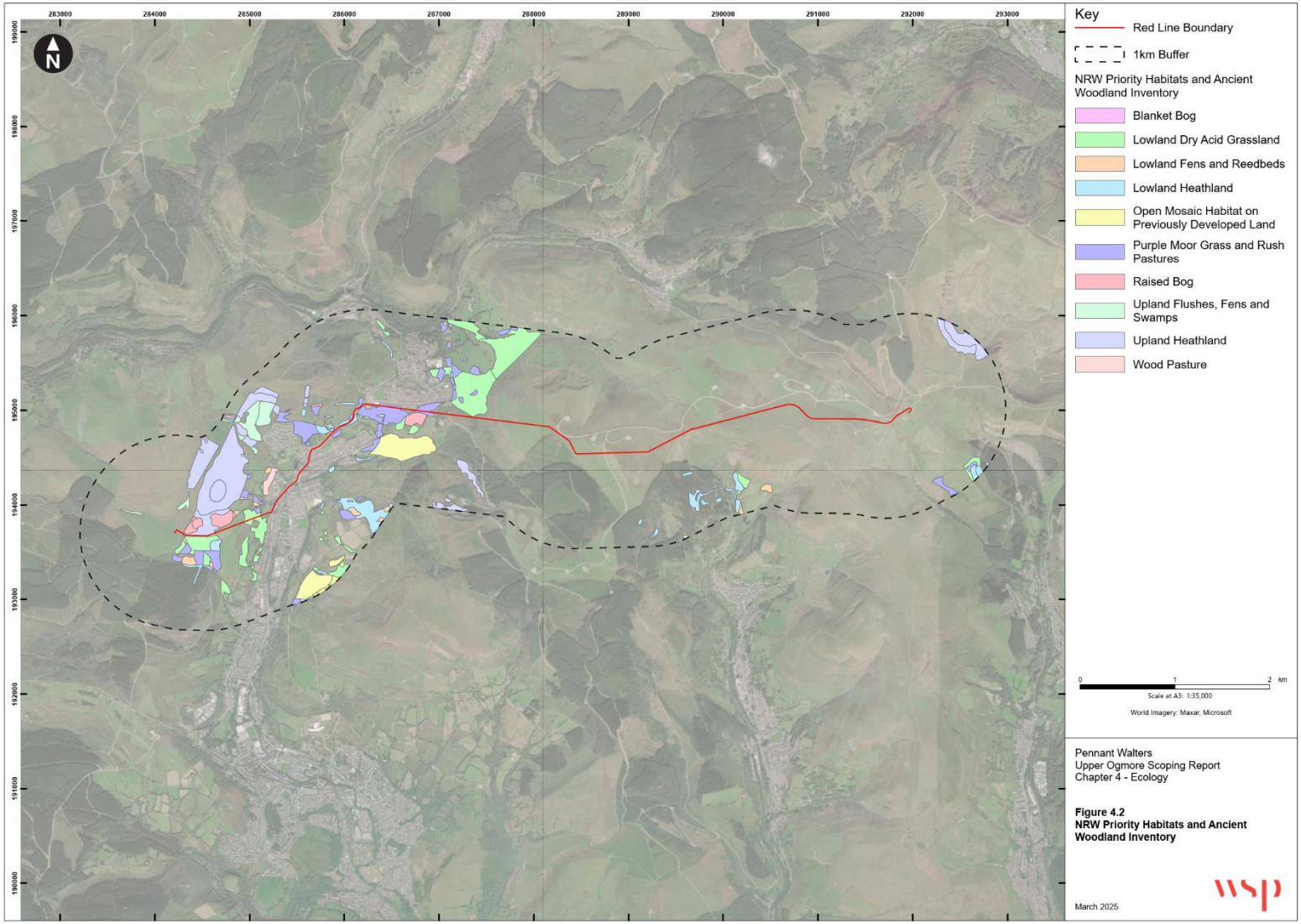


Table 4-5 - Priority Habitats within 1km of the Site

Habitat type	No. Of Parcels	Present within the Survey Area
Blanket bog	9	No
Lowland dry acid grassland	35	No
Lowland fens and reedbeds	15	No
Lowland heathland	36	No
Open mosaic habitat on previously developed land	7	No
Purple moor grass and rush pastures	39	Yes
Raised bog	6	No
Upland flushes, fens and swamps	10	No
Upland heathland	19	No
Wood pasture	1	No

Ancient Woodland

4.4.10. There is no ancient woodland covering any part of the Survey Area, or on land adjacent to the Site. The desk study identified one Plantation on Ancient Woodland Site (PAWS) within 1km of the Project, located 0.09km west.

4.4.11. No trees on or adjacent to the Survey Area are listed on the Ancient Tree Inventory[33], [34].

Notable Plants

4.4.12. A total of 557 records of notable plant species were returned during the desk study within 2km of the Project. This included records of the invasive non-native species hollyberry cotoneaster *Cotoneaster bullatus*, Himalayan balsam *Epilobium brunnescens* and montbretia *Crocosmia pottsii x aure*. Additional non-native invasive species recorded in proximity to the Site included New Zealand willowherb *Epilobium brunnescens*, located 0.5km south.

4.4.13. Records of notable species that could also be supported by on-site habitats include heath spotted orchid *Dactylorhiza maculata*, recorded 0.15km north of the Site dating from 2002, and fir clubmoss *Huperzia selago*, recorded 0.5km south of the Site dating from 2013.

[33] The Woodland trust Ancient Tree Inventory. Accessible online at https://ati.woodlandtrust.org.uk/

[34] Welsh Government Data Map Wales Ancient Woodland Inventory 2021. Accessible online at https://datamap.gov.wales/layers/inspire-nrw:NRW_ANCIENT_WOODLAND_INVENTORY_2021

UKHAB Survey

4.4.14. The site visit element of the PEA encompassed a UKHab survey. Habitats recorded on Site are listed below and relevant UKHab codes are provided within parentheses for each habitat type recorded e.g. Other Neutral Grassland (g3c):

- Upland rush pasture (g1b, 14, 102);
- Upland acid grassland (g1b);
- Purple moor grass and rush pasture (f2b) (Section 7 Priority Habitat on the Wales Environment (Act) 2026) on ;
- Modified grassland (g4);
- Heathland (h1);
- Broadleaved woodland (w1g);
- Plantation coniferous woodland (w2, secondary code 29); and
- Scrub: Bramble (h3d), Mixed (h3h), Willow (h3j) and Gorse (h3e).

Suitability for protected and notable species

4.4.15. Following the UKHab survey and an evaluation of desk study records, and protected species surveys completed (GCN, bat and water vole), the Site is considered suitable for supporting the following protected and/or notable species:

- Bats (all UK species);
- Water vole *Arvicola amphibius*[35]*;*
- Brown hare *Lepus europaeus*;
- Harvest mouse *Micromys minutus;*
- Birds[36];
- Reptiles (common lizard *Zootoca vivipara*[37], adder *Vipera berus*, grass snake *Natrix Helvetica* and slow worm *Anguis fragilis*);
- Amphibians (smooth newt *Lissotriton vulgaris*, palmate newt *Lissotriton helveticus*, common toad *Bufo bufo* and common frog *Rana temporaria); and*
- Invertebrates, including red-necked footman *Atolmis rubricollis* (nationally scarce), and green hairstreak *Callophyrys rubi* (locally important).

Protected and/or Notable Species Considered to be Likely Absent

4.4.16. The following species are considered to be likely absent from the Site, or only present in low numbers and on an occasional basis:

- Badger *Meles meles*;
- Otter *Lutra lutra*;
- Dormouse *Muscardinus avellanarius;*
- Hedgehog *Erinaceus europaeus;* and

[35] A water vole latrine was identified within the upland acid grassland in the south-western end of the Site during the UKHab survey.

[36] **Chapter 5: Ornithology** of the Scoping Report relates to Ornithology. Birds are therefore not discussed further within this chapter.

[37] A common lizard was sighted at the south-western end of the Site within purple moor grass and rush pasture habitat during the UKHab survey.

- GCN.

4.5 APPRAISAL

4.5.1. **Table 4.6** sets out the potential significant effects identified to date. These are assessed before the application of any mitigation. Please note that further surveys have been recommended for some of the ecological receptors listed below (e.g. bats). The assessment of impacts on these species will be refined on receipt of appropriate survey data.

Table 4-6 – Potential significant effects to be assessed

Effect	Zone of Influence	Ecological Features Potentially Impacted
Construction		
Habitat loss (temporary or permanent).	Within the construction footprint.	Direct and permanent habitat loss within construction zone, including temporary loss/disruption e.g. for access routes, compounds or lay-down areas; loss of habitat for protected and notable species. Loss of habitat within parcels of Priority Habitat including purple moor grass and rush pastures.
Removal of trees	Within the construction footprint.	Direct and permanent loss of trees with bat roosting suitability and commuting habitat such as linear habitat (e.g., boundary trees/hedgerows).
Habitat degradation.	Pollution and contamination incidents associated with hydrology within 2km.	Statutory and non-statutory designated sites up to 2km from the Project. Habitats with hydrological connections to the Project, within 2km, including those that support protected or otherwise notable species. Impacts to watercourses: small streams present at the south-western end of the Project and any protected species directly associated with the streams and connected habitat.
Noise, vibration and visual disturbance from construction traffic and personnel.	Construction footprint and up to 250m of construction zone.	Temporary disturbance to protected and notable faunal species
Changes in air quality - dust.	Within 50m of construction footprint.	Non-statutory designated sites and Priority Habitats
Changes in light levels.	Changes in lighting within and immediately adjacent (100m) to the Project during construction.	Disturbance impacts to protected and notable species.

Effect	Zone of Influence	Ecological Features Potentially Impacted
Introduction or spread of invasive non-native species (INNS).	Construction footprint and up to 250m of construction zone.	Non-statutory designated sites and Priority Habitats, protected and notable species (should their habitat be degraded by introduction/spread of INNS.
Direct mortality during construction.	The area within the temporary and permanent construction footprint.	Incidental mortality or injury of protected and notable species during vegetation and site clearance.
Operational		
Noise and visual disturbance from traffic and people during routine maintenance.	Construction footprint and up to 250m from the Project.	Temporary disturbance of protected and notable species.

4.5.2. One statutory designated site of international importance was identified within 10km of the Project - Blackmill Woodlands SAC. No significant effects on this designated site is predicted due to its distance from the Project (Blackmill Woodlands SAC is located 8.7km south-east of the Project). In addition, due to the scale and nature of the Project, any impacts which may occur are considered to be of a temporary, short-term nature, confined to a narrow corridor only. However, this assessment would be kept under review during development of the EIA for the Project and a formal screening exercise to assess and document the potential for LSEs on statutory designated sites of international importance would be completed.

4.5.3. Effects on the Mynydd-Ty-Isaf SSSI are likely to be temporary and short-term given the nature of the Project, however, given its distance from the Site (0.5km north-east), a detailed assessment of effects, and whether these are considered to be significant, will be undertaken as part of the EIA for the Project and following development of the Project design and construction activities.

4.5.4. One SINC (Caerau West) is present within the Survey Area (25m corridor either side of the Project) and therefore has the potential to be impacted. A further three SINCs are present within 100m of the Survey Area; Caerau North, Scotch Street and Tudor West. SINCs may be impacted by habitat loss, water and air-borne pollution and the introduction of INNS, as they lie within or close to the Survey Area.

4.5.5. Permanent and/or temporary loss of Priority Habitats is anticipated, and indirect impacts could result through dust deposition, and through water-borne pollution events if there are hydrological connections between the Project and these habitats. This would be confirmed or discounted during development of the EIA and detailed Project design.

4.5.6. Potential impact pathways on protected and notable species/species groups may include habitat loss, noise, vibration and visual disturbance, and the introduction or spread of INNS.

4.5.7. The impacts above are predicted in the absence of mitigation. Mitigation measures will follow the stepwise approach advocated in Planning Policy Wales (Welsh Government, 2024)[38] and will be designed to avoid or reduce the impacts where possible. Where this is not possible, a reduction in effects through mitigation and compensatory measures would be taken.

ASSESSMENT OF CUMULATIVE EFFECTS

4.5.8. Consideration will also be given as to whether any of the IEFs identified within this scoping chapter are likely to be subject to cumulative effects as a result of the Project in combination with other nearby developments.

4.5.9. Cumulative effects will generally be either:

- Cumulative 'ZoI' effects whereby two or more developments affect the same specific receptor (e.g. two developments in the same river catchment); or
- Cumulative effects on the total resource (or population) of an ecological feature in a region due to two or more developments (e.g. two developments affect the same habitat type in a region, reducing its overall area).

4.5.10. Assessment of these is complex and relies on the definition of a reasonable scope for cumulative effects, and the availability of a reasonable baseline for other developments. In addition, the assessment focuses on those occasions where two 'not significant' effects might operate cumulatively to result in a significant effect (rather than where the effects of one development on an ecological feature are already, on their own, considered significant).

4.5.11. A cumulative assessment will therefore be provided within the Environmental Statement (ES).

ENVIRONMENTAL EFFECTS SCOPED OUT

4.5.12. The following environmental effects are deemed unlikely to result in significant effects, and will therefore not be considered within the Environmental Statement (ES):

- Loss or disturbance of common and widespread habitats of negligible nature conservation importance; and
- temporary disturbance of common and widespread species of negligible nature conservation importance such as rabbits.

4.5.13. Effects on common and widespread habitats and species will not be considered as they do not meet the criteria for requiring full EcIA identified in the CIEEM Guidelines[39]; and are therefore not considered to be a material consideration for decision-making.

4.5.14. As mentioned in the PEA survey report (**Annex 4.1**), the majority of the survey area is not considered to be of high suitability for bats, with limited linear features for commuting and foraging, particularly within the uplands in the east to west section of the route. Therefore, bat activity surveys are scoped out.

[38] Welsh Government (2024). Planning Policy Wales: Edition 12. February 2024. Available at: https://www.gov.wales/planning-policy-wales

[39] CIEEM (2024) Guidelines for Ecological Impact Assessment In The UK And Ireland. Available at: Guidelines for Ecological Impact Assessment (EcIA) | CIEEM

4.5.15. It is anticipated the Project will not directly impact riparian habitats and any indirect impacts will be short term. Whilst small streams are present at the south-western end of the proposed route, these are less well connected to other large watercourses, with the River Afan laying over 3km west. Therefore, otters are not considered a constraint and further surveys are scoped out of the assessment. For more information, refer to PEA survey report (**Annex 4.1**).

4.6 RECOMMENDATIONS AND MITIGATION

FURTHER ECOLOGICAL SURVEYS AND RECOMMENDATIONS

4.6.1. Further ecological assessments are anticipated to be needed for statutory designated sites of international and national importance, bats, water vole, brown hare, harvest mouse, hedgehog, reptiles, amphibians (excluding GCN), invertebrates, INNS and other plant species of notable interest, in conjunction with a review of detailed / final Project design.

4.6.2. Measures are also likely required for the Caerau West SINC site and Priority Habitats, including consultation with the Local Planning Authority to agree suitable mitigation (where avoidance through design is not possible).

4.6.3. Consultation with the Local Planning Authority should also be undertaken in relation to developing suitable mitigation strategies and compensation and/or enhancement measures for water vole and reptiles (where avoidance through design is not possible).

4.6.4. Further survey is recommended for bats, comprising aerial inspections / tree climbing surveys of the trees that were identified as being potentially suitable to support roosting bats. The aerial inspections / tree climbing surveys will allow for a more detailed assessment of the likely suitability of the trees for bats to support the ES assessment, in accordance with good practice guidelines[40].

NET BENEFIT FOR BIODIVERSITY

4.6.5. The Welsh Government has produced an advice note on delivering biodiversity enhancements[41], which is now secured in Welsh planning policy through Edition 12 of Planning Policy Wales (PPW)[42] (Welsh Government, 2024). This includes an approach to delivering Net Benefit for Biodiversity (NBB) in Wales, with the onus being placed on demonstrating both a measurable NBB and promoting ecosystem resilience. The NBB approach intends to deliver an overall improvement in biodiversity. It does not utilise a metric. It instead assesses this improvement in biodiversity qualitatively, putting the emphasis on proactive consideration of biodiversity and wider ecosystem benefits within a placemaking context early in the design process.

4.6.6. Biodiversity enhancements that achieve NBB must be delivered following the implementation of the 'stepwise approach' of firstly avoiding, then minimising, mitigating and, as a last resort,

[40] Collins J. (ed.) (2023) Bat Surveys for Professional Ecologists, Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London.

[41] Welsh Government, (2022). *Section 6 biodiversity and resilience of ecosystems duty: summary report 2022*. Available online at: https://www.gov.wales/sites/default/files/pdf-versions/2022/12/4/1672307032/section-6-biodiversity-and-resilience-ecosystems-duty-summary-report-2022.pdf [Accessed: March 2025].

[42] Welsh Government, (2024). *Planning Policy Wales, Edition 12*. Available online at: https://www.gov.wales/sites/default/files/publications/2024-07/planning-policy-wales-edition-12.pdf [Accessed: March 2025].

compensating for adverse impacts on the environment that occur as part of a development. Therefore, compensation should only be considered as a last resort, where it has been demonstrated clearly that adverse effects on the environment cannot be avoided or fully mitigated. If compensation is necessary, this must be delivered on-site where possible but off-site compensation can be sought if demonstrated that this is not possible.

4.6.7. This approach will encourage the consideration of features that may not necessarily be protected, but are crucial for ecosystem functioning and resilience, leading to more joined up spaces for nature.

4.6.8. Natural Resources Wales (NRW) have developed a framework for evaluating ecosystem resilience based on five attributes and properties specified in the Environment (Wales) Act 2016[43]. This is referred to as DECCA and comprises the objectives listed:

- **Diversity** – maintaining and enhancing diversity at every scale, including genetic, structural, habitat and between-habitat levels. This supports the complexity of ecosystem functions and interactions that deliver services and benefits.
- **Extent** – incorporating measures which maintain and increase the area of semi-natural habitat/features and linkages between habitats. In general, smaller ecosystems have reduced capacity to adapt, recover or resist disturbance.
- **Condition** – the condition of an ecosystem is affected by multiple and complex pressures acting both as short term and longer-term types of disturbance. Both direct and wider impacts should be considered, for example avoiding or mitigating pressures such as climate change, pollution, invasive species, land management neglect etc.
- **Connectivity** – this refers to the links between and within habitats, which may take the form of physical corridors, stepping stones in the landscape, or patches of the same or related vegetation types that together create a network that enables the flow or movement of genes, species and natural resources. Developments should take opportunities to develop functional habitat and ecological networks within and between ecosystems, building on existing connectivity.
- **Adaptability to change** – ecosystem resilience is a product of the above four attributes. Adaptability, recovery and resistance to/from a disturbance are defining features of ecosystem resilience.

4.6.9. NRW define ecosystem resilience as "*an environment that can respond to pressures by resisting, recovering or adapting to change, and is able to continue to provide natural resources and benefits to people*."[44]

RECOMMENDED MITIGATION MEASURES

4.6.10. The following preliminary mitigation measures can be identified at this stage, the need for which and design of would be confirmed through the ES assessment:

[43] Welsh Government, (2016). Environment (Wales) Act 2016. Available online at: https://www.legislation.gov.uk/anaw/2016/3/contents [Accessed: March 2025].

[44] Natural Resource Wales, (2020). *SoNaRR2020: Ecosystems are resilient to expected and unforeseen change*. Available online at: https://naturalresources.wales/evidence-and-data/research-and-reports/state-of-natural-resources-report-sonarr-for-wales-2020/sonarr2020-our-assessment/ecosystems-are-resilient-to-expected-and-unforeseen-change/?lang=en#:~:text=A%20resilient%20ecosystem%20is%3A%20An%20environment%20that%20can,to%20provide%20natural%20resources%20and%20benefits%20to%20people. [Accessed: March 2025].

- High quality habitat (including Priority Habitat) would be retained and protected within the Project, where possible. This includes purple moor grass and rush pastures, broad-leaved woodland, species-rich grasslands and streams. Where this is not possible, new high-quality habitat will be created at an appropriate replacement ratio;
- Any trees lost to the Project will be replaced at a 3:1 ratio in accordance with Planning Policy Wales (Welsh Government, 2024);
- Where possible, features suitable for or known to support protected and notable species would be retained and protected within the Project. If this is not possible, then further surveys may be required and a protected species licence from NRW may need to be obtained to allow the work to proceed lawfully;
- A commitment to a Construction Environmental Management Plan (CEMP) which would include details of the measures to be employed to minimise effects on protected species and to minimise impacts resulting from (for example) disturbance;
- Commitment to comply with best practice guidelines on environmental protection, for example Construction Industry Research and Information Association (CIRIA) C741 – Environmental Good Practice on Site (4th Edition) (CIRIA, 2015a)[45], CIRIA C532 – Control of Water Pollution from Construction Sites (CIRIA, 2001)[46] and the Environment Agency's (EA) Pollution Prevention Guidance (PPG), although withdrawn should still be referred to as a means of avoiding potential pollution events; and
- Construction-stage measures e.g. site support from an ecological clerk of works, minimise the risk of disturbance and injury/killing of protected species.

[45] https://www.ciria.org/CIRIA/CIRIA/Item_Detail.aspx?iProductCode=C741&Category=BOOK
[46] https://www.ciria.org/CIRIA/CIRIA/Item_Detail.aspx?iProductCode=C532&Category=BOOK

5 ORNITHOLOGY

5.1 INTRODUCTION

5.1.1. This section of the Scoping Report sets out the overall approach that will be taken in the EIA for ornithology. This section assesses the likely significant effects arising from the Project upon ornithological features and the potential Zone of Influence (ZoI) for these effects. Ornithological features considered include protected and notable ornithology species and habitats and designated sites that could support these species.

5.1.2. This chapter is supported by **Figure 5.1** and **Appendix F: Annex 4.1** and should be read in conjunction with **Chapter 2: Landscape** and **Chapter 4 Ecology**.

5.2 INFORMATION SOURCES AND STUDY AREA

PREVIOUS ECOLOGICAL SURVEYS

5.2.1. Various ecological surveys have been completed by CSA Environmental Ltd in 2024 in support of the Project, including a Preliminary Ecological Appraisal (PEA)[47] and other protected species surveys. The content of the PEA report has been taken into consideration within this Chapter.

5.2.2. Potential for the Study Area to support legally protected and notable ornithology species has been assessed using the results of the desk study (undertaken as part of the PEA) and a review of other freely available datasets only.

STUDY AREA

5.2.3. The Study Area to be used in the ES will be refined as more information becomes available regarding the ornithological features present (targeted surveys are planned for 2025) and the potential impacts of the Project. For the purpose of this EIA Scoping Report, a precautionary Study Area and Zone of Influence (ZoI) has been used to identify potentially sensitive ornithological receptors/ Important Ornithological Features (IOFs).

5.2.4. The precautionary Study Area and ZoI under consideration for the Project for various ornithological interests are detailed in **Table 5-1.**

[47] CSA Environmental (2024). Upper Ogmore Wind Farm – Preliminary Ecological Appraisal, August 2024. Report No: CSA/6891/01

Table 5-1 – Precautionary Study Area for Potentially Important Ornithological Features

Receptor	Potential Study Area
Statutory designated sites of international importance, including Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar Sites with ornithological interest features.	The Project boundary plus a 20km buffer from the Project.
Statutory designated sites of national importance, including National Nature Reserves (NNR); Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR) with ornithological interest features.	The Project boundary plus a 10km buffer from the Project
Protected species listed as Species of Principal Importance (SPI) in Section 7 of The Environment (Wales) Act 2016; species included on the Red List for Birds of Conservation Concern 5 (Stanbury et al 2021)[48], or Red-listed Birds of Conservation Concern 4 Wales (Johnstone et al 2023)[49] within 2km of the Project.	The Project boundary plus a 2km buffer from the Project
Schedule 1 Wildlife and Countryside Act 1981 (as amended) breeding raptors.	The Project boundary plus a 2km buffer from the Project in accordance with SNH (2017)
Nightjar *Caprimulgus europaeus.*	The Project boundary plus a 1.5km buffer from the Project in accordance with SNH (2017)
Breeding raptors, wintering raptors, moorland, owls and wildfowl.	The Project boundary plus a 500m buffer either side from the Project in accordance with SNH (2017)

5.3 METHODOLOGY

5.3.1. Assessment methods for all potentially significant effects will be based on the methodology described in the CIEEM Guidelines for Ecological Impact Assessment in the UK (2018), updated September 2024.

SIGNIFICANCE CRITERIA

5.3.2. This section sets out the methodology that will be followed to assess the potential ornithological impacts of the Project, considering both the construction and operational phases. The construction phase includes enabling works, clearance, earthworks and construction activities.

[48] Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. British Birds 114: 723-747.

[49] Johnstone, I.G., Hughes, J., Balmer, D.E., Brenchley, A., Facey, R.J., Lindley, P.J., Noble, D.G. and Taylor, R.C. Online First. *Birds of Conservation Concern Wales 4: the population status of birds in Wales*. Milvus: the Journal of the Welsh Ornithological Society.

5.3.3. The methodology for this assessment is in accordance with guidance provided by CIEEM (2018) and follows the key stages listed below:

- Establishing the Study Area (see Section 5.2, above);
- Collating information on the baseline studies of ornithological receptors (see Section 5.2, above);
- Identification of Important Ornithological Features (IOFs);
- Identification and characterisation of potential impacts;
- Identification and assessment of significant effects from potential impacts upon IOFs; and
- Identification and assessment of residual effects.

IDENTIFICATION OF IMPORTANT ORNITHOLOGICAL FEATURES

5.3.4. The value of sites, species and habitats will be evaluated in line with CIEEM guidelines with reference to their importance in terms of conservation value (which relates to the need to conserve representative areas of different habitats and the generic diversity of species populations); and their legal status. For the purposes of this assessment, sites, species populations, species assemblages and habitats will be valued using the following geographical scale:

- International;
- National (UK or Wales);
- County;
- Local;
- Of value within the context of the project; and
- Negligible.

5.3.5. Guidelines on ecological impact assessment note the difficulty of devising valuation criteria that can be consistently applied to designated sites, species and habitats in the same way in all parts of the country. It recommends an approach to valuation that involves teasing apart the different values that can be attached to the ornithological features under consideration. However, it is beneficial to give examples of the sorts of criteria used in the valuation process, and these are summarised in **Table 5-2.**

Table 5-2 – Examples of Criteria used to Evaluate Important Ornithological Features

Level of Value	Definition
International	An internationally important site, e.g. Special Protection Area (SPA), Special Area of Conservation (SAC), or Ramsar site (or a site considered worthy of such designation); a regularly occurring population of an internationally important species (listed on Annex IV) of the Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora; the 'Habitats Directive'[50]); 1% of the known international population of a particular species.
National/UK or National/Wales.	A nationally designated site, e.g. Site of Special Scientific Interest (SSSI), or a site considered worthy of such designation; a viable area of a habitat type listed in

[50] The European Commission. (1992). Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A01992L0043-20130701

	Annex 1 of the Habitats Directive, or smaller areas of such habitat which are essentially to maintain the viability of a larger habitat; any regularly occurring population of a nationally important species, e.g. listed on Schedules 5 and 8 of the Wildlife and Countryside Act (WCA) 1981 (as amended); a feature identified to be a priority habitat or species under Section 7 of the Environment Wales Act 2016[51], 1% of the known UK population of a particular species.
County	Areas of internationally or nationally important habitats which are degraded but are considered readily restored; viable areas of key habitat identified in Local Biodiversity Action Plans (LBAPs), or smaller areas of such habitat which are essential to maintain the viability of a larger whole, a site designated as a Wildlife Site or a Site of Interest for Nature Conservation (SINC), a regularly occurring, locally significant number of a nationally important species; 1% of the known population of a particular species within the county.
Local	Designated sites including: Local Nature Reserves (LNRs) designated in the local context. Trees that are protected by Tree Preservation Orders (TPOs) and areas of habitat that are considered to enrich the habitat resource in the local context (such as veteran trees), including features of value for migration, dispersal or genetic exchange.
Of value within the context of the project.	Woodland plantations, structure planting, small extents of species-rich grassland or another species-rich habitat that is not included in the LBAP.
Negligible	No intrinsic natural conservation value associated with the habitat. Generally, these are areas of hardstanding or buildings.

5.3.6. It is impractical and inappropriate for an assessment of the potential impacts of a development which may result in ornithological effects to consider every species and habitat. Instead, the assessment focuses on potential impact on species and habitats that are considered of sufficiently high value (i.e. IOFs) present within the Project's ZoI that could result in a significant effect.

5.3.7. The description and valuation of ornithological features will consider any likely changes including, for example:

- trends in the population size or distribution of species;
- likely changes to the extent of habitats; and
- the effects of other proposed developments or land-use changes.

5.3.8. Due consideration will be given to non-important ornithological features (i.e. those nature conservation sites, species and habitats below local importance) throughout the construction and operation period, with regard to legislative protection.

IDENTIFICATION AND CHARACTERISATION OF POTENTIAL IMPACTS

5.3.9. IOF's are usually species assemblages, or populations or groups of a species or designated sites nature conservation sites designated for ornithological reasons or supporting habitats. Impacts can be permanent or temporary, direct or indirect, and can be cumulative. These factors are brought

[51] Welsh Government. (2016). Environment (Wales) Act 2016. Available at: https://www.legislation.gov.uk/anaw/2016/3/contents

together to assess the scale of the impact on IOFs and, wherever possible, the scale of the impact is quantified. Professional judgement is then used to assign the impacts on the IOFs to one of four classes of scale, defined in **Table 5-3.**

Table 5-3 – Scale of Potential Impacts

Magnitude	Definition
High	A permanent or long-term effect on the extent or size or integrity of a site, habitat, species assemblage or community, population or group. If adverse, this is likely to threaten its sustainability; if beneficial, this is likely to enhance its conservation status.
Medium	A permanent or long-term effect on the extent or size or integrity of a site, habitat, species assemblage or community, population or group. A short-term effect that will adversely affect the integrity of a receptor in a permanent manner. If adverse negative effect, this is unlikely to threaten its overall sustainability, if positive this is likely to be sustainable but is unlikely to significantly enhance its conservation status.
Low	A permanent or temporary, long-term reversible or short-term effect on a site, habitat, species assemblage or community, population or group whose magnitude is detectable but will not threaten/change its conservation status.
Negligible	A short-term reversible effect on the extent, size or integrity of a site, habitat, species assemblage or community, population or group that is within the normal range of natural variation and has no discernible lasting effect.

5.3.10. Potential impacts are characterised initially in the absence of any mitigation, except where this is integral to the design of the Project (embedded mitigation).

DEFINING SIGNIFICANCE OF EFFECT

5.3.11. The significance of the predicted effects on receptors arising from the identified impacts of the Project is assessed. Significance (which can be either beneficial or adverse) is assessed as **Significant** or **Not Significant** based on the integrity and/or the conservation status of an IOF within a given geographical area.

5.3.12. In considering the integrity and conservation status of the receptor, the key considerations are:

- Will any site/ecosystem processes be removed or changed or subject to disturbance?
- What will be the effect on the nature, extent, structure and function of component habitats?
- What will be the effect on the average population size and viability of component species?

5.3.13. In determining the significance of a potential effect, the above factors including the value of the feature, magnitude of the potential impact, spatial extent of the impact and the duration of the impact are considered.

5.3.14. Where possible, the assessment of these parameters needs to be expressed quantitatively and to be based on research and published information. However, it is also recognised that many ecological and ornithological effects are complex, therefore professional and qualitative judgements are often required to prescribe the significance of the effect.

SOURCE-PATHWAY-RECEPTOR APPROACH

5.3.15. The source-pathway-receptor approach will be used to understand the mechanisms by which the Project could result in significant effects on ornithological resources. The approach starts by identifying potential impacts, defining the ZoI, over which that impact could have a material effect, and then mapping the progression of the impact along potential pathways to the ornithological resources being assessed.

5.4 BASELINE ENVIRONMENT

DATA COLLECTION METHODS

5.4.1. Potential for the Study Area to support legally protected and notable ornithology species has been assessed using the results of the PEA report (CSA Environmental, 2024)[52] (**Appendix F: Annex 4.1**) The PEA included a desk study and a UKHab Survey.

5.4.2. The desk study was completed with information requested from South East Wales Biodiversity Records Centre (SEWBReC) and other freely accessible databases, in addition to an assessment of aerial imagery and Ordnance Survey mapping.

5.4.1. Further data searches will be undertaken with the RSPB and local raptor study group ahead of proposed breeding bird surveys in 2025. Additionally, a search of Environment Statements for consented wind farms located in close proximity to the Site will be undertaken to identify target species records, noting that details of sensitive species locations will not be available in the public domain.

BASELINE CONDITIONS

Statutory Designated Sites

5.4.2. No statutory designated sites fall within the Site.

5.4.3. Two statutory designated sites of national importance (designated for ornithological features) are present within 10km of the Site. These are shown in **Figure 5-1** listed in **Table 5-4**, along with a description of their designatory features/interests.

5.4.4. The desk study identified no SPAs or Ramsar sites (designated for ornithological features) within 20km of the Site.

[52] CSA Environmental (2024). Upper Ogmore Wind Farm – Preliminary Ecological Appraisal, August 2024. Report No: CSA/6891/01

Figure 5-1 - Statutory designated sites of international and national importance (ornithological interest)

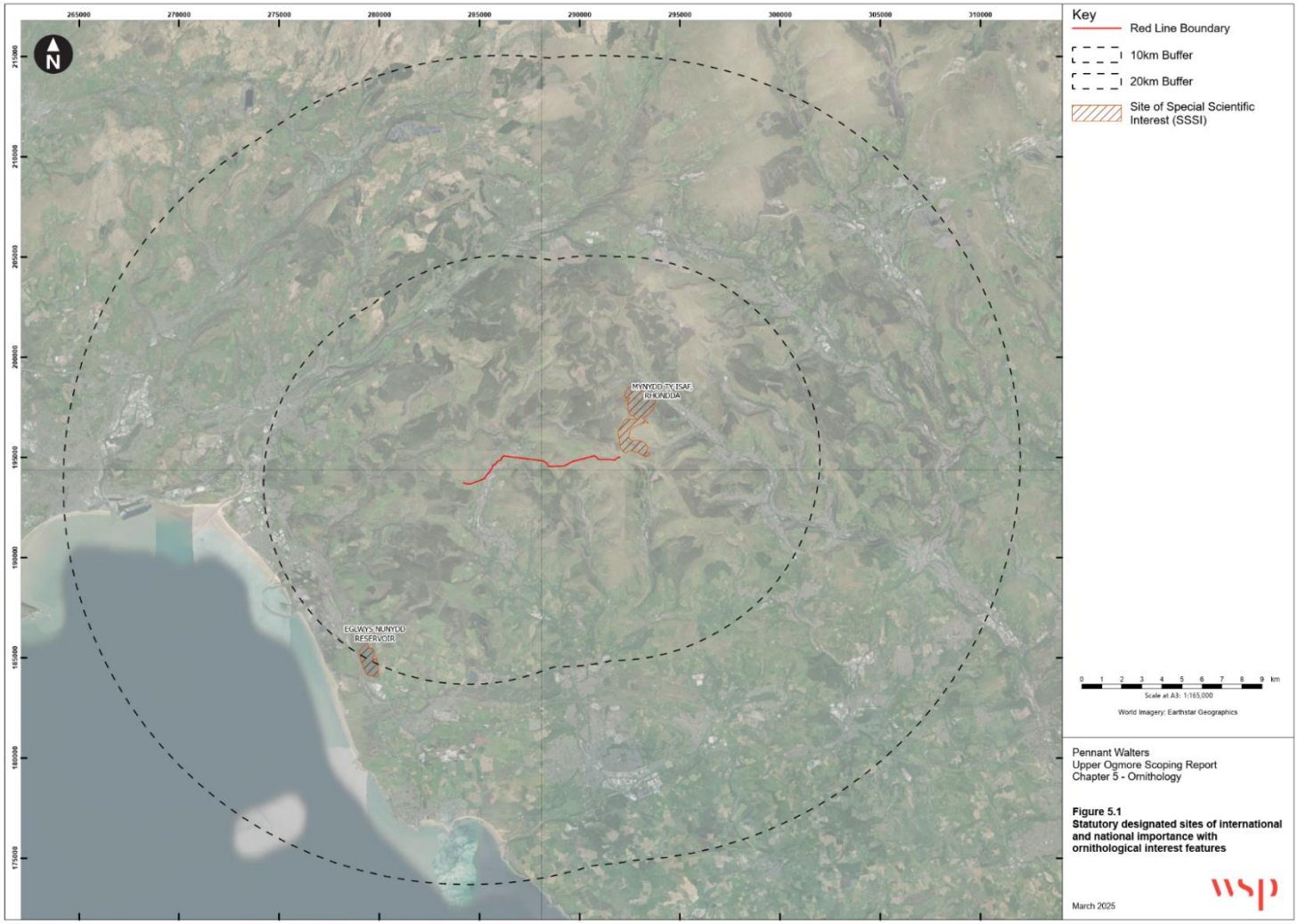


Table 5-4 – Statutory Designated Sites (designated for Ornithological features) Within 10km of the Project

Site name	Designation	Size (hectares (ha))	Approximate distance and orientation from the Site	Description	Potential connectivity with the Site (Connectivity distances reported from Pendlebury et al., 2011)
Mynydd-Ty-isaf	SSSI	322	0.5km NE	This site is characterised by the cliffs and crags of glacial corries which support a mosaic of vegetation types. The high crags also provide nesting sites for a Schedule 1 raptor.	Breeding core range of 2km, with maximum range of 18km for key raptor species.
Eglwys Nunydd Reservoir	SSSI	91	9.46km SW	The largest freshwater body in the county. The reservoir attracts large numbers of wintering waterfowl and passage migrants. Notable species including great crested grebe *Podiceps cristatus,* little grebe *Tachybaptus ruficollis*, mallard *Anas platyrhynchos*, gadwall *Mareca strepera* and coot *Fulica atra* now breed.	Unlikely given the habitats on-Site.

Suitability for protected and/or notable species

5.4.5. There is widespread ground nesting bird habitat on Site, within tussocky purple moor grass, acid grassland and heath, as well as some tree/shrub habitat suitable for nesting birds. A number of generalist and specialist bird species are expected to utilise habitats within the Survey Area and direct impacts to nesting birds within impact areas will need to be considered further in proposals.

5.4.6. The desk study returned 2,873 records of 123 different bird species within 2km of the Site.

5.4.7. Those of potential relevance to habitats on-Site include upland and ground/scrub nesting species on the Red and Amber lists of conservation concern[53], such as kestrel *Falco tinnunculus*, linnet *Linaria cannabina*, skylark *Alauda arvensis*, ring ouzel *Turdus torquatus*, snipe *Gallinago gallinago*, wheatear *Oenanthe Oenanthe* and whimbrel *Numenius phaeopus*.

5.4.8. Nightjar *Caprimulgus europaeus* are known to breed within the vicinity of the Site, and goshawk *Accipiter gentilis* and honey-buzzard *Pernis apivorus* are also known breeding species in the wider area.

[53] British Trust for Ornithology (2021). Birds of Conservation Concern 5 (BOCC5) available online https://www.bto.org/sites/default/files/publications/bocc-5-a5-4pp-single-pages.pdf [Accessed March 2024].

5.5 APPRAISAL

5.5.1. **Table 5-5** sets out the potential significant effects identified to date. These are assessed before the application of any mitigation. Please note that further surveys have been recommended for the ornithological receptors listed below. The assessment of impacts on ornithology will be refined on the receipt of appropriate survey data.

Table 5-5 – Potential significant effects to be assessed

Effect	Zone of Influence	Ornithological Features Potentially Impacted
Construction		
Direct habitat loss/fragmentation (temporary or permanent), including removal of trees and/or woodland.	Within the construction footprint.	The Site is considered to have potential to support a range of protected and/or notable bird species including raptors, moorland species and nightjar. Direct and permanent habitat loss within construction zone; including temporary loss/disruption e.g. for access routes, compounds or lay-down areas, loss of habitat for IOFs.
Damage and/or destruction of nests	Within the construction footprint.	The Site is considered to have potential to support a range of protected and/or notable bird species including raptors, moorland species and nightjar. Potential impacts included on precautionary basis.
Disturbance and/or displacement of bird species	Within 500m of the construction footprint	A range of protected and/or notable bird species are likely to be present in the immediate area including raptors, moorland species and nightjar.
Noise, vibration and visual disturbance from construction traffic and personnel.	Construction footprint and up to 250m of construction zone.	Temporary disturbance to protected and/or notable bird species. Potential impacts included on precautionary basis.
Operational		
Injury or mortality of birds via collision and/or strike	Within the construction footprint	The Site is considered to have potential to support a range of protected and/or notable bird species including raptors, moorland species and nightjar. Potential impacts included on precautionary basis.
Displacement through indirect loss of habitat if disturbance causes birds to avoid the Site	Within 500m of the construction footprint	The Site is considered to have potential to support a range of protected and/or notable bird species including raptors, moorland species and nightjar. Potential impacts included on precautionary basis.

and surrounds, i.e. foraging.		

ASSESSMENT OF CUMULATIVE EFFECTS

5.5.2. Consideration will also be given as to whether any of the IOFs identified within this scoping chapter are likely to be subject to cumulative effects as a result of the Project in combination with other nearby developments.

5.5.3. Cumulative effects will generally be either:

- Cumulative 'ZoI' effects whereby two or more developments affect the same specific receptor (e.g. two developments in the same river catchment); or
- Cumulative effects on the total resource (or population) of an ornithological feature in a region due to two or more developments (e.g. two developments affect the same habitat type in a region, reducing its overall area).

5.5.4. Assessment of these is complex and relies on the definition of a reasonable scope for cumulative effects, and the availability of a reasonable baseline for other developments. In addition, the assessment focuses on those occasions where two 'not significant' effects might operate cumulatively to result in a significant effect (rather than where the effects of one development on an ornithological feature are already, on their own, considered significant).

5.5.5. A cumulative assessment will therefore be provided within the Environmental Statement (ES)

ENVIRONMENTAL EFFECTS SCOPED OUT

5.5.6. The following environmental effects are deemed unlikely to result in significant effects, and will therefore not be considered within the ES:

- Temporary disturbance of common and widespread ornithological species of negligible nature conservation importance such as passerines;
- Loss or disturbance of common and widespread habitats likely to be used by ornithological species of negligible conservation importance;
- Effects on common and widespread habitats and species will not be considered as they do not meet the criteria for requiring full EcIA identified in the CIEEM Guidelines[54]; and are therefore not considered to be a material consideration for decision-making; and
- Habitats Regulations Assessment: There are no statutory designated sites of international importance (SPAs or Ramsar sites supporting ornithological interest features) within 20km of the Site. On this basis, it is considered that an HRA for the Project will not be required for ornithological reasons, however this will be reviewed and confirmed as additional baseline data are collected.

5.6 RECOMMENDATIONS AND MITIGATION

FURTHER SURVEYS AND RECOMMENDATIONS

[54] CIEEM (2024) Guidelines for Ecological Impact Assessment In The UK And Ireland. Available at: Guidelines for Ecological Impact Assessment (EcIA) | CIEEM

5.6.1. The following guidance documents referred to in determining further survey requirements are listed below:

- Scottish Natural Heritage (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms.
- NatureScot (2025). Guidance - Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds.
- NatureScot (2025). Guidance - Assessing the significance of impacts on bird populations from onshore wind farms that do not affect protected areas.

