Appendix 8B
CSA Environmental (2024a). Preliminary Ecological Appraisal - Foel Trawsnant Wind Farm

Preliminary Ecological Appraisal

October 2024

Foel Trawsnant Wind Farm

Prepared by
CSA Environmental

On behalf of
Fisher German

Report No: CSA/7086/01

CSA environmental

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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/7086/01	-	02/10/2024	BK	CT	First Issue

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EXECUTIVE SUMMARY

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.

CSA Environmental was instructed by Fisher German to undertake a Preliminary Ecological Appraisal (PEA) of the Site to identify any ecological constraints to proposals, inform scheme design, highlight opportunities for ecological enhancement and determine the need for any additional consultation, investigation or 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 cable sections will be restricted to the highways boundary along the existing road networks and are not considered to have any ecological significance. The overhead section of the route crosses through grassland, woodland and hedgerow habitats, areas within which ecological value is associated. The proposed route passes through areas of irreplaceable habitat, priority habitat and a number of SINCs which will require further discussions on the scope of works and necessary mitigation measures.

Protected species which were incidentally confirmed to be present include water voles and reptiles, with additional species considered likely to be present including bats, dormouse, nesting birds and harvest mouse. Further survey work to determine presence/ absence of species and provide an understanding of their use of the habitats, are recommended in order to inform an evidence based Ecological Impact Assessment to be prepared in support of planning. Given the nature of the proposed work and associated short-term, temporary impacts, precautionary working methods are considered appropriate for reptiles, nesting birds and harvest mouse.

No overriding constraints to proposals of the Site have been identified subject to appropriate mitigation being agreed. Recommendations have been provided for ecological enhancement measures that could be delivered as part of the proposals.

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 Foel Trawsnant Wind Farm, Maesteg. 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 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. 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 watercourse features present (see Habitats Plan in Appendix A).

1.4 This PEA aims to:

- Characterise baseline ecological conditions of the Site and its wider context
- Identify any ecological constraints to development of the Site
- 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 Site, 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 2021

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.

National Planning Policy

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 Biological 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 Site and adjacent land within c. 2km of its central grid reference. 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 was 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 Site 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), 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 07/08 May 2024 by Katie Critchley MCIEEM (FISC Level 4), Tom Richards MCIEEM (FISC Level 4), Cerian Smith (FISC Level 3) and Charlie Morgan (FISC Level 3) encompassing the Site 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 (S41) 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 As the original botanical survey was undertaken outside of the optimal time of year for most flowering plants, it is likely that not all species present could be identifed at the time. This has been taken into consideration for the habitat classifications, with supplementary species information collected during subsequent visits for other survey work.

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 Site.

4.2 Three international statutory designations were identified within 10km of the survey area; the Cefn Cribwr Grasslands SAC (c. 4.2km south of the survey area), Kenfig/Cynffig SAC (c. 6km south-west of the survey area) and the Blackmill Woodlands SAC (c. 8km south of the survey area). Given the nature and scale of the proposals and the distance to international designations, there are considered to be no pathways for effect on these key sites.

4.3 No national statutory designations were identified within 3km of the Site.

4.4 One local statutory designation was identified within 3km of the Site. This was the Bryn Tip Local Nature Reserve (LNR) (c. 1.8km west of the survey area). Based on the distance between the Site and the LNR, it is considered unlikely that the installation of the new power line will cause significant effects on this designation and is therefore not taken to represent a constraint to development.

Non-Statutory

4.5 A total of 24 non-statutory designations were identified within 2km of the Site, all identified as Sites of Importance for Nature Conservation (SINCs). Five of these designations lie partially within the survey area, a further five lie adjacent to the proposed route and four more are located within 1km of the Site. These non-statutory designations within 1km are described in Table 1 below. Given these designations support valuable and priority habitats and fall within or adjacent to the proposed route, there is potential for these ecological features to be impacted by the works and require further consideration.

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

Site Name & Designation	Distance & Direction from Survey Area	Special Interests or Qualifying Features
International Designation 10km		
Cefn Cribwr Grasslands SAC	c. 4.2km south	The site is one of four sites selected to represent purple moor grass *Molinia* meadows in south central Wales. Extensive *Molinia - Cirsium dissectum* fen meadow including the heathy sub-type exists. The site is also important for the marsh fritillary butterfly.
Kenfig/ Cynffig SAC	c. 6km south-west	The area supports Atlantic salt meadows, with several important and rare habitats including dunes with *Salix repens ssp.*

		Argentea, fixed coastal dunes with herbaceous vegetation and hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.*
Blackmill Woodlands SAC	c. 8km south	Old sessile oak *Quercus petraea* woodlands with an acidic ground flora, as well as moderate coverage of fern and bryophyte.
Local Designations within 3km		
Bryn Tip LNR	c. 1.8km 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 butterfly (*Argynnis aglaja*) and bee orchid (*Ophrys apifera*). On-site habitats support breeding birds like stonechat *Saxicola Torquata*, and linnet (*Carduelis Cannabina*). Brown hare, hedgehog, badger, and otters (*Lutra lutra*) are among the mammal species found here.
Non-Statutory Designations within 1km		
Abercerdin Wood SINC	On-site	Broad-leaved semi-natural woodland with a mix of unimproved and semi-improved neutral grassland. Areas of ancient semi-natural woodland are present.
Nant-y-Crynwydd SINC	On-site	A diverse mix of marshy, semi-improved neutral and acid grassland habitats. This site also supports sphagnum blanket bog, broad-leaved semi-natural woodland, and dense scrub habitats.
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 found here; namely, dry heath acid mosaic, dry dwarf shrub heath, and wet dwarf shrub heath. Marshy grassland and scattered bracken are also present throughout the site.
Cwm Cerdin SINC	On-site	A wide belt of ancient semi-natural woodland runs through a large section of this site. Other habitats include broad-leaved semi-natural woodland, unimproved neutral grassland, and tall herb fern interspersed in improved grassland.
Gilfach Uchaf SINC	On-site	A large site comprised of a diverse mosaic of habitats including marshy grassland, semi-improved acid grassland, acid dwarf shrub heath, and natural acid/neutral rock exposure.