5.6.2. The survey methods recommended are based on guidelines published by NatureScot (2025) and it is recommended that the following surveys are undertaken.

Vantage Point Flight Activity Surveys

5.6.1. Vantage point surveys will follow best practice guidelines[55],[56] and will be undertaken to record the flight activity of target species across the Study Area. Each vantage point will be monitored for 6 hours per month over the breeding season (April 2025 – August 2025), extended to include the late breeding period for honey-buzzard.

5.6.2. A qualitative approach to identifying hotspot areas for collision risk will be adopted, where levels of flight activity are kept under review and re-evaluated as targeted ornithology surveys are carried out and as the ES progresses. NatureScot (2025) guidance recommends that for new overhead line projects, emphasis should be put on mitigation in the first instance, where surveys indicate potential conflicts. However, where impacts are likely to be severe, and mitigation may not reduce this sufficiently, bespoke models may be used (SNH 2025)[57], (SNH) (2017)[58].

Moorland Bird Survey

5.6.3. A Moorland Bird Survey (MBS) following Brown & Shepherd (1993)[59] would be undertaken to record any activity from waders (and other target breeding bird species of conservation concern in Wales) present within the Study Area. This standard technique requires four survey visits to be undertaken across the breeding season in all suitable areas within 500m of the site, between April - July inclusive.

Breeding Raptor Survey

5.6.4. The MBS will provide sufficient information on ground nesting raptors within 500m of the site boundary. However, surveys for breeding raptors will extend out to a 2km buffer of the site boundary (access permitting) following guidance in Hardey *et al* (2009)[60]. A four-visit survey would be undertaken between April and June/July 2025 in these areas.

[55] NatureScot (2016). Guidance - assessment and mitigation of impacts of power lines and guyed meteorological masts on birds.

[56] NatureScot (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms.

[57] SNH. 2025. Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds https://www.nature.scot/doc/guidance-assessment-and-mitigation-impacts-power-lines-and-guyed-meteorological-masts-birds#new-vs-replacement-power-lines (Accessed March 2025).

[58] SNH. 2017. Recommended bird survey methods to inform impact assessment of onshore wind farms. Version 2. March 2017. Scottish Natural Heritage

[59] Brown, A.F. & Shepherd, K.B. (1993). A method for censusing upland breeding waders. Bird Study, 40: 189-195.

[60] Hardey, J. Crick, H., Wernham, C., Riley, H., Etheridge, B., and Thompson, D. (2013). Raptors: A field guide for surveys and monitoring 3rd edition. The Stationary Office, Edinburgh.

Breeding Nightjar Survey

5.6.5. Nightjar are known to breed near the Upper Ogmore Wind Farm area. Breeding nightjar surveys will be undertaken in suitable habitat within a 500m buffer of the site (access permitting); suitable habitat being young pre-thicket stage plantation and in areas of clearfell. Two survey visits will be undertaken, one during June and one in early July 2025 following standard methods outlined in Gilbert *et al*. (1998)[61].

Winter Raptor Roost Surveys

5.6.6. Surveys will comprise two survey visits between November 2025 and February 2026, to identify any communal raptor roosts within 2km of the Site. Survey methodology shall follow those detailed in Hardey *et al* (2013).

Target Species

5.6.7. Following the initial desk-based study, the following species will be targeted during the survey programme:

- Protected raptors and owls: breeding osprey *Pandion haliaetus* and honey-buzzard; resident red kite *Milvus milvus*, goshawk, barn owl *Tyto alba*, short-eared owl *Asio flammeus* and peregrine *Falco peregrinus*; and wintering hen harrier *Circus cyaneus* and merlin *Falco columbarius*;
- waterfowl and waders: all wildfowl species (except feral species, mute swan *Cygnus olor* and Canada goose *Branta canadensis*) and Annex I waders including wintering golden plover *Pluvialis apricaria*; and
- other species: nightjar.

5.6.8. The following have been identified as secondary species for the purposes of survey recording:

- All non-Annex I wader species (e.g. oystercatcher *Haematopus Ostralegus*, snipe *Gallinago Gallinago*, woodcock *Scolopax rusticola*, curlew *Numenius Arquata* and lapwing *Vanellus vanellus*); all non-Annex I / Schedule 1 raptor species (e.g. common buzzard *Buteo buteo*, sparrowhawk *Accipiter nisus*, long-eared owl Asio otus, tawny owl *Strix aluco* and kestrel *Falco tinnunculus*); and raven *Corvus corax*.

5.6.9. Further assessments are anticipated to be needed for statutory designated sites of national importance (Mynydd-Ty-Isaf SSSI and Eglwys Nunydd Reservoir SSSI) (to be considered within the ES) alongside a review of detailed/ final Project design.

5.6.10. Consultation with the Local Planning Authority should also be undertaken (at a suitable time within the Project lifecycle, following refinement of the Project design and completion of surveys) in relation to developing suitable mitigation strategies for specific ornithological species (where required). Avoidance of significant impacts through design should however be the first consideration where feasible.

[61] Gilbert, G., Gibbons, D.W. & Evans, J. (1998). Bird Monitoring Methods. RSPB, Sandy.

6 HISTORIC ENVIRONMENT

6.1 INTRODUCTION

6.1.1. The Historic Environment assessment will consider the potentially significant effects on the local environment that may arise from the construction, operation and decommissioning of the Project.

6.1.2. This chapter of the Scoping Report sets out the information sources used to inform the scope of the assessment. It provides an overview of the baseline conditions relevant to Historic Environment within the vicinity of the Site boundary; the likely significant effects to be considered within the assessment and measures which can be incorporated into the Project to mitigate any potential significant effects.

6.1.3. This chapter should be read in conjunction with **Chapter 1: Introduction**.

LIMITATIONS OF THIS ASSESSMENT

6.1.4. This Scoping Report has been informed by a draft Archaeological Desk-based Assessment (ADBA) prepared by Heneb: the Welsh Trust for Archaeology, which provides a Historic Environment baseline for the Project and was supported by a site visit carried out by Heneb. Heneb reported that some assets along the route were heavily obscured or unreachable due to the steep terrain and/or ground cover of heavy grass, shrub and trees. The draft ADBA does not include a detailed baseline of off-site heritage assets and no visits were made to off-site designated heritage assets to consider setting issues.

6.2 INFORMATION SOURCES AND STUDY AREA

6.2.1. In order to identify historic assets which may be impacted by the Project, a range of historic environment sources were consulted within a 300m radius study area in the ADBA (see **Table 6-1**). The baseline summary provided in this ES scoping assessment has been drawn from this existing draft ADBA which details the designated and non-designated historic assets discussed. This has helped assess the likely nature, extent, preservation and significance of any known or possible historic assets that may be present within, or adjacent to, the Site boundary. A fully illustrated desk-based assessment will be submitted with the ES, which will expand on the information currently provided.

6.2.2. In addition, a 2km extended study area has been applied for scoping historic assets, where heritage significance may be impacted through changes to their setting. The 2km study area has been selected based on professional judgement taking into account the scale of the proposed development and the local landscape character.

Table 6-1 - Information sources used for Historic Environment

Source	Description
Cadw[62]	Inventory of Historic Assets with information on statutorily designated historic assets.
Glamorgan-Gwent Archaeological Trust (GGAT).	GGAT Historic Environment Record (HER).
British Geological Survey (BGS).	Solid and drift geology digital map; online BGS geological borehole record data.
Glamorgan Archives.	Historic maps and documents.
Central Register of Air Photography for Wales (CRAPW).	Vertical and specialist (oblique) aerial photographs.
Natural Resources Wales (NRW).	LiDAR information.
Portable Antiquities Scheme (PAS).	Database of archaeological finds found by chance.
Royal Commission on Ancient and Historical Monument of Wales (RCAHMW).	Inventory of non-designated historic assets (The National Monument Record of Wales).
Internet	General online search.

6.3 METHODOLOGY

6.3.1. This section sets out the methodology for the assessment of effects on historic environment. The Study Area is set out in **Section 6.4**.

RELEVANT LEGISLATION, POLICY AND GUIDANCE

6.3.2. The ES Chapter will set out the planning framework in respect of buried heritage assets (archaeological remains), built heritage assets and historic landscapes. It will include the methodology for assessing the environmental effects predicted during the construction and

[62] Designated Historic Asset GIS Data, The Welsh Historic Environment Service (Cadw), 13 Feb 2025, licensed under the Open Government Licence **http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/**

operation (completed development) phases. It will provide a summary overview of the baseline conditions.

6.3.3. This Scoping Report chapter has been prepared in line with legislation and national policy as well as in accordance with published advice on the historic environment, including the following:

Legislation and Planning Policy

- Historic Environment (Wales) Act 2023[63];
- Planning Policy Wales (Edition 12, February 2024)[64];
- Future Wales: The National Plan 2024 (2021)[65]; and
- Bridgend County Borough Council Local Development Plan 2018 to 2033[66].

Historic Environment Guidance

- Technical Advice Note 24 (TAN24): The Historic Environment (2017)[67];
- Heritage Impact Assessment in Wales (2017)[68];
- Setting of Historic Assets in Wales (2017)[69];
- Managing Historic Character in Wales (2017)[70];
- Conservation Principles for the sustainable management of the historic environment in Wales (2011)[71];CIfA Code of conduct: professional ethics in archaeology (2022)[72];

[63] Welsh Government, (2023). *Historic Environment (Wales) Act 2023*. Available online at: https://www.legislation.gov.uk/asc/2023/3/contents [Accessed 13/02/2025].
[64] Welsh Government, (2024). *Planning Policy Wales, Edition 12*. Available online at: https://www.gov.wales/sites/default/files/publications/2024-07/planning-policy-wales-edition-12.pdf [Accessed 11/10/2024].
[65] Welsh Government, (2021). *Future Wales: The National Plan 2024.* Available online at: https://www.gov.wales/future-wales-national-plan-2040 [Accessed 11/10/2024].
[66] Bridgend County Borough Council, (2024). *Replacement Bridgend Local Development Plan 2018 to 2033*. Available online at: https://www.bridgend.gov.uk/residents/planning-and-building-control/development-planning/replacement-bridgend-local-development-plan-2018-to-2033/ [Accessed 11/10/2024].
[67] Welsh Government, (2017). *Technical Advice Note 24: The Historic Environment*. Available online at: https://www.gov.wales/sites/default/files/publications/2018-09/tan24-historic-environment.pdf [Accessed 13/02/2025]
[68] Cadw, (2017). *Heritage Impact Assessment in Wales*. Available online at: https://cadw.gov.wales/sites/default/files/2019-05/20170531Heritage%20Impact%20Assessment%20in%20Wales%2026917%20EN.pdf [Accessed 13/02/2025]
[69] Cadw, (2017). *Setting of Historic Assets in Wales*. Available online at: https://cadw.gov.wales/sites/default/files/2019-05/Setting%20of%20Historic%20Assets%20in%20Wales%20EN.pdf [Accessed 08/10/2024]
[70] Cadw, (2017). *Managing Historic Character in Wales*. Available online at: https://cadw.gov.wales/sites/default/files/2019-05/Managing%20Historic%20Character%20in%20Wales%20%20EN.pdf [Accessed 11/10/2024]
[71] Welsh Assembly Government, (2011). *Conservation Principles for the sustainable management of the historic environment in Wales*. Available online at: https://cadw.gov.wales/sites/default/files/2019-05/Conservation_Principles_EN_0.pdf [Accessed 13/02/2025]
[72] Chartered Institute for Archaeologists (CIfA), (2022). *Code of Conduct: professional ethics in archaeology*. Available online at:

- CIfA Code of conduct: professional conduct (2024)[73];
- CIfA Standard and Guidance for historic environment desk-based assessment (2020a)[74]; and
- CIfA Standard and Guidance for commissioning work or providing consultancy advice on archaeology and the historic environment (2020b)[75].

6.3.4. The Historic Environment assessment will be supported by a technical appendix in the form of a detailed ADBA prepared by Heneb: the Trust for Welsh Archaeology. This will include a detailed baseline compiled through a standard range of data sources, as highlighted in **Table 6-1**.

OVERARCHING APPROACH

6.3.5. The generic Project-wide approach to the assessment methodology is set out in **Chapter 1: Introduction.** Whilst this has informed the approach in this Historic Environment assessment, it is necessary to set out how this methodology will be applied, and adapted as appropriate, to address the specific needs of this Historic Environment assessment.

TEMPORAL SCOPE

6.3.6. The temporal scope of the assessment of Historic Environment is consistent with the period over which the Project would be carried out and therefore covers the construction, operational and decommissioning periods, as set out in **Section 1.1**.

6.3.7. Decommissioning activities would not be expected to result in additional ground disturbance with underground infrastructure proposed to be left in situ.

DETERMINING SIGNIFICANCE OF EFFECTS

6.3.8. The EIA Regulations do not define significance, and it will be necessary to state how this will be defined. The significance of an effect resulting from a development during construction or operation is most commonly assessed by reference to the sensitivity (or value) of a receptor and the magnitude of the effect, as set out in **Table 6-3**. This approach provides a mechanism for identifying areas where mitigation measures may be required and to identify the most appropriate measures to alleviate the risk presented by the development.

6.3.9. For the purposes of assessing the significance of effects in EIA terms, heritage significance is described with reference to the interests set out in Planning Policy Wales and TAN24 (see **Section 1.1**). These guidelines define the significance of historic assets by the following values: evidential,

https://www.archaeologists.net/sites/default/files/Code%20of%20conduct%20revOct2022.pdf [Accessed 02/10/2024]

[73] Chartered Institute for Archaeologists (CIfA), (2024). *Regulations for professional conduct*. Available online at: https://www.archaeologists.net/sites/default/files/Regulations%20for%20professional%20conduct_0.pdf [Accessed 02/10/2024]

[74] Chartered Institute for Archaeologists (CIfA), (2020a). *Standard and guidance for historic environment desk-based assessments*. Available online at: https://www.archaeologists.net/sites/default/files/CIfAS%26GDBA_4.pdf [Accessed 02/10/2024]

[75] Chartered Institute for Archaeologists (CIfA), (2020b). *Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment*. Available online at: https://www.archaeologists.net/sites/default/files/CIfAS%26GCommissioning_2.pdf [Accessed 02/10/2024]

historic, aesthetic and communal. The determination of the significance is based on statutory designation, professional judgement and through consultation with statutory consultees.

6.3.10. Each historic asset is evaluated against the range of criteria listed above on a case-by-case basis, in accordance with the criteria listed in **Table 6-2**. This also considers regional variations and individual qualities, where applicable.

6.3.11. Unless the nature and exact extent of buried archaeological remains within any given has been determined through prior investigation, their significance can be uncertain, and a judgement will be made on the basis of existing knowledge.

6.3.12. In relation to designated historic assets, the assessment considers the contribution that historic character and setting makes to the overall significance of the asset.

Table 6-2 – Definition of heritage significance

Heritage Significance	Criteria	Example asset class
High	Asset has significance for an outstanding level of archaeological, architectural, historic and/or artistic interest.	Designated historic assets. Nationally and international significant non-designated archaeological sites, including burial grounds.
Medium	Asset has significance for a high level of archaeological, architectural, historic and/or artistic interest.	Locally listed buildings and other local / county-based designations. Regionally significant non-designated archaeological sites.
Low	Asset has significance for elements of archaeological, architectural, historic or artistic interest.	Locally significant archaeological sites.
Negligible	Due to its nature of form, condition or survival, it cannot be considered as an asset in its own right.	Non-extent HER records.

Table 6-3 – Establishing the magnitude of change

Magnitude	Criteria (adverse)	Criteria (Beneficial)
High	Loss of heritage significance of an order of magnitude that would result from total or substantial demolition or disturbance of a historic asset or from the disassociation of an asset from its setting.	Sympathetic restoration of an at-risk or otherwise degraded heritage asset and/or its setting. Bringing an at-risk heritage asset into sustainable use, with robust long-term management secured.
Medium	Loss of heritage significance arising from partial disturbance or inappropriate alteration of	Appropriate stabilisation and/or enhancement of a heritage asset and,

Magnitude	Criteria (adverse)	Criteria (Beneficial)
	a historic asset which will adversely affect its importance. Change to the key characteristics of the setting of a historic asset, which may harm the significance of the asset, but will still allow its archaeological, architectural or historic interest to be appreciated.	or its setting that better reveal the significance of the asset or contribute to a long-term sustainable use or management regime.
Low	Minor loss to or alteration of a historic asset which leaves its current significance intact. Minor or short-term changes to setting which do not affect the key characteristics and in which the historical context remains intact.	Minor enhancements to management of a feature or site that better reveal the significance of the asset or contribute to a short-term management regime.
Negligible	Minor alterations of a historic asset which does not affect its significance. Minor and short-term, or reversible, changes to setting which do not affect the significance of the historic asset.	Very minor alteration to an asset which presents minimal change to heritage significance, including minor and, or short-term or reversible change to setting.

6.3.13. The matrix in **Table 6-4** has been prepared to guide the assessment of whether effects on the historic environment for the purposes of EIA are to be considered significant or not. The classification of the effect is judged on the relationship of the magnitude of change to the assessed heritage significance of the resource. As a general rule, major effects are considered to be significant, moderate effects are considered to be potentially significant, and minor and negligible effects are considered to be not significant. Where effects are assessed, according to **Table 6-4**, as potentially significant in EIA terms, professional judgement will be applied to determine whether they are significant or not significant.

Table 6-4 – Significance evaluation matrix

		Magnitude of change			
		High	Medium	Low	Negligible
Significance	High	Major	Major	Moderate	Minor
	Medium	Major	Moderate	Minor	Negligible
	Low	Moderate	Minor	Negligible	Negligible
	Negligible	Minor	Negligible	Negligible	Negligible

6.4 BASELINE ENVIRONMENT

6.4.1. A high-level appraisal of historic assets has been undertaken to inform the scoping assessment using the sources listed in **Table 6-1**. This provided to inform the scope of the effects which will be considered in the EIA.

DESIGNATED HISTORIC ASSETS

6.4.2. There is one designated historic asset within this scoping boundary. This is the scheduled Clawdd Mawr Dyke (GM231)[76].

6.4.3. Within the 300m study area, there are a further two scheduled monuments, as follows:

- Mynydd Caerau Round Cairns (GM232); and
- Bwlch yr Avan Dyke (GM246).

6.4.4. No other designated historic assets fall within the 300m study area.

6.4.5. Within 2km extended study area, there are:

- 12 scheduled monuments (in addition to those already listed above);
- 27 listed buildings; and
- one registered historic landscape (RHL).

6.4.6. No other designated historic assets fall within the 2km extended study area.

6.4.7. A list of designated heritage assets within 2km is provided in **Appendix C** and shown in **Figure 5.1, Appendix D**.

NON-DESIGNATED HISTORIC ASSSETS

6.4.8. There are 11 GGAT HER records within the scoping boundary, one of which relates to the scheduled Clawdd Mawr Dyke (02791.0w)[77]. The other records are as follows:

- Cross Ridge Dyke, Foel Y Dyffryn (01862.0m) (undated);
- Caerau war memorial (08463m);
- Trial level near Llynfi-inn (08704m) (post medieval quarry pit evidenced on historic mapping, not extant, possibly destroyed);
- Blaencaernau Engine House (04434w) (post medieval, observed on historic mapping, not extant on modern satellite imagery but not accessible during site visit);
- Caernau Air Shaft (04435w) (associated with Blaencaernau Level);
- Blaencaernau Winding Drum (04436w) (associated with Blaencaernau Level);
- Caernau Coal Level (04433w) (post medieval colliery evidenced on historic mapping);
- Mynydd Caerau Tramway (04440w) (associated with Blaencaernau Level);
- Bwlch Garw Cists (00718w) (Bronze Age, evidence on historic mapping but HER records no trace could be observed on the ground); and
- Bwlch Garw East (00068m) (HER considers this likely to be a naturally formed amorphous mound).

6.4.9. There are a further 28 GGAT HER records within the 300m study area, though a number of these records reference the scheduled monuments already identified above. The records include Neolithic, Bronze Age and medieval finds or features, though they are dominated by post-medieval features

[76] Cadw designation number provided for scheduled monuments.
[77] GGAT HER reference number.

associated with the local coal industry, specifically associated with the Caerau Colliery and Llynfi quarries.

6.4.10. There are six RCAHMW records within the scoping boundary, including:

- Blaengarw, Barrow I (307436)[78] (undated round barrow recorded in the same vicinity as the HER record for the Bwlch Garw Cists (00718w), which references the barrow and confirms that similarly to the cists, no trace of the barrow could be observed);
- Foel y Dyffryn, Quarry VIII (516895) (post medieval quarry hollow);
- Foel y Dyffryn, Quarry IV (516590) (post medieval quarry hollow);
- Bwlch Yr Afan (523233) (post medieval boundary stone);
- Bwlch Yr Garw, Boundary Stone (516547) (post medieval, extant); and
- Llynfi Inn (516899) (public house, late 19th-20 century, now demolished).

6.4.11. The undated round barrow (307436) is recorded in the same vicinity as the HER record for the Bwlch Garw Cists (00718w), which references the barrow and confirms that similarly to the cists, no trace of the barrow could be observed.

6.4.12. There are a further 72 RCAHMW records within the 300m study area. These include prehistoric archaeological finds and features (mainly Bronze Age) but primarily reflect the former industrial structures and infrastructure associated with the post-medieval and modern iron industry, with the majority of assets located in urban areas on the western side of the proposed development.

6.4.13. It is possible that previously unrecorded remains and above ground structures are present within the scoping boundary and study area and will be assessed in the ES.

CHRONOLOGICAL OVERVIEW

6.4.14. The proposed cable route crosses a predominantly upland landscape, with evidence for human activity from the prehistoric to modern day. The earliest available evidence within the study area relates to an isolated find of a Neolithic flint axe (00096m), with Bronze Age activity represented by a series of barrows, cairns and cists in the study area (516589, 307436, 307437 and 00718w). Remains of a dyke, dating to the later prehistoric or medieval period is also recorded within the east end of the study area (Bwlch yr Avan Dyke GM246/307654). There is no available evidence within the study area for Roman period activity. Early medieval and medieval evidence is limited, though the Scoping Boundary crosses a scheduled early medieval dyke (GM231/02791.0w/307434), a linear earthwork comprising a substantial bank and ditch forming a major boundary between two adjacent landholdings[79]. It is likely that the area remained largely rural until industrial development which dominated the post medieval period, with the establishment of quarry sites and collieries. This in turn led to the development of transport infrastructure and urban settlement primarily in the west where the proposed route passes through Caerau and Blaencaerau and to the south of Croeserw. In addition, more recently, the landscape within the eastern section has seen the development of a

[78] RCAHMW asset reference number.
[79] Cadw. N.d. Scheduled Monuments- Full Report. Available at https://cadwpublic-api.azurewebsites.net/reports/sam/FullReport?lang=&id=2906 (Accessed 11.02.2025)

wind farm, the Llynfi Afan Renewable Energy Park, immediately adjacent to the proposed cable route.

6.5 APPRAISAL

POTENTIAL RECEPTORS

6.5.1. The receptors taken forward for assessment have been identified through an ADBA, with a review of further designated historic assets within 2km, and the potential impacts to the Historic Environment, which include:

- Direct disturbance of historic assets;
- Changes to the settings of historic assets, affecting their significance; and
- Changes to historic landscape.

DIRECT DISURBANCE

6.5.2. Any effects arising from direct disturbance of historic assets would be expected to occur during the construction phase and are permanent and irreversible but would be restricted to the footprint of the Project.

6.5.3. Direct disturbance would arise only from physical disturbance caused by the construction of the Project. Therefore, effects on known historic assets will be considered only where these are located within the footprint of the Project. Direct effects on historic assets outside the footprint of the Project will not occur and are scoped out.

6.5.4. The proposed cable route (OHL) intersects with a scheduled monument, the Clawdd Mawr Glyncorrwg Dyke (GM231/02791.0w/307434).

6.5.5. There is a potential for previously unrecorded historic assets to be directly affected by the Project. According to the draft ADBA, these may include the following:

- Prehistoric and medieval archaeological remains, particularly within the central and eastern part of the scoping boundary, where the proposed route crosses the uplands of Mynydd Caerau; and
- Post medieval archaeological remains relating primarily to former coal extraction.

6.5.6. Such effects will be considered with reference to a characterisation of the potential presence of such historic assets developed from an understanding of the historic landscape context, and reference to appropriate cartographic and documentary sources.

CHANGES TO SETTING

6.5.7. The setting of historic assets is defined in Cadw guidance as follows:

- *"The setting of a historic asset includes the surroundings in which it is understood, experienced and appreciated, embracing present and past relationships to the surrounding landscape".*

6.5.8. Cadw guidance identifies a staged approach to the assessment of effects on settings, with the first stage being the identification of the historic assets which may be affected. In accordance with guidance, this has been done considering:

- The location, size and scale of the Project;
- The local landscape character; and
- The location, setting and nature of the historic assets.

6.5.9. The selection of heritage assets to be included in the detailed assessment in the ES has been reviewed against a Zone of Theoretical Visibility (ZTV) (**Figure 5.2**). The results of the stage 1 scoping exercise is presented in **Appendix C**. The following historic assets are proposed to be scoped into the detailed assessment of effects within the ES:

- Clawdd Mawr, Mynydd Caerau (GM231);
- Mynydd Caerau Round Cairns (GM232); and
- Bwlch yr Avan Dyke (GM246).

6.5.10. All other assets within the 2km study area are proposed to be scoped out of the ES assessment as either no change to setting is anticipated or any limited perception of the Project is not expected to give rise to a significant adverse effect, due to the intervening distance, infrastructure, planting, the nature of the asset itself and the proposed development design (e.g. underground sections of cable). This includes the only RHL within the study area, The Rhondda (HLW (MGl) 5), which lies 140m east of the Site at its nearest point. From this asset views of the proposed OHL would be limited to relatively small areas within the western extent of the RHL (see **Appendix C**).

LIKELY SIGNIFICANT EFFECTS

6.5.11. The likely significant historic environment effects that will be taken forward for assessment in the Environmental Statement are summarised in **Table 6-5**.

Table 6-5 – Likely significant historic environment effects

Activity	Effect	Receptors
Construction: Site preparation for installation of underground cables and overhead H-pole powerlines and construction of associated infrastructure (i.e. construction compounds, trackways, control points, site access and electrical cabling).	Direct disturbance to, or loss of, historic assets located within the development footprint.	Clawdd Mawr Glyncorrwg Dyke (GM231/02791.0w/307434) Known and unknown non-designated buried historic assets.
Operation and maintenance: Operation of OHL infrastructure; occasional vegetation clearance to maintain clearance around OHL; temporary	Changes to the heritage significance of assets through changes to their settings.	Designated historic assets.

Activity	Effect	Receptors
vehicular visitation for necessary repairs.		
Decommissioning: Retention in situ of OHL infrastructure.	Changes to the heritage significance of assets through changes to their settings.	Designated historic assets.

6.5.12. The effects scoped out from further assessment in the ES are:

- **Direct disturbance to historic assets within the section of the underground cable route proposed within existing road network** – areas of works within the road footprint will not impact upon any unknown historic assets, as these have likely already been directly disturbed by modern development to a depth of between 1m to 2m. As such, excavation of the cable trenches to a depth of up to 1.5m and the joint boxes at 1 to 2m deep and 5m x 3m wide will have a negligible adverse effect and can be scoped out of further assessment.
- **Direct disturbance to historic assets during the operation phase of the underground cable and overhead powerline** – whilst in the operation phase, these cables will be static and will not require any direct impacts upon the ground. As such, they will have no adverse effect on unknown historic assets.
- **Direct disturbance to historic assets outside of the scoping boundary** – no ground excavation works are anticipated to take place beyond the scoping boundary and therefore there will be no adverse effect upon unknown historic assets.
- **Adverse effect through change to their settings on historic assets not listed in paragraph 6.5.9** – due to a combination of location, distance, intervening topography and the nature of the assets, together with the proposed OHL scheme design (see **Chapter 1: Introduction**), there are no further assets whose setting and physical character would be significantly affected during the operational and maintenance phases of the Project.
- **Direct disturbance to historic assets arising during decommissioning** – the operational elements of the proposed development will be left in situ, therefore there will be no further direct impacts to the ground.

6.6 RECOMMENDATIONS AND MITIGATIONS

FURTHER ASSESSMENT

6.6.1. It is proposed that a more detailed review of the historic and archaeological baseline is needed to inform the assessment of archaeological potentials within the scoping boundary and detailed assessment of the effects within the ES.

6.6.2. Further baseline assessment of current settings of the historic assets and the potential impacts on setting from the Project will be required to mitigate adverse effects.

MITIGATION

6.6.3. The development of the Project design is an iterative process that will take into consideration the potential for effects on historic environment, adopting measures to avoid or minimise impacts where

possible in the first instance. Where disturbance cannot be avoided, measures should be taken to ensure the adverse effects are minimised. Possible measures could include:

- Avoid physical disturbance to scheduled monument, the Clawdd Mawr Dyke (GM231/02791.0w/307434), through appropriate design requiring no intrusive groundwork at the monument or within a 100m buffer;
- Avoid physical disturbance to Caerau war memorial (08463m) and ensure appropriate protection measures are in place during construction to avoid accidental disturbance;
- Micro-siting of pole locations and underground cable route and use of alternative access routes and lay down areas to avoid/minimise direct disturbance to archaeological sensitive locations and adverse changes to setting of historic assets;
- Temporary fencing off historic assets within the vicinity of the Project to avoid impacts during construction activities; and
- Minimising vegetation loss where this would adversely affect the setting of historic assets.

6.6.4. Where avoidance of impacts to buried historic assets are not possible, an appropriate mitigation strategy will be devised to secure preservation by record (e.g. archaeological monitoring of groundworks) before any loss occurs, which can be agreed in advance with the local planning authority.

6.6.5. Within the road footprint and areas of existing modern impacts, there will be no requirement for further mitigation as any unknown archaeological remains have already been compromised.

6.6.6. In areas which have not previously been impacted by modern development, it is anticipated that the localised impacts from constructing the underground cable ducts, overhead H-pole powerlines and associated compounds, laydown areas and trackways will require archaeological monitoring and recording to mitigate their loss or disturbance.

6.6.7. Cross-discipline engagement will also be undertaken to ensure that proposed landscape and ecological environmental measures take into consideration the potential opportunities and constraints relevant to the historic environment.

CONSULTATION

6.6.8. Where necessary, engagement with relevant stakeholders (Cadw and local planning authority) will be undertaken when refining the scope of the historic environment assessment for the ES.

6.6.9. There may be a requirement for scheduled monument consent relating to proposed works at Clawdd Mawr Dyke (GM231/02791.0w/307434), depending on the detailed design of the scheme, which would require consultation with Cadw.

6.7 BASELINE ENVIRONMENT

6.7.1. A high-level appraisal of historic assets has been undertaken to inform the scoping assessment using the sources listed in **Table 6-1.** This provided to inform the scope of the effects which will be considered in the EIA.

7 HYDROLOGY, GEOLOGY AND HYDROGEOLOGY

7.1 INTRODUCTION

7.1.1.1 This chapter defines a hydrology, geology and hydrogeology specific Study Area and details the consultation that will be carried out to obtain data/information which is not otherwise available to inform the environmental impact assessment (EIA). Furthermore, it summarises baseline conditions associated with the Study Area, provides a description of potential significant effects, outlines mitigation and describes assessment methods to be applied. Other chapters that should be read alongside this chapter include **Chapter 1: Introduction**; **Chapter 5: Ecology**, and **Chapter 8: Coal Mining**.

7.2 STUDY AREA

7.2.1. A discipline study area 'the Study Area' has been derived for hydrology, geology and hydrogeology. The Study Area consists of a 1km buffer beyond the Project red line boundary (RLB); in respect of surface water receptors and water supplies – where there are pathways for potential effects - it is extended a further 5km downstream.

7.3 CONSULTATION

7.3.1. Consultation will be carried out with the following consultees:

- Natural Resources Wales (NRW) in respect of licensed abstractions;
- Dŵr Cymru (Welsh Water) in respect of public water supplies;
- Bridgend Borough Council in respect of private water supplies; and
- Neath Port Talbot County Borough Council in respect of private water supplies.

7.3.2. Consultation responses will be used to inform the EIA, including refining scoping decisions where appropriate e.g. in relation to potential significant effects on water supplies.

7.4 DATA SOURCES

7.4.1. Data sources that will be used to inform the EIA will include, though will not be limited to:

- Natural Resources Wales (DataMapWales) data on licensed abstractions, source protection zones (SPZs), drinking water (surface and ground) protected areas (DWPAs), designated sites, main rivers and other rivers, water framework directive (WFD) waterbody status, flood risk and peat;
- British Geological Survey (BGS) data on superficial deposits, bedrock geology and hydrogeology;
- Ordnance Survey (OS) topographical mapping;
- The Land Information System (LandIS) soil data for England and Wales; and
- Local Authority data held in respect of private water supplies.

7.5 BASELINE CONDITIONS

7.5.1. This section describes baseline conditions relative to the Study Area and includes descriptions of the following:

- Designated sites including Special Areas of Conservation (SAC), Sites of Special Scientific Interest (SSSI), Ramsar and Geological Conservation Review (GCR) sites;
- Flood risk (fluvial and pluvial);

- Surface and groundwater bodies (status and quality);
- Water supplies (public and private) and other abstractions;
- Superficial deposits;
- Soils and peat;
- Bedrock geology; and
- Groundwater dependent terrestrial ecosystems (GWDTE).

7.5.2. DataMapWales mapping indicates that there are no designated or protected sites including sites of special scientific interest (SSSI)[80], special areas of conservation (SAC)[81], Ramsar[82], geological conservation review (GCR)[83] sites within the Study Area; although the Mynydd Ty-isaf Rhondda SSSI is within the Study Area, it is designated based on its biological importance.

7.5.3. A review of DataMapWales main rivers[84] mapping indicates that the Study Area falls within seven main-river WFD catchments, west-to-east these are:

- Afan conf with Corrwg to confluence with Pelenna (ID: GB110058026130) - Moderate status;
- Ffrwd Wyllt headwaters to tidal limit (ID: GB110058026100) - Moderate status;
- Llynfi headwaters to Lletty Brongu STW (ID: GB 110058026331) – Moderate status;
- Afan headwaters to confluence with Corrwg (ID: GB 110058026120) – Good status;
- Garw headwaters to confluence with Ogmore (ID: GB 110058026320) – Moderate status;
- Ogwr Fawr headwaters to confluence with Ogmore (ID: GB 110058026340) – Moderate status; and
- Rhondda R source to conf Afon Rhondda Fach (ID: GB 109057027200) – Good status.

7.5.4. A review of DataMapWales mapping[85] also indicates that the Study Area is within the Swansea Carboniferous Coal Measures groundwater body (ID: GB41002G201000) and the SE Valleys Carboniferous Coal Measures groundwater body (ID: GB40902G201900), both classified as Poor (2021).

7.5.5. Of the Main watercourses listed, those highlighted in bold are within the Study Area; WFD classifications for the main rivers and ground waterbodies listed are based on 2021 (Cycle-3) classifications. In addition to the identified main watercourses, OS 1:50,000 scale mapping indicates that there are also several (NRW defined) ordinary watercourses across the Study Area.

7.5.6. In respect of the underlying bedrock geology, BGS Geoindex (Onshore)[86] 1:50,000 scale mapping indicates that the Study Area is underlain north-east to north-west by the following:

- Llynfi Member-Sandstone;
- South Wales middle coal measures formation- mudstone, siltstone and sandstone;

[80] DataMapWales (2025). Sites of Special Scientific Interest. Available: https://datamap.gov.wales
[81] DataMapWales (2022). Special Areas of Conservation: Available: https://datamap.gov.wales
[82] DataMapWales (2022). Ramsar sites. Available: https://datamap.gov.wales
[83] DataMapWales (2021). Geological Conservation Review Site Boundaries. Available: https://datamap.gov.wales
[84] DataMapWales (2022). Main Rivers. Available: https://datamap.gov.wales
[85] DataMapWales (2023). WFD Regulations Cycle 3 Classification. Available: https://datamap.gov.wales
[86] British Geological Survey (2025). Geoindex (Onshore). Available: https://www.bgs.ac.uk

- Rhondda member – sandstone sedimentary bedrock;
- South Wales upper coal measures formation - mudstone, siltstone and sandstone; and
- Llynfi member - mudstone, siltstone and sandstone.

7.5.7. Whilst the BGS Geoindex (Onshore)[86] 1:50,000 scale mapping also indicates that superficial deposits consist of glacial tills and diamicton throughout the Study Area.

7.5.8. A review of LandIS (Soilscapes England & Wales) soil mapping[87] shows that there are three main soil types present within the Study Area, these are:

- Very acid loamy upland soils with a wet peaty surface;
- Freely draining acid loamy soils over rock; and
- Slowly permeable wet very acid upland soils with a peaty surface.

7.5.9. A review of the DataMapWales Peatland of Wales Map (2022)[88] indicates that, within the Study Area, there are small areas of peat with an evidence score of 1 and localised pockets in the east with evidence scores of 4 and 5, respectively.

7.5.10. A review of NRW Flood and Coastal Erosion Risk[89] mapping suggests that, within the Study Area, there is a risk of flooding from rivers (main and ordinary) and surface water, though this is limited to immediate floodplains of watercourses; relative to the Study Area, the area of highest risk is through Caera in the west. Given the inland location there is no risk of flooding from coastal sources. Furthermore, the Study Area is not within Flood Zone 2 or 3 as defined by NRW.

7.5.11. A review of the NRW Water Watch Wales mapping[90] shows that the Study Area is within the Swansea Carboniferous Measures groundwater, DWPA and that the wider Study Area encroaches into the Rhondda R - source to conf Afon Rhondda Fach, river DWPA; whilst there are no DWPA for lakes within the Study Area. While a review of DataMapWales mapping[91] of SPZ, indicates that there are none within the Study Area.

7.5.12. Data requests have been submitted to the public bodies (**Section 7.3**) for information in respect of public and private water supplies; though no information had been made available at the time of writing. However, it likely that there will be several public / private water supplies within the Study Area.

7.5.13. A further review of the NRW Water Watch Wales mapping[90] indicates that there are no known GWDTE within the Study Area; however, these may be present and potential for GWDTE will be assessed cognisant of future national vegetation classification (NVC) surveys to be carried out by WSP ecologists.

[87] LandIS (2025). Soilscapes England & Wales. Available: https://www.landis.org.uk/soilscapes
[88] DataMapWales (2022). Peatlands of Wales Map. Available: https://datamap.gov.wales
[89] Natural Resources Wales (2025). Flood and Coastal Erosion Risk Maps. Available: https://flood-risk-maps.naturalresources.wales
[90] Natural Resources Wales (2025). Water Watch Wales Maps. Available: https://waterwatchwales
[91] DataMapWales (2024). Source Protection Zones (SPZ) Merged. Available: https://datamap.gov.wales

7.6 DESCRIPTION OF POTENTIAL SIGNIFICANT EFFECTS

7.6.1. A precautionary approach has been adopted to identify potential construction and operational (including cumulative) significant effects to be assessed - scoped in - and those not to be assessed - scoped out – of the EIA. These are detailed in **Table 7-1** below.

Table 7-1 - Hydrology, Geology and Hydrogeology - Scoping

Impact	Phase	Scoped In	Scoped Out	Justification
Temporary watercourse crossings required for construction access, etc.	Construction	✓		Potential for physical disturbances within watercourses and temporary changes to flow regimes during.
Temporary works – direct/indirect effects on water quality from construction surface runoff/discharges.	Construction	✓		Potential for temporary effects on water quality and flood risk.
Direct/indirect effects on flood risk.	Construction, Operation and Decommissioning		✓	All watercourse structures would be designed and constructed following good practice techniques and would be of sufficient capacity to receive storm flows with an allowance for increased flows due to climate change. Therefore, it is considered that the Project would not increase local flood risk.
Direct/indirect effects on groundwater, including on private water supplies and GWDTE.	Construction, Operation and Decommissioning	✓		Impacts on groundwater levels or flows to be assessed because of proposed excavations.
Maintenance: use of machinery for non-intrusive inspection and repairs.	Operation		✓	Due to the nature and scale of the Project, these activities would not be likely to cause pollution of the water environment; and any physical disturbance would be temporary and highly localised in nature.

7.7 MITIGATION

7.7.1. During construction, good practice methods and guidance would be adopted and incorporated into a construction environmental management plan (CEMP) to reduce the likelihood and magnitude of potential incidents which could have an adverse effect on hydrological, geological and/or hydrogeological receptors.

7.7.2. Mitigation consistent with good practice methods and guidance typically includes, but is not limited to:

- Spill prevention, pollution prevention and incident response planning within a pollution prevention plan (PPP) as part of the CEMP;
- Implementation of appropriately sized temporary construction sustainable drainage systems (SuDS) for the treatment and discharge of construction runoff;
- Implementation of a phased approach to construction to minimise areas of exposed/disturbed ground/soils;
- Compliance monitoring (e.g. through an environmental clerk of works, EnvCoW) in relation to environmental commitments (PPP/CEMP) and any statutory obligations e.g. construction runoff discharge licences and permits for engineering activities affecting watercourses; and
- Incorporation of permanent SuDS from the design stage.

7.7.3. Specific mitigation shall be outlined where proposed infrastructure is in proximity to/within a sensitive receptor and where potential significant effects are assessed as likely either during construction, operation or decommissioning.

7.8 PROPOSED ASSESSMENT METHODOLOGY

7.8.1. This section outlines the proposed EIA assessment methodology. At the time of writing, it is not considered that the hydrology, geology and hydrogeology chapter shall require field surveys to inform the assessments, due to the scale of the Project, and the low likelihood of disruption caused by installation of Project infrastructure. As such field surveys do not form a part of the proposed methodology for this chapter.

Desk-based Study

7.8.2. The desk-based study would collate all available baseline information to determine site characteristics of the proposed overhead-line (OHL)/underground-cable (UGC) route; this would typically include the following elements:

- Collation of relevant hydrological, geological and hydrogeological baseline information including surface and groundwater WFD status/quality data;
- Identification of surface and groundwater bodies within the Study Area;
- Identification of designated or protected sites within the Study Area;
- Identification of public and private water supplies and any other licensed abstractions within the Study Area, including data requests to public bodies/stakeholders; and
- Evaluation of flood risk from fluvial, pluvial and groundwater sources.

Assessment

7.8.3. In respect of potential significant effects on hydrological, geological and hydrogeological receptors, the EIA will incorporate the following high-level qualitative assessments:

- Surface and groundwater quality;
- Water supplies (public and private);
- Soils (inc. Peat); and
- GWDTE.

7.8.4. The identification of potentially significant effects on receptors within the Study Area will broadly follow the approach of the Standards for Highways (2020) Design Manual for Roads and Bridges

(DMRB) guidance document LA113 – Road Drainage and the Water Environment; although not directly applicable to the nature of the Project, the assessment principles set out within the DMRB guidance provide an acknowledged and accepted basis for assessing significant effects of developments on the water environment.

7.8.5. The assessment approach is therefore broadly presented in three stages:

- Estimating the importance of receptors;
- Estimating the magnitude of potential impacts on receptors; and
- Assessing the significance of the potential effects on receptors.