Y Parc (south) SINC	Adjacent to the east	Part of a larger designated Priority Area of heathland and grassland, this site is particularly important for its wet dwarf shrub heath. A diverse mixture of ancient semi-natural woodland, marshy grassland and blanket bog habitats are also present here.
Y Parc (north) SINC	Adjacent to the east	Comprised of broad-leaved semi natural woodland with wet and dry dwarf heath, semi-improved acid grassland, and wet modified sphagnum bog habitats. Areas of scattered bracken and dense scrub are present throughout this site.
Cwm Cerwyn SINC	Adjacent to the east	Lies within a Priority Area of heathland and grassland, comprises of areas of ancient semi-natural woodland and coniferous plantation. This site also supports unimproved neutral grassland and dense scrub habitats.
Cwm Sychbant SINC	Adjacent to the west	Semi-improved neutral grassland and marshy grassland habitats with areas of ancient semi natural woodland and coniferous plantation. Dense and continuous bracken is also present on this site.
Nant-y-Castell Grasslands SINC	Adjacent to north of the Site	This site supports unimproved neutral grassland habitat and dense continuous bracken.
Sychbant Fields SINC	c. 0.02km south-west	Largely dominated by dry dwarf shrub heath (acid).
Waun-y-Gilfach Woods SINC	C. 0.4km east	Dominated by ancient semi-natural woodland with areas of marshy grassland and broadleaved semi-natural woodland. This site also sits within a large Protected Area (heathland and grassland).
Llan Road Woods SINC	c. 0.5km east	Part of a larger designated Protected Area (heathland and grassland) site. The site also comprises of bracken, dense scrub, marshy grassland, and scattered broad-leaved trees.
Tudor West SINC	c. 0.6km north	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.

Habitats and Flora

4.6 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

4.7 The proposed route passes through two areas of ancient semi-natural woodland, as identified by Natural Resources Wales Ancient Woodland Inventory and by SEWBReC data search (see Appendix C; Desktop Study Information, Ancient Woodland Map).

4.8 No trees on or adjacent to Site are listed on the Ancient Tree Inventory.

Notable Flora Records

4.9 The SEWBReC provided 336 records of 52 notable plant species from within the search area. Those of potential relevance to the Site include heath spotted orchid *Dactylorhiza maculate* (c. 0.01km north) and bee orchid (c. 0.03km east), which could be supported by various grassland and heath habitats across the proposed route, as well as meadow thistle *Cirsium dissectum* (LBAP in Bridgend County), bluebell *Hyacinthoides non-scripta* (Schedule 8) and Welsh poppy *Meconopsis cambrica* (Red Data Book 2 species) which have been recorded within the survey area.

4.10 A number of non-native invasive species records were also identified, including Japanese knotweed *Fallopia japonica* (c. 0.01km west) and Himalayan balsam *Impatiens glandulifera* (adjacent to the west) and *Rhododendron ponticum* and American skunk cabbage *Lysichiton americanus* which may be supported within habitats across the proposed route. Himalayan balsam was noted within a number of areas across the survey route associated with hedgerows and watercourses (including F23 alongside the small brook, fields F8-F9, hedgerows bounding F15 and F16, and western boundary hedgerow of F9) and appears to be common locally. Rhododendron was noted within woodland W1 and a single American skunk cabbage was recorded along the brook corridor west of F21. Consideration for the prevention of spread of invasive species will be required alongside implementation of the proposals.

Habitats

4.11 The northern section comprises a mix of upland 'modified' sheep grazed grassland, unmanaged or low intensively managed upland acid grassland, and waterlogged purple moor grassland and rush pasture segregated into fenced field compartments or bound by ditches and walls.

4.12 The southern section (south of the underground highways route) again comprises a series of sheep grazed pasture fields bound by mixed native species hedgerows north of woodland W2, with components of acid grassland, with further fenced intensive sheep grazed fields south of W2, bound by a brook, fence, and a small number of tree lines and

hedgerows. The southern fields are more open and dominated by upland rush pasture and purple moor grass under low or no management. The route terminates in broadleaved plantation woodland over acid grassland.

Modified grassland (g4) with Secondary codes (101, 102)

4.13 The survey area is dominated by low and high intensively managed sheep grazed (102) pasture fields, with fields north of woodland W2 showing higher diversity with species typical of acid grassland but with short-grazed sward and signs of modification. Species included frequent to dominant ribwort plantain *Plantago lanceolata* and sweet vernal *Anthoxanthum odoratum*, with red clover *Trifolium pratense*, field woodrush *Luzula campestris*, creeping buttercup *Ranunculus repens* and common sorrel *Rumex acetosa*, but also yellow rattle *Rhinanthus minor*, tormentil *Potentilla erecta* and common bird's-foot trefoil *Lotus corniculatus*. Fields F8 and F9 showed signs of being cattle grazed although none present during the survey, with some additional diversity such as meadow thistle and basal leaves of devil's-bit scabious *Succisa pratensis*.