7.8.6. The significance of the effect resulting from the Project will be assessed with reference to the importance (or sensitivity / value) of a given receptor and the magnitude of the impact. This approach provides a mechanism for identifying areas where mitigation measures may be required and to identify the most appropriate measures to alleviate the risk presented by the Project. The residual effects of the Project on receptors will be evaluated assuming that identified mitigation measures are fully implemented.

7.8.7. Assessments would be carried out cognisant of national and local planning obligations and policies; as well as established best practice principles as per published industry guidance specific to water quality/pollution, flood risk, water supplies (public and private) and sensitive receptors including carbon-rich peat and GWDTE. A non-exhaustive list of guidance is provided below:

- DMRB LA113[92];
- The Environment (Wales) Act (2016)[93];
- The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations (2017) – 'the EIA Regs'[94];
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 – the 'Water Environment Regs'[95];
- Planning Policy Wales (PPW)[96];
- Construction Industry Research and Information Association (CIRIA) guidance[97] including:
  - C753 (The SuDS Manual);
  - C532 (Control of Water Pollution from Construction Sites: Guidance for Consultants and Contractors); and
  - C807 (Managing Construction Pollution: Good Practice Guidance).
- Technical Advice Note 5: Nature conservation and planning (TAN5)[98];

[92] Standards for Highways (2020). DMBR, Road Drainage and the Water Environment. Available: https://www.standardsforhighways.co.uk
[93] Welsh Government (2016). The Environment (Wales) Act 2016. Available: https://www.legislation.gov.uk
[94] Welsh Government (2017). The EIA Regs. Available: https://www.legislation.gov.uk/wsi/
[95] Welsh Government (2017). The Water Environment Regs. Available: https://www.legislation.gov.uk/wsi/
[96] Welsh Government (2024). Planning Policy Wales, Edition 12: Available: https://www.gov.wales/
[97] CIRIA (2025). CIRIA Guidance. Available: https://www.ciria.org
[98] Welsh Government (2009). Technical Advice Note 5, Nature Conservation and Planning. Available: https://www.gov.wales/

- Technical Advice Note 15: Development, Flooding and Coastal Erosion (TAN15)[99];
- Technical Advice Note: 23: Economic Development (TAN23)[100]; and
- Natural Resources Wales National Peatland Action Programme[101]

7.8.8. Furthermore, residual effects (i.e. those which remain post-mitigation) would be identified and assessed as either significant or non-significant.

7.9 DESIGN RECOMMENDATIONS

7.9.1. Potential significant effects can often be avoided or minimised through iterative design processes that remain cognisant of hydrological, geology and hydrogeology constraints. Where it is not considered feasible to avoid potential significant effects, specific mitigation must be identified to restore and offset residual significant effects during the construction, operational and decommissioning phases of the Project.

7.10 LIMITATIONS

7.10.1. Limitations include reliance on timely availability and quality of data, including ecological (NVC) survey data critical to the assessment of effects on GWDTE; as well as public water and private water supply data, critical to the assessment of potential effects on water supplies. Furthermore, assessments may be limited by the accuracy and resolution of open-source publicly available data.

7.10.2. This Scoping Report was prepared prior to the completion of data requests, consultation and field surveys; as such, the baseline conditions described may be subject to change based on data received, consultee responses and field survey data.

[99] Welsh Government (2021). Technical Advice Note 15, Development, Flooding and Coastal Erosion. Available: https://www.gov.wales/
[100] Welsh Government (2014). Technical Advice Note 23: Economic Development. Available: https://www.gov.wales
[101] Natural Resources Wales (2024). The National Peatland Action Programme. Available: https://naturalresources.wales

8 COAL MINING

8.1 INTRODUCTION

8.1.1. The following chapter sets out a preliminary assessment of potential coal mining risks for the Upper Ogmore Connection and makes recommendations for any further assessments required at subsequent project design stages.

8.2 INFORMATION SOURCES AND STUDY AREA

8.2.1. The information laid out in this chapter is summarised from the following sources:

- British Geological Society (BGS) 1:50 000 Series Geological Map 248 Pontypridd Solid and Drift 1956;
- BGS 'GeoIndex' online viewer, accessed on 07 February 2025;
- Mining Remediation Authority (MRA) Interactive Map Viewer, accessed 07 February 2025; and
- National Library of Scotland Historical maps, accessed on 07 February 2025.

8.2.2. The study area for this Coal Mining Risk Assessment (CMRA) area is determined as a buffer zone extending to within 100m of the proposed route alignment.

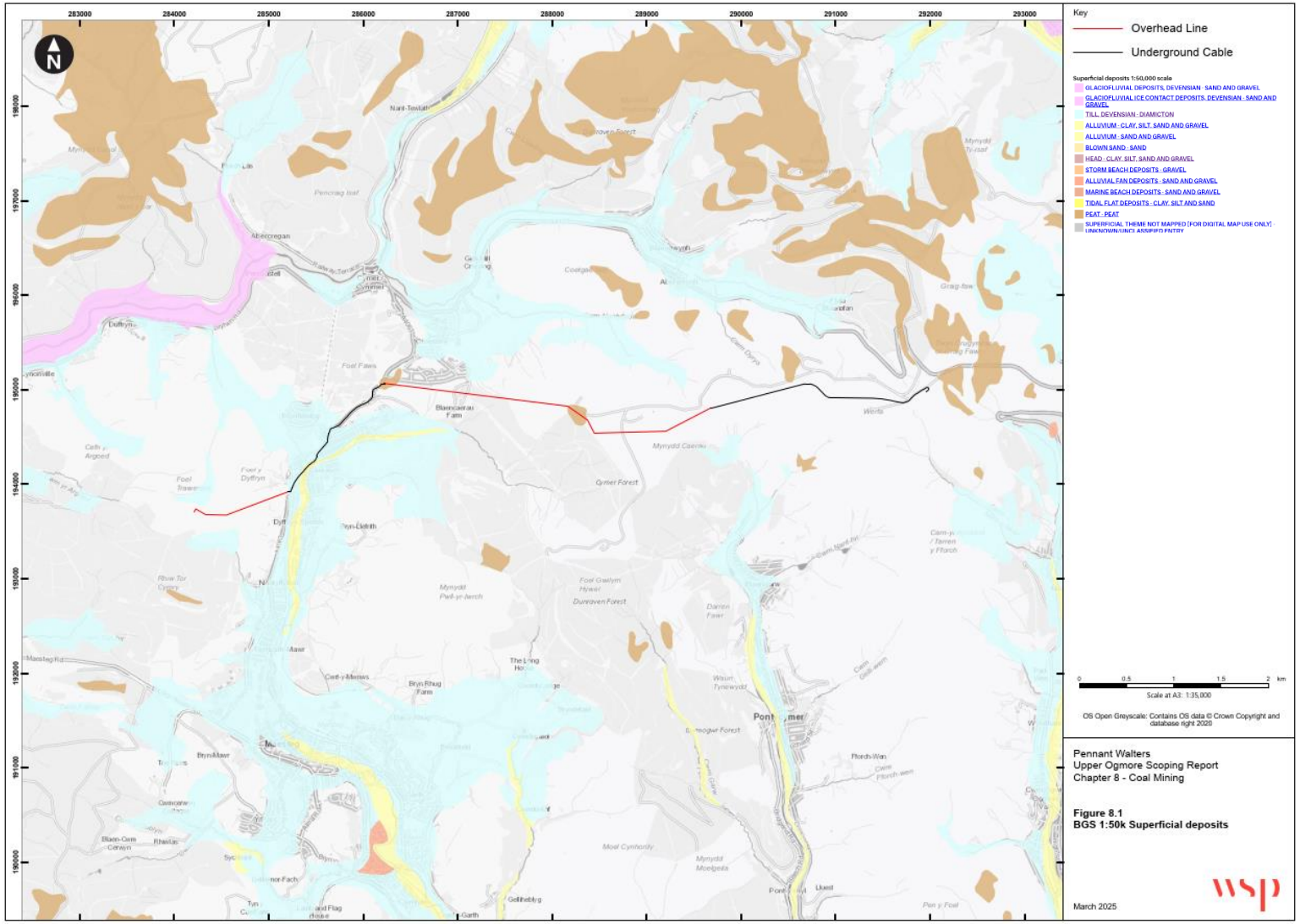
8.3 METHODOLOGY

8.3.1. Preliminary coal mining risks are assessed in accordance with the guidelines for a CMRA as recommended by the Mining Remediation Authority (MRA) (noting that this preliminary assessment does not constitute a full CMRA at this stage) and *CIRIA 143 Abandoned Mineworkings Manual* and BS EN 1997:7 (Eurocode 7).

8.4 BASELINE ENVIRONMENT

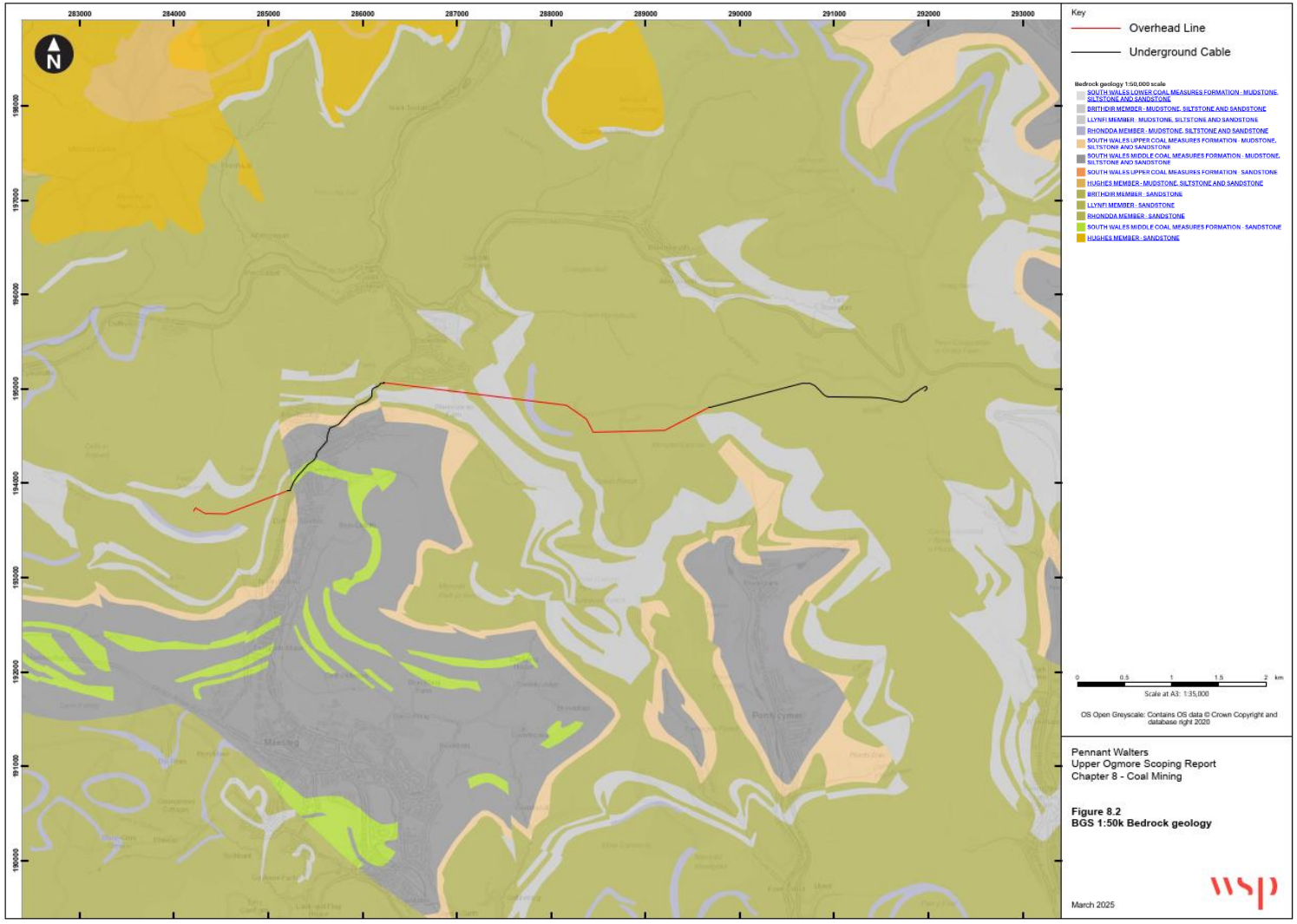
8.4.1. According to BGS mapping, the superficial deposits beneath the Site are recorded to be thin or absent, with Glacial Till and some Alluvium mapped below the planned underground cable section in the west as shown in **Figure 8-1** below.

Figure 8-1 - Superficial deposits beneath the site with approximate route in red



8.4.2. The bedrock geology beneath the site is recorded as the South Wales Middle Coal Measures, the South Wales Upper Coal Measures and the Llynfi Member and the Rhondda Member as shown in **Figure 8-2** below. All these formations are identified as ‘coal bearing strata’.

Figure 8-2 - Bedrock geology beneath the site with approximate route in red



8.4.3. According to the Mining Remediation Authority interactive viewer, the Site crosses through many zones defined as "*Development High Risk Areas*" associated with a number of coal seams which subcrop beneath the Site.

8.5 PRELIMINARY COAL MINING RISK APPRAISAL

8.5.1. A number of potential risks have been identified in relation to the Project with regard to historic mining. The risks are typically:

- presence of coal seam outcrops;
- areas of recorded past shallow coal mining;
- areas of probable (unrecorded) shallow coal mining; and
- mine entries (shafts and adits).

8.5.2. These specific risks are explained in more detail below. In this context the terms 'shallow' means within 30m of rockhead, consistent with MRA definitions.

Coal Seam outcrops

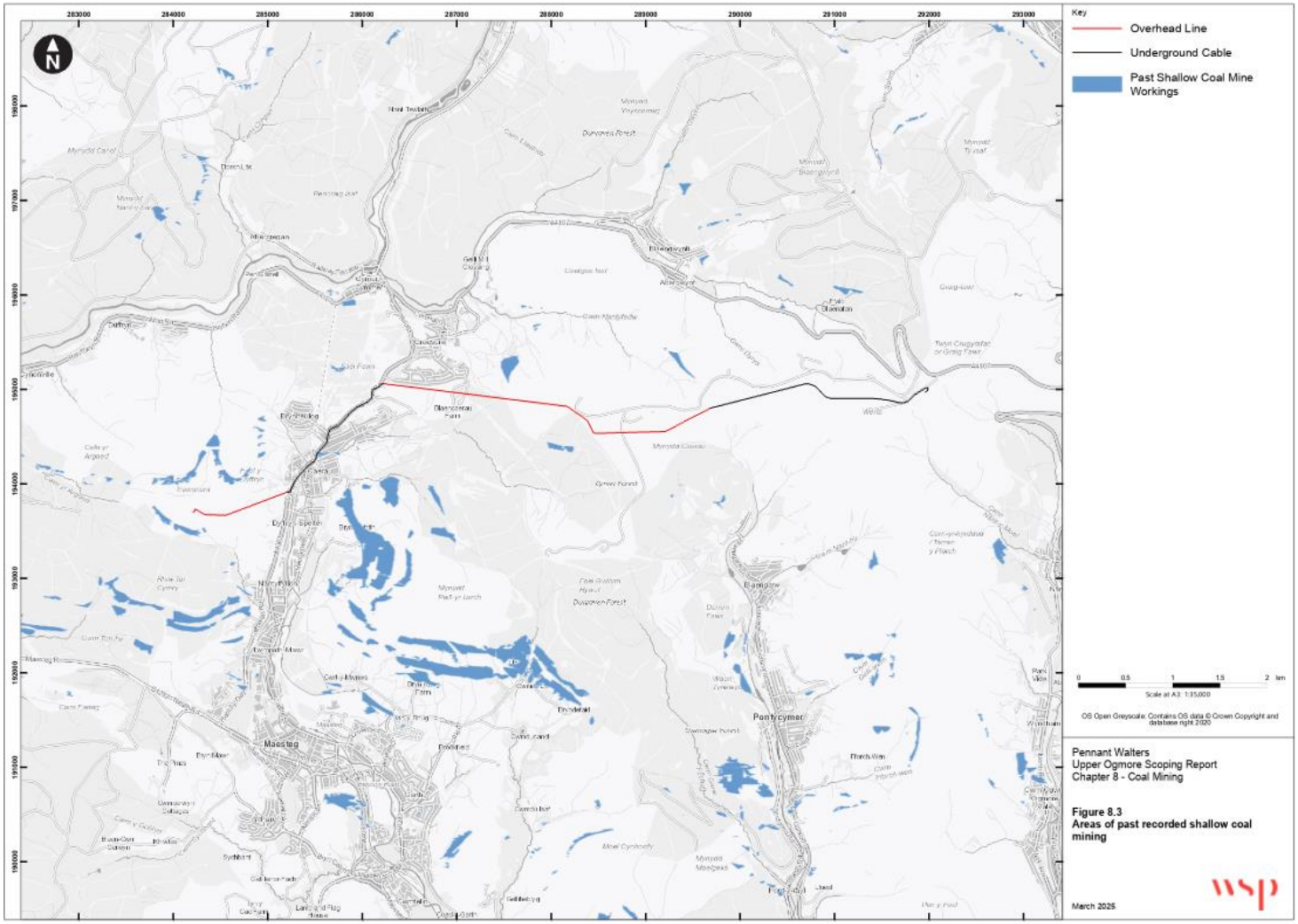
8.5.3. Both the BGS and the Mining Remediation Authority identify a number of coal seams outcropping or subcropping (i.e. at rock head below any drift soil cover) beneath the Site, indicating that these coal seams will occur at a shallow depth beneath parts of the proposed development area. These seams are indicated in **Appendix E** – **Mining Constraints Plan**.

8.5.4. Each coal seam should be assessed individually in order to identify the potential area at which this may occur at shallow depth and to determine if shallow mining (recorded or unrecorded) may have occurred within the seam below the Site.

Past recorded shallow coal mining

8.5.5. There are a several isolated areas of identified past shallow mining (<30m of rock head) within the site that may pose a risk to the Project, as indicated blue shading in **Figure 8-3**.

Figure 8-3 - Areas of past recorded shallow coal mining



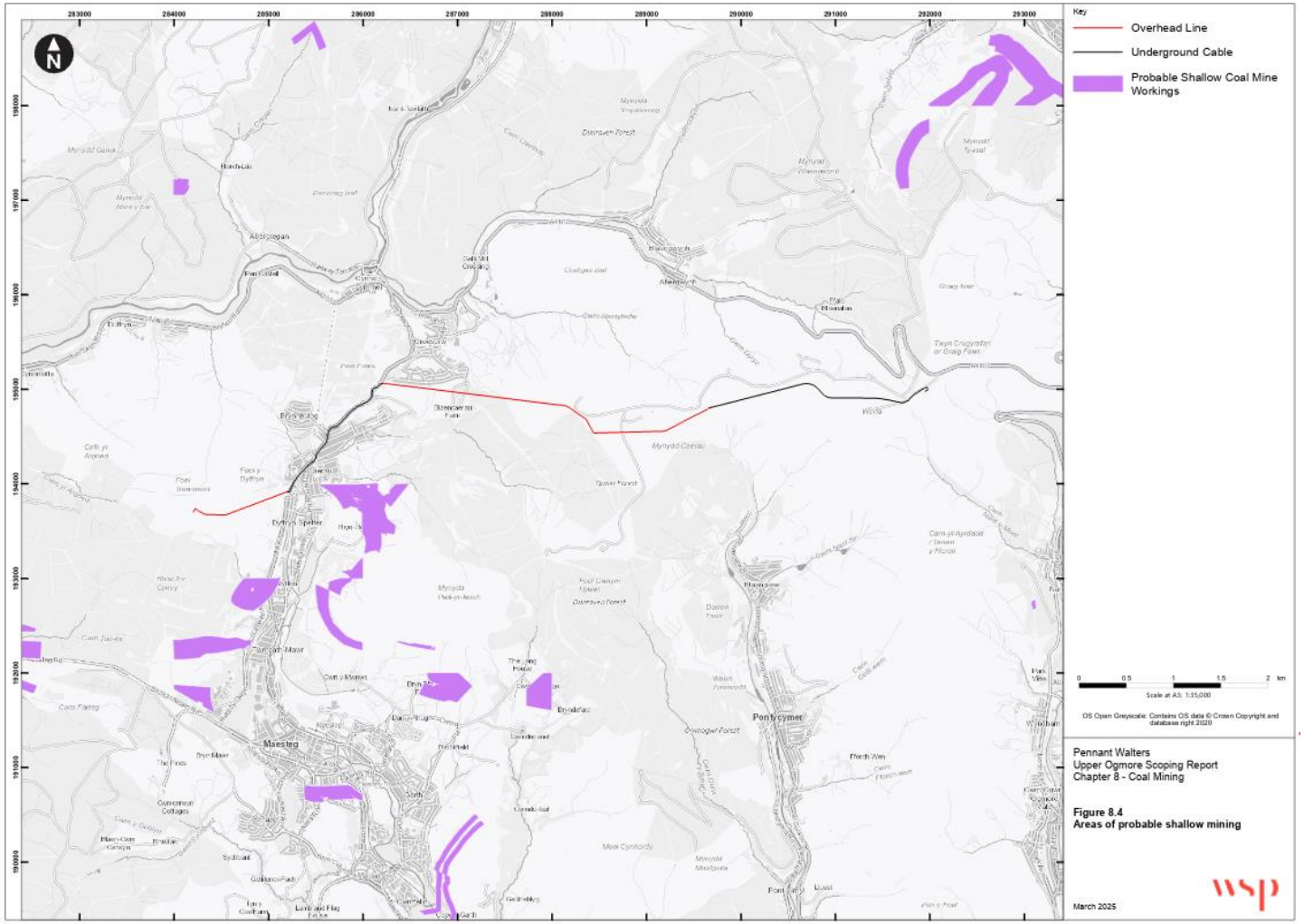
8.5.6. The depth and thickness of these past shallow workings beneath the site should be assessed to determine the potential risk to the Project.

Probable shallow mining

8.5.7. There are a several isolated areas of probable shallow mining (<30m of rock head) within the Site that may pose a risk to the Project as indicated purple shading in **Figure 8-4**.

8.5.8. These are areas where shallow coal seams of workable thickness are expected at shallow depth but where there are no records of past mining having taken place. As records of mining are incomplete it is possible that these areas are affected by unrecorded shallow mineworkings.

Figure 8-4 - Areas of probable shallow mining



8.5.9. The areas of probable shallow workings beneath the site should be assessed to determine the potential risk to the Project.

Mine entries

8.5.10. There are nineteen mine entries identified within 100m of the Site boundary that are a potential hazard to the proposed development. The risks associated with mine shafts are assessed by considering the potential zone of influence (ZoI), the zone where ground subsidence may reasonably be expected to occur in the event of a shaft failure, collapse or settlement of any infill. This zone has a radius defined as:

- $R = \frac{shaft\ diameter}{2} + departure\ distance + depth\ to\ rockhead$

8.5.11. The '*departure distance'* is a measure of the likely degree of positional accuracy attributed to the mine entry by the MRA.

8.5.12. Considering the large number of mine entries close to the site, a 'worst-case' zone of influence has been calculated for all the mine entries using the largest shaft diameter (3m) and a maximum departure distance (10m) and the greatest depth to rockhead from historic boreholes in the area (10m), to give a zone of influence of 21.5m.

8.5.13. The locations of these mine entries and their zones of influence are shown in **Appendix E**.

8.6 RECOMMENDATIONS AND MITIGATIONS

8.6.1. It is recommended that a CMRA to be undertaken to assess any and all risks related to historic coal mining in the area of the proposed development and provide further recommendations to mitigate any specific risks found within the site area.

8.6.2. For underground cable sections, shallow recorded or unrecorded mine workings, if present would not ordinarily present a significant constraint to construction of the Project.

8.6.3. Overhead line support structures may be affected by ground instability if constructed in areas of recorded or unrecorded shallow mineworkings, due to upwards migration of old mining voids. Intrusive ground investigation would be required in these high-risk areas to determine the potential presence and depth of such workings to determine the level of risk to the structures and if any mitigation such as grout stabilisation treatment is warranted.

8.6.4. Where coal seams are expected to outcrop or subcrop at a depth where the cable installation or overhead line support structures could disturb coal, then a permit would be required from the coal authority for those areas.

8.6.5. The MRA do not ordinarily permit construction over or within the ZoI of any mine entry and as such the buried cable route and overhead line support structures locations should be amended to avoid these areas where possible. If this cannot be accommodated then special agreement would be required from the MRA, which may require investigation works to locate and treat affected mine entries and / or additional support measures to the cable route or support structures.

9 ENVIRONMENTAL ASPECTS SCOPED OUT

9.1 INTRODUCTION

9.1.1. This chapter discusses the environmental disciplines which will be scoped out of further assessment, and therefore will not be included in the ES. Reasoning for scoping out assessments is provided in the appropriate sections.

9.2 AIR QUALITY

INTRODUCTION

9.2.1. The following chapter sets out the justification for scoping out an Air Quality assessment for the Upper Ogmore Grid Connection.

BASELINE AIR QUALITY

9.2.2. The Project is not within an Air Quality Management Area (AQMA) and the latest monitoring undertaken by Bridgend County Borough Council (BCBC) demonstrates that air quality near the Site is within the UK's air quality standards for nitrogen dioxide (NO_2). The nearest AQMA to the Project is the Neath Port Talbot AQMA at Margam, designated for Particulate Matter and located approximately 8km to the southwest.

9.2.3. Passive NO_2 diffusion tube monitoring is undertaken by both Bridgend and Neath Port Talbot County Borough Council (NPTCBC). The closest monitoring is undertaken by BCBC within 5km of the Project. These two sites are located in Maesteg and monitor concentrations well below the air quality objective (40 microgrammes per cubic meter ($\mu g/m^3$). A summary of the recent monitoring data can be found in **Table 9-1** below.

9.2.4. There are no nearby monitoring points undertaken by NPTCBC.

Table 9-1 - Air Quality Monitoring Results undertaken by the local authority

Monitor ID	X	Y	Approximate Distance to Project (km)	Monitored NO_2 Concentrations ($\mu g/m^3$)				
				2019	2020	2021	2022	2023
OBC-125	285299	191136	2.6	18.8	19.3	9.8	14.5	20.8
OBC-128	286218	189805	4.4	-	11	16.8	8.8	-

SUMMARY OF POTENTIAL EFFECTS NOT REQUIRING CONSIDERATION

9.2.5. During construction, dust generating activities will be undertaken on Site. Typical dust generating activities include demolition, earthworks, construction and trackout. The impacts of these activities are summarised below:

- Demolition: there will be a little to no demolition within the Red Line Boundary (RLB) and so the impact will be negligible;
- Earthworks: significant earthworks will be undertaken only for the underground works under existing roads. Although other earthworks will be undertaken, such as the open trench works, these activities will not result in any significant effects to air quality and as such the impacts would be negligible;
- Construction: construction of the connection is unlikely to generate large volumes of dust and so is negligible; and
- Trackout: due to the limited dust generation from the above activities, the trackout of dust from construction vehicles is likely to be negligible.

9.2.6. With the application of best practise construction methods, impacts arising from dust generation will be negligible.

9.2.7. During operation, there will be no continuous source of emissions. Emissions generated during the operation will arise from the use of maintenance vehicles which will be infrequent and temporary. It is unlikely that there will be any significant air quality impacts to residential receptors or ecological habitat sites.

CONCLUSION

9.2.8. Due to the Project having only temporary emissions to air during the construction phase, it is not expected that there will be an impact to air quality to human or ecological receptors during construction.

9.2.9. Due to the Project having no emissions to air during operation, it is not expected that there will be an impact to air quality to human or ecological receptors during operation.

9.2.10. Based on the above conclusions, an Air Quality Assessment has been scoped out of the assessment.

9.3 SOCIO-ECONOMICS

INTRODUCTION

9.3.1. The Socio-economic assessment will consider the potentially significant effects on the local environment that may arise from the construction and operation of the Project.

9.3.2. This section should be read in conjunction with **Chapter 1: Introduction**.

BASELINE SOCIO-ECONOMICS

9.3.3. The ‘local’ Study Area for the Socio-economic assessment comprises the administrative boundaries of Bridgend CBC and Neath Port Talbot CBC. Wales comprises the 'regional level' study area for the assessment of socio-economics impacts.

9.3.4. Socio-economic impacts which could occur to nearby settlements may include:

- Supply chain: procurement of goods and services, such as security, catering, hotel facilities or maintenance;
- Employment: contractors or manufacturers would be required and, if possible, procurement may be local; and

- Expenditure: new spending power generated from employees directly and indirectly associated with the Project. An amount of the earning capacity of these individuals would be expected to be spent on items such as shopping, accommodation and leisure.

9.3.5. The closest settlements to the OHL and UGC are:

- Caerau, which the UGC travels through;
- Croeserw which is adjacent to the proposed route;
- Nantyffyllon approximately 0.9km to the south of the proposed route;
- Blaengarw approximately 1.2km to the south of the proposed route;
- Abergwynfi approximately 1.3km to the north of the proposed route; and
- Blaengwynfi approximately 1.6km to the north of the proposed route.

9.3.6. There are also isolated residential dwellings and agricultural buildings within the Study Area.

9.3.7. The 2021 Office for National Statistics (ONS) NOMIS data[102] estimated the Bridgend CBC population to be 145,700 and Neath Port Talbot CBC to be 141,900. The estimated population for Wales in 2021 was 3,105,600. The estimated working age population (residents aged 16-64 years) as a percentage of the total resident population was 68% for Bridgend CBC and 75% for Neath Port Talbot CBC. This is slightly lower than the 75.6% estimate for Wales and 78.4% estimate for Great Britain.

9.3.8. **Table 9-2** shows the proportion of total employees working in each industry sector in 2022 (the most recently published data at the time of writing). Across the two local authority districts, a large proportion of employee jobs were in Sector G (Wholesale and retail trade; repair of motor vehicles and motorcycles), Sector C (Manufacturing) and Sector O (Public administration and defence; compulsory social security).

Table 9-2 - Overview of employee jobs by industry sector in 2022 (%)

Industry sector	Bridgend CBC	Neath Port Talbot CBC	Wales
B : Mining and quarrying	0.0	0.6	0.2
C : Manufacturing	12.3	18.0	10.8
D : Electricity, gas, steam and air conditioning supply	0.1	0.3	0.5
E : Water supply; sewerage, waste	0.7	1.2	1.0

[102] Office for National Statistics, (2024). *NOMIS*. Available online at: https://www.nomisweb.co.uk/ [Accessed: 29th October 2024].

Industry sector	Bridgend CBC	Neath Port Talbot CBC	Wales
management and remediation activities			
F : Construction	5.3	5.0	4.9
G : Wholesale and retail trade; repair of motor vehicles and motorcycles	14.0	12.0	13.2
H : Transportation and storage	6.1	9.0	4.2
I : Accommodation and food service activities	8.8	6.0	8.8
J : Information and communication	3.5	1.2	2.4
K : Financial and insurance activities	0.9	0.7	3.0
L : Real estate activities	1.2	1.6	1.5
M : Professional, scientific and technical activities	3.9	2.5	5.2
N : Administrative and support service activities	7.0	6.0	6.8
O : Public administration and defence; compulsory social security	15.8	10.0	8.2
P : Education	8.8	9.0	9.1
Q : Human health and social work activities	8.8	12.0	15.4
R : Arts, entertainment and recreation	2.2	2.5	2.7
S : Other service activities	1.6	1.4	2.0

SUMMARY OF POTENTIAL EFFECTS NOT REQUIRING CONSIDERATION

9.3.9. Due to the low percentage of the local population who work within construction (5.3% in Bridgend CBC and 5.0% in Neath Port Talbot), is unlikely that there will be direct beneficial impacts on the local economy during the construction of the Project. Although a higher percentage of working age residents work within the manufacturing sector (12.3% in Bridgend CBC and 18.0% in North Port Talbot), the job generation would not be significant in the context of the labour market. There would be minimal job creation in the local area during construction due to the scope of the Project (see **Chapter 1: Introduction**); during operation, job creation is expected to be negligible to none. Therefore, the Project is unlikely to have either a positive or negative significant effect on the local community. Construction workers spending part of their income in the local area is also unlikely to produce significant effects due to the limited amenities that the nearby settlements provide.

CONCLUSION

9.3.10. Due to the reasons outlined above, Socio-Economics has been scoped out of the EIA and will not be considered further as part of the assessment.

9.4 NOISE AND VIBRATION

INTRODUCTION

9.4.1. This chapter of the Scoping Report sets out the information sources used to inform the scope of the assessment. It provides an overview of the baseline conditions relevant to Noise and Vibration within the vicinity of the Scoping Boundary; the likely significant effects to be considered within the assessment and mitigation measures to minimise any potential significant effects.

INFORMATION SOURCES AND STUDY AREA

Table 9-3 - Information sources used for Noise and Vibration

Source	Description
Open-source mapping	Identification of noise sensitive receptors within 300m from the Scoping Boundary and vibration sensitive receptors within 100m from the Scoping Boundary.
DataMapWales[103]	Results of Environmental Noise Mapping 2022 published by the Welsh Government.

[103] Home | DataMapWales

METHODOLOGY

9.4.2. A qualitative assessment has been undertaken at this stage to determine if significant effects arising from the Project are likely. Baseline noise levels have been determined from strategic noise mapping published by the Welsh Government.

9.4.3. The likely significant effects have been assessed having regard to guidance in BS 5228-1 :2009 +A1:2014 '*Code of practice for noise and vibration control on construction and open sites Part 1 noise*'.

BASELINE ENVIRONMENT

9.4.4. Based on the Environmental Noise Mapping 2022, the existing noise climate at Caerau is dominated by road traffic noise. Existing noise levels during daytime at houses fronting the A4063 are between 60 – 65 dB $L_{Aeq,16hr}$. Noise levels outside the urban area are likely to be lower than this.

APPRAISAL

Construction

9.4.5. The worst-case construction activities near populated areas will be open cut trenching. Typical noise levels for this activity will be in the region of 85 dB $L_{Aeq,T}$ at 10m. Therefore, the magnitude of noise impact is likely to be medium or high. However, it is considered that this magnitude of impact will not be a significant effect as the duration of these activities is unlikely impact an individual receptor for:

- 10 or more days or nights in any 15 consecutive days or nights; or
- More than 40 days within a six month period.

9.4.6. This appraisal assumes that there are no requirements for trenchless crossing activities or night-time construction activities.

Operation

9.4.7. An energised electricity transmission line can be a source of a phenomenon known as 'corona discharge' (a limited electrical breakdown of the air). Whilst the conductor systems of overhead lines are designed and constructed to minimise corona, surface irregularities on the conductors caused by physical damage such as burrs, or debris such as insects, pollen, industrial pollution, raindrops or other forms of contamination may locally enhance the electrical field strength sufficiently for discharges to occur. Any corona discharge would act as a source of audible noise (a crackling sound occasionally accompanied by a low frequency hum in certain wet conditions).

9.4.8. It is not expected that this phenomenon, during operation, is of concern for the Project given that the OHL is 66 kV. Evidence-based studies have confirmed that the noise from corona discharge is only likely to become a significant effect at voltages higher than 350 kV.

RECOMMENDATIONS AND MITIGATIONS

9.4.9. It is proposed that noise and vibration is scoped out the EIA on the basis that there are no likely significant effects expected. However, the likely construction noise and vibration impacts will be assessed within the Construction Environmental Management Plan (CEMP) in accordance with BS 5228:2009 +A1:2014 *Code of practice for noise and vibration control on construction and open sites*.

9.4.10. Significance of the construction noise will be assessed using threshold values reported within Table E.1 of BS5228-1 where the activity may impact the receptors for a month or more, or Table E.2,

where activity may affect the receptors for greater than ten consecutive days and less than a month in any rolling six-month period.

9.4.11. If receptors are affected by construction noise over a shorter duration, than stated in the paragraph above, noise will be controlled through application of best practice and embedded mitigation.

9.4.12. Vibration levels of Peak Particle Velocity 1 millimetres per second (mm/s) should not be exceeded for longer than 1 hour for more than 5 days at any receptor.

9.4.13. The CEMP shall determine the mitigation required to ensure that these criteria are met as well as providing general good practice measure to be adopted by the Project.

9.4.14. Any mitigation measures will be agreed with the local authority Environmental Health Officers (EHOs).

9.5 LAND QUALITY

INTRODUCTION

9.5.1. The Land Quality assessment will consider the potentially significant effects on land quality receptors, including soil, geology, minerals, and from land contamination, that may arise from the construction, operation and decommissioning of the Project. Potential significant effects and risks associated with Coal Mining are not considered here; please refer to **Chapter 8: Coal Mining.**

Information sources and study area

9.5.2. Considering the location, scope and scale of the Project, the Land Quality study area has included a buffer extending 250m beyond the Project boundary. Sources of information used to inform the Land Quality study are detailed in **Table 9-4**.

Table 9-4 - Information sources used for Land Quality

Source	Description
Bridgend Borough Council Replacement Bridgend Local Development Plan (2018 – 2033) AD7 – Proposals Map (Final Version)[104].	Identifies Mineral Safeguarding Zones within the study area.

[104] Bridgend Borough Council (2022) Replacement Bridgend Local Development Plan (2018-2033) Examination: AD6 – Written Statement Adopted Plan, and, AD7 – Proposals Map (Final Version). [online] Available at: https://www.bridgend.gov.uk/residents/planning-and-building-control/development-planning/replacement-bridgend-local-development-plan-2018-to-2033/submission-and-independent-examination/. Accessed November 2024.

Source	Description
British Geological Survey (BGS) GeoIndex[105]	Provides information on 1:50,000 scale geology and borehole records.
Cranfield Soil and Agrifood Institute, LandIS Soilscapes Interactive Map[106].	Soil map for Wales.
Google Earth Pro	Recent and historical aerial photography.
Mining Remediation Authority Interactive Map[107]	Provides information on coal mining history.
Multi-Agency Geographic Information for the Countryside (MAGIC) interactive map.[108]	Interactive map for topography and features including statutory and non-statutory designations.
National Library of Scotland (NLS) Map Finder[109].	Provides a selection of viewable historical maps from the 1800s to the mid 20th century.
Neath Port Talbot County Borough Council LDP Adopted Plan Interactive Map[110]	Identifies Mineral Safeguarding Zones within the study area.
Welsh Government, DataMap Wales: The Peatlands of Wales map[111]	Provides an updated distribution of Welsh Peatlands (to 2022) based on current evidence sources and created on a 50m grid. A peatland evidence score defines the level of confidence in the presence of peat in any given grid cell, with those cells scoring more than 2 on this scale of 1-10, captured in the 'Peatlands of Wales' peat distribution map.

[105] British Geological Society (2025). Geoindex (Onshore). [online] Available at: https://www.bgs.ac.uk/map-viewers/geoindex-onshore/ [Online] Accessed February 2025.
[106] Cranfield University (2025). Soilscapes. [online] Available at: http://www.landis.org.uk/soilscapes/ [Online] Accessed February 2025.
[107] Mining Remediation Authority (2025) Map Viewer. [online] Available at: https://datamine-cauk.hub.arcgis.com/. Accessed February 2025.
[108] Defra (2025) Available at: https://magic.defra.gov.uk/MagicMap.aspx. [online] Accessed February 2025.
[109] National Library of Scotland. Map Finder. Available at: https://maps.nls.uk/geo/find/marker/. [online] Accessed February 2025.
[110] Available at: https://maps.npt.gov.uk/ldp_final/index.html.
[111] Welsh Government (2022) Peatlands of Wales. Available at: https://datamap.gov.wales/maps/peatlands-of-wales-maps/view#/. [online] Accessed February 2025.

Source	Description
Welsh Government, DataMap Wales: Natural Resources Wales, Historical Landfill Sites dataset [112]	Provides the extents (polygons) of landfill sites which were taken off the Authorised Landfill Sites list when the waste licence status changed to either: 'Licence expired', such as licences issued under the Control of Pollution Act 1974 which were time limited; 'Licence Revoked', whereby the licence has been revoked and is no longer in force; or, 'Licence Surrendered' where the Operator has successfully surrendered the licence.

METHODOLOGY

Land contamination

9.5.3. The Environment Agency's Land Contamination Risk Management (LCRM)[113] provides the technical framework for applying a risk management process when dealing with land affected by contamination. This approach to the assessment of land contamination has been adopted by Natural Resources Wales[114].

9.5.4. LCRM comprises an iterative risk-based approach starting with a Phase 1 Geoenvironmental Desk Study (also known as a Preliminary Risk Assessment) and followed by a Phase 2 Ground Investigation (including quantitative risk assessment) where considered necessary, to assess the risks to the environment and users of the land posed by contamination that may be present.

9.5.5. The Applicant will have a Phase 1 Geoenvironmental Desk Study prepared for the Project site to support the planning application. The Phase 1 Geoenvironmental Desk Study will make recommendations for ground investigation prior to construction, if this is needed due to the desk study identifying potentially significant land contamination risks to human health, the environment, or property (including the built environment). The Phase 1 Geoenvironmental Desk Study will include a review of current environmental information and historical OS maps to identify potential contamination sources and sensitive receptors and will include figures showing these in relation to the Project boundary and study area.

[112] Natural Resources Wales (2024) Historic Landfill Sites. Available at: https://datamap.gov.wales/maps/new?layer=inspire-nrw:NRW_Historic_Landfill_Sites#/. [online]. Accessed February 2025.
[113] Environment Agency, (2020). Land contamination risk management (LCRM). Updated July 2023. (online) Available at: https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm (Accessed November 2024).
[114] Natural Resources Wales (2025) Advice for developers: Land contamination. [online] Available at: https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/advice-for-developers/land-contamination/?lang=en. Accessed November 2024.

9.5.6. The CEMP will reference the findings of the Phase 1 Geoenvironmental Desk Study and will include a protocol for responding to any unexpected contamination encountered during ground works for the Project in accordance with LCRM.

Soil, Geology, and Minerals

9.5.7. An approach to assessing and reporting the effects of proposed developments on geology, soils and minerals is set out in the Design Manual for Roads and Bridges, LA 109 - Geology and Soils[115], and this has been used to inform the assessment. As a published approach to assessing the effects of highways developments on soil in EIA, it can be adapted for use on other projects.

9.5.8. The Institute of Environmental Management & Assessment (IEMA) Guide: A New Perspective on Land and Soil in Environmental Impact Assessment[116] provides information and guidance on how the practical implications of soil functions, soil biodiversity, soil health, ecosystem services and natural capital should be applied within the overarching framework of climate change, to incorporate them effectively into the EIA process.

9.5.9. The Institute of Civil Engineers (ICE), The Environmental Impact Assessment Handbook - A Practical Guide for Planners, Developers and Communities (3rd Edition)[117] provides an approach to assessing the potentially significant effects of development projects on soil and defines the sensitivity of different soil types to handling during construction projects. The guide notes that soil is a non-renewable resource, and that disturbance should be limited as far as possible, that soil is particularly prone to structural degradation if it is handled when too wet, and that adverse effects can be mitigated by following best practice guidance, such as the Defra 2009 Code of Practice for the Sustainable Use of Soils on Construction Sites[118].