4.14 Fields south of woodland W2 appear under higher intensity grazing management which much poorer herb diversity and no acid indicators, dominated by perennial rye *Lolium perenne*, Yorkshire fog *Holcus lanatus*, cock's-foot *Dactylis glomerata*, sweet vernal and occasional herbs such as docks *Rumex* sp., creeping buttercup, thistle and common mouse-ear *Cerastium fontanum*.

4.15 Full descriptions of modified grassland habitats are given within the Habitat Summary Table within Appendix D.

Upland acid grassland (g1b) with secondary codes (102, 124, 521)

4.16 Three fields of upland acid grassland were noted, within field F5, F10, F11, and F12. Field F5 was grass dominated with dense soft rush *Juncus effusus* and not under regular sheep grazing pressure, with a tussocky structure as it transitions out of purple moor grass. Fields F10-F12 were more diverse with some heath typologies, with 40-50% cover of low growing western gorse *Ulex gallii* with purple moor grass *Molinia caerulea*, mat grass *Nardus stricta*, sheep's fescue *Fesctua ovina* and scattered herbs such as heath milkwort *Polygala serpyllifolia*, purple lousewort *Pedicularia sylvatica* and foxglove *Digitalis purpurea* and scattered rushes.

4.17 Full descriptions are provided within the Habitat Summary Table within Appendix D.

Upland rush pasture (g1b) with secondary codes (14, 102)

4.18 Fields F25 and F26 are more characterised by upland rush pasture, typically found within upland Wales, dominated by scattered and dense stands of rushes (14) with open sheep grazed areas (102) and low herb

content. These are located alongside the brook corridor with generally wet ground conditions.

4.19 Full descriptions are provided within the Habitat Summary Table within Appendix D.

Purple moor grass and rush pasture (f2b) with secondary codes (128, 504, 521)

4.20 Fields at the very northern and southern extents of the proposed route are identified as purple moor grass and rush pasture, a UK priority habitat for being highly susceptible to agricultural modification and reclamation. Fields were generally waterlogged, and unmanaged given the challenging structure of the habitat with deep grass tussocks. Additional diversity was recorded within F27, including meadow thistle, purple lousewort and marsh bedstraw *Galium pallustre*, with some occasional patches of cross leaved heath *Erica tetralix* and gorse.

4.21 Full descriptions are provided within the Habitat Summary Table within Appendix D.

Woodland (w1) with secondary codes (28, 111, 113, 128, 201, 521, 205, 214)

4.22 Three parcels of woodland fall within the survey area where the proposed route passes through. Woodland W1 at the southern end of the route is part of a replanted forestry site, with the survey area dominated by replanted broadleaved woodland (<20% coniferous species) over heath and acid grassland flora. An area around the existing pylon has been cleared and maintained as low vegetation cover. Trees species recorded include birch *Betula* sp., oak *Quercus sp.*, rowan *Sorbus aucuparia*, alder *Alnus glutinosa*, and occasional Sitka spruce *Picea sitchensis* with bilberry *Vaccinium myrtillus*, bramble *Rubus fruticosus* agg and rare/occasional R*hodendron*. Shrub and ground flora species included bracken, bramble, soft rush, heath bedstraw and foxglove.

4.23 Woodland W2 forms a belt of mature woodland lying across the proposed route, with a proportion of the woodland mapped as ancient woodland (see Ancient Woodland Map in Appendix C). The woodland was dominated, with fallen and standing deadwood present, and a watercourse flowing through the bottom of the valley. Species were diverse with ancient woodland indicator species in the ground flora, including bluebell, wood anemone *Anemone nemorosa* and pignut *Conopodium majus*. A group of larch *Larix decidua* in poor condition was present on the north-west edge. Ancient semi-natural woodland is an irreplaceable habitat and should be strictly protected from impacts alongside proposals.

4.24 Woodland W3 is a dense scrubby woodland with a single vehicle width track running north to south through the eastern edge of the woods,

lined by mature hedge banks and stone walls with mature trees and shrubs and diverse ground flora. It is expected the proposed route will be restricted to the existing track and avoid impacts to component trees but the depth and spread of the root system should be considered to avoid harm to the long-term health of the trees.

4.25 Full descriptions of woodland parcels are provided within the Habitat Summary Table within Appendix D.

Hedgerows and trees (h2) with secondary codes (33, 11, 111, 203, 204, 521, 522, 524)

4.26 A variety of native species hedgerows (522) are present along field boundaries, particularly fields F8 to F17, a number of which could be considered species rich with 5+ species present and on a mature hedge bank (111). Species include western gorse, birch, sycamore *Acer pseudoplatanus*, hazel *Corylus avellana*, hawthorn *Crataegus monogyna*, holly *Ilex aquifolium*, rowan and oak. Hedgerows bounding fields F10 to F12 comprising largely of western gorse, with occasional oak, rowan and bramble. Hedgerows are largely unmanaged (521), with occasional side trimming, with some boundaries becoming gappy and sparse from lack of management with bracken and Himalayan balsam (524) present. Hedgerows are a UK and local priority habitat of intrinsic ecological importance and should be avoided and protected wherever possible as part of the proposals.

4.27 Lines of mature trees are present along the brook that flows south along the western edge of F23 and F21, dominated by willow *Salix* sp. and oak species. A line of seven mature oak trees is present on a shallow bank along the northern boundary of F19. Mature trees are of intrinsic ecological importance and should be retained and protected alongside the proposals wherever possible.

Fauna

Bats

4.28 A total of 74 bat records were identified within the search area, dating from 1992 to 2023. These include the following species: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, noctule *Nyctalus noctula*, brown long-eared bat *Plecotus auratus*, Natterer's bat *Myotis nattereri* and *Myotis sp.*

4.29 The closest record is of a pipistrelle bat roost located adjacent to the route, east of the Heol Ty Gwyn road within Maesteg Welfare Park, dating from 2012. A further 13 records of unidentified bat roosts and pipistrelle bat roosts were returned in the search, the majority of which are associated with the residential areas of Maesteg, with the closest c. 0.01km from the proposed route.

4.30 Habitat features with the highest suitability for bats include areas of broadleaved woodland, hedgerows and individual trees. The linear features, such as hedgerows, may provide commuting habitat and key flight lines utilised by bats, whilst woodland or individual trees may contain potential roosting features suitable to support roosting bats.

Badger

4.31 The SEWBReC provided eight records of badger *Meles meles* from within the search area, dating from 1998 to 2016. The closest record is c. 0.02km east of the southern end of the proposed route.

4.32 Areas of potentially suitable badger habitat include the pockets of woodland, scrub and hedgerow bases along the proposed route. No evidence of badgers was recorded during the Site walkover of the proposed route and impacts are largely restricted to discrete locations to install poles and tracking routes, with underground sections restricted to the existing highway. However, given the habitats present and presence of records nearby, it is not impossible that new setts could be created within or alongside working areas and a pre-commencement survey along the final defined route would be recommended to confirm no new setts are present.

Dormouse

4.33 A total of six records of dormouse *Muscardinus avellanarius* were identified within the search area, dating from 1976 to 2022. The majority of these records are associated with the Craig Yr Aber woods located c. 1km south-east of the most southern point of the route.

4.34 There are two areas of ancient semi natural woodland within the survey area which provides suitable, well-connected habitat that could support this species. The proposed underground route follows an existing road which passes through one of these woodland areas (Abercerdin Wood SINC), and as the works will be undertaken within the existing hard surface area, with no anticipated loss of vegetation, further investigation into dormouse distribution within this section is not considered to be necessary. However, the overhead section of the proposed route passes through or over a second ancient woodland area (Cwm Cerdin) and therefore further dormice surveys were recommended to confirm their presence/absence and assess the scale of impact to this species, if present, associated with any works within the woodland (e.g. lopping, felling or pruning of trees).

Riparian Mammals

4.35 A total of three records of otter *Lutra lutra* were identified within the search area, dating from 2009 to 2016. The closest record is c. 0.7km west of the northern section of the route associated with a characteristic spraint next to a path.

4.36 Small streams are present at the northern and southern ends of the proposed route but do not appear well connected to other larger water courses, such as the River Afan laying over 3km west and the River Llynfi over 3km east. The network of tributaries may support occasional dispersal of otters, but regular foraging or sheltering is unlikely. As the proposals will not directly impact riparian habitats and will be short-term, otters are not considered to be a constraint.

4.37 No records of water vole *Arvicola amphibius* were identified within the search area. A search of online databases identifies a record over 1.5km north of the survey area.

4.38 The several connected tributaries and surrounding boggy purple moor grass and rush habitats at the southern and northern end of the survey area are suitable to support water vole, with evidence of water vole identifed within the purple moor grass in F5 in the north during the site walkover (latrine site). The proposals have the potential to impact upon suitable terrestrial habitat in these areas, including where evidence has been noted, therefore further survey and consideration is required.

Other Mammals

4.39 Nine records of brown hare *Lepus europaeus* were identified within the search area, dating from 1999 to 2016. The closest record is c. 0.1km from northern section of the route.

4.40 The mosaic of open grassland habitats and woodland may provide some suitable habitat to support brown hare. However, given the well - connected and suitable surrounding habitats in the landscape, a significant population is not anticipated within the defined survey area. Considering the scale of the proposals and the short-term nature of the works, this species is not considered to pose a constraint.

4.41 A total of two records of harvest mouse *Micromys minutus* were identified within the search area, dating from 2008 to 2009. The closest record is located c. 0.01km east of the proposed route.

4.42 The areas of short grazed modified grassland are less suitable for harvest mice, whilst the dense tussocky habitats associated with purple moor grass and rush pasture provides opportunities 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 therefore possible this species is present in discrete locations.

4.43 A total of 21 records of hedgehog *Erinaceus europaeus* were identified within the search area, dating from 2002 to 2021. The majority of these records are associated with the residential areas of Maesteg, with the closest record is c. 0.01km west of the A4063.

4.44 The habitats present within the survey area are also likely to provide opportunities for hedgehogs. As the records suggest, local populations are likely to be associated with the residential areas and the surrounding habitats may have occasional use by hedgehogs. Due to the scale of work and short-term impacts, with dense vegetation used for sheltering being avoided where possible, hedgehogs are not considered to pose a constraint to the proposed work.