9.5.10. The above referenced guidance documents have informed the assessment of the potential for the Project to result in significant effects on soil, geology or mineral receptors.

BASELINE

Soil (and agricultural land)

9.5.11. From west to east, the LandIS Soilscapes map shows the overhead line route of the Project running through Soilscape 16: very acid loamy upland soils with a wet peaty surface, then Soilscape 13: freely draining acid loamy soils over rock. The grid connection then runs underground north-eastwards below the A4063 road between Dyffryn and Caerau, where the map shows the soils as

[115] Highways England (2019). Design Manual for Roads and Bridges LA109 Sustainability & Environment Appraisal LA 109 Geology and soils (Online). Available at: https://www.standardsforhighways.co.uk/dmrb/search/adca4c7d-4037-4907-b633-76eaed30b9c0 (Accessed November 2024).
[116] Institute of Environmental Management & Assessment (IEMA) (2022) IEMA Guide: A New Perspective on Land and Soil in Environmental Impact Assessment. IEMA; March, UK.
[117] Institute of Civil Engineers (ICE) (2019). The Environmental Impact Assessment Handbook - A Practical Guide for Planners, Developers and Communities (3rd Edition). ICE Publishing; London, UK.
[118] Defra (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. [online] Available at: https://www.gov.uk/government/publications/code-of-practice-for-the-sustainable-use-of-soils-on-construction-sites. Accessed November 2024.

Soilscape 19: slowly permeable wet very acid upland soils with a peaty surface, the route then continues through Soilscape 16: very acid loamy upland soils with a wet peaty surface, up to Croeserw. Peaty soils on this section of underground route are likely to have been removed or partially removed for construction of the road. The grid connection then turns east to run as overhead line at Croeserw and runs through Soilscape 19: slowly permeable wet very acid upland soils with a peaty surface. East of Croeserw, the soils change to Soilscape 16: very acid loamy upland soils with a wet peaty surface. The route changes back to underground cable and continues through Soilscape 16: very acid loamy upland soils with a wet peaty surface to the eastern extent of the proposed grid connection route.

9.5.12. The Peatlands of Wales map shows land where the potential for peat has been identified by the Welsh Government, with peat defined as having a thickness of more than 40cm of organic material within the upper 80cm of a soil profile. The map shows no peat on the grid connection route, including a 12.5m buffer either side, however two areas of peat are present in the study area. These occur in the west to the north of the grid connection route at grid coordinates Easting (E) 284823, Northing (N) 193904 and at (E) 286750, (N) 194900, west of Blaencaerau Farm.

9.5.13. A full description of the superficial and bedrock geology in the study area is provided in **Chapter 8: Coal Mining** and is not repeated in this section. The BGS 1:50,000 scale superficial geology map shows two areas of peat that are crossed by the proposed grid connection route (these are noted to be separate to the two areas of possible deep peat shown on the Peatlands of Wales map). These occur to the southwest of Croeserw at grid coordinates (E) 286265, (N) 195061, where the grid connection changes from underground cable to overhead line, and at a point further east along the overhead line route at (E) 288282, (N) 194753. The westernmost feature is shown extending for approximately 190m of the route, and the easternmost feature for approximately 250m of the route. The westernmost peat area includes the substation site southwest of Croeserw and some peat at this area is, therefore, likely to have been removed during construction of the substation. The BGS shows two further areas of peat within the study area that are not intersected by the proposed grid connection route, these occur north of the eastern section of underground cable route, at (E) 290503, (N) 195195, and at the eastern end of the grid connection route, at (E) 292163, (N) 195067.

9.5.14. The planning application for the Upper Ogmore Wind Farm is available online[119] and a peat depth survey completed for that proposed development[120] confirms peat of >0.4m depth at the eastern end of the study area for the Project, but not within the Project boundary.

9.5.15. The Predictive Agricultural Land Classification (ALC) Map 2 shows that the ALC grades of land within the Project boundary and study area range from Grade 4 to Grade 5, and there are also areas classed as urban land, applicable to the underground cable section as it runs through the town of Caerau, and non-agricultural land (e.g., as applied to areas of woodland). The ALC grading system,

[119] RES (2025) Upper Ogmore Wind Farm DNS Application documents. [online] Available at: https://upperogmore-windfarm.co.uk/dns-application/. Accessed February 2025.
[120] Peat depth map for the Upper Ogmore Wind Farm proposed development. [online] Available at: https://upperogmore-windfarm.co.uk/media/2638422/figure-0801-peat-depth-map.pdf. Accessed February 2025.

set out in MAFF (1988) Revised Guidelines & Criteria for Grading the Quality of Agricultural Land, provides a method used in England and Wales for assigning ALC grades 1, 2, 3a, 3b, 4 or 5 to agricultural land, with Grade 1 being the best land and Grade 5 being very poor-quality land, typically limited to use for permanent pasture or rough grazing. Best and most versatile (BMV) agricultural land is defined in Planning Policy Wales as Grades 1, 2 and 3a. This is excellent to good quality land which is able to best deliver food and non-food crops.

9.5.16. Soil sensitivity is also considered in relation to ecological designations. There are no internationally or nationally designated ecological sites within the Project boundary or the study area, and no Local Nature Reserves. Consideration of potential effects of the Project on ecological conservation sites and habitats is in **Chapter 4: Ecology**.

Geology

9.5.17. Information on DataMap Wales shows no Regionally Important Geodiversity Sites (RIGS), Geological Conservation Review (GCR) Sites, or geological Sites of Special Scientific Interest (SSSI) within the Project boundary or the study area. Cwm Parc RIGS is immediately east of the study area but would not be affected by the Project.

9.5.18. Geological baseline information including descriptions of the superficial and bedrock geology within the Project boundary, and which also applies to the Land Quality study area, is presented in **Chapter 8: Coal Mining** and is not repeated in this section.

Minerals

9.5.19. Except for the underground route where it runs through the urban area at Caerau, the grid connection route and study area are within a Mineral Safeguarding Zone (Category 1 – Sandstone and Igneous Rock – ENT 12) according to the Bridgend Borough Council Local Development Plan, AD7 – Proposals Map. A small section of the underground route is within the Neath Port Talbot County Borough Council region and this part of the study area is also within a Mineral Safeguarding zone (Category 1 Sandstone Resource). Where the overhead line route enters Caerau from the west there is a Category 2 – Sandstone – ENT12 Mineral Safeguarding Zone within the study area, however the grid connection route can potentially avoid it. The grid connection route and study area pass through a Category 2 – Sand and Gravel – ENT 12 Mineral Safeguarding Zone south of Blaencaerau Farm.

Land Contamination

9.5.20. Historical maps viewed on the NLS Map Finder website show several former quarries and mines in the study area and the grid connection route is traversed by several former tramways associated with mineral extraction, also a former railway line. A tunnel (former Cymmer Tunnel) is present within the study area, however, this is shown to be >100m northwest of the underground cable route through Caerau and is, therefore, unlikely to be affected by the Project. Building demolition is evident within the study area associated with former industrial land uses, and made ground including demolition wastes and colliery spoil deposited to land is possible in these areas. Made ground is also likely in urban areas where the underground grid connection route is routed along existing roads as imported fill materials may have been used during road construction. Contaminants associated with these land uses include heavy metals, asbestos, and hydrocarbons.

9.5.21. NRW record no historical landfills within the study area, however, disposal of wastes in voids from historical quarrying is possible.

9.5.22. Current aerial photography shows a substation in the study area southwest of Croeserw. Historical mapping indicates this was present by 1970 and there would, therefore, be potential for polychlorinated biphenyls (PCBs) to have been present in oils used in transformers and electrical cables in the substation, and localised contamination by hydrocarbons or PCBs is possible. The Upper Ogmore Windfarm is also located within the study area. The underground cable route passes through residential areas at Caerau and the main land use in the remainder of the Project is agricultural.

9.5.23. Farm buildings and farming activities can be potential sources of land contamination due to the use of fuels and oils for farm vehicles, the use of pesticides, herbicides and fertilizers, ad hoc waste disposal and the presence of asbestos in buildings and sheds, which can release fibres to ground if in poor condition or during demolition. The study area includes Blaencaerau Farm, which the overhead line route runs through. Elsewhere, small-scale and localised sources are possibly associated with agricultural land use. Forestry activity has also taken place within the study area, with historical maps showing a Forester's House and Forest Office within the study area north of Cymer Forest. As with farming there is the potential for pesticides and herbicides to have been used/ stored historically as part of forestry activities, however, sources would likely be small-scale.

9.5.24. A full review of potential sources of contamination will be undertaken for the Project. This will take the form of a Phase 1 Geoenvironmental Desk Study (aka Preliminary Risk Assessment) to support the planning application and inform any Phase 2 Ground Investigation (including quantitative risk assessment) if this is necessary, to assess risks to the environment, property or users of the land posed by contamination that may be present. This could be combined with investigations to obtain geotechnical information for detailed design, and potentially investigations to obtain information to support further coal mining risk assessment (see recommendations and mitigations in **Chapter 8: Coal Mining**).

SUMMARY OF POTENTIAL EFFECTS NOT REQUIRING CONSIDERATION

Soil (and agricultural land)

9.5.25. The largest potential for effects on soils and agricultural land would occur during construction, since this is when most ground disturbance would occur. Very minimal ground disturbance would occur during operation, and during decommissioning it is anticipated that underground infrastructure would be left in situ.

9.5.26. It is likely that peat can generally be avoided by the Project, however, due to the potential for localised peat identified in the baseline review some peat/ soil surveys will be needed to enable suitable soil/ peat handling measures to be included in the CEMP. If peat is found that meets the criteria described in paragraph 9.5.12 and it cannot be avoided, a Peat Management Plan will be produced to support the CEMP.

9.5.27. The potential for significant effects on soils, including peat, is scoped out based on the Project being likely to require only limited disturbance to soils during construction. Where the cable route runs below ground it will either be constructed in areas that have been subject to previous development for tracks or road, or where the potential for peat deposits is limited. However, as noted above, targeted peat probing and soil survey will be undertaken within the study area where peat could potentially be disturbed by the Project, to provide information to support the avoidance of peat. This will inform the specification of suitable soil management measures in the CEMP and, if peat cannot be avoided, a Peat Management Plan. Where possible, micrositing of poles and routing of

underground cables away from peat will be undertaken to avoid peat. If peat is identified and cannot be avoided, the Applicant will confirm the requirement for any required further assessments, such as Peat Slide Risk Assessment, based on the findings of the peat probing and soil surveys and latest design information.

9.5.28. Much of the western section of underground cable construction work will be confined to the highway boundary for the length of underground cable, the eastern section of underground cable may be routed along existing tracks within the Upper Ogmore Wind Farm, to minimise disturbance of soils. However, if this is not possible, soil in roadside verges may need to be temporarily excavated or otherwise disturbed (e.g., by vehicle movements) during the construction phase. Soil management measures will be set out the CEMP to minimise damage to soils during construction (e.g., due to plant and vehicles causing soil compaction, or during excavation, temporary storage, or reinstatement of soils) and to enable any natural soils disturbed during the construction phase to be reinstated in a way that allows the land to return to its baseline condition.

9.5.29. With the above measures in place to protect peat and soils, the Project is unlikely to result in significant effects on soils or peat.

9.5.30. The ALC Map 2 shows no BMV land within the Project boundary or study area, significant effects on agricultural land are, therefore, unlikely and an Agricultural Land Classification (ALC) survey is, therefore, not proposed for the Project.

9.5.31. As effects on soils and agricultural land during construction are scoped out, effects on soils and agricultural land during operation and decommissioning are also scoped out, based on the rationale in paragraph 9.5.12.

Geology

9.5.32. Effects on geological receptors including geological conservation sites are scoped out on the basis that there are no sites with geological conservation designations within the Project boundary or in the study area.

Minerals

9.5.33. Potential effects on mineral resources by sterilisation due to the Project are scoped out for aggregates (hard rock, sand and gravel). The grid connection route runs through safeguarded mineral resources; however, it does not encounter any existing quarries, or land where quarrying proposals have been identified (confirmed by a search of the Bridgend Borough Council and the Neath Port Talbot Council Planning Registers for quarry related proposals). The Mineral Safeguarding Area for Category 1 – Sandstone and Igneous Rock – ENT 12 extends across most of the Bridgend Borough, as does the Category 1 Sandstone Resource safeguarding area in the Neath Port Talbot Council region, and considering the scale of the Project would, therefore, be unlikely to result in a significant effect relating to the safeguarding of mineral resources for future extraction.

Land contamination

9.5.34. The largest potential for effects on land contamination receptors would occur during construction, since this is when most ground disturbance would occur. Very minimal ground disturbance would occur during operation, and during decommissioning it is anticipated that underground infrastructure would be left in situ.

9.5.35. Risks to human health, environmental receptors, and property, including the built environment, will be managed through compliance with the risk-based approach set out in LCRM and in accordance with measures in the CEMP. The findings of the Phase 1 Geoenvironmental Desk Study will be fed back to the wider EIA team during the assessment to inform the design of the grid connection route. On this basis there should be no potential for significant effects on land contamination receptors due to the Project. The findings of the Phase 1 Geoenvironmental Desk Study will be used to develop the CEMP for the Project.

Risks to Construction Workers

9.5.36. Construction work must comply with the law and construction workers will therefore be subject to The Construction (Design and Management) (CDM) Regulations 2015[121] and safe working practices as part of normal construction health and safety management under the Health and Safety at Work Act (1974)[122] and regulations made under the Act. These legal obligations include the requirement for risk assessments and method statements for all construction related activities and the use of appropriate working methods, training, and Personal Protective Equipment (PPE).

9.5.37. In addition to these legal obligations, good and standard construction practices, which would be undertaken to meet existing legislative requirements under CDM and the Health and Safety at Work Act, would reduce ground conditions effects. These good and standard practices include measures to prevent pollution incidents that could result in harm to construction workers, the development of spill response procedures and ensuring storage of fuels for construction in suitable locations and in suitably bunded tanks.

Ground instability/ geohazards

9.5.38. The Phase 1 Geoenvironmental Desk Study will include consideration of geohazards including ground instability associated with former coal mining. Compliance with good practice in structural design including compliance with the Eurocodes and relevant British Standards will be an embedded measure for the Project.

CONCLUSION

9.5.39. Potential effects on soils and peat can be mitigated through design and by undertaking targeted surveys to confirm the ground conditions, as described in paragraphs 9.5.25 to 9.5.28, and are therefore scoped out.

9.5.40. Effects on geological receptors are scoped out on the basis that there are no sites with geological conservation designations that would potentially be affected by the Project.

9.5.41. Potential effects on minerals are scoped out based on the absence of mineral extraction or proposed mineral extraction sites within the Project or in the study area.

[121] UK Government (2015). The Construction (Design and Management) Regulations 2015 (online) Available at: https://www.legislation.gov.uk/uksi/2015/51/contents/made. [online] Accessed November 2024.
[122] UK Government (1974). Health and Safety at Work Act 1974 (online) Available at: https://www.legislation.gov.uk/ukpga/1974/37/contents. [online] Accessed November 2024.

9.5.42. The Project will need to comply with legal requirements (CDM, the Health and Safety at Work Act and the Waste Regulations). Additionally, the Applicant is committed to the implementation of good and standard construction and design practices. Regarding land contamination, the Applicant is committed to developing an unexpected contamination protocol. Given these measures, coupled with the Applicant's commitment to complete a Phase 1 Geoenvironmental Desk Study to support the planning application, and inform further investigation if this is needed, it is predicted that there will be no significant adverse effects on land contamination receptors as a result of developing the Project.

9.5.43. Ground stability and other geohazards associated with former coal mining are discussed in **Chapter 8: Coal Mining**. The Project will comply with Eurocodes and relevant British Standards to ensure that non-coal mining related ground stability and other geohazards are addressed in the design.

9.6 MAJOR ACCIDENTS AND DISASTERS

INTRODUCTION

9.6.1. The Major Accidents and Disasters assessment will consider the potentially significant effects on the local environment that may arise from the construction and operation of the Project.

9.6.2. This section should be read in conjunction with **Chapter 1: Introduction**.

BASELINE MAJOR ACCIDENTS AND DISASTERS

9.6.3. The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 states that an EIA must identify "*the expected effects deriving from the vulnerability of the proposed development to risks of major accidents and disasters that are relevant to that development*"

9.6.4. The scope for the EIA to consider major accidents and disasters has been initially considered in **Table 9-5.** Major accidents or disasters have been scoped in where they represent a risk to the Project, either from the proposed location or from the Project itself. A high risk is considered to be where there is reasonable likelihood of the accident or disaster occurring, or where the effect of the accident or disaster would lead to the requirement for mitigation which is beyond the usual scope of construction or operational activities. Where an accident or disaster has been scoped in, the ES chapter(s) identified will consider the matter in more detail. This further detail may show that no further assessment is needed, or it may lead onto an appropriate level of assessment and/or identification of appropriate mitigation.

Table 9-5 - Major Accidents and Disasters

Major Accidents or Disaster	Risk due to location	Risk due to project	Scoped in/out due to risk	Rationale	Environmental Statement Chapter
Biological hazards: epidemics	Very low	Very low	Out	The probability of epidemics which would affect the construction or operation of the Project is considered to be very low.	N/A
Biological hazards: animal and insect infestation.	Very low	Very low	Out	The probability of animal and insect infestations which would affect the construction or operation of the Project is considered to be very low.	N/A
Earthquakes	No	No	Out	Any earthquakes in the vicinity of the Project would be of a very low magnitude and therefore are not predicated to affect the Project.	N/A
Tsunamis / tidal waves / storm surges	No	No	Out	The general location of the Project and its distance from the coast means there is no risk of these phenomena affecting the Project.	N/A
Volcanic eruptions	No	No	Out	There are no active volcanos in the vicinity of the Project.	N/A
Famine / food insecurity	Negligible	Very low	Out	The probability of famine / food insecurity which would affect the construction or	N/A

Major Accidents or Disaster	Risk due to location	Risk due to project	Scoped in/out due to risk	Rationale	Environmental Statement Chapter
				operation of the Project is considered to be negligible.	
Displaced populations	Negligible	Very low	Out	The probability of displaced populations affecting the construction or operation of the Project is considered to be negligible.	N/A
Severe weather: storms	Medium	No	Out	The UGCs would be physically unaffected by the majority of severe weather. The OHLs are supported by pre-cast concrete kicking blocks and would require great force to become loosened. Therefore, the risk to the Project is considered very low.	N/A
Severe weather droughts	Very low	No	Out	The probability of severe drought occurring in the vicinity of the Project is considered to be very low.	N/A
Severe weather: extreme temperatures	Low	Very low	In – severe cold weather could lead to ice build-up on cables.	Ice build-up could lead to increased weight on the OHLs.	Project Description.
Terrorist incidents	No	No	Out	N/A	N/A

Major Accidents or Disaster	Risk due to location	Risk due to project	Scoped in/out due to risk	Rationale	Environmental Statement Chapter
Cyber attacks	No	No	Out	N/A	N/A
Disruptive industrial action	No	No	Out	N/A	
Public disorder	No	No	Out	N/A	N/A
Wildfires	No	No	Out	N/A	N/A
Severe space weather	No	No	Out	N/A	N/A
Poor air quality events	No	No	Out	N/A	N/A
Transport accidents	No	Yes	In –increase in traffic from construction.	An increase in traffic could lead to an increased risk of accidents. Road network may be unsuitable for such traffic, further increasing accident risk.	Traffic and Transport.
Industrial Accidents	No	Yes	In	Manual labour, working at height and use of specialist plant all bring risk of industrial accidents. Relevant UK health and safety legislation will be adhered to; site construction	Construction activities are covered by separate H&S legislation and guidelines.

Major Accidents or Disaster	Risk due to location	Risk due to project	Scoped in/out due to risk	Rationale	Environmental Statement Chapter
				management practices will include, but are not limited to: temporary diversions of public rights of way, relevant signage and fencing of potentially hazardous construction areas where appropriate.	Project Description, Hydrology, Geology and Hydrogeology, and Biodiversity chapters.
Floods	Low	Very Low	In	A high-level flood risk assessment will be undertaken within the ES.	Project Description; Hydrology, Geology and Hydrogeology
Urban fires	Low	Very low	Out	Only the underground cables section are within urban areas. Due to the scale of the Project, the risk of urban fires affecting is seen as low.	N/A

Appendix A

LVIA FIGURES

283000 284000 285000 286000 287000 288000 289000 290000 291000 292000 293000

199000 198000 197000 196000 195000 194000 193000 192000 191000 190000

Neath and Port Talbot County Borough Council

Bridgend County Borough Council

Rhondda Cynon Taf County Borough Council

Key

- Overhead Line
- Underground Cable
- OHL 66kV Grid connection poles
- Neath and Port Talbot County Borough Council
- Bridgend County Borough Council
- Rhondda Cynon Taf County Borough Council

0 0.5 1 1.5 2 km

Scale at A3: 1:35,000

Pennant Walters
Upper Ogmore Scoping Report
Chapter 2 - Landscape Visual Impact Assessment

Figure 2.1
Site context with council boundaries

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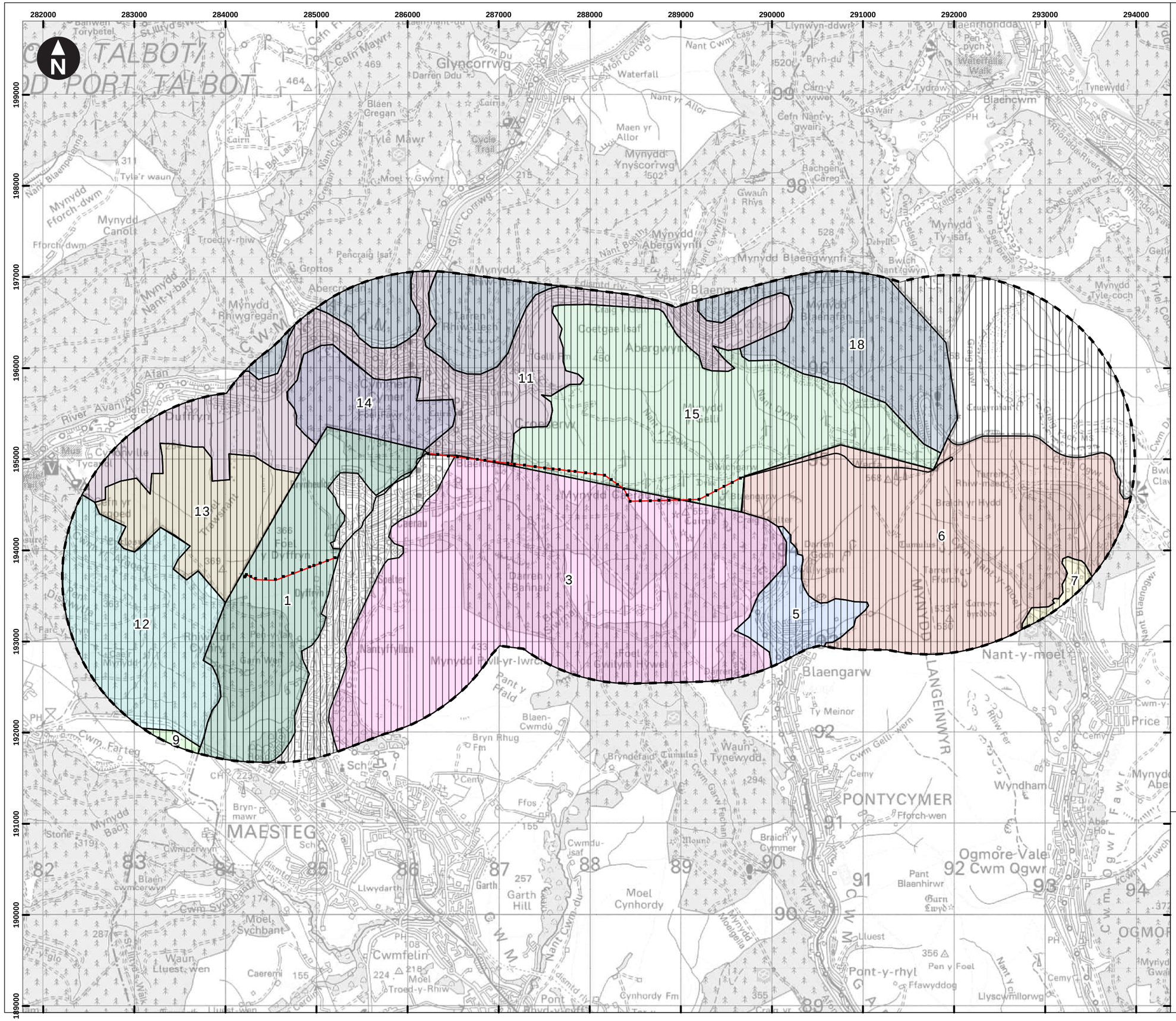

Key

- Overhead Line
- Underground Cable
- OHL 66kV Grid connection poles
- LVIA Study Area

National Landscape Character Areas

- NLCA37 - South Wales Valleys

Landscape Character Areas

- 1). Llangynwyd Rolling Uplands and Forestry
- 3). Llynfi & Garw Uplands and Forestry
- 5). Garw Valley Floor and Lower Slopes
- 6). Mynydd Llangeinwyr Uplands
- 7). Ogmore Valley Floor & Lower Slopes
- 9). Cefn Cethin
- 11). Cwm Afan and Cwm Pelenna
- 12). Mynydd Penhydd
- 13). Foel Trawsnant
- 14). Foel Fawr
- 15). Mynydd y Gelli
- 18). Mynydd Resolfen, Craig-y-Llyn & Mynydd Ynyscorrwg

0 0.55 1.1 1.65 2.2 km

Scale at A3: 1:40,000

Pennant Walters
Upper Ogmore Scoping Report
Chapter 2 - Landscape Visual Impact Assessment

Figure 2.2
Landscape Character Areas

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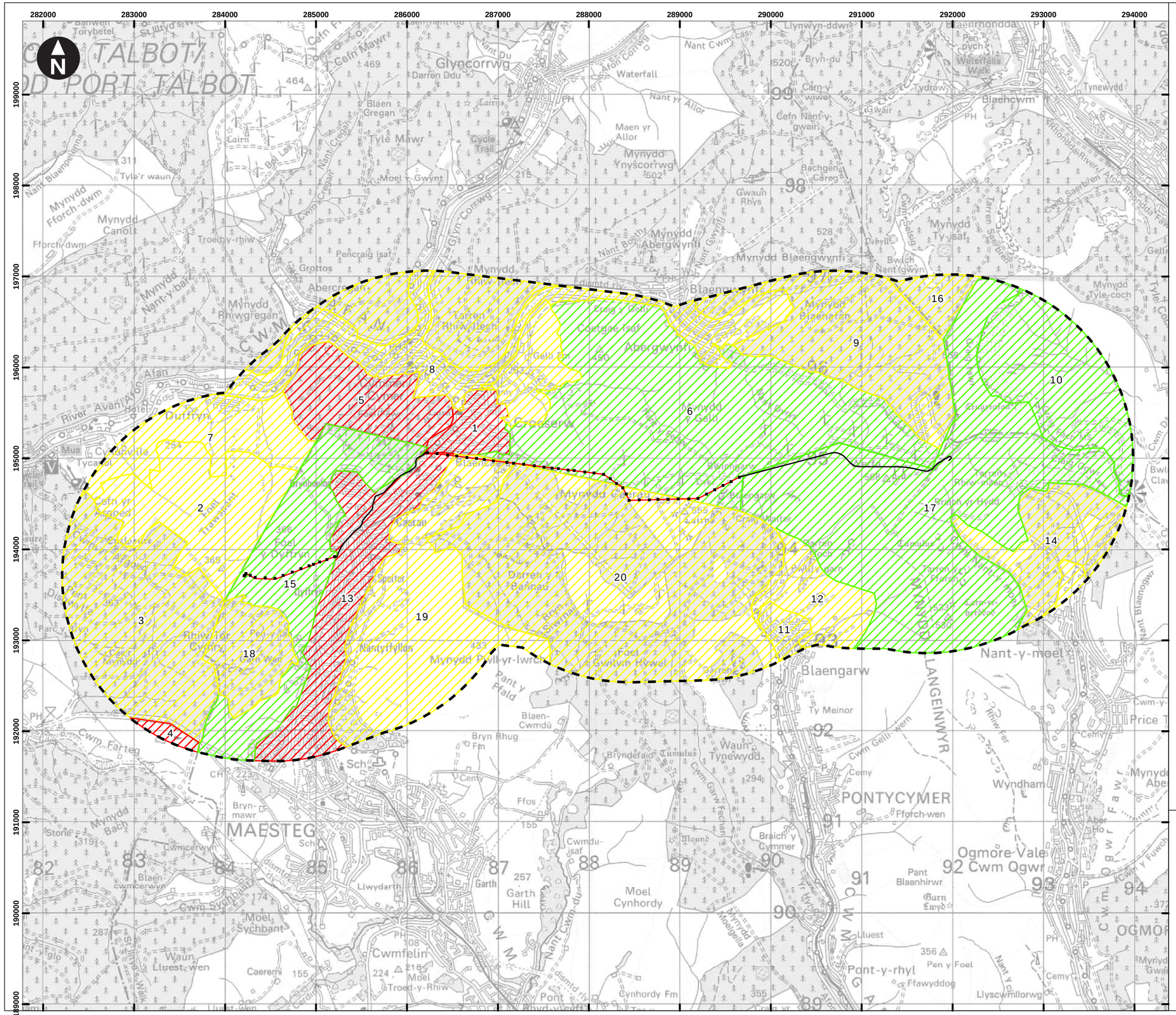

Key

- Overhead Line
- Underground Cable
- OHL 66kV Grid connection poles
- LVIA Study Area

LANDMAP Visual and Sensory Areas

Value

- High
- Moderate
- Low

Aspect Area Name	No.
Upland settlements	1
Foel Trawsnant	2
Mynydd Penhydd	3
Cefn Cethin	4
Foel Fawr	5
Mynydd y Gelli	6
Cwm Afan and Cwm Pelenna farmed sides	7
Cwm Afan and Cwm Pelenna	8
Mynydd Nant y bar / Mynydd Blaenafan	9
Cwm Dar	10
Cwm Ogwr	11
Mynydd Llangeknwyr	12
Maesteg	13
Mynydd Ton, Bwllfa, William Meyrick	14
Mynydd Baedan	15
St Gwynno	16
Mynydd Llangeinwyr	17
Conifer to west of study area	18
Garth Hill	19
Garw and Caerau Forest	20

0 0.55 1.1 1.65 2.2 km

Scale at A3: 1:40,000

Pennant Walters
Upper Ogmore Scoping Report
Chapter 2 - Landscape Visual Impact Assessment

Figure 2.3
Landscape Character - LANDMAP Visual and Sensory Areas

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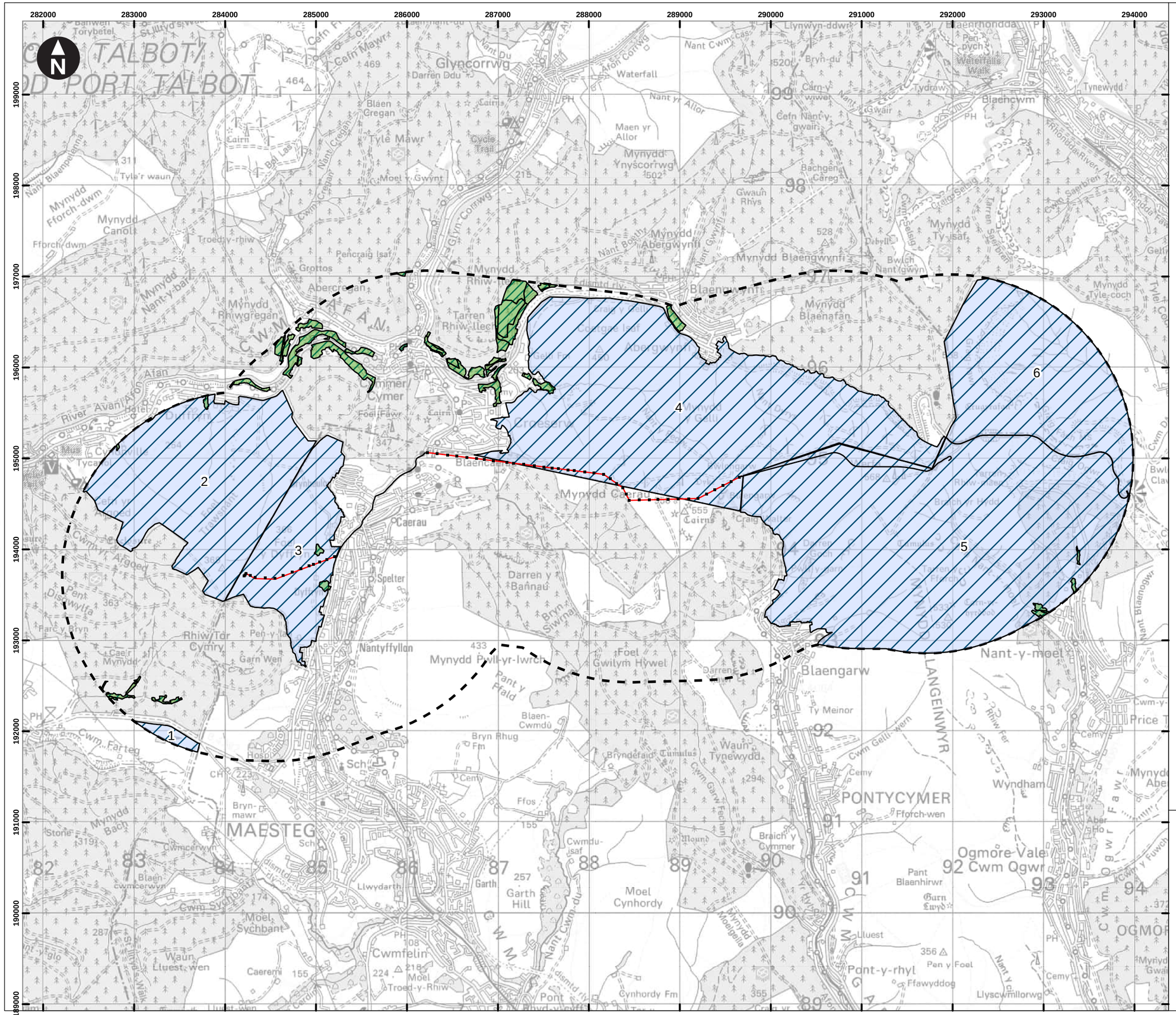

Key

- Overhead Line
- Underground Cable
- OHL 66kV Grid connection poles
- LVIA Study Area
- Ancient Woodland
- Special Landscape Areas
  - 1). Margam
  - 2). Foel Trawsnant
  - 3). Foel y Dyffryn
  - 4). Mynydd Y Gelli
  - 5). Northern Uplands
  - 6). Rhondda Fawr Northern Cwm & Slopes

0 0.55 1.1 1.65 2.2 km

Scale at A3: 1:40,000

Pennant Walters
Upper Ogmore Scoping Report
Chapter 2 - Landscape Visual Impact Assessment

Figure 2.4
Landscape Designations

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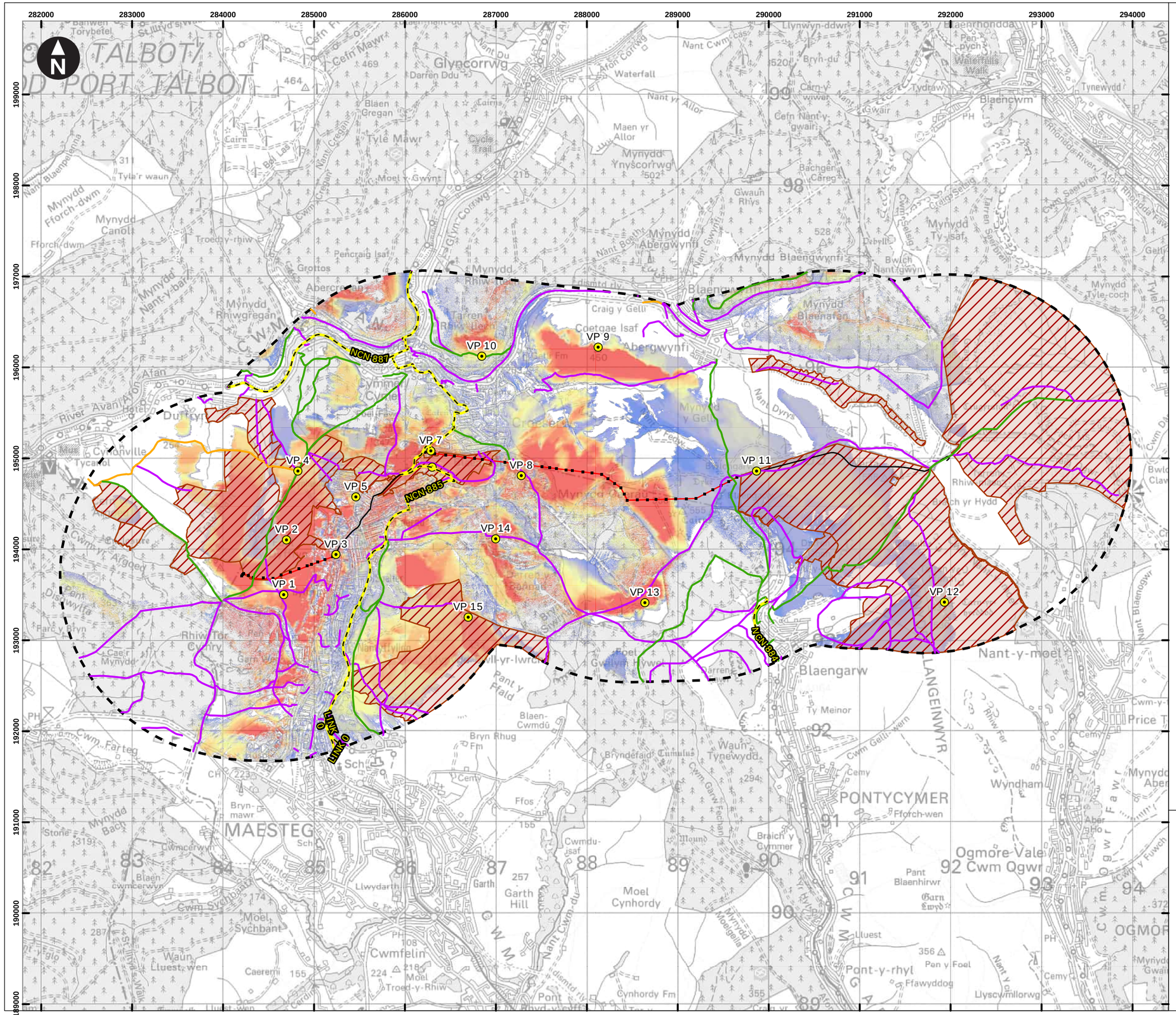

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Key

- Overhead Line
- Underground Cable
- OHL 66kV Grid connection poles
- LVIA Study Area
- LVIA Viewpoints
- National Cycle Network
- ▨ Open Access Land

Areas where the proposed 66kV grid connection poles are theoretically visible

- High visibility
- Low visibility

Public Right of Way

- Bridleway
- Footpath
- Byway

This drawing was based on a computer generated Zone of Theoretical Visibility (ZTV). The areas shown indicate the maximum theoretical visibility of the proposed OHL grid connection poles using 1m Digital Surface Model (DSM) LiDAR. The ZTV includes an adjustment that allows for the curvature and light refraction of the Earth. The ZTV also accounts for the visibility screening effects of buildings and vegetation.

The ZTV was generated using OHL grid connection pole heights varying between 11-15m (ABGL), using a viewer height of 1.6m.

0 0.55 1.1 1.65 2.2 km

Scale at A3: 1:40,000

Pennant Walters
Upper Ogmore Scoping Report
Chapter 2 - Landscape Visual Impact Assessment

Figure 2.5
Public Access and Zone of Theoretical Visibility

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282000 283000 284000 285000 286000 287000 288000 289000 290000 291000 292000 293000 294000

199000 198000 197000 196000 195000 194000 193000 192000 191000 190000 189000

N

Key

Overhead Line

Underground Cable

OHL 66kV Grid connection poles

LVIA Study Area

LiDAR Digital Terrain Model (1m)

Elevation (mAOD)

568

3

0 0.55 1.1 1.65 2.2 km

Scale at A3: 1:40,000

Pennant Walters
Upper Ogmore Scoping Report
Chapter 2 - Landscape Visual Impact Assessment

Figure 2.6
Topography

February 2025

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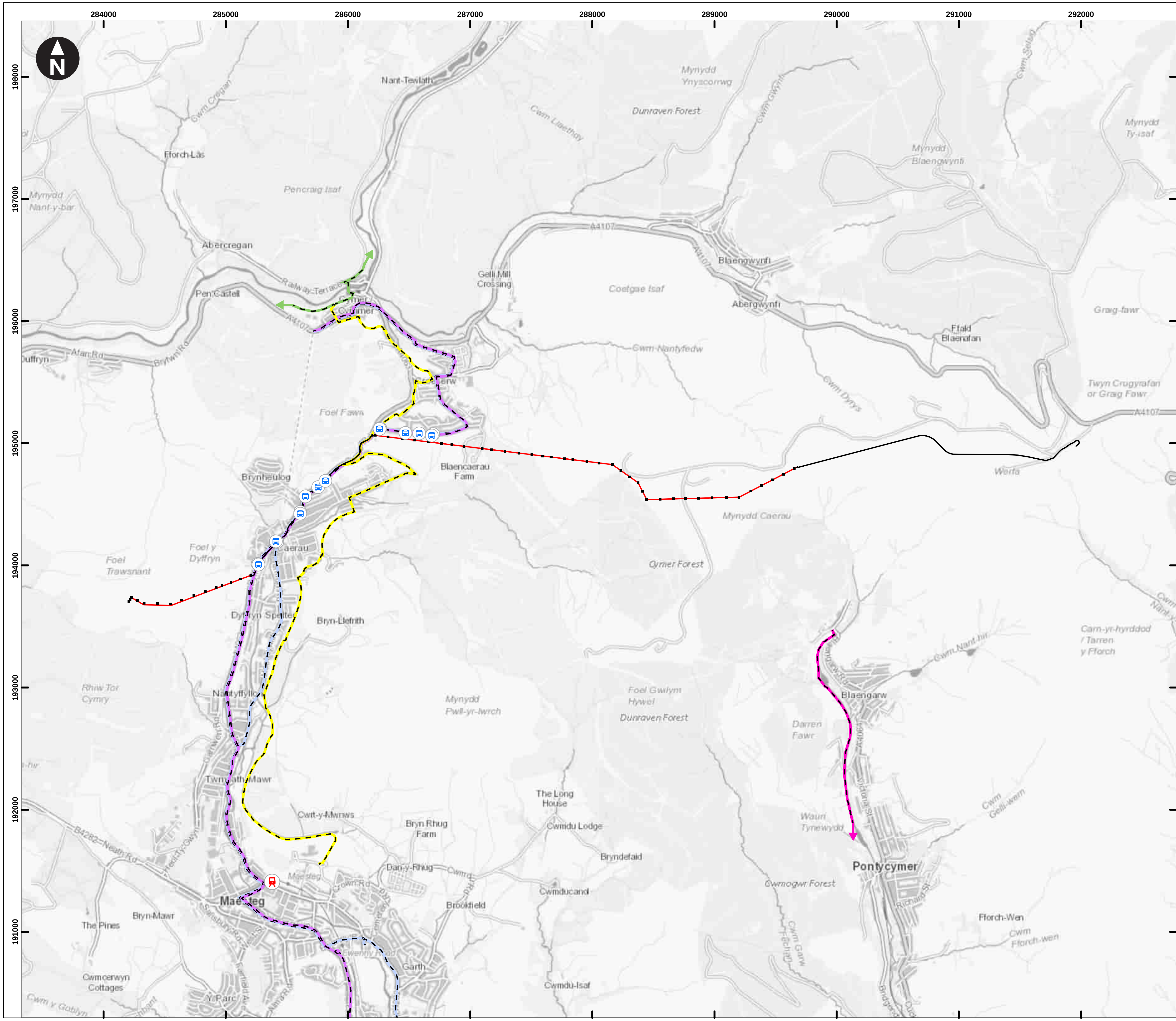
Appendix B

TRANSPORT FIGURES



Key

- Overhead Line
- Underground Cable
- OHL 66kV Grid connection poles
- Maesteg Railway Station
- Nearest Bus Stops
- National Cycle Route 884
- National Cycle Route 885
- National cycle Route 887
- Bus Route (70)
- Bus Route (71)

0 0.4 0.8 1.2 1.6 km

Scale at A3: 1:30,000

Pennant Walters
Upper Ogmore Scoping Report

Figure 3.1
Transport Network Summary

February 2025

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Appendix C

SETTING SCOPING EXERCISE

APPENDIX C SETTING SCOPING EXERCISE

Table 1 details the outcome of the Stage 1 scoping exercise to identify historic assets to be included within the detailed ES assessment of effects arising through change to setting.