Birds

4.45 A total of 3,144 records of 129 bird species were identified within the search area, dating from 1966 to 2023. Those of potential relevance to the Site include species that are supported by the upland habitats and open grassland habitats present and identified as Red or Amber species of conservation concern (Birds of Conservation Concern Wales 4). These include cuckoo *Cuculus canorus,* curlew *Numenius arquata,* dunnock *Prunella modularis,* kestrel *Falco tinnunculus,* linnet *Linaria cannabina,* skylark *Alauda arvensis,* snipe *Gallinago gallinago* and starling *Sturnus vulgaris.*

4.46 Suitable habitat for ground nesting birds is widespread along the route, particularly within longer acid grassland swards and drier purple moor grass habitats. Nesting bird habitat is also present within areas of woodland, trees/shrub and hedgerows. A number of generalist and specialist bird species are expected to utilise habitats within the survey area. Where direct impacts to nesting birds is likely to occur, further consideration will be required.

Reptiles

4.47 A total of 50 records of four reptile species were identified within the search area including adder *Vipera berus*, common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis* and grass snake *Natrix helvetica*. Records adjacent to the proposed route included sightings of a common lizard in 2016 and a slow-worm in 2002. Recent records from 2022 indicate the presence of an adder c. 1.5km west and of common lizard c. 0.5km east of the proposed route.

4.48 Survey work undertaken in relation to a nearby planning application for the Afan Valley Adventure Resort (reference: P2018/0493) confirmed a local population of common lizard, as well the presence of slow-worms and adders within the local area in 2017.

4.49 Presence of reptiles was confirmed during the site walkover through an incidental sighting of common lizard at the northern end of the survey area and on the southern slope of the ancient woodland belt in F10. Several additional areas of suitable habitat were identifed within longer areas of purple moor grass and soft rush, whilst areas of short sheep grazed grassland were considered to be less suitable for these species.

Reptile species are expected to utilise habitats present along the proposed route and impacts to reptiles will require further consideration.

Amphibians

4.50 A total of 48 records of four amphibian species were identified within the search area, including common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Lissotriton vulgaris* and palmate newt *Lissotriton helveticus.* The closest records are of a common frog c. 0. 256km west of Heol Ty Gwyn and of common frog and common toad c.0.08km south of the southern end of the route within Craig Yr Aber forestry, rescued during supervised clearance works in 2016.

4.51 A more detailed appraisal of the Site in respect of great crested newt is provided below.

Great Crested Newt

4.52 No records of great crested newts were returned within the data search.

4.53 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, three of which are believed to overlap with the ponds identifed within a dispersible range of the proposed route. No evidence of great crested newts were found in any of the surveyed ponds.

4.54 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. Seven potential breeding ponds appear to be within a dispersible range of the route, based on OS mapping and aerial imagery (see Pond Location Plan in Appendix C. Pond P2 is located east of the residential area of Maesteg which forms a significant barrier and given this section is the underground cable section falling within the highway, this pond has been discounted.

4.55 The open mosaic of grassland and woodland habitats surrounding the ponds provide suitable terrestrial habitat for dispersing great crested newts. In addition, no major barriers to dispersal between the ponds and the proposed route were identified except for Pond 2. Further assessment was recommended to determine the likely presence of this species within the local area and across the proposed route.

Invertebrates

4.56 A total of 1,106 records of 132 invertebrate species were identified within the search area. Those of potential relevance to the Site include nationally and locally notable species that may also be supported by habitat present.

4.57 The southern section of the route is located within the South Wales Coast Important Invertebrate Area (IIA). This area has been selected due to supporting at least 79 qualifying IIA species of conservation concern, however the important species listed were not present within the records returned.

4.58 The grassland and woodland habitats present across the route are likely to support a number of generalist and specialist species, including priority purple moor grass and rush pasture habitats. Given that proposed works are restricted to a narrow corridor and impacts are to be temporary, with habitats restored upon completion, significant impacts to the invertebrate assemblage are not anticipated and further surveys are not considered necessary.

5.0 DISCUSSION AND RECOMMENDATIONS

Nature Conservation Designations

Non-Statutory

5.1 The proposed overhead route passes through five SINCs which have been designated for various valuable and priority habitats, with the underground works restricted to the highway along existing roads which pass adjacent to further SINCs. The works associated with the overhead power lines will be restricted to a narrow working corridor to accommodate installation of the poles and vehicle access and tracking. The habitats would be impacted during the installation of the pole mounted cables; however, this would be a short-term impact with the ground conditions to be fully reinstated following the works to facilitate re-establishment of the habitats. Discussions with the local authority regarding the full scope of the work and necessary mitigation will be required to agree a suitable mitigation strategy or risk contravening Policy DNP5 of the Bridgend Local Development Plan 2018-2033 in relation to having adverse impacts on local nature conservation sites.

5.2 Taking into account the scope of the proposals, other non-statutory designations not intersected by the proposed route are not considered likely to be impacted by the works.

Habitats and Flora

Habitat Feature

5.3 The underground works associated with the proposed route are restricted to the existing highways road networks and is therefore not anticipated to impact any sensitive habitat. Habitats along the remaining sections of the route comprise habitats that are considered to be ecologically valuable. The highest value is associated with areas of priority habitat 'purple moor grass and rush pasture' and areas of ancient semi-natural woodland.