Table 1 – Scoping of setting assessment of designated historic assets within 2km extended study area

Designation type	Cadw record Number	Cadw Scheduled Monument Number	Grade	Name	Distance from Scoping Boundary	ZTV for OHL	Scoped in	Justification
Listed building	11356	-	II	Siloh Independent Chapel	1.33km	Y	N	Roadside urban setting of historic asset, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Listed building	14175	-	II	Gelli Farm	1.22km	Y	N	Working farm, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Listed building	18495	-	II*	Salem Welsh Baptist Chapel	1.03km	Y	N	Roadside urban setting of historic asset, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Listed building	18496	-	II	Capel Saron	1.58km	Y	N	Roadside urban setting of historic asset, with intervening buildings,

Designation type	Cadw record Number	Cadw Scheduled Monument Number	Grade	Name	Distance from Scoping Boundary	ZTV for OHL	Scoped in	Justification
								distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Listed building	18507	-	II	Nantyffyllon Workmen's Institute	1.27km	Y	N	Roadside urban setting of historic asset, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Listed building	18627	-	II	Bethania Capel y Bedyddwyr (Welsh Baptist Chapel)	1.83km	N	N	No perception of proposed development due to intervening distance, planting and topography.
Listed building	23842	-	II	Cymmer Bridge	1.21km	Y	N	Enclosed setting, nature of asset and intervening distance, planting and topography.
Listed building	23843	-	II	Cymmer Viaduct	1.14km	N	N	No perception of proposed development due to intervening distance, planting and topography.
Listed building	23844	-	II	Croeserw Viaduct	980m	Y	N	Enclosed setting, nature of asset and intervening distance, planting and topography.
Listed building	23847	-	II	Gelli Farm Cottage	1.24km	Y	N	Working farm setting, with intervening buildings, distance and planting. Any theoretical limited perception of the

Designation type	Cadw record Number	Cadw Scheduled Monument Number	Grade	Name	Distance from Scoping Boundary	ZTV for OHL	Scoped in	Justification
								proposed development is not predicted to give rise to significant adverse effect.
Listed building	23848	-	II	Old longhouse at Nantyfedw	855m	Y	N	Working farm setting, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Listed building	23849	-	II	Stable at Nantyfedw	865m	Y	N	Working farm setting, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Listed building	23852	-	II	Bakehouse at Gelli Farm	1.21km	Y	N	Working farm setting, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Listed building	23853	-	II	Barn and Cow House at Gelli Farm	1.23km	Y	N	Working farm setting, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not

Designation type	Cadw record Number	Cadw Scheduled Monument Number	Grade	Name	Distance from Scoping Boundary	ZTV for OHL	Scoped in	Justification
								predicted to give rise to significant adverse effect.
Listed building	23854	-	II	1 Gelli Houses	1.20km	N	N	No perception of proposed development due to intervening distance, planting and topography.
Listed building	23855	-	II	2 Gelli Houses	1.21km	N	N	No perception of proposed development due to intervening distance, planting and topography.
Listed building	23856	-	II	3 Gelli Houses	1.22km	N	N	No perception of proposed development due to intervening distance, planting and topography.
Listed building	23857	-	II	4 Gelli Houses	1.23km	N	N	No perception of proposed development due to intervening distance, planting and topography.
Listed building	23858	-	II	5 Gelli Houses	1.23km	N	N	No perception of proposed development due to intervening distance, planting and topography.
Listed building	23859	-	II	6 Gelli Houses	1.24km	N	N	No perception of proposed development due to intervening distance, planting and topography.
Listed building	23860	-	II	7 Gelli Houses	1.25km	Y	N	Roadside setting of historic asset, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed

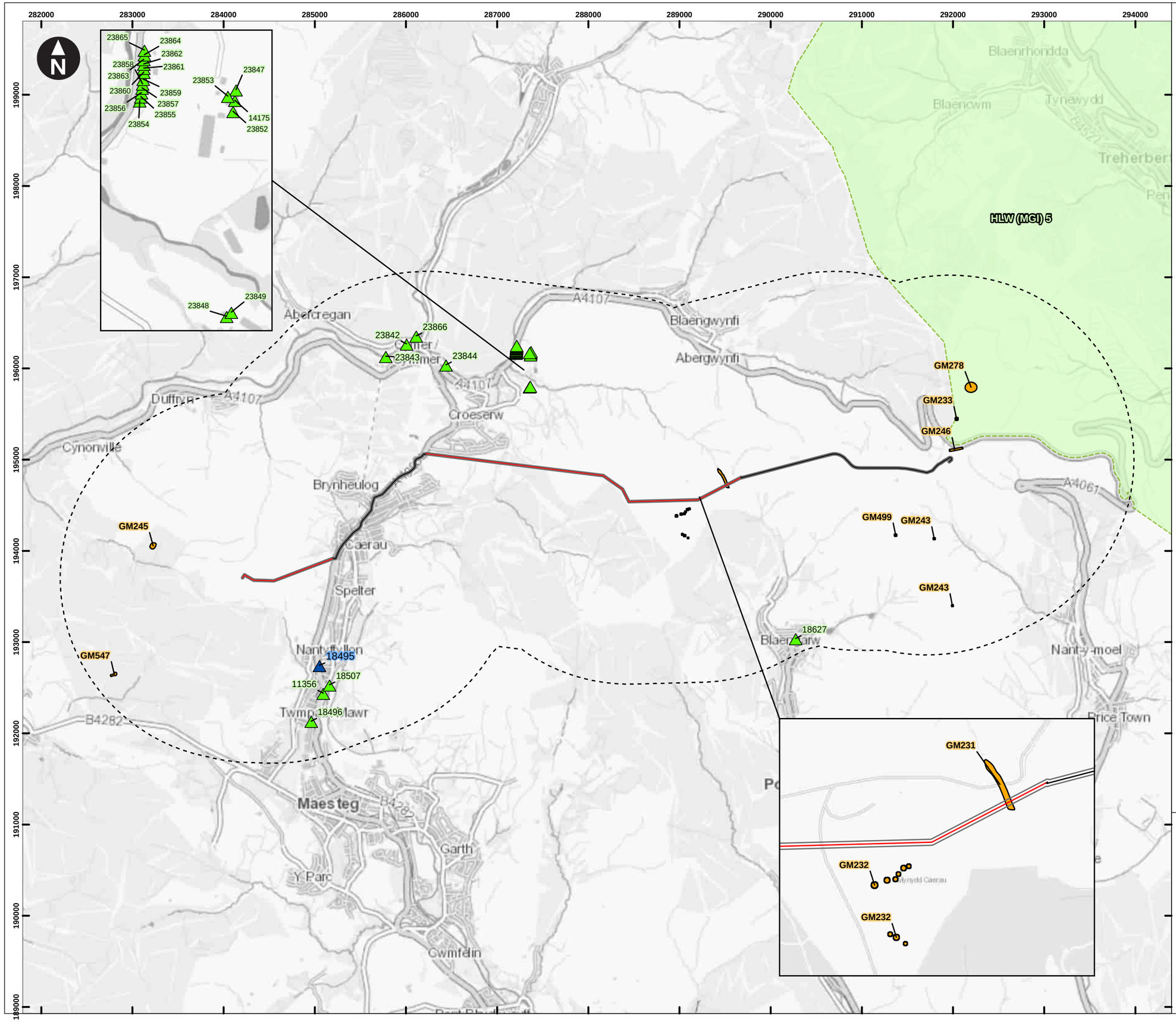
Designation type	Cadw record Number	Cadw Scheduled Monument Number	Grade	Name	Distance from Scoping Boundary	ZTV for OHL	Scoped in	Justification
								development is not predicted to give rise to significant adverse effect.
Listed building	23861	-	II	8 Gelli Houses	1.26km	Y	N	Roadside setting of historic asset, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Listed building	23862	-	II	9 Gelli Houses	1.27km	Y	N	Roadside setting of historic asset, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Listed building	23863	-	II	10 Gelli Houses	1.28km	Y	N	Roadside setting of historic asset, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Listed building	23864	-	II	11 Gelli Houses	1.28km	Y	N	Roadside setting of historic asset, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.

Designation type	Cadw record Number	Cadw Scheduled Monument Number	Grade	Name	Distance from Scoping Boundary	ZTV for OHL	Scoped in	Justification
Listed building	23865	-	II	12 Gelli Houses	1.29km	Y	N	Roadside setting of historic asset, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Listed building	23866	-	II	Hebron Chapel	1.28km	Y	N	Rural village setting of historic asset, with intervening buildings, distance and planting. Any theoretical limited perception of the proposed development is not predicted to give rise to significant adverse effect.
Scheduled monument	398	GM243	-	Carn y Hyrddod & Neighbouring Cairn	705m and 1.47km	Y (southern cairn) & N (northern cairn)	N	Very limited perception of operational OHL from single cairn, would not result in significant adverse effect.
Scheduled monument	399	GM246	-	Bwlch yr Avan Dyke	55m	N	Y	Proximity to proposed development.
Scheduled monument	625	GM232	-	Mynydd Caerau Round Cairns	75m to 395m	Y	Y	Proximity to and visibility of proposed operational OHL.
Scheduled monument	2264	GM245	-	Cefn yr Argoed Camp	1.01km	N	N	Enclosed setting asset by dense planting. No perception of proposed development.

Designation type	Cadw record Number	Cadw Scheduled Monument Number	Grade	Name	Distance from Scoping Boundary	ZTV for OHL	Scoped in	Justification
Scheduled monument	2882	GM233	-	Crug yr Afan Round Cairn	400m	N	N	No perception of operational OHL. Any perception of construction activities would be temporary and not anticipated to give rise to significance adverse effect.
Scheduled monument	2894	GM278	-	Earthwork 360m NNE of Crug yr Avan	735m	N	N	No perception of operational OHL. Any perception of construction activities would be temporary and not anticipated to give rise to significance adverse effect.
Scheduled monument	2906	GM231	-	Clawdd Mawr, Mynydd Caerau	0m	Y	Y	Within scoping boundary, OHL section of proposed route.
Scheduled monument	3438	GM499	-	Round Barrow on the Werfa	710m	Y	N	Very limited perception of operational OHL from single cairn, would not result in significant adverse effect
Scheduled monument	3982	GM547	-	Cae'r Mynydd Ventilation Furnace and Mine	1.72km	N	N	No perception of proposed development due to intervening distance, planting and topography.
Registered Historic Landscape	HLW (MGl) 5	-	-	The Rhondda	140m	Y	N	Very limited views of proposed operational OHL from western edge of the RHL. Any perception of construction activities would be temporary. Not anticipated to give rise to significant adverse effects.

Appendix D

HISTORIC ENVIRONMENT FIGURES



Pennant Walters
Upper Ogmore Scoping Report
Chapter 6 - Historic Environment

Figure 6.1
Designated Heritage Assets within 2km

February 2025

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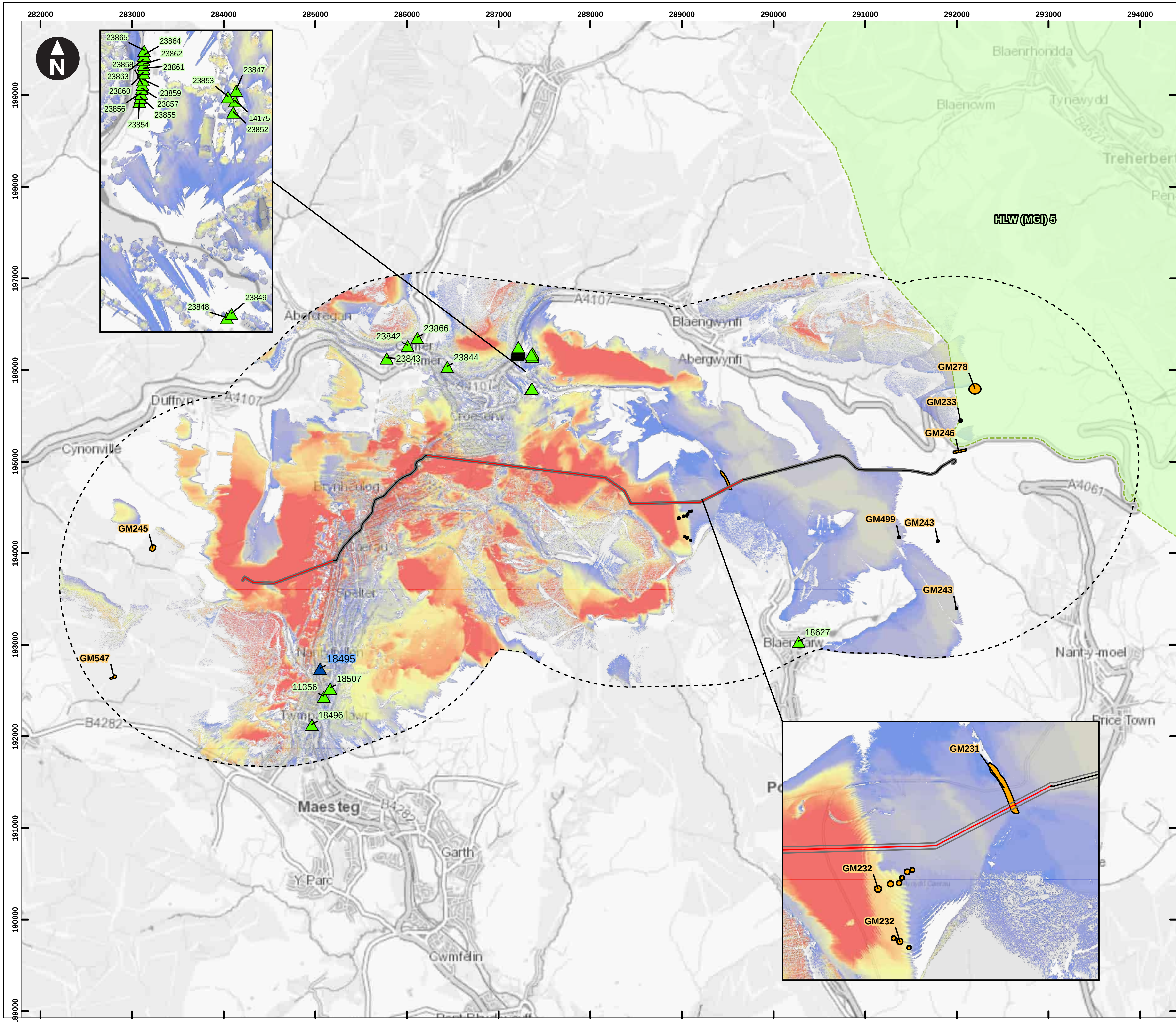

Key

- Scoping Boundary
- Overhead Line
- Underground Cable
- 2km Study Area
- Scheduled Monuments
- Registered Historic Landscape

Listed Buildings

Grade

- I
- II*
- II

Areas where the proposed 66kV grid connection poles are theoretically visible

- High visibility
- Low visibility

This drawing was based on a computer generated Zone of Theoretical Visibility (ZTV). The areas shown indicate the maximum theoretical visibility of the proposed OHL grid connection poles using 1m Digital Surface Model (DSM) LiDAR. The ZTV includes an adjustment that allows for the curvature and light refraction of the Earth. The ZTV also accounts for the visibility screening effects of buildings and vegetation.

The ZTV was generated using OHL grid connection pole heights varying between 11-15m (ABGL), using a viewer height of 1.6m.

0 0.55 1.1 1.65 2.2 km

Scale at A3: 1:40,000

Pennant Walters
Upper Ogmore Scoping Report
Chapter 6 - Historic Environment

Figure 6.2
Designated Heritage Assets and ZTV within 2km

February 2025

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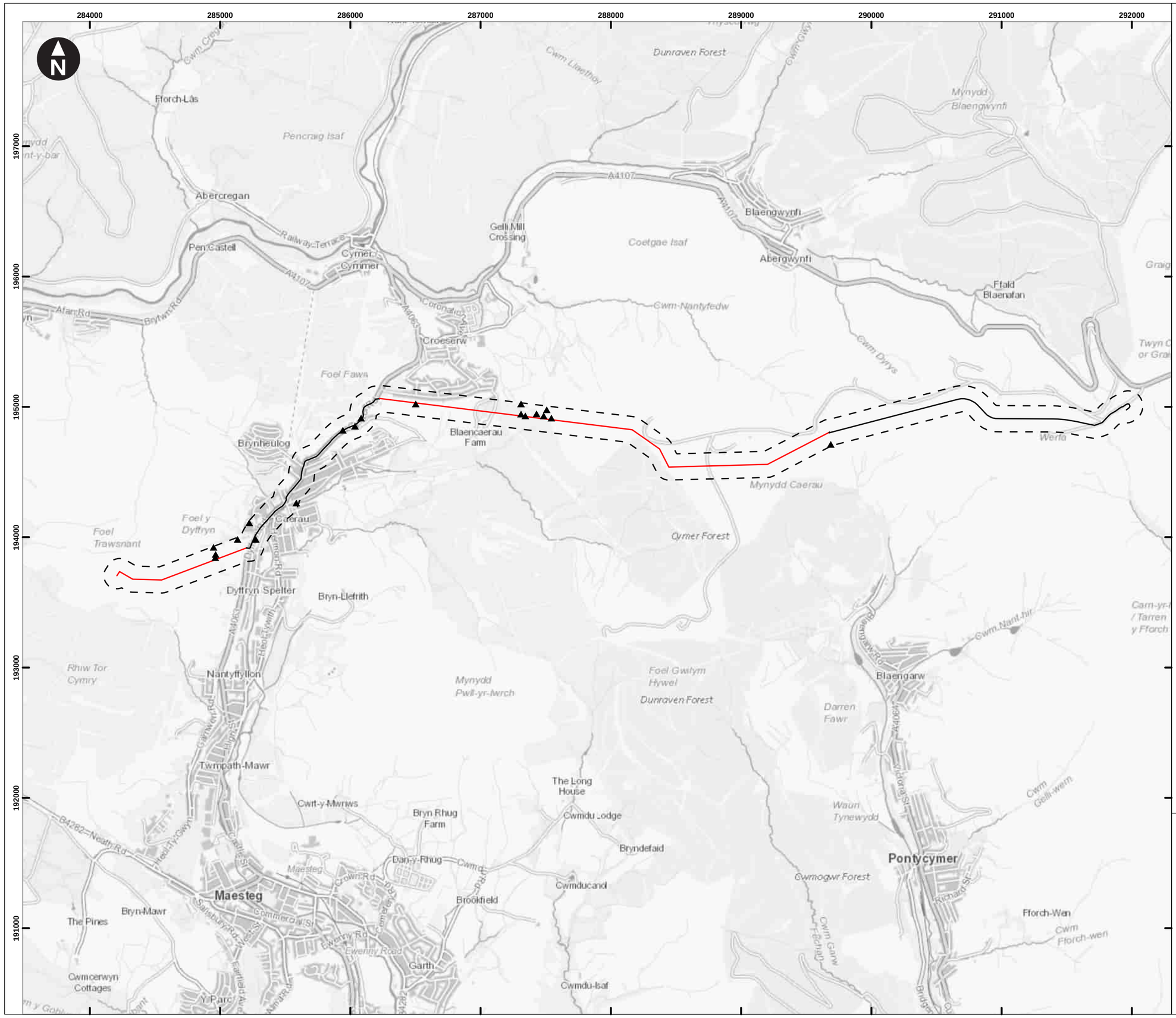
Appendix E

MINING CONSTRAINTS PLAN



Key

- Overhead Line
- Underground Cable
- 100m buffer
- Approximate mine entries (19)

Pennant Walters
Upper Ogmore Scoping Report
Appendix E - Mining

Appendix E
Mining constraints plan

February 2025

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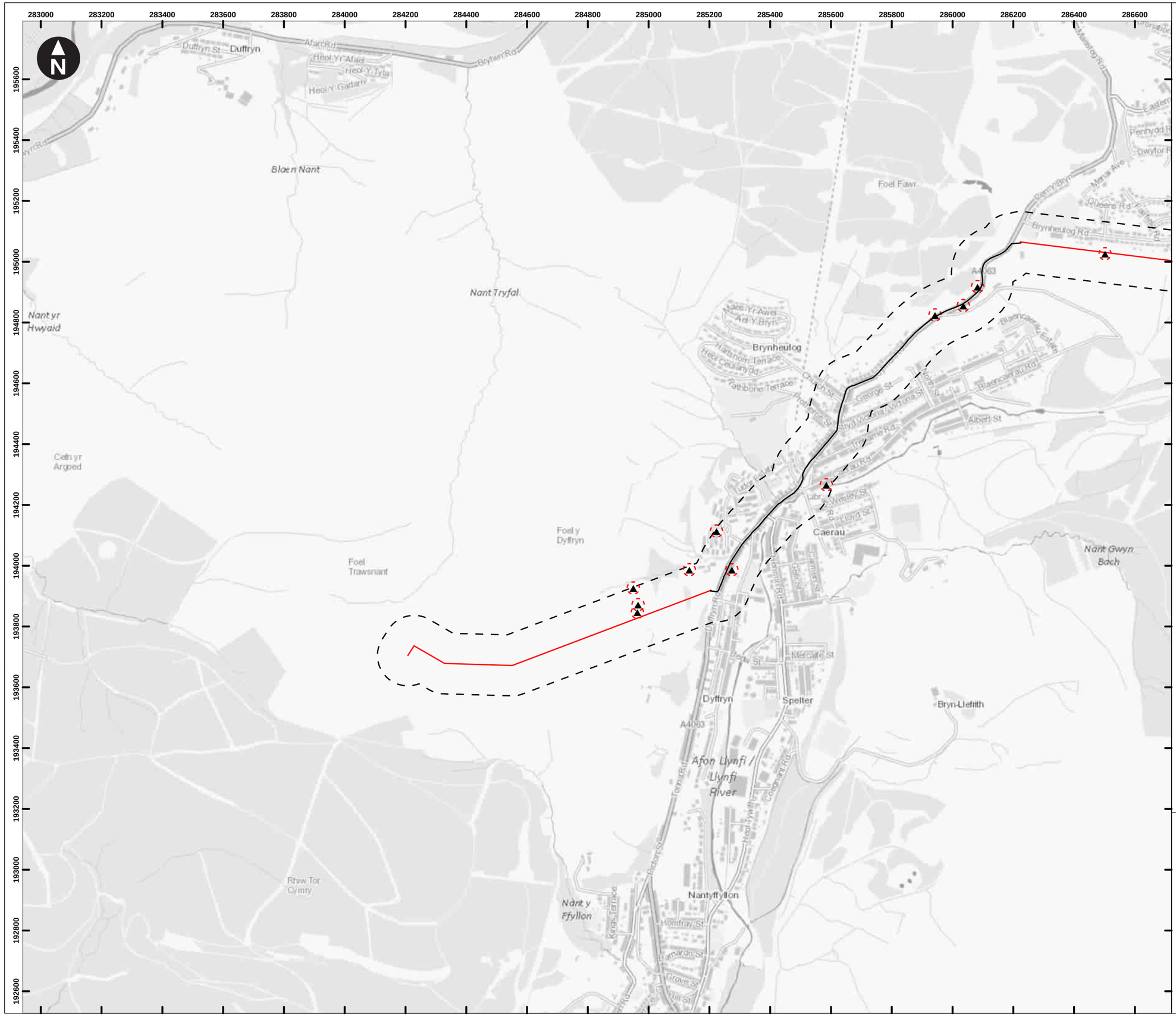

Key

- Overhead Line
- Underground Cable
- 100m buffer
- Approximate mine entries (11)
- Mine entry Zone of Influence

0 0.15 0.3 0.45 0.6 km

Scale at A3: 1:12,000

Pennant Walters
Upper Ogmore Scoping Report
Appendix E - Mining

Appendix E
Mining constraints plan

February 2025

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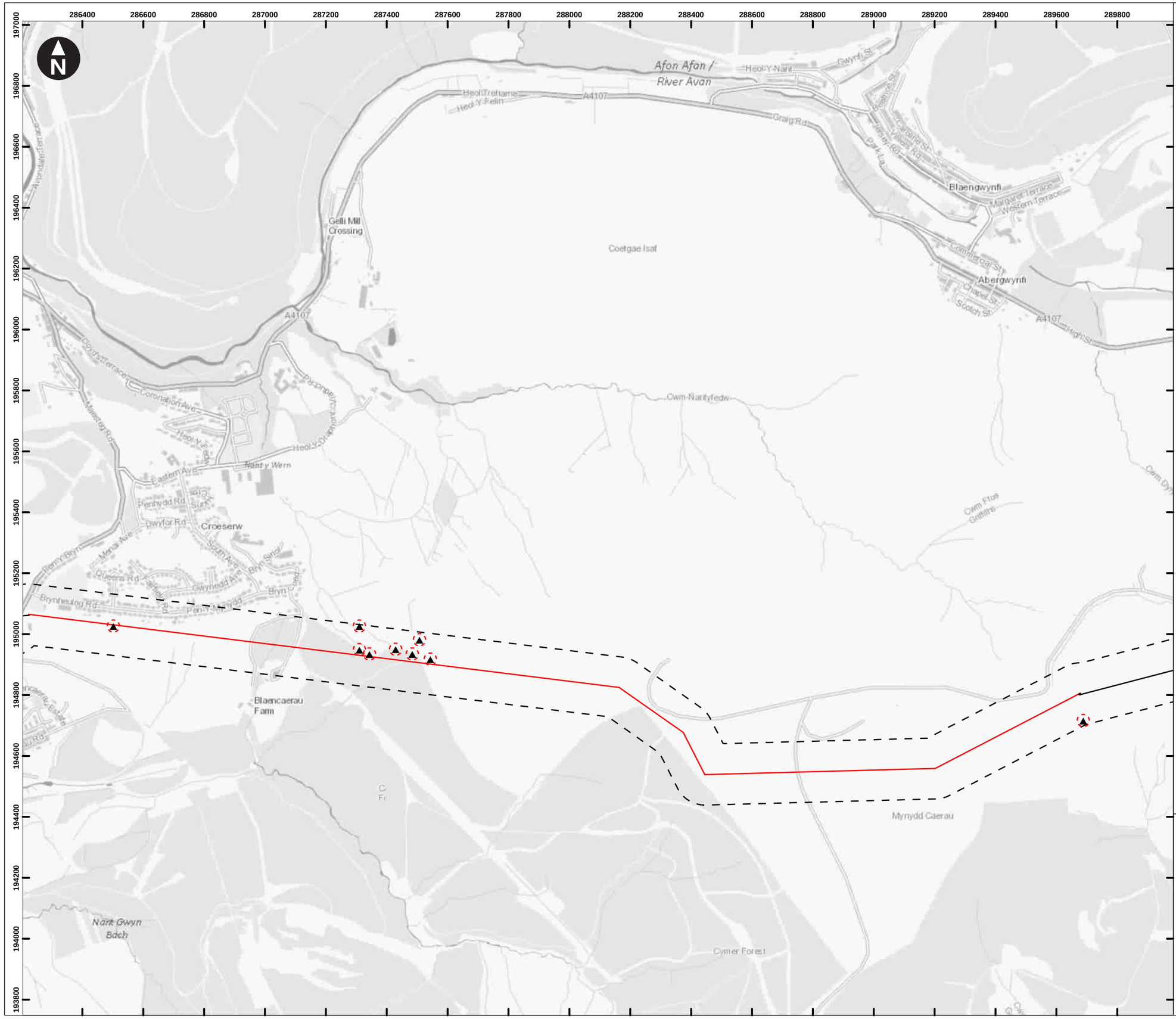

Key

- Overhead Line
- Underground Cable
- 100m buffer
- Approximate mine entries (9)
- Mine entry Zone of Influence

0 0.15 0.3 0.45 0.6 km

Scale at A3: 1:12,000

Pennant Walters
Upper Ogmore Scoping Report
Appendix E - Mining

Appendix E
Mining constraints plan

February 2025

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Key

- Overhead Line
- Underground Cable
- 100m buffer
- Approximate mine entries (1)
- Mine entry Zone of Influence

0 0.15 0.3 0.45 0.6 km

Scale at A3: 1:12,000

Pennant Walters
Upper Ogmore Scoping Report
Appendix E - Mining

Appendix E
Mining constraints plan

February 2025

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Appendix F

ECOLOGY ANNEXES

PUBLIC

Annex 4.1
PEA Survey Report

Preliminary Ecological Appraisal

August 2024

Upper Ogmore Wind Farm

Prepared by
CSA Environmental

On behalf of
Fisher German

Report No: CSA/6891/01

CSA environmental

masterplanning | ecology | landscape | heritage

This report may contain sensitive ecological information. It is the responsibility of the Local Authority to determine if this should be made publicly available.

Report Reference	Revision	Date	Prepared by	Approved by	Comments
CSA/6981/01	-	15/08/2024	BK	CSm	First issue

CONTENTS

Appendices

EXECUTIVE SUMMARY

Overhead and underground power lines for a new 66kv electricity line are proposed at the Site, for which planning permission for a Development of National Significance will be sought.

CSA Environmental was instructed by Fisher German to undertake a Preliminary Ecological Appraisal (PEA) of the Site to identify any ecological constraints to development, inform scheme design, highlight opportunities for ecological enhancement and determine the need for any additional investigation/survey. As part of this PEA, a desk study and field survey of the Site were undertaken between April and May 2024, including a UK Habitat Classification survey.

Underground sections will be restricted to the highways boundary along existing road networks and are not considered to have any ecological significance. Ecological interest is associated with the mosaic of grassland, heathland and woodland habitats along the proposed overhead route. The proposed corridor passes through the Caerau West SINC as well as areas of Priority Habitats, therefore further discussions will be required on the scope of works and mitigation measures required in these areas.

Protected species which were confirmed to be present include reptiles and water vole, with additional species considered likely to be present including roosting bats, nesting birds and harvest mouse. Further survey work to determining presence/absence of species and the nature of their use of the habitats are recommended for roosting bats, water vole and great crested newts in order to inform an evidence based Ecological Impact Assessment to be prepared in support of planning. Due to the scale of the proposed work and associated short term impacts, precautionary working methods are considered appropriate for reptiles, nesting birds and harvest mouse.

No overriding constraints to development of the Site have been identified. Recommendations have been provided for ecological enhancement measures that could be delivered as part of the proposed development.

1.0 INTRODUCTION

1.1 This report has been prepared by CSA Environmental on behalf of Fisher German. It sets out the findings of a Preliminary Ecological Appraisal (PEA) of Upper Ogmore Wind Farm, Maesteg. Overhead and underground power lines for a new 66kv electricity line are proposed at the Site, for which planning permission for a Development of National Significance will be sought.

1.2 The scope of this appraisal has been determined with due consideration for best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017), and to the *Biodiversity: Code of practice for planning and development* (BS 42020:2013) published by the British Standards Institution (2013).

1.3 The proposed route occupies a length of c. 8.84km and is located around central grid reference SS 8940 9479, to the north-east of Maesteg and south-east of Glyncorrwg. The underground section of this route is restricted to the existing highways network, whilst the remaining overhead route crosses a mosaic of predominantly upland rush pasture, upland acidic grassland, modified grassland and purple moor grass and rush pasture habitats, with additional patches of scrub and woodland (see Habitats Plan in Appendix A). The proposed route and a 25m corridor either side were surveyed (with additional sections included where relevant and subject to route amendments) and is hereafter identified as 'the survey area'.

1.4 This PEA aims to:

- Characterise baseline ecological conditions of the survey area and its wider context
- Identify any ecological constraints to development of the survey area
- Inform scheme design
- Identify further ecological surveys and investigation necessary to inform a full Ecological Impact Assessment (EcIA) of the Site
- Highlight opportunities for ecological enhancement

1.5 To achieve these aims, an ecological desk study and field survey were undertaken of the survey area, the findings of which are presented herein.

1.6 As set out in best practice guidelines (CIEEM, 2017) a PEA is typically only suitable for planning submission where there are no ecological constraints relating to the project. Where ecological constraints are identified, such as the presence of important ecological features, the effects of development on these features should be assessed within a separate EcIA report, which would supersede the PEA.

2.0 LEGISLATION, PLANNING POLICY & STANDING ADVICE

Legislation

2.1 Legislation relating to wildlife and biodiversity of particular relevance to this PEA includes:

- The Conservation of Habitats and Species Regulations 2017 (as amended)
- The Wildlife and Countryside Act 1981 (as amended)
- The Natural Environment and Rural Communities (NERC) Act 2006
- The Protection of Badgers Act 1992
- The Environment (Wales) Act 2016

2.2 This above legislation has been addressed, as appropriate, in the production of this report. Further information on the above legislation is provided in Appendix B.

Planning Policy Wales

2.3 The Planning Policy Wales (Welsh Government 2024) sets out the government planning policies for England and how they should be applied. Chapter 6: Distinctive and Natural Places is of particular relevance to this report as it relates to ecology and biodiversity. Further details are provided in Appendix B.

2.4 Technical Advice Note 5: Nature Conservation and Planning (Welsh Assembly Government, 2009), which is referred to by the PPW, provides further guidance in respect of statutory obligations for protecting and enhancing biodiversity and geological conservation and their effects within the planning system.

Local Planning Policy

2.5 A number of local planning policies relate to ecology, biodiversity and/or nature conservation. These are summarised in Table 1 of Appendix B. These policies have been addressed, as appropriate, in the production of this report.

Standing Advice

2.6 Natural Resources Wales Standing Advice (Natural Resources Wales, 2021) regarding bats and planning, aims to support local authorities and forms a material consideration in determining applications. Standing Advice has therefore been given due consideration, alongside other detailed guidance documents, in the production of this report.

3.0 METHODS

Desk Study

3.1 An ecological desk study was undertaken in May 2024 comprising a review of online resources and biological records centre data as detailed below.

3.2 The Multi-Agency Geographic Information for the Countryside (MAGIC) online database was reviewed to identify nature conservation designations within the following search radii:

- Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites within 10km of the Site (including possible/proposed sites)
- Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Local Nature Reserves (LNR) within 3km of the Site
- Other relevant data e.g. Ancient Woodland Inventory within 1km of the Site

3.3 A review was undertaken of the location of any such designations, their distance from and connectivity with the Site, and the reasons for their designation. This information was used to determine whether they may be within the proposed development's Zone of Influence (ZoI).

3.4 The South East Wales Biodiversity Records Centre (SEWBReC) was contacted for details of any non-statutory nature conservation designations and records of protected/notable habitats and species. This information was requested for an area encompassing the survey area and adjacent land within c. 2km of the proposed route. This search area was selected to include the likely zone of influence upon non-statutory designations and protected or notable habitats and species.

3.5 Further online resources were reviewed for information which may aid the identification of important ecological features. The Woodland Trust's online Ancient Tree Inventory and Natural Resources Wales Ancient Tree Inventory reviewed for known ancient or veteran trees within the Site and adjacent land. Interactive online mapping provided by the charity 'Buglife' was used to determine whether the survey area falls within an Important Invertebrate Area. Data Map Wales also provided interactive online mapping which was used to help determine priority habitats within the area.

3.6 Relevant survey work associated with nearby planning applications was reviewed in order to further understand the local populations of protected species within the area. This included the Afan Valley Adventure Park outline planning application (P2018/0493) and the Y Bryn Wind Farm application (P2024/0029).

3.7 As Natural Resources Wales does not have specific published guidelines for assessing great crested newts in Wales, Natural England's Great Crested Newt Mitigation Guidelines (2001) was followed, a desktop search was undertaken to identify ponds within 500m of the Site which may have potential to support breeding great crested newts *Triturus cristatus*, using Ordnance Survey (OS) mapping, the MAGIC database and aerial photography.

3.8 Where possible under the terms of the data provider, relevant desk study data are presented in Appendix C.

Field Survey

3.9 A UK Habitat Classification ('UKHab') survey was carried out in fine and dry weather conditions on 29/30 April 2024 by Lucy Moorhouse (FISC Level 4) and Becca King (FISC Level 3) and Katie Critchley Cecol (Fisc Level 4) and Charlie Morgan (FISC Level 3) on 08 May 2024 encompassing the survey area and immediately adjacent habitats that could be viewed.

3.10 UKHab is a unified and comprehensive system for mapping and classifying habitats, designed to provide a simple and robust approach to surveying and monitoring, and replaces Phase 1 Habitat survey methods. The method allows for identification of important habitat types, including habitats of Principal Importance under Section 42 of the NERC Act (2006) and Habitats Directive Annex I habitats.

3.11 The following parameters were adopted for the UKHab survey undertaken for this PEA:

- UKHab Professional edition (Butcher *et al*., 2023, commercial End User Licence Agreement (EULA))
- Minimum Mappable Unit (MMU):
    - $10m^2$/0.001ha (polygons)
    - 5m (linear)
- Primary Habitats recorded to a minimum of Level 2 (see below) with UKHab codes provided
- Mandatory secondary codes used
- Base-mapping comprising a combination of aerial imagery and topographic information

3.12 Primary Habitats are recorded to a minimum of Level 2. Where the survey is conducted at an appropriate time of year (e.g. May to July for grassland) habitats may be recorded to Level 3, 4 or 5, only if conditions and the experience of the surveyor allow.

3.13 Alongside the UKHab survey, additional field survey information was collected, comprising:

- Detailed floral species lists recorded for each identified habitat/parcel
- Evidence of, or potential for, European Protected Species (EPS) (including bats, great crested newt, dormouse and otter)
- Evidence of, or potential for, other protected species (including birds, reptiles, water vole, badger and certain invertebrates)
- Evidence of, or potential for, other notable species (including S41 Species of Principal Importance as well as notable, rare, protected or controlled plants and invertebrates)
- Any other survey information relevant to ecological matters

3.14 Results of the UKHab survey are presented on the Habitats Plan in Appendix A. Appendix D provides photographs of the habitats at the Site and Appendix E provides a list of floral species recorded in each habitat parcel. Nomenclature for higher plants within this report is consistent with the fourth edition of The New Flora of the British Isles (Stace, 2019).

Limitations

3.15 The original botanical survey was undertaken outside of the optimal period for most flowering plants and therefore it is likely that some species were missed. This has been taken into consideration for the habitat classifications, with additional species information collected during subsequent survey visits to inform these.

3.16 The original proposed route has been amended in a number of sections to account for constraints identified during the early design stages and so the survey area width varies along the proposed route and multiple visits were made at different times of the year to pick up changes.

Evaluation and Assessment

3.17 The evaluation and assessment of ecological features is beyond the scope of a PEA and has therefore not been undertaken here. Formal evaluation and assessment of any identified important ecological features should be undertaken as part of either a full EcIA, or receptor-specific survey and assessment in accordance with the published CIEEM method (CIEEM, 2018).

4.0 BASELINE ECOLOGICAL CONDITIONS

Nature Conservation Designations

Statutory

4.1 There are no statutory designations covering any part of the survey area.

4.2 Two international statutory designations were identified within 10km of the survey area, the Blackmill Woodlands SAC (c. 8.7km south of the survey area) and the Cefn Cribwr Grasslands SAC (c. 10km south of the survey area).

4.3 One national statutory designation was identified within 3km of the survey area, the Mynydd-Ty-isaf SSSI (c. 0.5km north-east of the survey area).

4.4 One local statutory designation was identified within 3km of the survey area, the Bryn Tip LNR (c. 2.4km south-west of the survey area).

4.5 These statutory designations are described in Table 1 below. Based on the distance between the survey area and the designated areas, as well as the scale and nature of the proposed works with temporary short-term impacts along a narrow-defined corridor, significant effects on these designations are not anticipated and they are not considered to be a constraint to development.

Non-Statutory

4.6 A total of 20 non-statutory designations were identified within 2km of the Site, comprising Sites of Importance for Nature Conservation (SINCs) and Special Landscape Areas (SLAs). Of these, one lies within the survey area boundary, the Caerau West SINC, and a further six are within 1km of the Site. Due to the nature and scale of the work proposed, only non-statutory designations within 1km of the Site have been described in Table 1 below. This are considered further within Section 5 discussion.

Table 1. Statutory and Non-Statutory Designations within search radii

Site Name & Designation	Distance & Direction from Survey Area	Special Interests or Qualifying Features
International Designations 10km		
Cefn Cribwr Grasslands SAC	c. 8.7km south	The site is one of four sites selected to represent purple moor grass *Molinia* meadows in south central Wales. Extensive *Molini* **-** *Cirsium dissectum* fen-meadow including the heathy sub-type exists. The site is also important for the marsh fritillary butterfly.
Blackmill Woodlands SAC	c. 10km south	Old sessile oak *Quercus petraea* woodlands with an acidic ground flora as

		well as moderate coverage of fern and bryophyte cover.
National Designations within 3km		
Mynydd-Ty-isaf SSSI	c. 0.5km north-east	This site is characterised by the cliffs and crags of glacial corries which support a mosaic of vegetation types including *Calluna* dominated heath, *Vaccinium myrtillus* heath, a range of species poor grasslands, bracken-dominated slopes and fern-rich screes and rock outcrops. Parsley fern *Crypogramma crispa*, beech fern *Phegopteris connectillis*, and mountain fern *Oreopteris limbosperma* are examples of some of the fern species found here. The geology of the site supports a number of arctic-alpine and other plant species of local distribution in Wales. The high crags also provide nesting sites for a Schedule 1 raptor.
Local Designations within 3km		
Bryn Tip LNR	c. 2.4km south-west	A former coal tip containing dry, species rich grassland with a large stand of Gorse *Ulex europeaus*. The site supports a variety of wildlife including the millipede *Turdulisoma cf turdulorum*, a new species discovered in 2017. Other species found here are dark green fritillary *Argynnis aglaja* and bee orchid *Ophrys apifera*. On-site habitats support breeding birds like stonechat *Saxicola orquate*, and linnet *Carduelis cannabina*. Brown hare *Lepus europaeus*, hedgehog *Erinaceus europaeus*, badger *Meles meles*, and otters *Lutra lutra* are among the mammal species also found here.
Non-Statutory Designations within 1km		
Caerau West SINC	On-site	Comprised of a range of different habitats including flush spring and acid/neutral flush, sphagnum blanket bog, and semi-improved acid grassland. A variety of heathland habitats are also present, namely: dry heath acid mosaic, dry dwarf shrub heath, and wet dwarf shrub heath. Marshy grassland and scattered bracken also exist throughout the site.
Caerau North SINC	c. 0.08km west	A large site with a mosaic of habitats including sphagnum blanket bog, marshy grassland, fen, and semi-improved acid grassland. Wet dwarf shrub heath, acid dry dwarf shrub heath, and broad-leaved semi-natural woodland habitats are also present.
Scotch Street SINC	c. 0.09km north-west	A mosaic of upland fringe habitats on previously disturbed land with important areas of boggy ground and mature heather.