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 the pole locations (typically 100 -130m apart). Habitats would be made good and reinstated following the installation with small areas 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. These

areas have been avoided at the northern end of the route as far as possible, utilising existing access where possible. Full scope of the work and mitigation will need to be discussed and agreed with the local authority for sensitive priority habitats.

Ancient Woodland

5.5 Ancient woodland is an irreplaceable habitat and should be safeguarded from harm in accordance with Planning Policy Wales 12. Proposals crossing woodland W2 have been adjusted to sail over the narrowest point of the ancient designation (according to mapping) to avoid total loss of any trees and avoid placement of poles within 15m of the woodland edge. However further investigation is required as to the requirement for any pruning or lopping of trees to achieve the necessary clearance of the line. Further discussion with the local authority is recommended to discuss the potential impacts and agree a mitigation strategy to minimise impact to maintain the long-term health and viability of the woodland.

Hedgerows and trees

5.6 The survey area comprises a number of native hedgerows along field boundaries. Hedgerows are a Section 42 Habitat of Principal Importance and represent important foraging, refuge and dispersal habitat for a range of fauna. Although the proposed works are utilising existing gaps where possible, they will likely require a small loss to hedgerows, which will be restricted to small sections within the linear features. Infill planting will be undertaken to replace these sections where possible.

5.7 A number of mature trees are present within tree lines, hedgerows and hedge banks within W3 and represent key ecological resources within the local landscape. Further consideration to the impact on trees itself is required, avoiding these wherever possible, with protected species constraints associated with mature trees (such as roosting bats and dormice) considered separately within the appropriate sections below.

Fauna

Bats

5.8 All bat species and their roosts are classified as European Protected Species (EPS) under the Conservation of Habitats and Species Regulations 2017 (as amended).

5.9 Further survey work will be required for any trees likely to be impacted by the proposed route where impacts cannot be avoided through design. This will comprise Ground Level Tree Assessments (GLTAs) to assess the suitability of these trees to support roosting bats, followed by aerial inspection or presence/absence surveys where potential roosting features have been identified, to determine their use by bats.

Dormouse

5.10 Hazel dormouse is classified as a European Protected Species (EPS) under the Conservation of Habitats and Species Regulations 2017 (as amended).

5.11 Suitable, well connected ancient woodland was identifed as suitable habitat within the survey area with potential to support this species. As several records of dormouse were recorded within the local area, a dormouse nest tube survey within the woodland was recommended to determine presence/likely absence and the likely scale of impacts to this species, if present. Although the nature of the works is unlikely to have long-term implications to any existing dormouse populations, further survey work will inform the nature and scale of mitigation required to avoid any negative impacts to the local population in the short-term.

Water voles

5.12 Water voles are protected under Schedule 5 of the Wildlife and Countryside Act 1981 and are listed as a rare and threatened species under Section 42 of the NERC Act (2006).

5.13 Suitable habitat to support water voles has been confirmed within the northern and southern section of the survey area, with evidence of the species confirmed within purple moor grass during the walkover within field F5. Therefore, a dedicated water vole survey within these areas was recommended, comprising two visits in spring and summer to confirm presence, coverage and the potential scale of impacts to this species. The first survey was completed in June and the second will be completed in September 2024. Full results will be provided within a Water Vole Survey Report.

Harvest Mouse

5.14 Harvest mice are classified as a Section 42 Species of Principal Importance and are quite restricted in Wales. Online resources indicated records covering the valley surrounding Masteg and with areas of suitable habitat identifed within the survey area there is potential for this species to persist in discrete locations along the proposed route. Possible impacts to this species are anticipated to be short-term, however precautionary working methods should be set out within a Construction Ecological Management Plan (CEcMP) to mitigate against any negative implications.

Birds

5.15 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.

5.16 Due to the nature of the works requiring dry 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. Therefore, it is 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 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

5.17 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 Wales.

5.18 Opportunities for reptiles were identifed across several sections of the survey area, with confirmed presence at two locations. However, due to the narrow working corridor and short-term nature of impacts associated with the proposed route, a full reptile survey is not considered proportionate to the scale of impact. 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 offense through injury or killing. 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

5.19 Habitats present across the survey area are suitable to support dispersal, refuge and foraging of great crested newts. The terrestrial habitats connect to six ponds within a dispersible range (see Appendix C). It was 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, with three denied access, one found to be dry and an additional two ponds identified and surveyed.

5.20 The three ponds where access was refused lie over 250m from the section of the proposed route which is associated with the underground

works restricted to the highways and where no terrestrial habitat will be impacted. These ponds lie over 800m from the closest section of overhead lines. Given the distance and context of these ponds and the lack of records within the local area, impacts to great crested newts are considered to be highly unlikely. Full methods and outcomes of surveys on the remaining ponds will be reported within a Great Crested Newt Survey Report and appended to any subsequent reporting.

5.21 Common amphibian species are known to be present locally, with common toad also listed as a Section 42 species of principal importance and may be encountered during the works. Precautionary measures implemented for nesting birds, harvest mouse and reptiles would also benefit amphibian species, which can be carefully caught and moved from the working area while the works are completed.

Summary of Recommendations

5.22 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
Badger	Pre-commencement walkover	-
Dormouse	Dedicated dormouse survey within ancient woodland habitat	April – October
Water vole	Dedicated water vole surveys of watercourses and suitable terrestrial habitat	April - October
Harvest Mouse	Precautionary working methods	-
Nesting 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 Precautionary working methods for common amphibian species	Mid-April – end of June

Opportunities for Ecological Enhancement

5.23 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 and hedge planting

6.0 CONCLUSIONS

6.1 Confirmed and potential ecological constraints to proposals at the Site have been identified as the presence of:

- **Non-statutory designations** – five SINCs and associated priority habitats fall within the proposed route
- **Habitats** – native hedgerows, mature trees, irreplaceable ancient woodland habitat and priority habitats fall within the proposed route
- **Invasive non-native species** – present in a number of locations across the survey area
- **Roosting bats** – potential for roosting bats within trees to be impacted
- **Dormouse** – potential for dormice within woodland habitats that fall within the proposed route
- **Harvest mice** – suitable nesting habitat
- **Nesting birds** – suitable ground and scrub nesting habitat
- **Water vole** – evidence of presence and suitable habitat on-site
- **Reptiles** – incidental sightings and suitable habitat on-site
- **Great crested newt** – ponds present within a dispersible 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 SINCs and priority habitats, ancient woodland, reptiles and water vile
- Ground-level tree assessments (GLTAs) for trees likely to be impacted to identify bat roosting potential
- Dormouse nest tube survey within suitable woodland
- Water vole survey of suitable habitats
- Pre-commencement badger survey
- Great crested newt HSI and eDNA survey work
- Precautionary working methods for reptiles, amphibians, harvest mouse and nesting birds

6.3 Recommendations for ecological enhancement measures that could be delivered as part of the proposals for a new 66kv powerline 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 the proposals 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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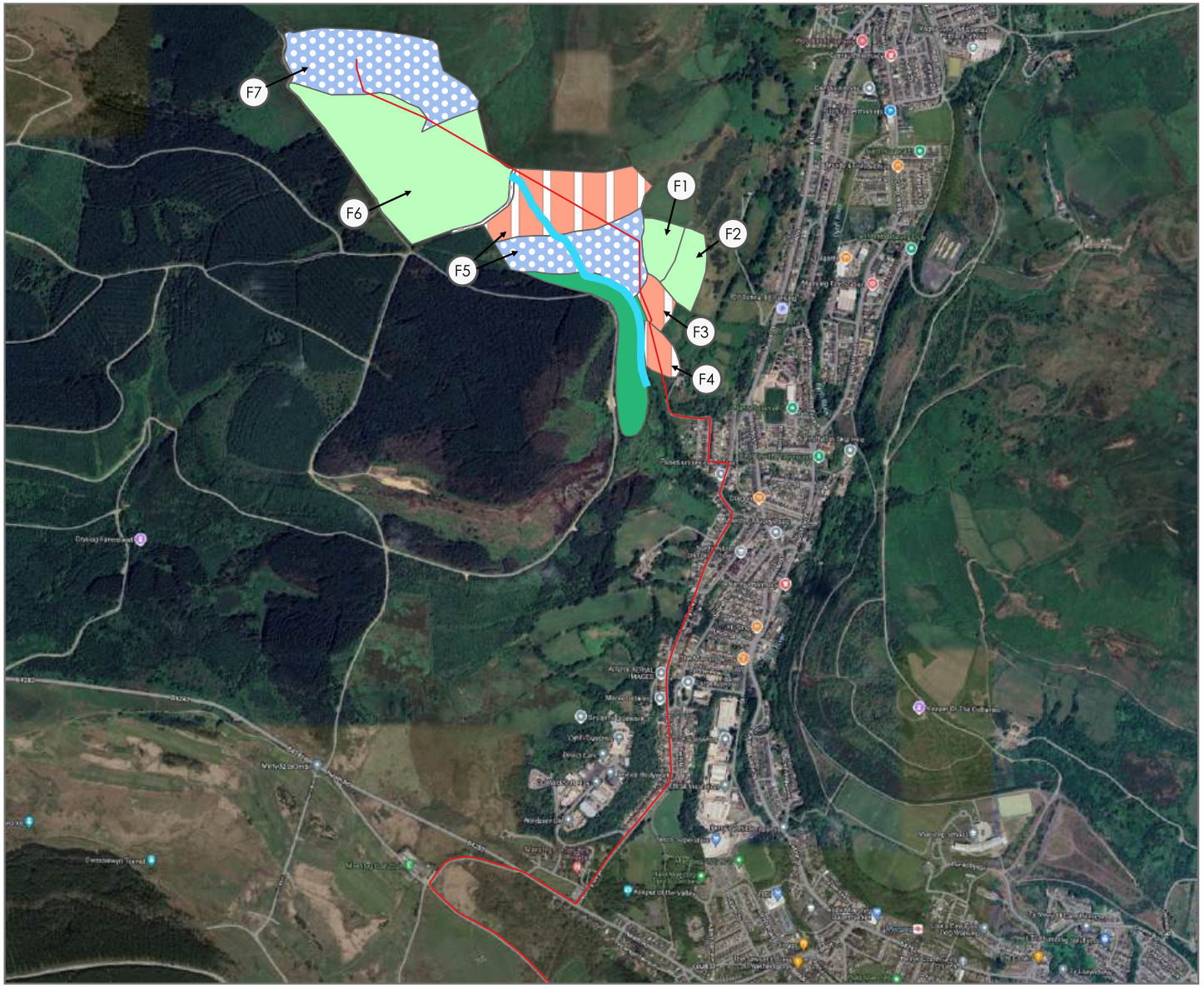
Appendix A