Tudor West SINC	c. 0.09km west	A variety of grassland habitats are present; namely, neutral unimproved, marshy, and semi-improved acid grassland. Acid/neutral flush habitats are also found here, and the site supports a large area of ancient semi-natural woodland alongside brad-leaved semi-natural woodland.
Parc Croeserw SINC	c. 0.2km north	A mosaic of purple moor grass and rush pasture, lowland acidic grassland and lowland heathland supporting a range of flora and fauna with a high suitability for reptiles.
Nant-y-Wern SINC	c. 0.3km north	Area of ancient woodland and marshy grassland, including priority habitat 'purple moor grass and rush pasture'. The habitats support a diversity array of vascular plants, bryophytes and support a number of important bird species.

Habitats and Flora

4.7 Habitats recorded on-site are illustrated in Appendix A with detailed species lists provided in Appendix E. Relevant UKHab codes are provided within parentheses for each habitat type recorded [e.g. Other Neutral Grassland (g3c)].

Irreplaceable Habitats

4.8 There is no ancient woodland covering any part of the survey area or immediately adjacent land, as shown on the Natural Resources Wales Ancient Tree Inventory.

4.9 SEWBReC identifed an area of Plantation on Ancient Woodland Sites (PAWS) c. 0.09km west of the A4063 within the southern stretch of the survey area.

4.10 No trees on or adjacent to the survey area are listed on the Ancient Tree Inventory.

Notable Flora Records

4.11 The SEWBReC provided 557 records of 119 notable plant species from within the search area. Those of potential relevance to the survey area include several non-native invasive species listed under Schedule 9 of the Countryside and Wildlife Act 1981 identifed on-site within the broadleaved woodland south of Croeserw. These records date from 2012 to 2014 and include hollyberry cotoneaster *Cotoneaster bullatus*, Himalayan balsam *Epilobium brunnescens* and montbretia *Crocosmia pottsii x aure*. Additional non-native invasive species recorded in close proximity to the proposed route include New Zealand willowherb *Epilobium brunnescens,* located c. 0.5km south.

4.12 Notable species that could also be supported by the habitats present and therefore potentially relevant include heath spotted orchid *Dactylorhiza maculata*, located c. 0.15km north of the Site dating from 2002, and fir clubmoss *Huperzia selago,* located c. 0.5km south of the Site dating from 2013.

Habitats

4.13 The northern east to west stretch of the survey area comprises open upland landscape (crossing in part through the existing Upper Ogmore Wind Farm), with no distinct field boundaries. The habitats comprise a mosaic of several habitat types including upland rush pasture, upland acidic grassland and purple moor grass and rush pasture (described below). With many similarities in species composition, the boundaries between these habitats can be indistinct and the transition between them is often gradual. For the purpose of this report the habitats have been defined and mapped, however it should be recognised that these are not distinct boundaries (see Habitats Plan CSA/6891_100; Appendix A).

4.14 The survey area south of Brynheulog Road supports a higher component of purple moor grass and rush pasture priority habitat on lower lying land, before the proposed route joins the A4063 and heads south. Where the route deviates off the A4063 at the south-western end, similar habitat types were identified, with a higher component of 'modified' sheep grazed grassland and were segregated into fenced field compartments (F1-F7, see Habitats Plan CSA/6891/101; Appendix A).

Upland Rush Pasture (g1b, 14, 102)

4.15 Upland rush pasture was only present along the northern east to west section and comprised a grass-dominated habitat characterised by the presence of scattered soft rush *Juncus effusus* (secondary code 14; scattered rushes) and generally species poor vegetation influenced by the grazing pressure of sheep (secondary code 102; sheep grazed)

4.16 Dominant grasses included perennial rye grass *Lolium perenne*, tufted hair grass *Deschampsia cespitosa*, red fescue *Festuca rubra* and sweet vernal grass *Anthoxanthum odoratum*. The rushes appear in varying amounts, from occasional separate tussocks to dominating thick swards. Areas of the upland rush pasture appear to be of an improved nature, with frequent herb species including red clover *Trifolium pratense*, hawkbit *Leontodon sp* and creeping buttercup *Ranunculus repens*.

Upland Acid Grassland (g1b)

4.17 The upland acidic grassland varied between spongy vegetation with frequent mosses to tussocky vegetation of soft rush, purple moor grass *Molinia caerulea* and matt grass *Nardus stricta*. The underlying vegetation included grass species such as sheep's fescue *Festuca ovina*, meadow grass *Poa sp*., perennial rye grass and bent grasses

Agrostis sp., as well as a number of frequent herb species including marsh thistle *Cirsium palustre*, willowherb *Epilobium sp*. and sheep's sorrel *Rumex acetosella*.

4.18 The upland acidic grassland habitat across the survey area showed variation in sward diversity and vegetation, with some areas dominated by mat grass whilst others were dominated by purple moor grass. The upland areas surrounding Target Note 1 (TN1) (see Habitats Plan; see Appendix A) were characterised by scattered heathland indicator species (<25% cover) including heather *Calluna vulgaris*, bilberry *Vaccinium myrtillus* and bracken *Pteridium aquilinum*.

4.19 On the steep slope on the western aspect (TN2) where sheep grazing is not present, the grassland exhibited a lusher sward with a greater species diversity and higher frequency of herb species. Frequent grasses included purple moor grass, Yorkshire fog and tufted hair grass, with herb species including as heath bedstraw *Galium saxatile*, angelica *Angelica sylvestris* and tormentil *Potentilla erecta,* as well as scattered soft rush and at least one other species of rush *Juncus sp*. Heathland indicator species were also present in low abundances, as well as patches of bramble *Rubus fruticosus agg*. and willow *Salix sp.* scrub.

4.20 Where the route deviates off the A4063 at the south-western end, it passes through three fields of upland acid grassland, with F2 and F3 similar and managed as short sheep grazed pasture, with typical species such as sheep sorrel, tormentil, field woodrush and sweet vernal grass recorded. Field F1 differs to F2/F3 as a result of steep topography and absence of grazing or management, although species composition was similar, with addition of purple moor grass creating a more tussocky structure. Other smaller fields of upland acid grassland were identified at F8 and F9, similar in nature to F2/F3, sheep grazed and supporting ant hills, although F9 was more fine leaved grass dominated with herbs, while F8 was more varied with damp mossy areas and tussocky areas supporting soft rush, purple moor grass and matt grass with herb species.

<u>Purple moor grass and rush pasture (f2b)</u>

4.21 The priority habitat 'purple moor grass and rush pasture' comprises a broadly similar composition to the upland acidic grassland and upland rush pasture habitats identifed on-site. However, this priority habitat is often associated with a rich sward of species including devils-bit scabious *Succisa pratensis* and ragged robin *Lychnis flos-cuculi* with a number of sedges and rushes, with spark-flowered rush *Juncus acutiflorus* usually abundant. Due to the botanical survey being undertaken early in the season for many plant species it is possible that a greater number of these were present within the sward than could be identified at the time of survey.

4.22 The area south of Brynheulog Road has been classified as purple moor grass and rush pasture based on the dominance of purple moor grass and presence of a greater number of herb species compared to other similar habitats across the survey area, these included tormentil *Potentilla erecta,* foxglove *Digitalis purpurea* and heath bedstraw *Galium saxatile*. Data Map Wales priority habitat maps also identifed this area as purple moor grass and rush pasture of high sensitivity.

4.23 At the south-western section of the route, a large area of purple moor grass and rush dominated habitat is present along a network of small streams, creating boggy areas with no sign of recent management. A further area of dominant purple moor grass and rush pasture is present with F12 with wet ditches present, with rush more dominant, including spike rush *Eleocharis palustris*, soft rush, club rush *Schoenoplectus lacustris* and hare's tail cotton grass *Eriophorum vaginatum*.

Modified Grassland (g4)

4.24 Short sheep grazed grassland is present within field F4, with evidence of previous draining. The species composition and diversity was significantly lower than adjacent acid grassland fields, with occasional patches of soft rush. Grass species were dominated by perennial rye grass with few other grass or herb species recorded rarely.

4.25 Fields F5, F6 and F7 were also modified in nature and heavily grazed by sheep and horses. Some discrete areas where grazing was less intense retained characteristics of upload acid grassland with occasional moss-covered ant hills. Sweet vernal grass dominated but occasional sheep's fescue, field wood-rush, yarrow and sheep's sorrel.

Heathland (h1)

4.26 Two areas of heathland were identifed within the survey area, see target note TN3 and TN4 on the Habitats Plan; Appendix A. Along the northern stretch of the route an area c.10m in length and c. 3m in width existed at TN3 along the boundary of upland acidic grassland to the west and plantation conifer woodland to the east. Dominant species included heather and gorse *Ulex europaeus,* with frequent bilberry and foxglove at a lower abundance. To the south of Croeserw an area of burnt heathland (TN4) existed amongst purple moor grass and rush pasture (secondary code 105).

Woodland and trees

4.27 The proposed route passes through an area of other broadleaved woodland (w1g) to the south of Croeserw. Species present included willow *Salix sp.,* beech *Fagus sylvatica*, hazel *Corylus avellana* and holly *Ilex aquifolium.* The survey area also included two areas of plantation coniferous woodland (w2, secondary code 29) to the south-east of Croeserw and at the southern end of the route.

4.28 A band of mature oak trees *Quercus sp.* exist along the central spine of the field F2 and along the northern boundary between Field F2 and F3.

Scrub: Bramble (h3d), Mixed (h3h), Willow (h3j) and Gorse (h3e)

4.29 Several patches of scrub habitats were identified within the survey area. Areas within the western part of the northern horizontal section included bramble scrub, willow scrub and mixed scrub comprising oak *Quercus robur*, willow and blackthorn *Prunus spinosa.* One area of gorse scrub was recorded within field section F4a where the field dropped away to a steep bank and was not grazed.

Fauna

Bats

4.30 A total of 63 bat records were identified within the search area, dating from 1989 to 2023. These include the following species: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, Nathusius' pipistrelle *Pipistrellus nathusii,* noctule *Nyctalus noctula*, Leisler's bat *Nyctalus leisleri*, brown long-eared bat *Plecotus auritus*, Natterer's bat *Myotis nattereri* and serotine *Eptesicus serotinus.*

4.31 The majority of records are associated with the residential area of Maesteg. The closest records are of common pipistrelle and unidentified bats c. 0.02km east and west of the proposed route.

4.32 Seven confirmed bat roosts and two possible bat roosts were returned within the search area, these comprised common pipistrelle and unidentified bat roosts dating from 2002 to 2020. These records appear to be associated with the residential area of Maesteg, with the closest roost located c. 0.03km east of the proposed route along the A4063.

4.33 The majority of the survey area is not considered to be of high suitability for bats, with limited linear features for commuting and foraging, particularly within the uplands in the east to west section of the route. There is potential for roosting bats associated with the woodland to the south of Croeserw and the trees identifed within F2.

Badger

4.34 The SEWBReC have provided two records of badger *Meles meles* from within the search area, dating from 2007 and 2023. The records are c. 1.8km south and c.1.7km north from the proposed route.

4.35 The majority of habitats within the survey area are considered to be sub-optimal for badgers with limited sett building opportunities given the limited areas of woodland and absence of hedge banks, and open and exposed foraging habitat for this species. Although some limited areas of scrub and woodland superficially provide some suitable habitat, no evidence of badgers was recorded during the Site walkover and this species is considered likely absent.

Dormouse

4.36 No records of dormouse *Muscardinus avellanarius* were identified within the search area. There is limited suitable habitat for dormice on-site with the proposed route passing through one small, isolated block of woodland. This species prefers well-connected areas of ancient and mature woodland and mature hedgerows which are not present within the survey area. Dormice are not considered to be a constraint to proposed works.

Riparian Mammals

4.37 A total of seven records of otter *Lutra lutra* were identified within the search area, dating from 2002 to 2020. The closest records are located c. 1.2km north of the survey area, associated with spraints along the River Afan, and 1.3km west of a characteristic spraint next to a path.

4.38 Whilst small streams are present at the south-western end of the proposed route, these are less well connected to other large watercourses, with the River Afan laying over 3km west. It's possible occasional dispersal of otters through the network of tributaries occurs on-site, but unlikely to support regular foraging or sheltering. Considering the proposals will not directly impact riparian habitats and will be short term, otters are not considered a constraint.

4.39 No records of water vole *Arvicola amphibius* were identified within the search area, although a search of online databases suggests presence within the 10km grid square that includes the survey area

4.40 Several small, connected streams and surrounding boggy purple moor grass and rush habitats in the south-western end of the survey area are suitable to support water vole, with evidence of water vole incidentally identified within the grassland during the walkover (latrine site). Proposals will impact upon suitable terrestrial habitat where evidence has been noted and further consideration is required.

Other Mammals

4.41 Nine records of brown hare *Lepus europaeus* were identified within the search area, dating from 1997 to 2012. The closest record point is located c. 0.01km north of the upland section of the route, associated with five records from between 1997 to 2018 of live adults.

4.42 Open grassland habitats and adjacent woodlands associated with the eastern section and western end of the survey area may support brown hare, with records suggesting they are present locally. However, given the vast areas of open habitat in the surrounding upland area, a significant population is not anticipated within the survey area. Given the scale and short-term nature of the proposed works, this species is not considered to be a constraint.

4.43 A total of 22 records of hedgehog *Erinaceus europaeus* were identified within the search area, dating from 2002 to 2022. The records are mostly associated within the residential areas of Maesteg and the closest record is c. 0.05km east of the proposed route along the A4063.

4.44 The majority of habitats are at higher altitudes in upland locations with open and exposed patchwork of grassland, rushes, gorse and bracken, with lower altitude habitats south of Croeserw dominated by damp tussocky purple moor grass habitat, of low suitability for hedgehogs. If hedgehog is present within the survey area having dispersed from the nearby residential areas, these are unlikely to be present in notable number.

4.45 No records of harvest mouse *Micromys minutus* were identified within the search area. Given upland habitats are dominated by a patchwork of short sheep grazed pasture and scattered rush, these areas are less suitable for harvest mice. Dense continuous tussocky habitats associated with purple moor grass and rush pasture provide greater suitability for this species. Harvest mouse is a Section 42 Species of Principal Importance and is quite restricted in Wales, with records scattered across lowland areas in north, west and south Wales, including a cluster in Bridgend, with coverage from online resources covering the valley surrounding Maesteg. It is possible this species is present in discrete locations.

Birds

4.46 A total of 2873 records of 123 bird species were identified within the search area, dating from 1974 to 2023. Those of potential relevance to habitats on-site include upland and ground/scrub nesting species on the Red and Amber lists of conservation concern, such as: kestrel *Falco tinnunculus,* linnet *Linaria cannabina,* skylark *Alauda arvensis,* ring ouzel *Turdus torquatus,* snipe *Gallinago gallinago,* wheatear *Oenanthe Oenanthe* and whimbrel *Numenius phaeopus.*

4.47 There is widespread ground nesting bird habitat within tussocky purple moor grass, acid grassland and heath, as well as some tree/shrub habitat suitable for nesting birds. A number of generalist and specialist bird species are expected to utilise habitats within the survey area and direct impacts to nesting birds within impact areas will need to be considered further in proposals.

Reptiles

4.48 A total of 73 records of four reptile species were identified within the search area including common lizard *Zootoca vivipara*, adder *Vipera berus,* grass snake *Natrix helvetica* and slow worm *Anguis fragilis.* The closest record is of a common lizard adjacent to the proposed route within the Upper Ogmore Wind Farm section recorded in 2022, and a cluster of three records within 100m of the south-west section for grass

snake, adder and common lizard, dated 2000. The majority of the remaining records are from incidental sightings within and around Measteg within gardens and nearby open spaces.

4.49 Work associated with a nearby planning application for the Afan Valley Adventure Resort (reference: P2018/0493) confirmed a population of common lizard in 2017, as well as the presence of slow-worms and adders within their survey area in 2017.

4.50 Short-grazed sheep pasture is unsuitable for foraging and sheltering reptiles, however the open mosaic of grassland, heathland and scrub habitats across the survey area is highly suitable for reptiles and these species are expected to utilise these habitats along the proposed route. An incidental sighting of common lizard was made at the south-western end of the route within the purple moor grass and rush pasture. Impacts to reptiles will require further consideration.

Amphibians

4.51 A total of 73 records of four amphibian species were identified within the search area, including smooth newt *Lissotriton vulgaris*, palmate newt *Lissotriton helveticus,* common toad *Bufo bufo* and common frog *Rana temporaria*. The closest record was recorded of a common frog c. 0.05km west of the proposed route along the A4063. A further three records of common toads were identified within ponds c. 0.4km south and c. 0.6km west of the southern end of the proposed route.

4.52 A more detailed appraisal of the Site in respect of great crested newt is provided below.

Great Crested Newt

4.53 No records of great crested newts were returned within the data search. A search of online databases shows the closest records to be over 7km south of the survey area.

4.54 Survey work associated with the adjacent application for the development of Y Bryn Wind Farm (reference: P2024/0029) involved bottle trapping and eDNA sampling of 11 ponds during 2022. No evidence of great crested newts or positive tests were found in any of the surveyed ponds.

4.55 Despite spending much of their annual lifecycle within the terrestrial environment, great crested newts are dependent upon the presence of suitable aquatic breeding habitat in order for a population to persist. Three potential breeding ponds appear to be present within a dispersible range of the proposed route, based on OS mapping.

4.56 The open mosaic of habitats would provide suitable habitat for dispersing great crested newts, with no major barriers to dispersal identified between the ponds and the proposed route. Further

assessments would be required to determine the likely presence of this species within the local area and across the proposed route.

Invertebrates

4.57 A total of 935 records of 132 invertebrate species were identified within the search area. Those of potential relevance include nationally scarce species, such as the red-necked footman *Atolmis rubricollis,* and locally important species such as green hairstreak *Callophyrys rubi.* The proposed route does not fall within an Important Invertebrate Area (IIA).

4.58 The mosaic of grassland, scrub, and woodland habitats across the proposed route are likely to support many generalist species, as well as more specialist species. Given the impacts are fairly restricted to a narrow working corridor over the short term, with habitats left to re-establish upon completion, the invertebrate assemblage is not considered to be significantly affected and further surveys were not considered necessary.

5.0 DISCUSSION AND RECOMMENDATIONS

Nature Conservation Designations

Non-statutory Sites

5.1 The south-western end of the proposed route passes through the Caerau West SINC which is designated for its mosaic of valuable habitats. This section of the route involves installation of overhead electrical lines, with all underground work being restricted to the highway areas along existing roads. The work associated with overhead electrical lines will be restricted to small areas along the proposed working corridor to accommodate vehicle tracking and installation of poles. Although habitats will be disturbed during the installation of the pole mounted cables, this will be a short-term impact with ground conditions to be reinstated following the works to allow habitats to re-establish. Full scope of the work and mitigation will need to be discussed and agreed will the local authority.

5.2 Given the nature of the proposals with a discrete working corridor and impact area over a short-term period, no other non-statutory sites outside of the survey area are considered likely to be impacted by proposals.

Habitats and Flora

Habitat

5.3 The central underground part of the proposed route passes through the highway and is associated with existing road networks and is not anticipated to impact any sensitive habitats. The open mosaic of habitats along the remaining sections of the route comprising purple moor grass and rush pasture, upland acid grassland, heathland, scrub and pockets of woodland are considered to be ecologically valuable with the highest value associated with areas of priority habitat 'purple moor grass and rush pasture'.

5.4 As previously discussed, the impacts associated with the overhead electrical lines are expected to be short-term, with installation of between 4-6 poles per day, including clearance of c.15m radius around each pole, dig the required hole and fill, and with a vehicle movement corridor to string up the cables between pole locations (typically 100-130m apart). Habitats would be made good and reinstated following the installation, with a small area to remain clear of scrub/trees around each pole for maintenance and maintain clearance. Some habitat areas will be more sensitive to vehicle access, such as wet purple moor grass and rush pasture which will be more susceptible to damage of the soil and vegetation structure from tracking of heavy machinery. Full

scope of the work and mitigation will need to be discussed and agreed with the local authority for sensitive priority habitats.

Fauna

Bats

5.5 All bat species and their roosts are classified as European Protected Species (EPS) under the Conservation of Habitats and Species Regulations 2017 (as amended).

5.6 Where the proposed route is likely to result in the loss of/impacts to trees, Ground Level Tree Assessments (GLTAs) are required to identify any features with the potential to support roosting bats. Trees with suitable features that are to be impacted will require further aerial inspection or presence/absence surveys to determine their use by bats.

Water vole

5.7 Opportunities for water vole were identified within the south-western end of the proposed route, with evidence of presence found within the purple moor grass during the initial survey. Water voles are protected under Schedule 5 of the the Wildlife and Countryside Act 1981 and are listed as a rare and threatened species under Section 42 of the NERC Act (2006). Otters are protected undern Schedule 5 of the Wildlife and Countryside Act 1981 and are classified as a European Protected Species (EPS) under the Conservation of Habitats and Species Regulations 2017 (as amended).

5.8 A dedicated water vole survey comprising two visits in the spring and summer is recommended within suitable habitat in the south-western section of the proposed route in order to determine confirm presence, coverage, and the potential scale of impacts to these species. The first survey was completed in June and a second survey will be completed in September.

Harvest Mouse

5.9 Harvest mouse is a Section 42 Species of Principal Importance and is quite restricted in Wales. It is possible harvest mouse are present in discrete locations across the surveyed area, particularly in tussocky purple moor grass habitats. The scale of work is not anticipated to have long-term impacts for this species, however precautionary working methods should be set out within a Construction Ecological Management Plan alongside avoidance measures for birds and reptiles, and followed during the construction period.

Birds

5.10 All wild birds are protected from killing and injury, and their nests and eggs are protected from damage and destruction, under the Wildlife and Countryside Act 1981 (as amended). Therefore, any temporary

disturbance or clearance of nesting habitat or features should ideally avoid the period between March and August (inclusive) when nesting birds are most likely to be present.

5.11 Due to the nature of the works which requires drier ground conditions to avoid significant damage to soil structures and third party land, the core period for conducting the proposed work is between March and October. It is therefore likely that not all work will be able to exclude the nesting bird season. During this period, all works will be subject to measures detailed within a Construction Ecological Management Plan (CEcMP) to limit the potential impacts, which includes checks of suitable habitat for nesting birds by a suitably qualified ecologist immediately prior to clearance, with a protective buffer or postponement of works if no alternative while birds are actively nesting until the young have fledged.

Reptiles

5.12 Opportunities for reptiles were confirmed across much of the mosaic of habitats along the proposed route, particularly purple moor grass, rush, heath and scrub habitats. All British reptile species are listed within Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are afforded protection against killing and injury under parts of sub-section 9(1) of the Act. In addition, all British reptile species are species of principal importance under S42 of the NERC Act (2006) in England.

5.13 Given the length of the proposed route, the narrow working corridor and short-term nature of impacts, a full reptile survey is not considered proportionate to the scale of impact, with all habitats to be reinstated after completion. However, to avoid contravention of the Wildlife and Countryside Act, precautionary working methods should be employed throughout the construction period, as set out within a CEcMP, to avoid an offence through killing or injury. This may include, but not limited to, sensitive timing of works, two stage cutting of suitable habitat to allow reptiles to disperse from impact areas, and fingertip searches. A detailed mitigation strategy should be discussed and agreed with the LPA.

Great Crested Newt

5.14 Terrestrial habitats are suitable to support dispersal, refuge and foraging by great crested newts. A pond search identified three ponds within a potential dispersal range, sharing habitat connectivity across the proposed route (see Appendix C). It is recommended that a Habitat Suitability Index (HSI) assessment of each pond be undertaken to determine their suitability to support great crested newt breeding, followed by environmental DNA (eDNA) sampling where possible to determine presence or likely absence. It should be noted these surveys were conducted in June 2024, which found one pond to be dry and two where access was denied.

5.15 The two ponds where access was refused lie c.130m from the underground section of the route which will be restricted to the highway and no suitable terrestrial habitat will be impacted. These ponds lie c. 165m from the closest section of overhead line, across Cymer Road. Given the small impact areas associated with works, the distance and context of the ponds within suitable habitat, and the lack of records and other suitable breeding ponds in the local area, the risk of great crested newts being present is considered very low. Full methods and outcomes will be reported within a Great Crested Newt Survey Report and appended to any subsequent impact assessment.

Summary of Recommendations

5.16 Based on the ecological constraints identified above, Table 2 summarises recommendations for further work necessary to determine the need for, and scope of, any avoidance, mitigation and/or compensation measures to address potential adverse effects of development. The outcome of this further work will inform an EcIA of the final scheme.

Table 2. Recommendations for further investigation/survey

Ecological Feature	Further Work	Applicable Timescales
Bats	Ground level tree assessments of any trees to be impacted	Anytime
Water vole	Dedicated water vole surveys of watercourses and suitable terrestrial habitat	April - October
Harvest Mouse	Precautionary working methods	-
Birds	Precautionary working methods	-
Reptile	Precautionary working methods (to be agreed with LPA ecologist)	-
Great crested newts	Habitat suitability Index (HSI) and eDNA sampling of ponds	Mid-April – end of June

Opportunities for Ecological Enhancement

5.17 Given the nature of proposals and the predominantly short-term impacts of the works there is considered to be a reduced requirement and opportunities for ecological enhancement. However, to promote adherence to the NPPF, Bridgend Local Development Plan and Neath Port Talbot Local Development Plan, opportunities for ecological enhancement include:

- Several bird and bat boxes on trees along the proposed route
- Additional tree planting

6.0 CONCLUSIONS

6.1 Confirmed and potential ecological constraints associated with the proposed route have been identified as the presence of:

- **Caerau West SINC** – within the proposed route
- **Roosting bats** – potential for bat roosting potential within trees to be impacted
- **Water vole** – evidence of presence and suitable habitat on-site
- **Harvest mice** – suitable nesting habitat
- **Nesting birds** – suitable ground and scrub nesting habitat
- **Reptiles** – incidental sighting and suitable habitat on-site
- **Great crested newt** – HSI/eDNA surveys of ponds within dispersal range

6.2 The following additional investigation/survey work is recommended to inform an evidence-based EcIA of the proposed development, such that suitable ecological impact avoidance, mitigation and/or compensation measures may be adopted:

- Consultation with LPA with regard to potential effects on SINC, reptiles, water voles
- Ground Level Tree Assessments (GLTAs) for trees likely to be impacted
- Water vole survey of suitable habitats
- Great crested newt HSI/eDNA survey work
- Harvest mice precautionary working methods
- Nesting bird precautionary working methods
- Reptile precautionary working methods

6.3 Recommendations for ecological enhancement measures that could be delivered as part of development at the Site have been provided here-in, which will aid accordance with Bridgend County Borough Council and Neath Port Talbot County Borough Council.

6.4 No overriding constraints to development have been identified subject to the implementation of appropriate mitigation measures in respect of confirmed ecological constraints, and further recommended survey work.

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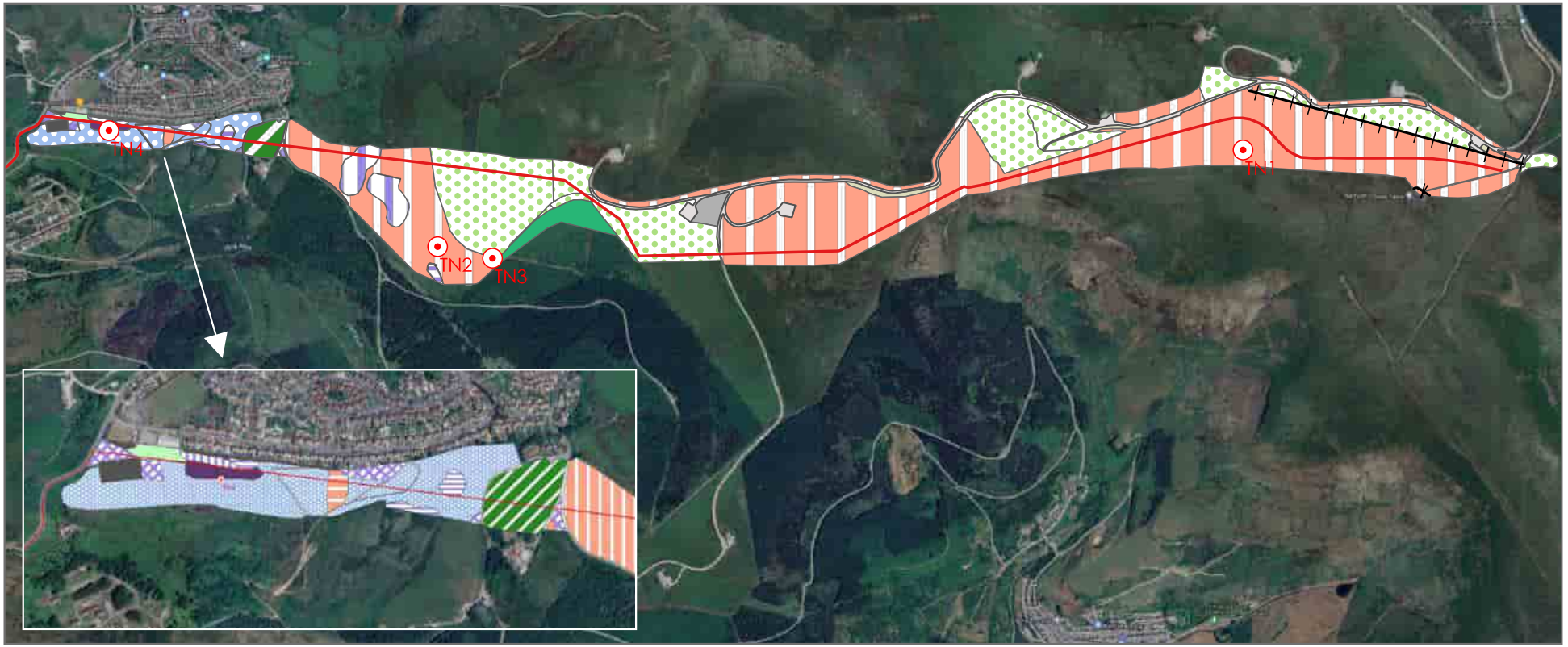
Appendix A

Habitats Plan



- Proposed route
- Purple moor-grass and rush pastures (f2b)
- Upland acid grassland (g1b)
- Bracken (g1c)
- Upland rush pasture (g1b, 14, 102)
- Heathland and shrub (h)
- Bramble scrub (h3d)
- Mixed scrub (h3h)
- Willow scrub (h3j)
- Sparsely vegetated land (s)
- Developed land; sealed surface (u1b)
- Buildings (u1b5)
- Artificial unvegetated, unsealed surface
- Other broadleaved woodland (w1g)
- Coniferous woodland (w2)
- Fence
- Field reference
- Target note

0 400 800 m

TN1: Upland acidic grassland with heathland indicator species
TN2: Upland acidic grassland with a lush sward of herb species
TN3: Strip of healthland
TN4: Area of burnt heathland

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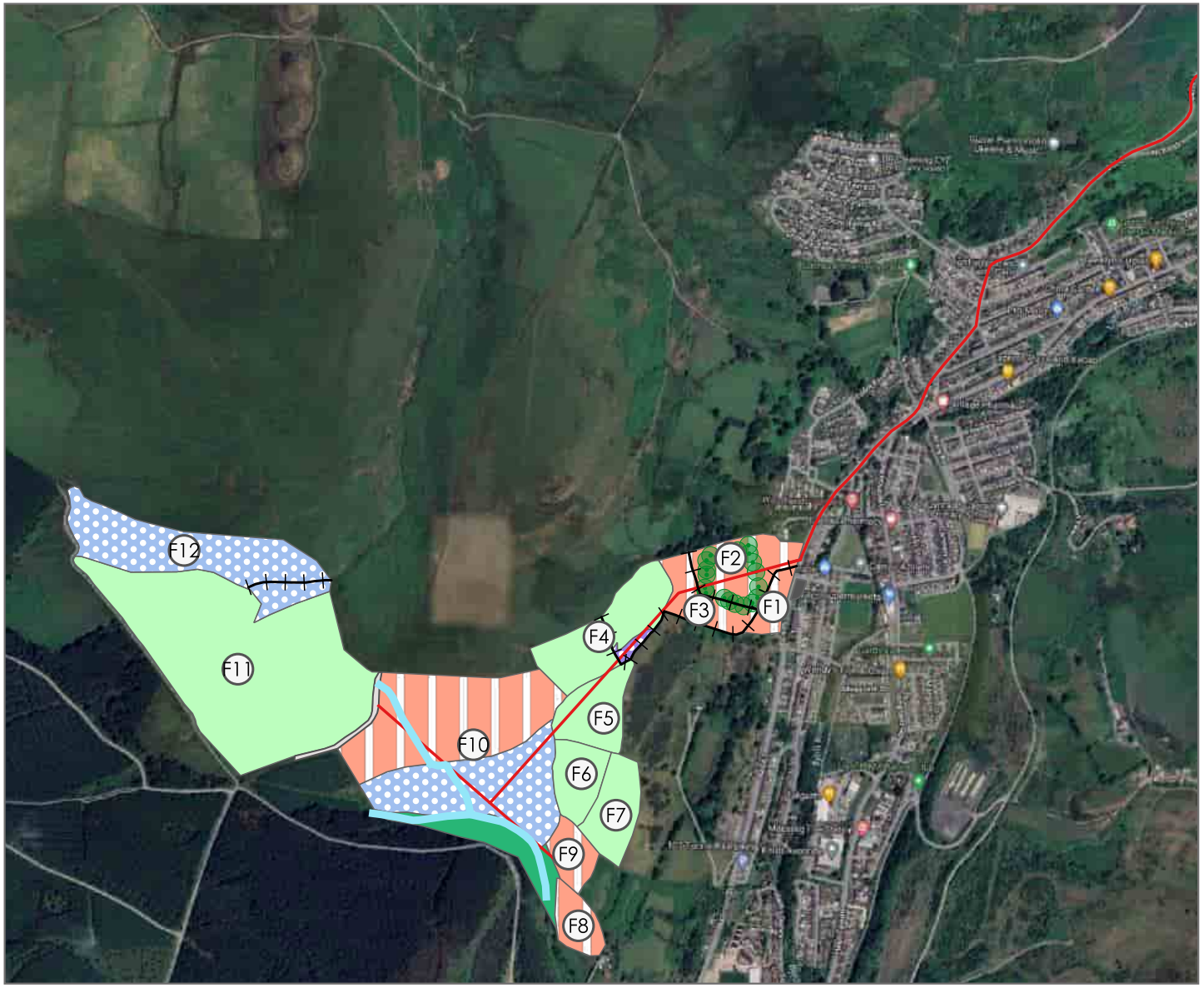
Project	Upper Ogmore Wind Farm	Date	July 2024	Drawing No.	CSA/6981/100
Drawing Title	Habitats Plan	Scale	Refer to scale	Rev	-
Client	Fisher German	Drawn	BK	Checked	CT



N

- Proposed route
- Purple moor-grass and rush pastures (f2b)
- Upland acid grassland (g1b)
- Modified grassland (g4)
- Gorse scrub (h3e)
- Coniferous woodland (w2)
- Rivers and streams (r2)
- Fence
- Field reference
- Individual trees

0 400 800 m

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Project	Upper Ogmore Wind Farm	Date July 2024	Drawing No. CSA/6891/101
Drawing Title	Habitats Plan	Scale Refer to scale	Rev -
Client	Fisher German	Drawn BK	Checked CT

Appendix B

Legislation and Planning Policy

1.1. The **Conservation of Habitats and Species Regulations 2017** (as amended) make prescriptions for the designation and protection of Sites of Community Importance ('European sites', i.e. Special Areas of Conservation and Special Protection Areas) and European Protected Species (EPS). The latter include all native bats, great crested newts, dormice, otters and certain reptiles, listed under Annex II of the Regulations. Following the UK's departure from the European Union, the provisions of the Regulations have been retained through enactment of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which came into force on 31 December 2020.

1.2. The **Wildlife and Countryside Act 1981** (as amended, principally by the Countryside and Rights of Way Act 2000) forms the basis for protection of statutory designated sites of national importance (e.g. Sites of Special Scientific Interest; SSSIs) and native species that are rare and vulnerable in a national context. Additionally, badgers are protected under the **Protection of Badgers Act 1992**.

1.3. The **Environment (Wales) Act 2016** sets out the required for the 'sustainable management of natural resources' together with new ways of working to achieve this. Section 6 under Part 1 of the Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty (the S6 duty) for public authorities in the exercise of functions in relation to Wales. The S6 duty requires that public authorities must seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and promote the resilience of ecosystems. Section 7 of Part 1 replaces the duty in section 42 of the NERC Act 2006, to publish and revise lists of living organisms and types of habitat in Wales of key significance, to sustain and improve biodiversity.

1.4. Section 40(1) of the **Natural Environment and Rural Communities (NERC) Act 2006** (as amended) states that each public authority, "must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving and enhancing biodiversity." This legislation makes it clear that planning authorities should consider impacts to biodiversity when determining planning applications, with particular regard to the Section 42 (S42) lists of 55 habitats and 558 species of principal importance.

1.5. The Planning Policy Wales (Welsh Government, 2024) sets out the government planning policies for Wales and how they should be applied. With regards to ecology and biodiversity, Chapter 6: Distinctive and Natural Places, states that development plan strategies, policies and development proposals should be formulated to look at the long term protection and enhancement of special characteristics and intrinsic qualities of places, be these of natural, historic and built environments, ensuring their longevity in the face of change. This means both protecting and enhancing landscapes, habitats, biodiversity,

geodiversity and the historic environment in their own right, as well as other components of the natural world, such as water resources or air quality. Biodiversity loss should be reversed, pollution reduced, environmental risks addressed and overall resilience of ecosystems improved.

1.6. The PPW recognises the planning system has a key role to play in helping to reverse the decline in biodiversity and increase the resilience of ecosystems. Paragraph 6.4.3 sets out the principles that local planning authorities should apply when determining planning applications:

- Support the maintenance and enhancement of biodiversity and the resilience of ecosystems.
- Ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats, including the most recent targets set out in the 2022 UN Global Biodiversity Framework;
- Ensure statutorily and non-statutorily designated sites and habitats are properly protected and managed and their role at the heart of resilient ecological networks is safeguarded;
- Safeguard protected species and species of principal importance and existing biodiversity assets from direct, indirect or cumulative adverse impacts that affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water, air and soil, including peat; and
- Secure the maintenance and enhancement of ecosystem resilience and resilient ecological networks by improving diversity, extent, condition, and connectivity.

1.7. Technical Advice Note 5: Nature Conservation and Planning (Welsh Assembly Government, 2009), which is referred to by the PPW, provides further guidance in respect of statutory obligations for protecting and enhancing biodiversity and geological conservation and their effects within the planning system and is a material planning consideration.

1.8. Local planning policies of relevance to ecology, biodiversity and/or nature conservation have been set out in Table 1 below.

Table 1. Summary of regional and local planning policy relating to ecology

Policy	Summary
Replacement Bridgend Local Development Plan 2018 to 2033	
Sp17: Conservation and Enhancement of the Natural Environment	Development which will conserve and, wherever possible, enhance the natural environment of the County Borough will be favoured. Development proposals will not be permitted where they will have an adverse impact upon: 1) The integrity of the County Borough's country side; 2) The character of its landscape; 3) Its biodiversity and habitats; and

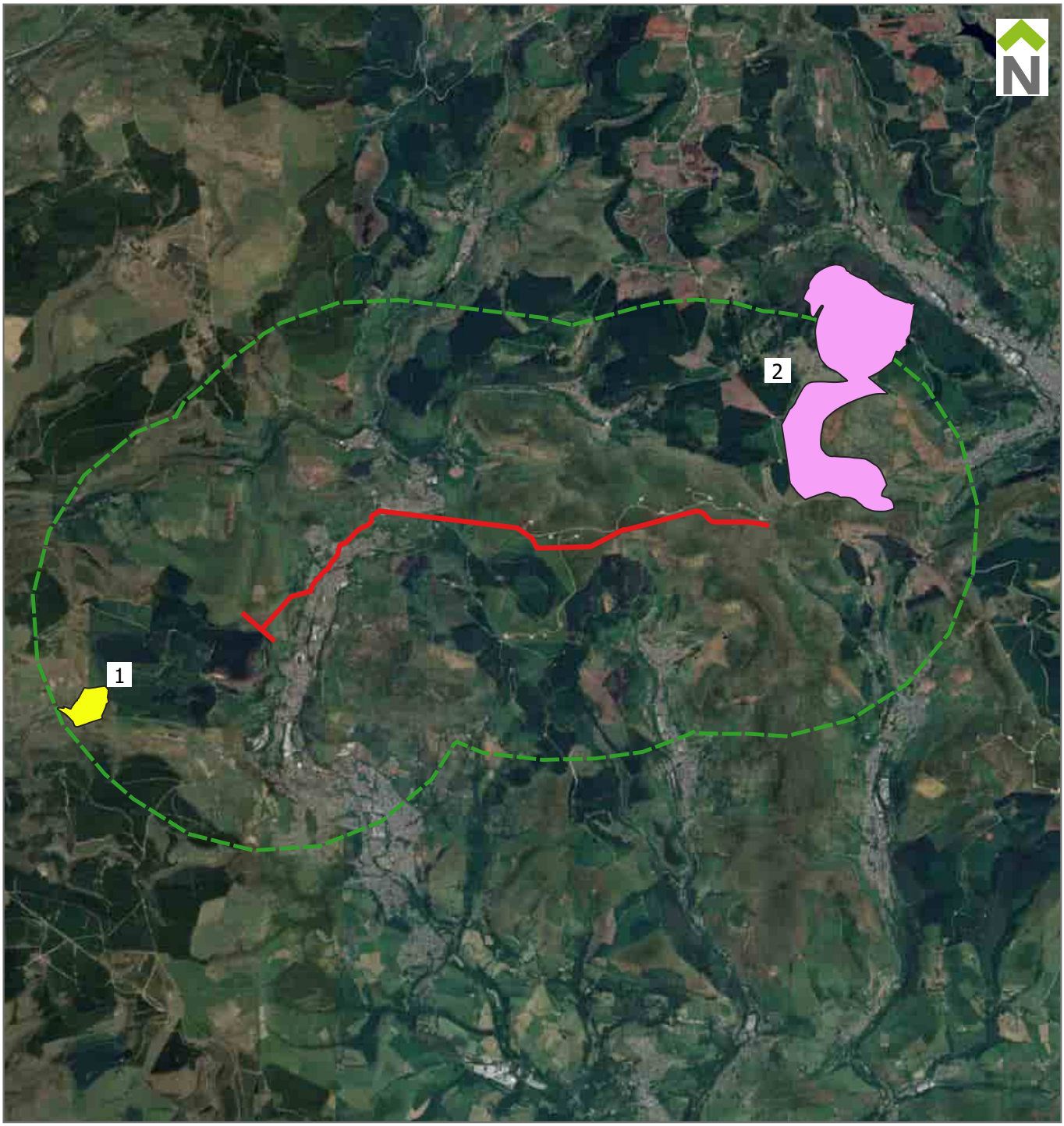
Policy	Summary
	4) The quality of its natural resources including water, air and soil. Areas having a high and/or unique environmental quality will be protected and the following strategically important areas within the County Borough will specifically be protected from inappropriate development which directly or indirectly impacts upon them: • SP17(1) Natura 2000 Network Sites (including Special Areas of Conservation (SACs); • SP17(2) Sites of Special Scientific Interest (SSSIs); • SP17(3) Kenfig and Merthyr Mawr National Nature Reserves (NNRs); • SP17(4) The Glamorgan Heritage Coast. • SP17(5) Mynydd Margam Registered Historic Landscape. The weight to be afforded to environmental designations in the determination of relevant planning applications will be based on their statutory or non-statutory status and geographical scale of designation. Proposals likely to have direct or indirect adverse effects on Special Areas of Conservation (SACs), Special Protection Areas (SPAs) or Ramsar sites, must be subject to Habitats Regulations Assessment (HRA). This includes development proposals on allocated sites where this plan indicates a project level HRA is required and any other development proposals likely to have adverse effects on SACs/SPAs/Ramsar sites.
DNP5: Local and Regional Nature Conservation Sites	Development within or adjacent to a: DNP5(1) Local Nature Reserve (LNR); DNP5(2) Site of Importance for Nature Conservation (SINC); or DNP5(3) Regionally Important Geodiversity Site (RIGS); must be compatible with the nature conservation or scientific interest of the area, whilst promoting their educational role. Developments which would have an adverse impact on these sites will not be permitted unless the benefits associated with the development can be demonstrated to outweigh the harm and/or the harm can be reduced or removed by appropriate mitigation and/or compensation measures.
DNP6: Biodiversity, Ecological Networks, Habitat and Species	All development proposals must contribute to biodiversity net gain and improved ecosystem resilience, as demonstrated through planning application submissions. Development proposals must maintain, protect and enhance biodiversity and ecological networks / services. Particular importance must be given to maintaining and enhancing the connectivity of ecological networks which enable the dispersal and functioning of protected and priority species. Development proposals that result in an adverse effect on the connectivity of biodiversity and ecological networks and/or have a significant adverse effect on the resilience of protected habitats and species will only be permitted where: 1) The need for development outweighs the nature conservation importance of the site;

Policy	Summary
	2) It can be demonstrated that there is no satisfactory alternative location for the development which avoids nature conservation impacts; 3) A functional connected element of the natural resource is retained as part of the design of the development; and 4) Any unavoidable harm is minimised by effective mitigation to ensure that there is no reduction in the overall nature conservation value of the area. Where this is not feasible, compensation measures designed to conserve, enhance, manage and, where appropriate, restore natural habitats and species must be provided. Compensatory provision must be of comparable or greater ecological value to that lost as a result of the development. A Project Level Ecological Impact Assessment (EcIA) must accompany development proposals on allocated sites with any identified likely significant adverse effects (premitigation) in relation to SA Objective 9 (Biodiversity, Geodiversity and Soil).
DNP7: Trees, Hedgerow and Development	Development that would adversely affect trees, 'special trees', woodlands and hedgerows of public amenity or natural/cultural heritage value, or that provide important ecosystem services, will not normally be permitted. Development proposals on sites containing or adjacent to, trees will be required to assess the trees in line with BS 5837:2012 Trees in relation to design, demolition and construction. The assessment must include: 1) a tree survey; 2) an arboriculture impact assessment; 3) an arboriculture method statement; 4) and/or a tree protection plan. Where trees are to be replaced a scheme for tree replacement must be agreed prior to the commencement of development, including details of planting and aftercare. If tree works are recommended, the works must comply with BS 2998:2010 Tree Works. Recommendations.
Nath Port Talbot Local Development Plan (2011-2026)	
Policy SP 15: Biodiversity and Geodiversity	Important habitats, species and sites of geological interest will be protected, conserved, enhanced and managed through the following measures: 1. The identification of the following Internationally and Nationally designated sites within the County Borough to enable their protection: (a) Special Areas of Conservation (SACs) and Ramsar Sites; (b) Sites of Special Scientific Interest (SSSIs); (c) National Nature Reserves (NNRs). 2. The identification and protection of sites of regional and local importance; 3. The protection of important natural heritage features. LDP Objective: OB 15
Policy EN6: Important Biodiversity and Geodiversity Sites	Development proposals that would affect Regionally Important Geodiversity Sites (RIGS), Local Nature Reserves (LNRs), Sites of Interest for Nature Conservation (SINCs), sites meeting SINC criteria or sites supporting Local Biodiversity Action Plan (LBAP) site. or S42 habitats or species will only be permitted where:

Policy	Summary
	1. They conserve and where possible enhance the natural heritage importance of the site; or 2. The development could not reasonably be located elsewhere, and the benefits of the development outweigh the natural heritage importance of the Site. Mitigation and/or compensation measures will need to be agreed where adverse effects are unavoidable.
Policy EN 7: Important Natural Features	Development proposals that would adversely affect ecologically or visually important natural features such as trees, woodlands, hedgerows / field boundaries, watercourses or ponds will only be permitted where: 1. Full account has been taken of the relevant features in the design of the development, with measures put in place to ensure that they are retained and protected wherever possible; or 2. The biodiversity value and role of the relevant feature has been taken into account and where removal is unavoidable, mitigation measures are agreed.

Appendix C

Desk Study Information



Site boundary

Sites of Special Scientific Intere

Local Nature Reserve (LNR)

National Nature Reserves (NNR

Distance and direction from the Site:

1. Bryn Tip LNR c. 2.4km south-west
2. Mynydd Ty-isaf SSSI c.460m north-east

0 1,000 2,000 m

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Project	Upper Ogmore Wind Farm	Date: June 2024	Drawing No.: CSA/6891/105
Drawing Title	National Designations 3km Search	Scale: Refer to scale	Rev: -
Client	Fisher German	Drawn: GG	Checked: BK

- Proposed route
- 10km buffer
- Ramsar
- Special Protected Areas (SPA)
- Special Areas of Conservation (SAC)

Distance and direction from the Site:

1. Blackmill Woodlands c. 8.7km south
2. Cefn Cribwr Grassalnd c. 10km south

0 2,500 5,000 m

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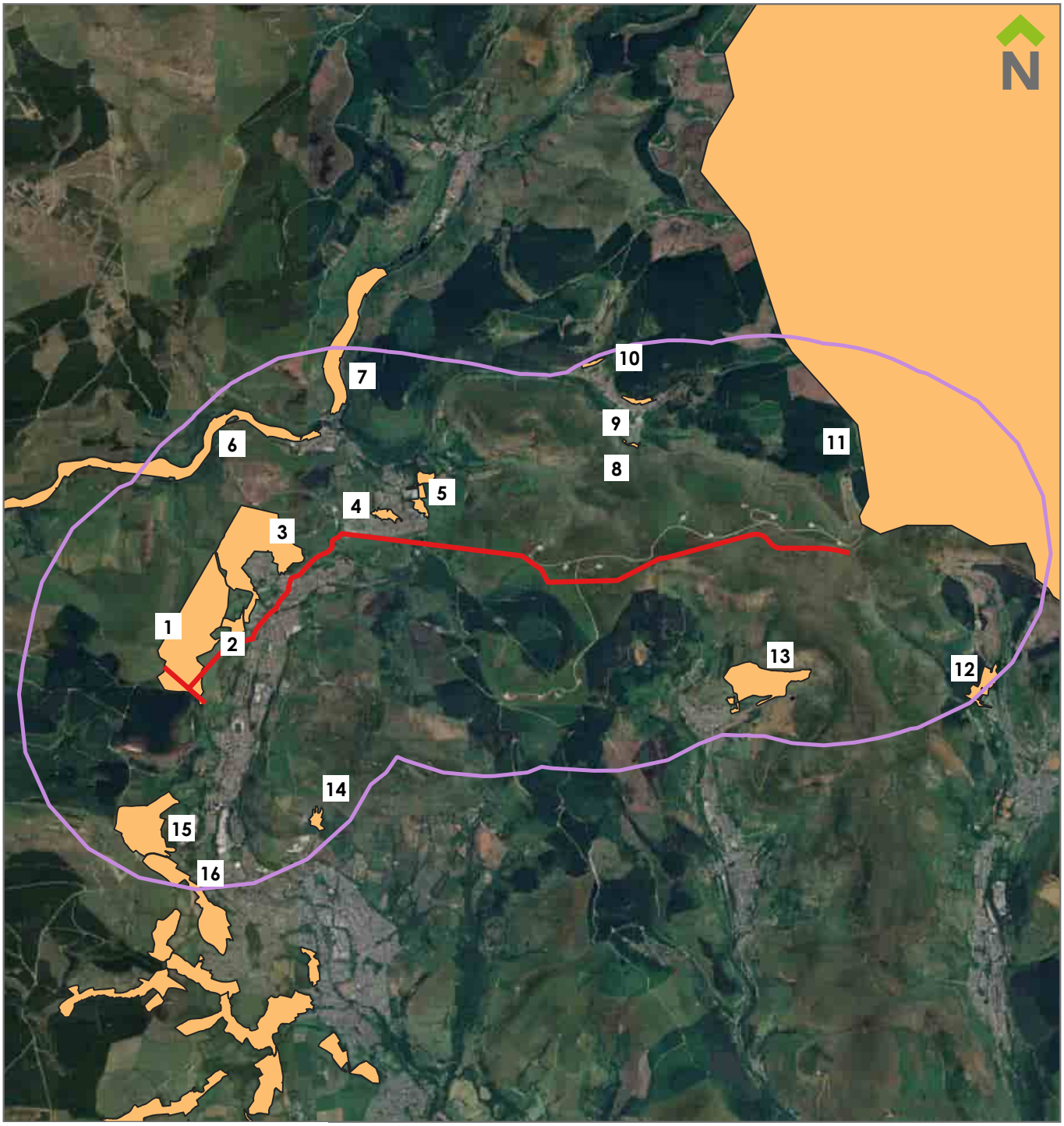
Project: Upper Ogmore Wind farm		Date: August 2024	Drawing No.: CSA/6891/106
Drawing Title: International Designations 10km Search		Scale: Refer to scale	Rev: -
Client: Fisher German		Drawn: BK	Checked: CT



Site boundary

2km buffer

SINCs

Ref	SINC	Distance from route
1	Caerau West	On-site
2	Tudor West	c. 0.09km north
3	Caerau North	c. 0.08km west
4	Parc Croeserw	c. 0.2km
5	Nant y Wern	c. 0.3km north
6	Afan Mineral Railway	c. 1.2km north
7	Scotch Street	c. 1.4km north

Ref	SINC	Distance from route
8	Scotch Street	c. 1km north
9	Caroline Street	c. 1.6km north
10	Gwynfi Street	c. 2km north
11	Rhondda Cynon Taf	c. 0.3km east
12	Nant-y-Moel Farm	c. 2km south
13	Blaengarw North-East	c. 1.2km south

0 2,000 4,000 m

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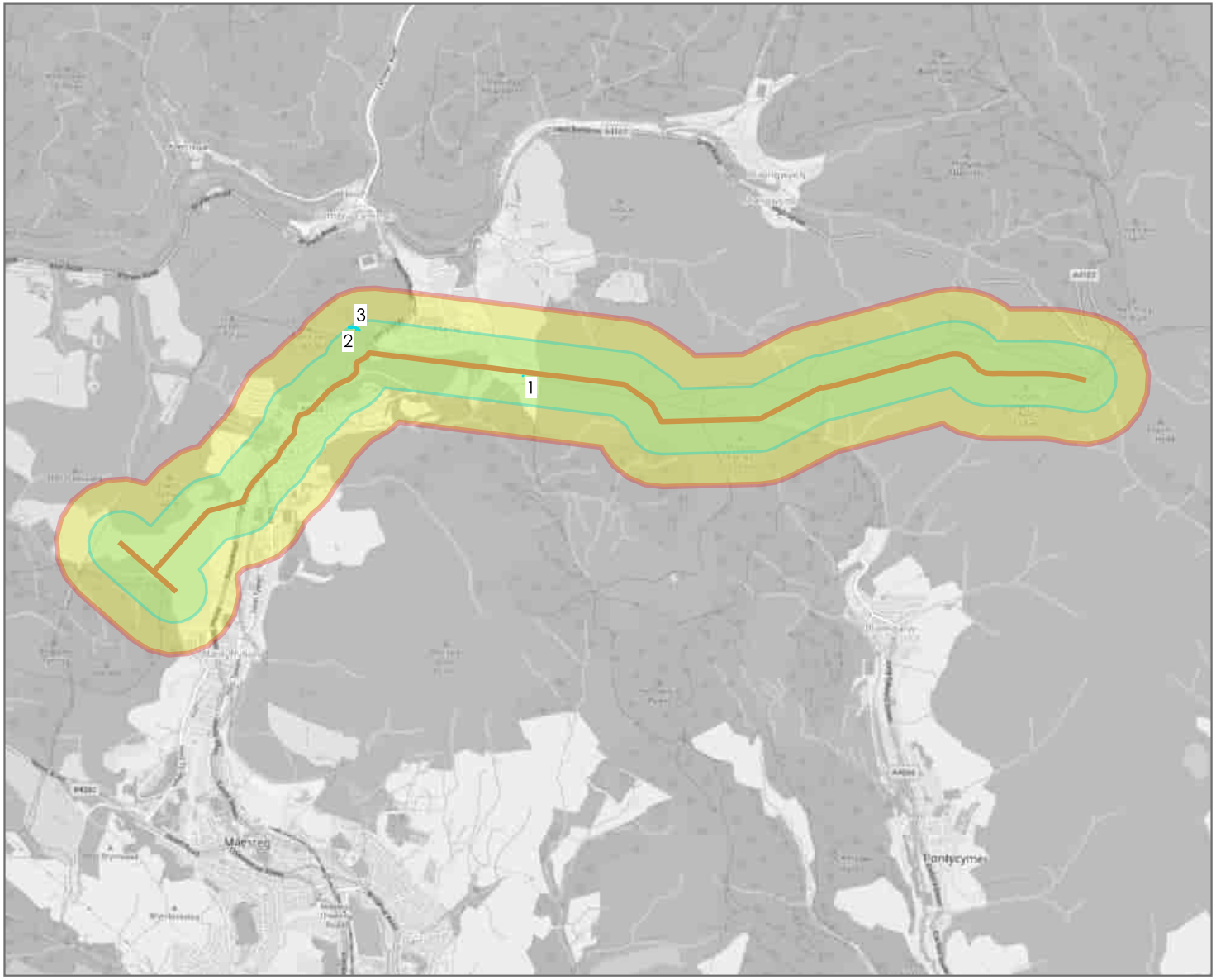
Project: Upper Ogmore Wind Farm		Date: July 2024	Drawing No.: CSA/6981/104
Drawing Title: Non-designated Sites		Scale: Refer to scale	Rev: -
Client: Fisher German		Drawn: BK	Checked: CT



N

- Site boundary
- 250m buffer
- 500m buffer
- Ponds:
  1. On-site
  2. c.160m north-west
  3. c. 210m north-west

0 1,000 2,000 m

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Project	Upper Ogmore (Archae)	Date	May 2024	Drawing No.	CSA/6891/103
Drawing Title	500m Pond Search	Scale	Refer to scale	Rev	-
Client	Fisher German	Drawn	GG	Checked	XX

Appendix D

Habitat Summary Table

Table 1. UK Habitat Classification Survey Results (Areas Habitats)

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
E-W section	Upland rush pasture	g1b, 14, 102	Upland rush pasture was only present along the northern east to west section and comprised a grass-dominated habitat characterised by the presence of scattered soft rush *Juncus effusus* (secondary code 14; scattered rushes) and generally species poor vegetation influenced by the grazing pressure of sheep (secondary code 102; sheep grazed) Dominant grasses included perennial rye grass *Lolium perenne*, tufted hair grass *Deschampsia cespitosa*, red fescue *Festuca rubra* and sweet vernal grass *Anthoxanthum odoratum*. The rushes appear in varying amounts, from occasional separate tussocks to dominating thick swards. Areas of the upland rush pasture appear to be of an improved nature, with frequent herb species including red clover *Trifolium pratense*, hawkbit *Leontodon sp* and creeping buttercup *Ranunculus repens*.	
E-W section	Upland acid grassland	g1b	The upland acidic grassland varied between spongy vegetation with frequent mosses to tussocky vegetation of soft rush, purple moor grass *Molinia caerulea* and matt grass *Nardus stricta*. The underlying vegetation included grass species such as sheep's fescue *Festuca ovina.* meadow grass *Poa sp.,* perennial rye grass and bent grasses *Agrostis sp.*, as well as a number of frequent herb species including marsh thistle *Cirsium palustre,* willowherb *Epilobium sp.,* sheep's sorrel *Rumex acetosella.* The upland acidic grassland habitat across the survey area showed variation in sward diversity and vegetation, with some areas dominated by matt grass whilst others were dominated by purple moor grass. The upland areas surrounding Target Note 1 (TN1) (see Habitats Plan; see Appendix A) were characterised by scattered heathland indicator species (<25% cover) including heather *Calluna vulgaris*, bilberry *Vaccinium myrtillus* and bracken *Pteridium aquilinum*.	

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
			On the steep slope on the western aspect (TN2) where sheep grazing is not present, the grassland exhibited a lusher sward with a greater species diversity and higher frequency of herb species. Frequent grasses included purple moor grass, Yorkshire fog and tufted hair grass, with herb species including as heath bedstraw *Galium saxatile*, angelica *Angelica sylvestris* and tormentil *Potentilla erecta,* as well as scattered soft rush and at least one other species of rush *Juncus sp*. Heathland indicator species were also present in low abundances, as well as patches of bramble *Rubus fruticosus agg*. and willow *Salix sp.* scrub.	
E-W section	Purple moor grass and rush pasture	f2b	The priority habitat 'purple moor grass and rush pasture' comprises a similar composition to the upland acidic grassland and upland rush pasture habitats identifed on-site. This priority habitat is often associated with a rich sward of species including devils-bit scabious *Succisa pratensis* and ragged robin *Lychnis flos-cuculi* with a number of sedges and rushes, with spark-flowered rush *Juncus acutiflorus* usually abundant. Due to the botanical survey being undertaken early in the season for some plant species it is possible that a greater number of these were present within the sward than could be identified at the time of survey. The area south of Brynheulog Road has been classified as purple moor grass and rush pasture based on the dominance of purple moor grass and presence of a greater number of herb species compared to other similar habitats across the survey area, these included tormentil *Potentilla erecta,* foxglove *Digitalis purpurea* and heath bedstraw *Galium saxatile*. Data Map Wales priority habitat maps also identified this area as purple moor grass and rush pasture of high sensitivity.	

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
E-W section	Heathland	h1 (105)	Two areas of heathland were identified within the survey area, see target note TN3 and TN4 on the Habitats Plan; Appendix A. Along the northern stretch of the route an area at TN3 of c.10m in length and c. 3m in width existed along the boundary of upland acidic grassland to the west and plantation conifer woodland to the east. Dominant species included heather and gorse *Ulex europaeus,* with frequent bilberry and foxglove at a lower abundance. To the south of Croeserw an area of burnt heathland (TN4) existed amongst purple moor grass and rush pasture (secondary code 105).	 *TN3 heathland*  *TN4 burnt heathland*

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
F1	Upland acid grassland	g1b	Unmanaged acid grassland with individual mature trees and a quarry. Access was limited to the field due to the topography, so it was surveyed from the southern boundary of Field F2. The grassland species were dominated by sweet vernal grass, sheep's fescue and purple moor grass. Herb species present included fox gloves, sheep's sorrel, tormentil, hoary plantain and hard fern.	
F2	Upland acid grassland	g1b	Field F2 had a short sward, managed by sheep grazing. Occasional ant hills and moss hills are present throughout the field. Species composition includes sheep sorrel, tormentil, field woodrush, common sorrel, marsh thistle, and sweet vernal grass. A band of mature oak trees are present along the central spine of the field and along the northern boundary between Field F2 and F3.	
F3	Upland acid grassland	g1b	Sheep grazed acid grassland with similar species composition to Field F2. Grass species were dominated by sweet vernal grass with occasional field wood rush and spring sedge. Dense bracken stands were present within the western sections of the field and continued down to the boundary of Field F1.	

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
F4	Modified grassland	G4	Sheep grazed modified grassland, with evidence of previous draining. The species composition and diversity was significantly lower than adjacent fields south and east of Field F4. Sward height is short and consistent throughout the field with occasional patches of soft rush. Grass species is dominated by perennial rye with very few other species. Herb species were rare in places, species included field wood rush, common sorrel, blinks and creeping buttercup.	
F4a	Gorse scrub	h3e	An area of dense gorse scrub is present within the south-western boundary of Field F4 adjacent to Field F5.	
F5, 6, 7	Modified grassland	g1b6	Fields F5 to F7 were modified in nature and heavily grazed by sheep and horses. In areas where grazing was less intense, such as the north-west corner of Field F7, species composition was in line with that of upland acid grassland with occasional moss covered ant hills. Sweet vernal grass dominated the grass species diversity with occasional sheep's fescue, field wood rush and spring sedge also present. Herb species included yarrow, common sorrel and sheep's sorrel.	

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
F8	Upland acid grassland	g1b	Upland acid grassland, abundant ant hills, sheep grazed. The upland acidic grassland varied between spongy vegetation with frequent mosses to tussocky vegetation of soft rush, purple moor grass *Molinia caerulea* and matt grass *Nardus stricta*. The underlying vegetation included grass species such as sheep's fescue *Festuca ovina.* meadow grass *Poa sp.,* perennial rye grass and bent grasses *Agrostis sp.*, as well as a number of frequent herb species including marsh thistle *Cirsium palustre,* willowherb *Epilobium sp.,* sheep's sorrel *Rumex acetosella. T*he field was currently managed through the grazing of sheep with frequent ant hill across its entirety.	
F9	Upland acid grassland	g1b	Similar to the composition of Field F1, Field F9 was managed through sheep grazing and had occasional ant hill and moss patches across its entirety. Sweet vernal grass dominated the grass species composition with red fescue and Yorkshire fog also present. Herb species included sheep sorrel, tormentil, common sorrel, heath bedstraw, foxglove, greater plantain and common dog violet. A bank to the east of the field leading down to the access track had abundant gorse, bracken and bramble present along its entirety.	
F10	Purple moor-grass and rush pasture and upland acid grassland	f2b	A large area of purple moor grass dominated habitat with very few other species present. Towards the northern extremities of the field the species composition transitioned to areas of dense soft rush pasture where water vole latrines were noted. The field had no sign of recent management with historic disused stone fence posts bounding the field to the east and north. Small patches of bracken and gorse are present on the valley side to the south of the field leading down to the stream corridor. Other less frequent species present included heath wood-rush,	

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
F11	Upland rush pasture	g3c8 14	The upland rush pasture comprised a grass-dominated habitat characterized by the presence of soft rush *Juncus effusus* and generally species poor vegetation influenced by the grazing pressure of sheep. Dominant grasses included perennial rye grass *Lolium perenne,* tufted hair grass *Deschampsia cespitosa,* red fescue *Festuca rubra* and sweet vernal grass *Anthoxanthum odoratum.* The rushes appear in varying amounts, from occasional separate tussocks to dominating thick swards. Areas of the upland rush pasture appear to be of an improved nature, with frequent herb species including red clover *Trifolium pratense*, hawkbit *Leontodon sp* and creeping buttercup *Ranunculus repens*	
F12	Purple moor-grass and rush pasture	f2b	Similar to that of field F10 with dense areas of purple moor grass. Wet, boggy ditches were present within areas of the field and were dominated by rush species including, spiked rush, soft rush, club rush and hare's tail cotton grass.	

Appendix E

Habitats and Flora Species List

Table 1. Habitat Polygons

Site Name	Upper Ogmore Windfarm Section						
Survey Date and Surveyor(s)	30/04/2024						
Scientific Name	**Common Name**	Upland acidic grassland	Upland rush pasture	Sparsley vegetated land	Scrub	Purple moor grass	Broadleaved woodland
Ferns							
Asplenium scolopendrium	Hart's-tongue fern						x
	Fern						x
Pteridium aquilinum	Bracken	x				x	x
Herb Species							
Anthriscus sylvestris	Cow parsley	x					x
Bellis perennis	Daisy	x					x
Calluna vulgaris	Heather	x				x	
Cerastium sp.	Common mouse-ear	x		x			
Chamerion angustifolium	Rosebay willowherb	x				x	x
Cirsium arvense	Creeping thistle		x			x	
Cirsium palustre	Marsh thistle	x	x	x			
Cotoneaster sp.	Cotoneaster						x
Digitalis purpurea	Foxglove	x				x	
Epilobium sp.	Willowherb	x	x				
Equisetum arvense	Field horsetail	x					x
Filipendula ulmaria	Meadowsweet						x
Galium aparine	Cleavers	x					
Galium saxatile	Heath bedstraw					x	
Galium sp.	Bedstraw	x					
Heracleum sphondylium	Hogweed	x					x
Hyacinthoides x *massartiana*	Non-native bluebell	x				x	x
Hypericum sp.	St John's-wort	x					
Leontodon sp.	Hawkbit	x		X			
Lotus corniculatus	Common bird's-foot-trefoil	x					
Lotus pedunculatus	Greater Bird's-foot-trefoil					x	
Plantago lanceolata	Ribwort plantain	x					
Potentilla anserina	Silverweed	x					x
Potentilla erecta	Tormentil	x				x	
Potentilla reptans	Creeping cinquefoil	x					x
Ranunculus repens	Creeping buttercup	x	x	x			x
Rumex acetosa	Common sorrel					x	
Rumex acetosella	Sheep's sorrel	x	x			x	
Rumex sp.	Dock	x					
Scorzoneroides autumnalis	Autumn hawkbit					x	
Senecio jacobaea	Common ragwort	x					
Taraxacum officinale agg.	Dandelion	x		x		x	
Trifolium pratense	Red clover		x				
Trifolium sp.	Clover	x	x	x		x	x
Urtica dioica	Common nettle	x	x	x			x
Vaccinium myrtilus	Bilberry	x					
Vicia sativa	Common vetch	x					
Sedges and Rushes							
Carex sp.	Sedge		x				
Carex flacca	Glaucous sedge	x				x	
Juncus sp.	Rush	x					
Juncus effusus	Soft-rush	x	x	x			
Juncus inflexus	Hard rush					x	x
Luzula campestris	Field wood-rush	x				x	
Luzula multiflora	Heath wood-rush	x	x				
Grasses							
Agrostis sp.	Bent grass					x	x
Agrostis stolonifera	Creeping bent		x				
Angelica sylvestris	Wild angelica	x				x	
Anthoxanthum odoratum	Sweet vernal-grass	x				x	
Briza media	Quaking grass	x					
Dactylis glomerata	Cock's-foot	x				x	x
Deschampsia cespitosa	Tufted hair-grass	x	x				x
Festuca sp.	Fescue	x				x	
Holcus lanatus	Yorkshire-fog	x				x	
Lolium perenne	Perennial rye-grass	x	x	x	x		x
Molinia caerulea	Purple moor-grass	x				x	
Nardus stricta	Mat-grass	x	x				
Schedonorus arundinaceus	Tall fescue	x					
Schedonorus pratensis	Meadow fescue	x					
Woody Species							
Coniferous							
Larix decidua	Larch						x
Picea sp.	Spruce	x					x
Pinus sp.	Pine						x
Broadleaved							
Acer pseudoplatanus	Sycamore						x
Corylus avellana	Hazel						x
Fagus sylvatica	Beech						x
Ilex aquifolium	Holly						x
Quercus robur	Pedunculate oak				x		
Quercus sp.	Oak	x			x		x

Scientific Name	Common Name						
		Upland acidic grassland	Upland rush pasture	Sparsley vegetated land	Scrub	Purple moor grass	Broadleaved woodland
Rubus fruticosus agg.	Bramble	x			x		x
Salix caprea	Goat willow	x				x	x
Salix sp.	Willow	x			x		
Sorbus aucuparia	Rowan						x
Ulex europaeus	Gorse	x					

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Annex 4.2
GCN Survey Report

Great Crested Newt Report

November 2024

Upper Ogmore Wind Farm, Maesteg

Prepared by
CSA Environmental

On behalf of
Fisher German

Report No: CSA/6891/02

CSA environmental

masterplanning | ecology | landscape | heritage

Report Reference	Date	Revision	Prepared by	Approved by	Comments
CSA/6891/02	26/11/2024		GG	CSm	DRAFT

CONTENTS

1.0 INTRODUCTION

1.1 This report has been prepared by CSA Environmental on behalf of Fisher German. It sets out the findings of great crested newt *Triturus cristatus* survey work for Upper Ogmore Wind Farm (hereafter referred to as 'the Site). Overhead and underground power lines for a new 66kv electricity line are proposed at the Site, for which outline permission for a Development of National Significance will be sought.

1.2 The scope of this reportl has been determined with due consideration for best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017), and to the Biodiversity: Code of practice for planning and development (BS 42020:2013) published by the British Standards Institution (2013).

2.0 LEGISLATION, PLANNING POLICY & STANDING ADVICE

2.1 Great crested newts are legally protected as European Protected Species (EPS) under Regulation 43 of the Conservation of Habitats and Species Regulations 2017. These Regulations make it an offence to:

- Deliberately capture, injure, kill or capture a great crested newt
- Deliberately disturb great crested newts, impairing their ability to survive, breed, reproduce or rear/nurture their young
- Damage or destroy a breeding site or resting place used by a great crested newt

2.2 Great crested newts are also fully protected under the Wildlife & Countryside Act 1981 (as amended), making it an offence to:

- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place of shelter or protection
- Intentionally or recklessly obstruct access to any structure or place of shelter or protection

2.3 Disturbance of great crested newts is covered by both the 2017 Regulations and the 1981 Act. Disturbance that impairs survival or successful reproduction would be covered by the Regulations, while less significant acts of disturbance may only be covered by the Act.

2.4 It is important to note that great crested newts and their habitats (such as breeding ponds) are protected throughout the year, regardless of whether or not newts are present at the time.

2.5 Great crested newts are also listed as a species of principal importance for the conservation of biodiversity in Wales, under Section 42 (S42) of the Natural Environment and Rural Communities (NERC) Act 2006. The S42 species list is used to guide decision-makers, including planning authorities, in implementing their duty under Section 40 of the NERC Act to have regard to the conservation of biodiversity in Wales, when carrying out their normal functions.

Licensing

2.6 Where development is proposed that would result in an offence under the Habitats and Species Regulations, a statutory derogation licence may be granted by Natural Resources Wales to permit an act that would otherwise be unlawful. To obtain an EPS licence for development, it must be demonstrated that the purpose of the act to be licensed is for:

- "preserving public health or public safety or other imperative reasons of overriding public interest including those of social or economic

nature and beneficial consequences of primary importance for the environment" (Regulation 55(2)(e))

2.7 In addition, Natural Resources Wales will not grant an EPS licence unless they are satisfied that:

- "There is no satisfactory alternative" (Regulation 55(9)(a))
- "The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range" (Regulation 55(9)(b))

3.0 METHODS

Desk Study

3.1 As Natural Resources Wales does not have specific published guidelines for assessing great crested newts in Wales, Natural England's Great Crested Newt Mitigation Guidelines (2001) were used. A desktop search was undertaken in May 2024 to identify ponds within 500m of the Site which may have potential to support breeding great crested newts, using Ordnance Survey (OS) mapping, the MAGIC database and aerial photography. 500m is the generally accepted typical maximum dispersal range of this species, with great crested newt most likely to use terrestrial habitat within 250m of breeding ponds.

Habitat Suitability Index (HSI) Assessment

3.2 Where ponds were situated within an 500m radius and connected to the Site by traversable terrestrial habitats, access permission was requested to undertake a Habitat Suitability Index (HSI) assessment, using the standard approach set out by Oldham *et al*. (2000). These assessments were undertaken on 24 June 2024 by Becca King and Georgina Gard. Pond locations and references are shown on the Pond Search Plan in Appendix A.

Environmental DNA (eDNA) Sampling

3.3 Environmental DNA (eDNA) sampling is used to determine the presence/ likely absence of great crested newts in ponds. This method has been shown to be a highly effective in detecting the presence of great crested newts (Biggs *et al.*, 2014). Water samples are collected and sent for laboratory DNA analysis to test for eDNA presence.

Limitations

3.4 Landowner permission was not granted for ponds P2 and P3 for HSI assessment and eDNA sampling.

3.5 Pond P1 was found to be dry and HSI assessment and eDNA sampling were therefore not possible. It is considered likely that this pond dries annually during the great crested newt survey period and is unlikely to support breeding.

3.6 There were no other limitations to the survey, which were conducted at an optimum time of year and in suitable weather conditions.

4.0 RESULTS

Desk Study

4.1 Despite spending much of their annual lifecycle within the terrestrial environment, great crested newts are dependent upon the presence of suitable aquatic breeding habitat in order for a population to persist.

4.2 The desktop search and subsequent pond scoping visits identified three water bodies occurring within a 500m dispersible range of the Site. These ponds are identified on the Pond Plan (CSA/6891/103 – see Appendix A). No potential breeding ponds were identified on-site during the UKHab survey.

4.3 Although no local records of great crested newt were returned from the data search, this may reflect a low survey effort rather than an absence of the species. Habitats present across the survey area are suitable to support dispersal, refuge and foraging of great crested newt.

Habitat Suitability Index (HSI) Assessment

4.4 HSI assessment of Ponds P2 and P3 was not possible due to access being expressly refused. Pond P1 was found to be completely dry and therefore an HSI assessment was not undertaken.

Environmental DNA (eDNA) Sampling

4.5 For the same reasons as above, eDNA sampling could not be conducted at any of the three ponds identified within 500m.

5.0 DISCUSSION

5.1 Access permission was not granted for ponds P2 and P3 which are both situated within the adjacent Wildfox Resort development. A check of supporting ecological survey work submitted for planning for the Wildfox proposals found no information available for great crested newts to confirm that any surveys had been conducted or presence had been established and were not scoped into the ecological chapter of the Environmental Statement. Pond P1 is seasonally dry, and so is unlikely to support a breeding population of great crested newt.

5.2 The presence or absence of great crested newts could not be confirmed through HSI assessment or eDNA sampling due to the lack of access. The absence of data means the suitability of P2 and P3 was assessed through OS mapping and aerial photography only. The habitats surrounding the ponds appear to be suitable for great crested newt foraging and dispersal, compared with the section of the Site closest to these ponds (c. 160m south-east) which relates to the below ground section that will follow a pre-existing highway. As such, it is considered there will be minimal habitat disturbance, should great crested newts be present.

5.3 On balance of the absence of records in the deskstudy and adjacent Wildfox Resort development and the nature and location of the three ponds present within dispersible range in relation to the proposed route, great crested newts are considered unlikely to be present within the Site and are not considered to pose a constraint.

5.4 Precautionary working methods relating to pre-commencement searches for nesting birds and reptiles will reduce risks of harm for other amphibian species. Taking these measures and the results of the above desk study and survey work into consideration, there are no additional recommendations specific to great crested newt.

6.0 REFERENCES

Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F., 2014. *Analytical and methodological development for improved surveillance of the Great Crested Newt*. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA. Oxford: Freshwater Habitats Trust.

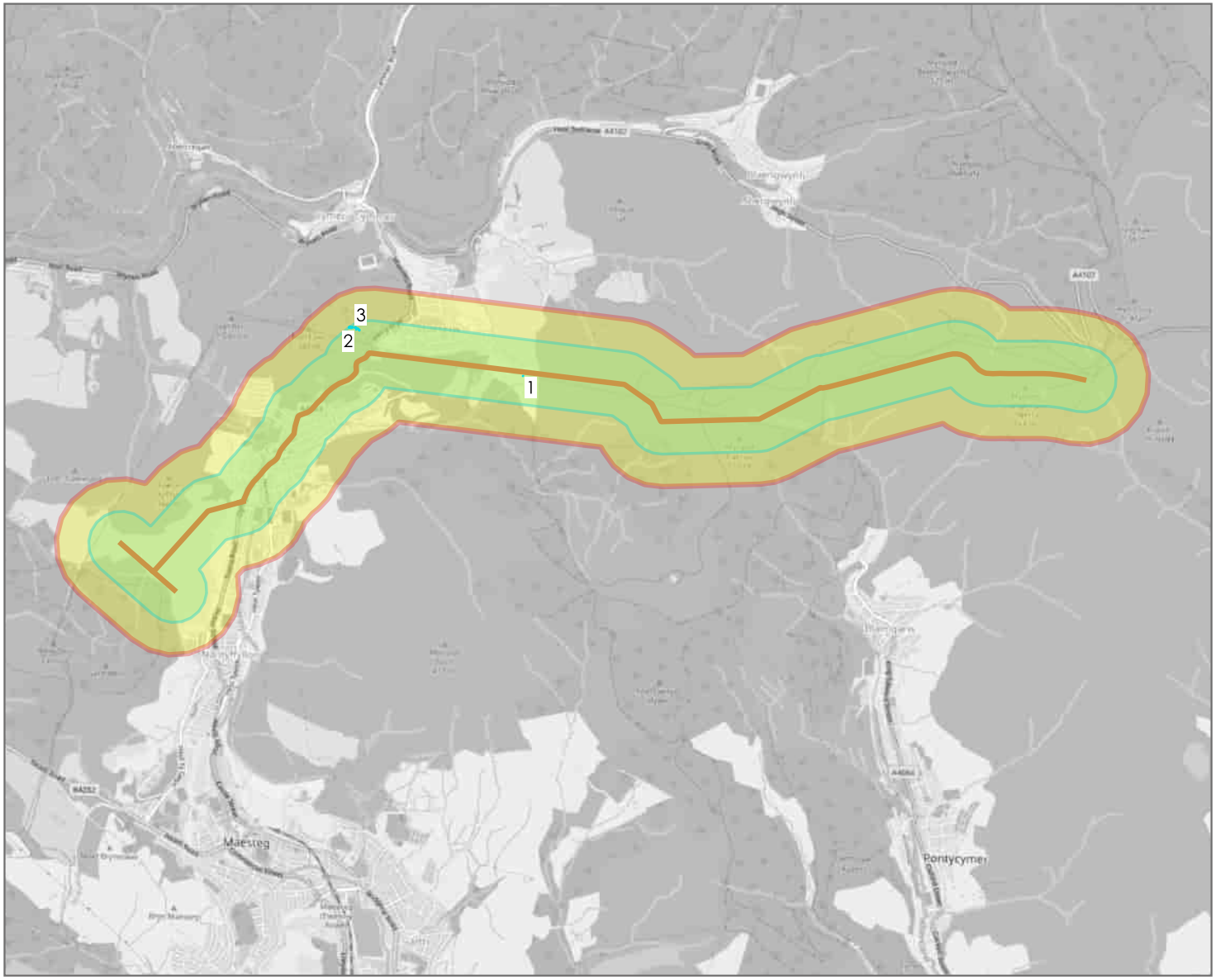
English Nature, 2001. *Great Crested Newt Mitigation Guidelines*. Peterborough: English Nature.

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M., 2000. Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10(4), 143-155.

Appendix A

Pond Plan

(CSA/6891/103)



Site boundary

250m buffer

500m buffer

Ponds:

1. On-site
2. c.160m north-west
3. c. 210m north-west

N

0 1,000 2,000 m

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Project	Upper Ogmore (Archae)	Date	May 2024	Drawing No.	CSA/6891/103
Drawing Title	500m Pond Search	Scale	Refer to scale	Rev	-
Client	Fisher German	Drawn	GG	Checked	CSm

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Annex 4.3
Bat Survey Report

Bat Survey Report

November 2024

Upper Ogmore Wind Farm

Prepared by
CSA Environmental

On behalf of
Fisher German

Report No: CSA/6891/03

CSA environmental

masterplanning | ecology | landscape | heritage

Report Reference	Revision	Date	Prepared by	Approved by	Comments
CSA/6891/03	-	27/11/2024	RT	CSm	

CONTENTS

1.0 INTRODUCTION

1.1 This report has been prepared by CSA Environmental on behalf of Fisher German. It sets out the findings of bat survey work undertaken for Upper Ogmore Wind Farm (hereafter referred to as 'the Site'). Overhead and underground power lines for a new 66kv electricity line are proposed at the Site for which outline planning permission for a Development of National Significance will be sought.

1.2 Four areas were identified where trees may potentially be impacted by proposals and so further Ground Level Tree Assessments (GLTA) were recommended. The purpose of these surveys was to assess the potential of any trees that may be impacted by the proposals for their suitability to support roosting bats and inform the route of the proposed overhead power lines to minimise impacts.

1.3 The content of this report has been determined with due consideration for best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017; 2018).

2.0 LEGISLATION, PLANNING POLICY & STANDING ADVICE

2.1 All British bat species are legally protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended). These Regulations make it an offence to:

- Deliberately capture, injure, or kill a bat
- Deliberately disturb bats, impairing their ability to survive, breed, reproduce or rear/nurture their young, or which significantly affects the local distribution or abundance of the species
- Damage or destroy a breeding site or resting place used by bats

2.2 All bats and their roosts in the UK were previously fully protected under the Wildlife & Countryside Act 1981 (as amended). Amendments to the Act have removed most provisions as they relate to bats, however it remains an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection

2.3 It is important to note that bat roosts are protected throughout the year, regardless of whether or not bats are present at the time. Under the Regulations, the offence of damaging or destroying a breeding site or resting place is subject to 'strict liability', i.e. an offence is commented irrespective of whether the causal act was deliberate or otherwise.

2.4 Where development is proposed that would result in an offence under the Regulations, a European Protected Species (EPS) statutory derogation licence (often termed 'EPS Mitigation Licence') will need to be secured from Natural Resources Wales to permit an act that would otherwise be unlawful. Such a licence can only be granted following receipt of planning permission with all relevant conditions discharged, and where it has been demonstrated that specific statutory derogation tests have been met.

3.0 METHODS

3.1 The following survey methods, design, data analysis and interpretation have been undertaken with due consideration of the Bat Conservation Trust (BCT) guidelines 4th edition (Collins, 2023).

Ground Level Tree Assessment (GLTA) - Trees

3.2 A GLTA is a detailed inspection of the exterior of a tree from the ground to look for features that bats could use for roosting, Potential Roost Features (PRFs).

3.3 All trees with potential to be affected by development were inspected from ground level, using binoculars, high-powered torches, ladder and endoscope as appropriate. The survey was completed on 24 September 2024 by Cerian Smith MCIEEM (Natural England class licence number 2017-28665-CLS-CLS) and Tom Richards MCIEEM (Natural England class licence number 2017-31786-CLS-CLS).

3.4 A description of each tree was made, including the species, height, and condition.

3.5 The aim of this inspection was to look for PRFs from ground level and give a preliminary description of each (such as type of PRF, height, size and location on tree). Surveyors also recorded direct (i.e. actual roosting bats) or indirect evidence of roosting bats (e.g. droppings), as well as the nature and number of features with 'potential' to support roosting bats. This includes consideration of trees to support bats whilst in hibernation.

3.6 Following the GLTA, each tree was assigned one of the following categories:

- ***PRF*** – A tree with at least one PRF.
- ***FAR*** – Further assessment required to establish if PRFs are present in the tree.
- ***None*** – Either no PRFs in the tree or highly unlikely to be any.

Assessing 'Potential' of Trees to Support Roosting Bats

3.7 Each PRF was assigned to one of the following categories:

- ***PRF-I*** – Tree with a Potential Roost Feature (PRF) that is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surroundings.
- ***PRF-M*** – PRF is suitable for multiple bats and may therefore be used by a maternity colony.

3.8 The categories above are intended to provide initial guidance on whether further inspections are necessary to prove presence or likely

absence of roosting bats, rather than to assign importance to such features.

3.9 The potential of a tree to support roosting bats is often influenced by its age, thermal stability, lighting and levels of human activity. Furthermore, the proximity to foraging habitat - particularly woodland, parkland and wetland - as well as the presence of navigational routes (e.g. hedgerows, treelines and watercourses) influence both the potential for bats to roost, as well as the species which may roost. Professional judgement is therefore applied, based upon known factors which effect the potential of features to support roosting bats, insofar as determining the need or scope of further surveys or inspections.

Limitations

3.10 Although the survey was not conducted at a time of year when the leaves are fully off the trees, it was undertaken in good weather conditions with clear visibility. Due to the nature of the majority of the trees and woodland assessed it is not deemed to be a limitation.

3.11 The ground at survey area 4 was steep in gradient and assisted with seeing some features higher in the canopy. However, some of the trees in the line T13-T18 were just beyond a boundary fence and could not be fully accessed to assess potential on all aspects of the tree. Despite this, features were identified on northern, eastern and southern aspects to categorise the majority of these as PRF-I or PRF-M but a full assessment should be conducted of western aspects during any further aerial inspections if impacted by proposals.

4.0 RESULTS

4.1 A total of four survey areas were identified on the Upper Ogmore Wind Farm proposals where trees may potentially be impacted by the route of the overhead powerlines and may result in loss or facilitation pruning. Each area was visited and any trees that support any bat roosting potential were identified and considered.

4.2 Full results of the survey and a map showing the location of trees with bat roosting potential is given at the end of this report/below.

4.3 The four areas are shown in Figures 1 and 2 below.

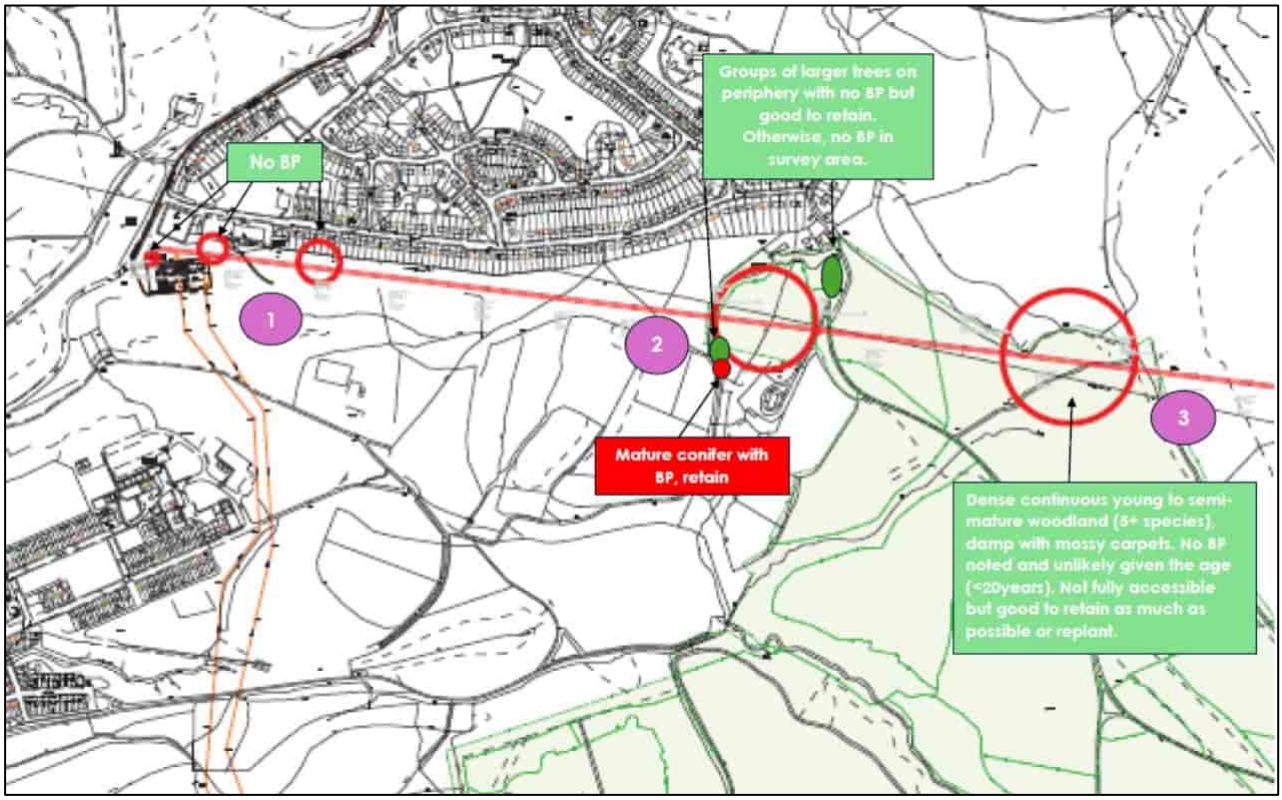

Figure 1. Ground Level Tree Assessment (GLTA) survey areas across locations 1, 2 and 3 where trees will potentially be impacted by the proposed powerline route. BP = bat potential.

4.4 Area 1 comprises three small groups of young trees and shrub, with several semi-mature trees scattered around the metal railings of the electricity substation. There is no bat potential (BP) associated with any of the vegetation here, all of which is too young to support suitable roosting features.

4.5 Area 2 appears to be a planted woodland area that comprises mostly trees that are less than 20 years old and so not of an age to generally support bat roosting features, except for two more mature groups of trees at the north-east (mostly sycamore; green markers on Fig.1) and south-west (mostly conifer) edges, including one conifer with bat potential (as shown by the red marker in Figure 1). The conifer was a

double stem mature tree, with one stem collapsed at c.5m height, with splits and crevice, and a hollow or woodpecker hole at c.3m height on the southern stem. This is identified as having a Potential Roost Feature (PRF).

4.6 Area 3 is an area of dense young to semi-mature replanted woodland comprising abundant spruce with oak, willow, birch and occasional rowan. The track through the woodland has completely overgrown and was inaccessible, but again is less than 20 years old and a walk around the southern edge did not suggest any trees significant enough to support roosting features and no bat potential was identified.

4.7 Area 4 is the most constrained area for trees, comprising a number of very mature (potentially veteran/ancient) oak and ash trees. A total of twenty trees were assessed along the boundaries, 17 of which supported potential roosting features, of which at least 10 had potential to support large numbers of bats (PRF-M), four had potential to support individual bats (PRF-I) and one tree would need further assessment for its suitability, and was therefore categorised as FAR.

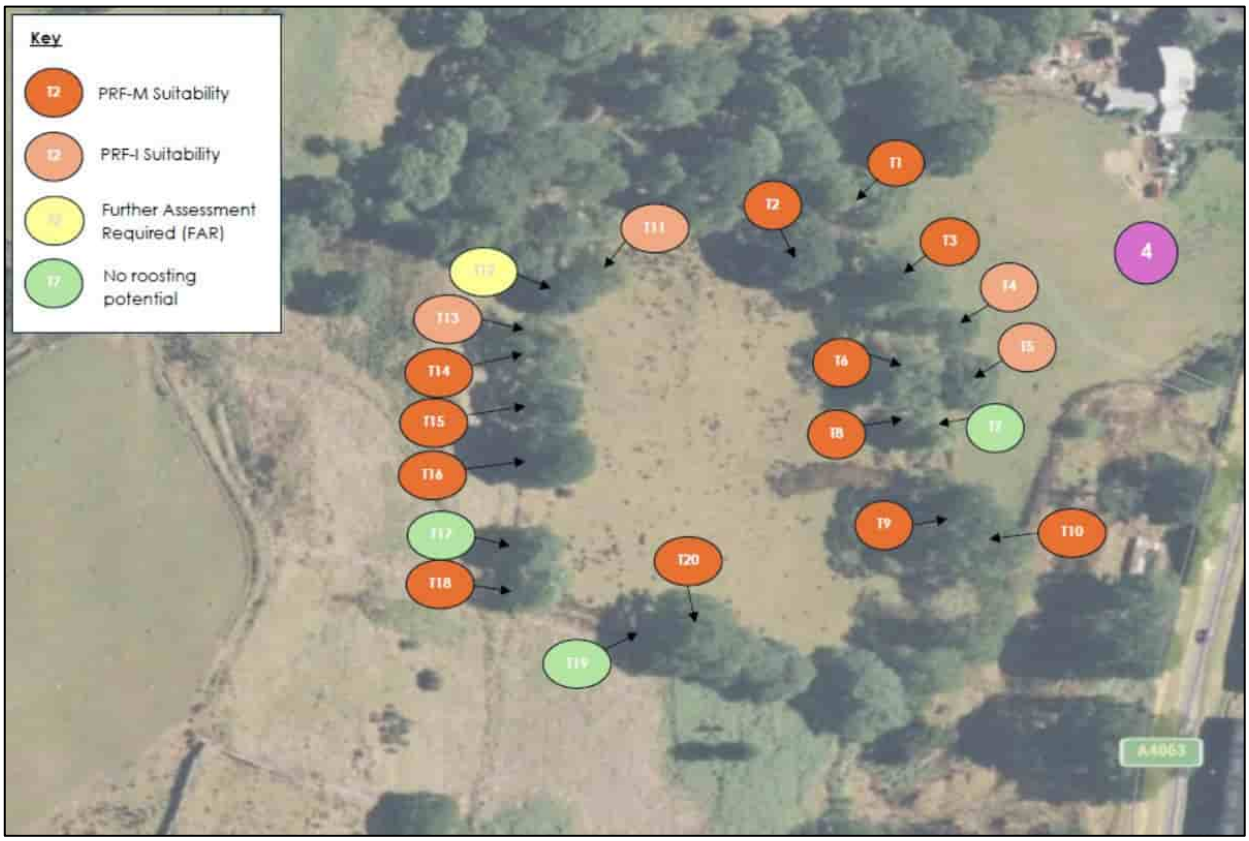

Figure 2. GLTA survey area at location 4 where trees will potentially be impacted by the proposed powerline route.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 Four areas were identified along the proposed route for the new power line with trees that might potentially be impacted during works. The first area, Area 1, comprises young trees and shrubs with no bat potential and therefore no mitigation measures in regard to bats are proposed.

5.2 Area 2 mostly comprises trees that are too young to support bat features, with the exception of one conifer with bat potential (south-west edge) and more mature group of mostly sycamore trees at the north-eastern edge. Both of these can be easily avoided and therefore will not pose as a constraint to the works.

5.3 Area 3 is dense young to semi-mature woodland and no trees thought significant enough to support roosting features have been identified. Although no constraints in regard to bats are within Area 3, it should be retained as far as possible, or re-planted if impacted during works. The surrounding heath/grassland area was noted to hold reptile potential and should be subject to sensitive working methods.

5.4 Area 4 is the area that is most constrained for trees, comprising a number of very mature oak and ash trees, some of which are potentially veteran and/or ancient. Seventeen out of the twenty trees assessed have potential roosting features for bats, with at least ten trees having features with the potential to support larger numbers of bats (PRF-M). It is recommended that the overhead powerline be routed through the existing gaps between tree canopies to avoid any direct impacts to canopies or individual trees. It is also recommended that a detailed tree assessment by a suitably qualified arboriculturist is sought to determine their ancient or veteran status, both of which are Irreplaceable Habitats. Consideration of avoidance of impacts from machinery on root systems as a result of the installation of powerlines will also be necessary.

5.5 Where impacts cannot be reasonably avoided, further detailed aerial inspection (tree climbing) surveys or emergence surveys will be required for any trees within Area 4 that will be directly impacted and have been identified as PRF-M, PRF-I or FAR. The first inspection would enable a more accurate assessment of the roosting resource by inspecting PRFs and re-categorising both the trees and PRFs if appropriate. A further two climbing inspections or three emergence surveys within the core active period of May to August may be required to confirm presence or likely absence of roosting bats and establish the species present or search for patterns that suggest roosts are present.

5.6 All four areas contain habitat to support nesting birds. As such, any clearance works will need to be subject to seasonal timing constraints and/or precautionary working methods to avoid the nesting bird season (1st March to 1st September inclusive).

6.0 REFERENCES

Chartered Institute of Ecology and Environmental Management, 2017. *Guidelines for Ecological Report Writing*. Winchester: CIEEM.

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Collins, J., ed., 2023. *Bat Surveys for Professional Ecologists: Good Practice Guidelines.* 4th ed. London: The Bat Conservation Trust.

Reason, P.F. and Wray, S. 2023. *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Ampfield: Chartered Institute of Ecology and Environmental Management.

Appendix A

Ground Level Tree Assessment Results Table

Ground Level Tree Assessments (GLTA)

Project Reference	6891
Project Name	Upper Ogmore Wind Farm
Surveyor	Cerian Smith and Tom Richards
Date	24/09/2024
Limitations	Steep gradients allowed some better visibility in higher canopies but restricted access on others

Tree Reference	Species	Location	Tree Height (m)	Tree Alive or Dead	Single or Multi-stem	Initial Suitability Category	PRF Reference	PRF Type	PRF Height (m)	PRF Location	Aspect of PRF Entrance	PRF Suitability	Description of Suitability
T1	Oak	SS 85118 93956	15	Alive	Single	PRF-M	A	Hollow	5	Horizontal feature at limb base	SE	PRF-M	
							B	Woodpecker Holes x 3	7	Main stem	S	PRF-M	
							C	Hollow	4	Western limb	S	PRF-M	
							D	Tear out	6	Western limb	N	PRF-M	
							E	Small hollow	6	Western limb	W	PRF-M	
T2	Oaks	SS 85100 93942	20	Alive	Single	PRF-M	A	Hollow	4	South limb	W	PRF-M	
							B	Tear out	4	South limb	W	FAR	
							C	Dead branch rot hollow	4	Main stem	NW	FAR	
							D	Hollow	4	SE limb	E	PRF-M	
T3	Oak	SS 85127 93934	25	Alive	Single	PRF-M	A	Split/ small tear-out	10	South limb	S	FAR	
							B	Split/ tear out c. 20 x 50cm	9	Main stem	W	FAR	
							C	Split	14	Main leader	Up facing	PRF-M	Old tear-out.
							D	Woodpecker holes x 2	13	Main leader	N	PRF-M	
							E	Hollow	10	Main stem	North aspect	PRF-M	
T4	Oak	SS 85140 93921	25	Alive	Single	PRF-I	A	Minor splits/ crevices	4	North-east leader	N	PRF-I	
							B	Large splits 1m long	4	South-east leader	SE	PRF-I	
T5	Oak	SS 85146 93906	25	Alive	Single	PRF-I	A	Splits in hanging stem	15	East leading stem	SE	PRF-I	All quite minor.
							B	Splits in hanging stem	10	North-east leader		PRF-I	All quite minor.
T6	Ash	SS 85127 93909	25	Alive	Single	PRF-M	A	Large hollow	9	Main stem	N	PRF-M	
T7	Ash	SS 85136 93892	12	Alive	Single	None	-	-	-	-	-		No features, no further survey required.
T8	Ash	SS 85129 93898	20	Alive	Single	PRF-M	A	Series of at least 3 woodpecker holes	8	Top of main stem	W	PRF-M	
							B	Large hollow	8	Top of main stem	Down-facing above woodpecker holes	FAR	
							C	Woodpecker hole	7	On second stem	N	PRF-M	
T9	Oak	SS 85138 93870	45	Alive	Single	PRF-M	A	Large hollow where old limb lost	5-10m	Main stem	S	PRF-M	
							B	Large opening c. 20cm wide	10	Main stem	NW	PRF-M	
							C	Woodpecker hole	12	North-east limb	W	PRF-M	
							D	Hollow		North-east limb	Above woodpecker hole	PRF-M	
T10	Oak	SS 85148 93862	45	Alive	Single	PRF-M	A	Large split.	10	South limb	Top side	PRF-M	
							B	Tear out	10	South-west second leading stem	SW	PRF-M	
							C	Split limb	3-4m	East facing	E	PRF-M	
T11	Birch sp.	SS 85046 93937	18	Alive	Multi-stem	PRF-I	A	Hollow	0 to 4m	Main stem, section before split	W		1-2 entrances
T12	Oak	SS 85035 93932	15	Alive	Single	FAR	A	Ramshorn feature	10	Under side of SE limb	Underneath	FAR	
T13	Oak	SS 85027 93922	20	Alive	Single	PRF-I	-	-	-	-	-	-	No features but PRF-I as mature and a full inspection of the rear was not possible.
T14	Oak	SS 85026 93912	20	Alive	Single	PRF-M	A	Rot hollow	10	East limb of main stem	W	PRF-M	
							B	Large split hollow on north-east limb with c. 40cm opening	9	North-east limb	SE	PRF-M	
T15	Oak	SS 85026 93902	20	Alive	Single	PRF-M	A	Split/ hole	4	Top of main stem, leading north	W	PRF-M	
T16	Oak	SS 85026 93887	20	Alive	Single	PRF-M	A	Rot hollow	5	North-west limb	N	PRF-M	
							B	Fused stems - crevices	10	Central stem	E	FAR	
T17	Oak	SS 85026 93862	15	Alive	Single	None	-	-	-	-	-	-	No features, no further survey required.
T18	Ash	SS 85024 93852	18	-	-	PRF-M	A	Hollow in main stem and rams horns	0-3m	Main stem	W	PRF-M	
							B	Split in limb heading north-east	4		W	PRF-M	
T19	Oak	SS 85057 93837	20	Alive	Single	None	-	-	-	-	-	-	No features, no further survey required.
T20	Oak	SS 85070 93841	12	Alive	Single	PRF-M	A	Longitudinal west facing split on west facing limb				FAR	
							B	Main stem	5-7m	Large aperture on main stem		PRF-M	

Appendix B

Photographs

Photograph 1. View across woodland at survey area 2 – scrubby trees with large conifers on south-west periphery.

Photograph 2. Mature conifer with bat potential, hollow/woodpecker hole below collapsed limb.

Photograph 3. View of western section of area 3 – scrubby replanted woodland, willow and oak.

Photograph 4. View of eastern section of area 3 – replanted woodland, higher component of spruce.

Photograph 5. Oak tree T1 in Area 4 with five PRF-M features on the south, north and west aspects

Photograph 6. Oak tree T3 in Area 4 with four PRF-M features on north, west and south aspects

Photograph 7. Oak tree T4 with two PRF-I features on northern and south-east aspects.

Photograph 8. Oak tree T5 and ash trees T6 and T8, with multiple PRF-I and PRF-M features.

Photograph 9. Birch tree T11 with hollow in main stem before it splits at c.1m high.

Photograph 10. Oak tree T9 with five PRF measures.

Photograph 11. PRF B on north-west aspect of oak tree T9, categorised PRF-M.

Photograph 12. PRFs C and D on western aspect of oak tree T9.

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Annex 4.4
Water Vole Survey Report

Water Vole Survey Report

November 2024

Foel Trawsnant Wind Farm

Prepared by
CSA Environmental

On behalf of
Fisher German

Report No: CSA/7086/04

CSA environmental

masterplanning | ecology | landscape | heritage

This report may contain sensitive ecological information. It is the responsibility of the Local Authority to determine if this should be made publicly available.

Report Reference	Date	Revision	Prepared by	Approved by	Comments
CSA/7086/04	26/11/2024	-	TR	CSm	

CONTENTS

1.0 INTRODUCTION

1.1 This report has been prepared CSA Environmental on behalf of Fisher German. It sets out the findings of water vole *Arvicola arvensis* survey work undertaken at Foel Trawsnant Wind Farm, Maesteg (hereafter referred to as 'the Site'). Overhead and underground power lines for a new 66kv electricity line are proposed at the Site for which outline planning permission for a Development of National Significance will be sought.

1.2 The proposed route occupies a length of c. 9km and is located around central grid reference SS 8474 8970, to the west of Maesteg. The underground section of the route is expected to be restricted to the existing highways network, whilst the remaining overhead route passes through areas of modified grassland, upland acidic grassland, purple moor-grass and rush pasture and ancient and broadleaved woodland, with several boundary hedgerows, tree lines and watercourses present.

1.3 A Preliminary Ecological Appraisal (PEA) (CSA/7086/01) identified the presence of watercourses within proximity of the proposed power line route and survey work was recommended to determine water vole presence / likely absence in order to inform the route location and design and to identify any impacts and associated mitigation measures that may be required. Two sections of the route where overhead cables are proposed contain watercourses that have been surveyed. The areas surveyed are shown on the Water Vole Survey Areas drawing (CSA/7086/107) in Appendix A.

1.4 Firstly, at the northern end of the scheme a stream (Watercourse A) flows along a woodland edge from west (SS 84257 93359) to east (SS 84656 93243) towards Maesteg. Two watercourses feed into the stream from the north-west (Watercourse A.1, SS 84290 93669 to SS 84503 93355) and north-east (Watercourse A.2, SS 84667 93459 to SS 84623 93303). At the southern end of the scheme, a second stream (Watercourse B) flows through predominantly modified grassland fields from south (SS 84103 87838) to north (SS 84707 88817). Photographs from the survey visits are provided in Appendix B and referred to in this report, where appropriate.

Legislation

1.5 Water voles have full legal protection under the Wildlife & Countryside Act 1981 (as amended). These regulations make it an offence to:

- Intentionally kill, injure or take water voles
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection
- Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose

1.6 Water voles are also a species of principal importance under the Natural Environment and Rural Communities (NERC) Act 2006, and local authorities and other public bodies therefore have a legal duty to take their conservation into account.

2.0 METHODS

2.1 Watercourse A, associated Watercourses A.1 and A.2 and Watercourse B were surveyed on 25 June 2024 by Katie Critchley CEcol MCIEEM and Tom Richards MCIEEM. A second survey of Watercourses A, A.1 and A.2 was undertaken on 24 September 2024 by Tom Richards MCIEEM and Cerian Smith MCIEEM.

2.2 Each survey involved a detailed search for field signs of water vole, which include droppings and latrines, feeding stations, footprints, runways, lawns, burrows and nests. Details on the characteristics of each watercourse were noted, including substrate and bank profiles, to allow a habitat assessment to be undertaken and to consider the likelihood of burrows being present. The specific locations of any confirmed water vole field signs were mapped and are illustrated on the Water Vole Survey Results Plan (CSA/7086/108) in Appendix C.

2.3 The survey work associated with Watercourses A, A.1 and A.2 included searches within adjacent terrestrial habitat areas, specifically two adjacent fields which support purple moor-grass and rush pasture and upland acid grassland habitats respectively.

2.4 The optimal period for water vole survey is late April to early October, with peaks of activity typically in May and August. In-line with guidance in the Water Vole Mitigation Handbook[1], two survey visits for water vole were undertaken to account for variability in habitat suitability. Following the first survey visit to Watercourse B it was clear that the due to poor habitat suitability and a lack of field signs that water vole absence could be reliably inferred. A second survey was not considered to be necessary for this watercourse. Weather conditions during each survey were dry and bright.

Limitations

2.5 Access was available to survey all watercourses in their entirety from both banks and from within the channel. However, small areas of dense scrub along Watercourse A.1 limited the extent to which the bank side habitats could be surveyed. This is not considered to have significantly impacted the findings of the survey.

2.6 Prior to the second survey visit on 24 September 2024 there had been a period of three days of rain showers. While the day of survey was dry, the preceding rain showers may have washed away some water vole field signs such as latrines positioned in unsheltered locations or floating within the channel. The survey was undertaken in the knowledge that this may

[1] Dean, M., Strachan, R. Gow, D and Andrews, R. (2016) *The Water Vole Mitigation Handbook (Mammal Society Mitigation Guidance Series)*. Eds Fiona Mathews and Paul Chanin. Mammal Society, London.

have been the case and thorough searches were undertaken. Other field signs such as burrows and feeding remains were unlikely to have been affected by the rain, and water vole evidence was still identified during the survey. The preceding weather conditions are not considered to have significantly impacted the findings of the survey.

3.0 RESULTS

Watercourses A, A.1 and A.2

Habitat Suitability

3.1 Watercourse A is situated within a valley with dense woodland edge to the south and purple moor-grass and rush pasture to the north (Photo 1). The immediate bank sides are sharply steep in profile to c. 1m high but then steeply rise again up the valley sides to the north and south. The bank face and channel substrate are cobble and gravel with a narrow channel of c. 0.5m wide (Photo 2) which contains a fast-flowing but shallow watercourse of c. 10-20cm deep with deeper pools in places to c. 50cm deep. The watercourse flows quite steeply down to the south-east. The bank faces are densely vegetated with tall grasses and rush, while the channel itself is devoid of vegetation.

3.2 Watercourse A.1 flows steeply down from the north-west from higher ground within upland acid grassland vegetation. The gradient then plateaus halfway down into a flat area of ground approximately where the upland acid grassland vegetation becomes purple moor-grass and rush pasture. Prior to this point the watercourse is fast flowing with a very narrow channel densely covered in grasses and occasional bramble scrub. In the flat middle section, the channel is not apparent and instead there is an area of pooled surface water for approximately 30m by 15m. To the south of this area the channel is again present (Photo 4) which is similar in character to the northern section of the watercourse. This channel then flows south-east through the purple moor-grass and rush pasture vegetation, eventually connecting with Watercourse A. The substrate of Watercourse A.1 is also made up of cobble and gravel with a water depth of less than 10cm.

3.3 Watercourse A.2 is situated along the eastern edge of the survey area and is considered to be a ditch feature, holding less water than Watercourse A.1 and being shallower (Photo 5). It is situated within dense purple moor-grass and rush pasture vegetation and runs parallel to an existing farm access track on its eastern side. It exhibits steep bank faces of c. 0.5 to 1m high. The substrate is stony but to a lesser extent than Watercourses A and A.1. The watercourse flows south, connecting with Watercourse A.

3.4 The purple moor-grass and rush pasture vegetation that lies to the north of Watercourse A and surrounds Watercourse A.2 and the southern half of Watercourse A.1 contains standing surface water in places, particularly along the southern edge of the area closer to Watercourse A and within the area of standing water associated with Watercourse A.1. This vegetation contains dense, tussocky mounds of purple moor-grass and other tall grasses and rushes that are suitable for burrowing and foraging water voles. Given the connectivity between the

watercourses and this waterlogged terrestrial habitat, the purple moor-grass and rush pasture habitat was also considered to hold suitability for water voles.

3.5 Further north the purple moor-grass and rush pasture vegetation becomes upland acid grassland (see dashed line divide in Appendix C) which is characterised by shorter and finer grass species and limited rushes and broadleaved herbs (Photo 6). This habitat is situated at higher elevations in this part of the Site and the ground conditions are markedly drier. Limited opportunities for burrowing are present alongside less suitable foraging opportunities and no shelter. As a result, this habitat area is not considered to be a suitable terrestrial habitat resource for water voles.

Survey Results

3.6 The Water Vole Survey Results drawing in Appendix C illustrates the locations of water vole field signs identified during survey work. An initial site visit in May 2024 as part of a Preliminary Ecological Appraisal incidentally recorded a single water vole latrine within the purple moor-grass and rush pasture vegetation centrally between Watercourses A, A.1 and A.2.

3.7 The first detailed water vole survey in June 2024 identified a second water vole latrine in a similar location to the latrine found in May. Further latrines were identified, one on the southern bank of Watercourse A, with feeding remains also found nearby on the northern bank of the watercourse. A third latrine was identified associated with Watercourse A.1 within the flat area of pooled water alongside two clear pile of feeding remains. No burrows were identified along these watercourses, likely due to the bank face substrate. Numerous runs and potential burrows were found within the purple moor-grass tussocks, which provide a dense thatch of vegetation cover for shelter.

3.8 No evidence of water vole presence was identified associated with Watercourse A.2.

3.9 The second water vole survey in September 2024 found water vole field signs/evidence of activity to be lower than the initial survey, with only one water vole latrine and nearby feeding remains identified centrally within the field of purple moor-grass and rush pasture. The conditions of the three watercourses surveyed were similar in terms of suitability compared to the June survey, but no evidence of water vole activity was noted in association with any of the watercourses.

Watercourse B

Habitat Suitability

3.10 The southernmost part of this watercourse lies within upland rush pasture vegetation, however it is situated between two field areas, within a

narrow fenced-off section that contains the watercourse only. It then flows north where it runs between short-grazed modified grassland fields (Photo 9). This southern half of the watercourse exhibited steep bank sides of c. 1.5m in height, vegetated predominantly with grasses and rushes, with scrub and tree vegetation absent (Photo 10). The bank sides and channel substrates consist of stony cobble and gravel sediments. The channel is approximately 0.5m wide with very shallow water of less than 10cm in depth, however deeper silty sediment is present in places. The water and overlying silt were distinctly reddish-orange in colour suggesting mineral deposition/contamination.

3.11 The northern half of the watercourse is tree-lined and heavily shaded. The channel here is wider, to c. 1m in width and slightly deeper in places at 10-30cm. The substrate is coarser, containing much larger sized stones with minimal silt (Photo 11). The bankside habitats are dominated by trees and some scattered bramble scrub, with limited vegetation otherwise due to the heavy shading, consisting of some short grasses but mostly bare ground. The bank sides are gentle in profile immediately adjacent to the channel and to the west but rise steeply to the south-east up to sheep-grazed modified grassland fields (Photo 12).

Survey Results

3.12 No evidence of water vole presence was identified during the survey of this watercourse in June 2024. Water vole are considered to be likely absent from this watercourse due to poor habitat suitability and a lack of survey evidence.

4.0 DISCUSSION AND RECOMENDATIONS

4.1 Water vole survey work within areas of suitable habitat along the Foel Trawsnant scheme route has identified the presence of water vole associated with two watercourses in land to the west of Maesteg where an overhead cable route is proposed.

4.2 Watercourses A and A.1 support water voles, and it has been confirmed that the population also utilises terrestrial habitats in the form of purple moor-grass and rush pasture vegetation near to the watercourse, which was found to be waterlogged in many places and offers suitable opportunities for shelter and foraging. The dense tussocky vegetation was extensive and difficult to survey thoroughly, and it is expected that the number of field signs identified during the survey work was an underestimate of activity within this habitat. However, given the limited number of latrines identified directly associated with the watercourses, a Low relative population density is predicted based on the survey information available.

4.3 Water vole presence is therefore confirmed in Watercourse A and A.1 and is assumed within the associated field area of purple moor-grass and rush pasture vegetation. Water vole are considered to be likely absent from Watercourse A.2.

Potential Impacts

4.4 In the absence of impact avoidance and mitigation measures, the proposed works could result in the killing/injury of water voles and/or damage or destruction of their burrows which would constitute a legal offence under the Wildlife and Countryside Act 1981 (as amended). Initial proposals showed the cable route passing through the central purple moor-grass and rush pasture area from south-east to north-west, crossing Watercourse A.1. This would necessitate the installation of poles within this habitat alongside associated vehicle movement routes and working areas. These works could result in impacts to water voles that have been confirmed to be present in this habitat area.

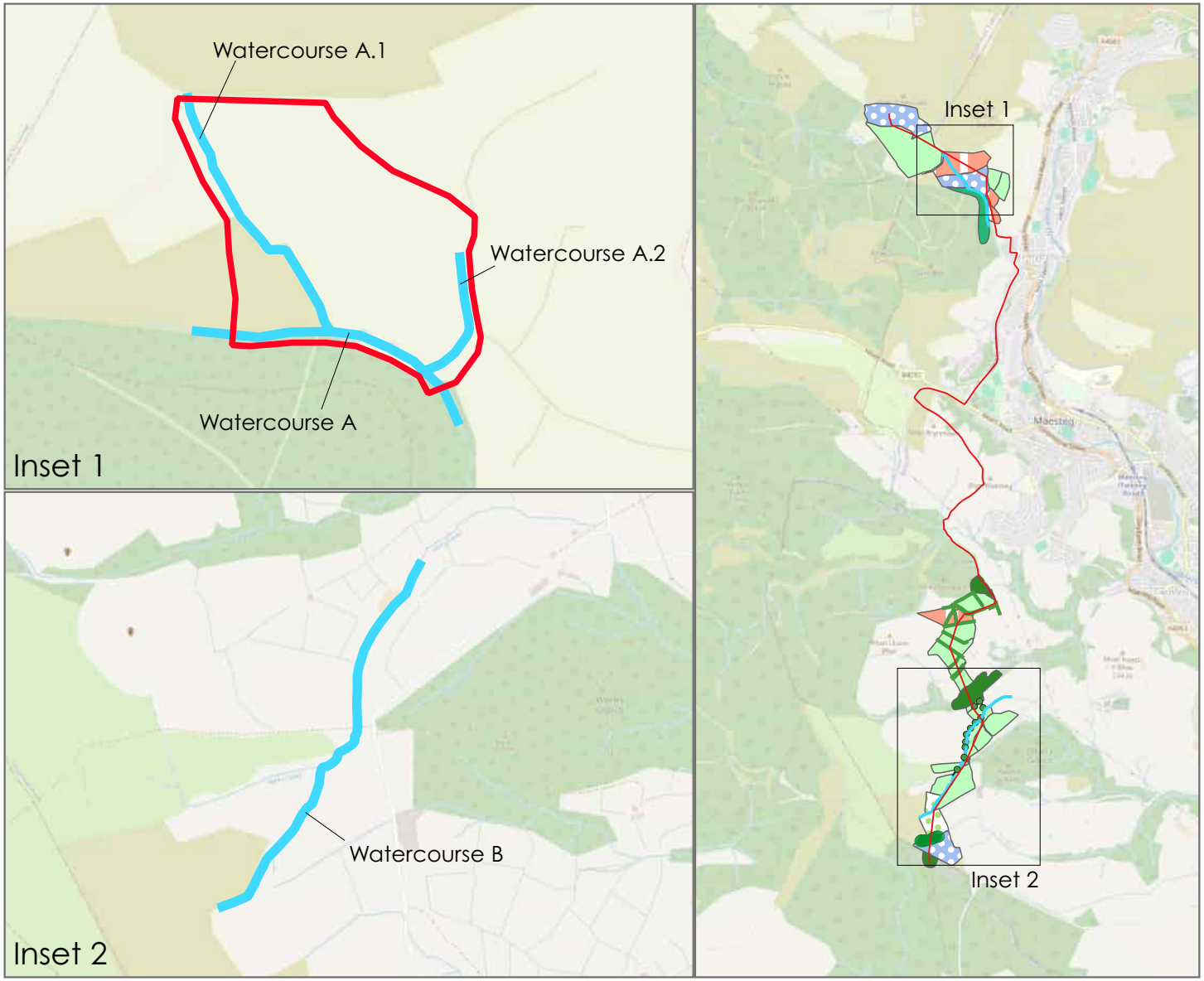
4.5 Following discussions with the project team, areas of particularly wet ground were identified in this location, in addition to the likely water vole constraints. The cable route was then revised to run north along the eastern edge of the field, along the existing hardstanding track that runs parallel to Watercourse A.2. The route then heads north-west through the upland acid grassland habitat, still crossing Watercourse A.1 at its northern extent but with pole locations chosen well away from the watercourse to avoid impacts.

4.6 As the proposals currently stand, it is considered that the cable route works could be undertaken to avoid impacts to water voles altogether, retaining areas of suitable habitat where they have been found to be

present. In the event that impacts are predicted due to changes to the cable route or working methods, a licence would be required from Natural Resources Wales to allow works to proceed. This licence would need to be supported by a detailed method statement, to include protocols to avoid impacts to this species, such as through a displacement operation, specifically related to the proposed works and likely impacts.

Appendix A

Water Vole Survey Areas Plan
(CSA/7086/107)



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Project	Foel Trawsnant Wind Farm	Date Nov. 2024	Drawing No. CSA/7086/107
Drawing Title	Water Vole Survey Areas	Scale Not to scale	Rev -
Client	Fisher German	Drawn TR	Checked CSm

Appendix B

Photographs

Photo 1. Watercourse A, view east (June 2024).

Photo 2. Watercourse A (June 2024).

Photo 3. View south-east across purple moor-grass and rush pasture towards Watercourse A (June 2024).

Photo 4. Watercourse A.1, view south-east (June 2024).

Photo 5. Watercourse A.2, view south-east (September 2024).

Photo 6. View south showing shorter upland acid grassland habitat (immediate foreground) leading south-east to purple moor-grass and rush pasture (September 2024).

Photo 7. Water vole latrine (May 2024).

Photo 8. Water vole feeding remains (June 2024).

Photo 9. Watercourse B, southern section view north (June 2024).

Photo 10. Watercourse B, southern section view north (June 2024).

Photo 11. Watercourse B, northern section view north (June 2024).

Photo 12. Watercourse B, northern section view north along eastern bank top (June 2024).

Appendix C

Water Vole Survey Results
(CSA/7086/108)

N

- Survey Area
- Watercourses
- Water vole latrines (07/05/24)
- Water vole latrines (25/06/24)
- Water vole latrines (24/09/24)
- Water vole feeding remains (25/06/24)
- Water vole feeding remains (24/09/24)
- Approximate field division. Upland acid grassland to the north and purple moor-grass and rush pasture to the south.

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Drawing Title	Water Vole Survey Results	Scale Not to scale	Rev -
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Annex 4.5
Supplementary Information

Upper Ogmore Grid Connection: ES Scoping Report Chapter 4: Ecology – Supplementary Information

DATE:	20 March 2025	**CONFIDENTIALITY:**	Public
SUBJECT:	Chapter 4: Ecology – Supplementary Information		
PROJECT:	UK0028130.1329	**AUTHOR:**	Nia Bowen
CHECKED:	Philip Peterson	**APPROVED:**	Kate Fisher

INTRODUCTION

The following text provides supplementary information with regards to the identification of the protected and/or notable species that have been scoped in, and out of the ES, based on current available information.

PROTECTED AND/OR NOTABLE SPECIES CONSIDERED LIKELY TO BE PRESENT AND SCOPED IN

No records of harvest mouse were returned within the desk study however there is some suitable habitat for this species present on Site, including the dense continuous tussocky habitats associated with purple moor grass and rush pasture. The population distribution of harvest mouse in Wales is primarily restricted to lowland areas within north, west and south Wales, including a cluster in Bridgend and the valley surrounding Maesteg. It is possible that harvest mouse may be present on Site in discrete locations. Harvest mouse is a Section 7 Priority Species on the Wales Environment (Act) 2016.

Ground Level Tree Assessment (GLTA) surveys for bats were undertaken by CSA Environmental in September 2024, focusing on four areas across the Site where trees may potentially be impacted by the Project. A total of 17 trees were identified as potentially being suitable to support roosting bats and were categorised as either PRF-I[1] or FAR[2]. The majority of the habitats on Site were not considered to be of high suitability for foraging and commuting purposes, with limited linear features present, particularly within the uplands in the east to west section of the Project.

No records of water vole were returned within the desk study, however a search of online databases suggests presence within a 10km grid square, that includes the Survey Area. Suitable habitat for water vole on Site includes several small, connected steams and the surrounding purple moor grass and rush habitats. Targeted surveys for water vole were carried out by CSA Environmental in June and September 2024, which focussed on the streams (referenced as Watercourse A, A.1 and A.2 within the survey report) and surrounding habitat at the south-western end of the Site. The surveys concluded the presence of water vole within watercourses A and A.1, and the likely absence of water vole in watercourse A.2.

PROTECTED AND/OR NOTABLE SPECIES CONSIDERED TO BE LIKELY ABSENT

Two records of badger were identified during the desk study, 1.7km north of the Project and 1.8km south of the Project. Habitats within the Survey Area were considered to be sub-optimal for badger, with limited sett building opportunities given the limited areas of woodland and absence of hedge banks and open and exposed foraging habitat. Some limited areas of scrub and woodland were considered to provide superficial

[1] Definition taken from the Bat Survey Good Practice Guidelines (Collins, J 2023). PRF-I: Tree with a Potential Roost Feature(s) (PRF) that is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surroundings.

[2] Definition taken from the Bat Survey Good Practice Guidelines (Collins, J 2023). FAR: Further assessment required to establish if PRFs are present in the tree

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CHECKED:	Philip Peterson	**APPROVED:**	Kate Fisher

suitability, but no evidence of use was identified and the species is therefore considered likely absent from Site. Likely significant effects on badger are not anticipated.

Seven records of otter were returned within the desk study, with the closest being a record of spraints along the River Afan located 1.2km west of the Project. Small streams are present on Site (confined to the south-western end), but these are not well connected to larger watercourses. It is considered possible that otters may occasionally disperse through the network of tributaries that occur on Site but are unlikely to use the Site for regular foraging or sheltering purposes. Furthermore, the Project will not directly impact riparian habitats and any indirect impacts will be short term. Likely significant effects on otter are not anticipated.

No records of dormouse were returned from the desk study and the UKHab survey identified limited suitable habitat for the species on Site, with the Project passing through one small, isolated parcel of woodland only with no connectivity to other suitable habitats in the wider landscape. Dormice are considered to be likely absent from the Site and likely significant effects on the species is not anticipated.

A total of 22 records of hedgehog were identified within the search area, dating from 2002 to 2022. The records are mostly associated within the residential areas of Maesteg and the closest record is 0.05km east of the Project. The majority of habitats on Site are at higher altitudes in upland locations with open and exposed patchwork of grassland, rushes, gorse and bracken, with lower altitude habitats south of Croeserw dominated by damp tussocky purple moor grass habitat, of low suitability for hedgehogs. If hedgehog is present within the Survey Area having dispersed from the nearby residential areas, these are unlikely to be present in any notable number and therefore significant effects on this species is not anticipated.

No records of GCN were returned within the desk study, but suitable terrestrial habitat was identified on Site during the UKHab survey, with connectivity to three potential breeding ponds within 250m of the Site. Further survey (HSI assessment and eDNA survey) was undertaken, however access to two ponds was not granted, and the third pond was dry at the time of survey. The two ponds where access was refused lie c.130m from the underground section of the Project, which will be restricted to the highway corridor and no suitable terrestrial habitat for GCN will be impacted. These ponds lie c. 165m from the closest section of overhead line, across Cymer Road. Given the small impact areas associated with the Project, the distance and context of the ponds within suitable habitat, and the lack of records and other suitable breeding ponds in the local area, the risk of GCN being present is considered very low.

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