Habitats Plan



N

- Proposed route
- Purple moor-grass and rush pastures (f2b)
- Upland acid grassland (g1b)
- Modified grassland (g4)
- Coniferous woodland (w2)
- Native hedgerow (h2a)
- Line of trees
- Rivers and streams (r2)
- Field reference

0 500 1,000 m

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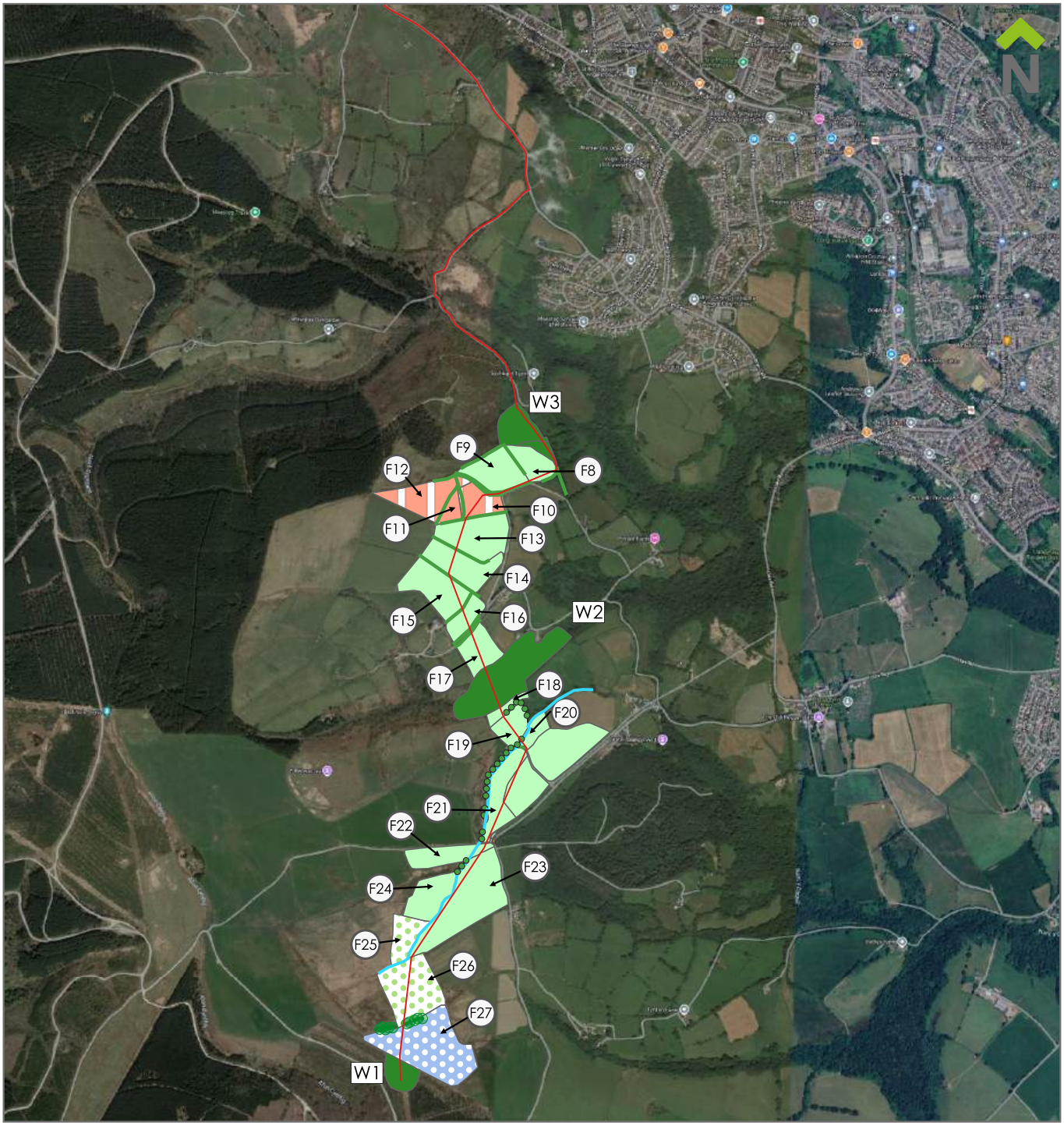
Project	Foel Trawsnant Wind Farm	Date	July 2024	Drawing No.	CSA/7086/100
Drawing Title	Habitats Plan	Scale	Refer to scale	Rev	-
Client	Fisher German	Drawn	BK	Checked	CT



- Proposed route
- Purple moor-grass and rush pastures (f2b)
- Upland acid grassland (g1b)
- Upland Rush Pasture (g1b, 14, 102)
- Modified grassland (g4)
- Woodland and forest (w)
- Native hedgerow (h2a)
- Line of trees
- Rivers and streams (r2)
- Field reference
- Woodland reference

0 500 1,000 m

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Project: Foel Trawsnant Wind Farm		Date: July 2024	Drawing No.: CSA/7086/101
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(2) 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.

7.1 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.

1.7. 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 countryside; 2) The character of its landscape; 3) Its biodiversity and habitats; and

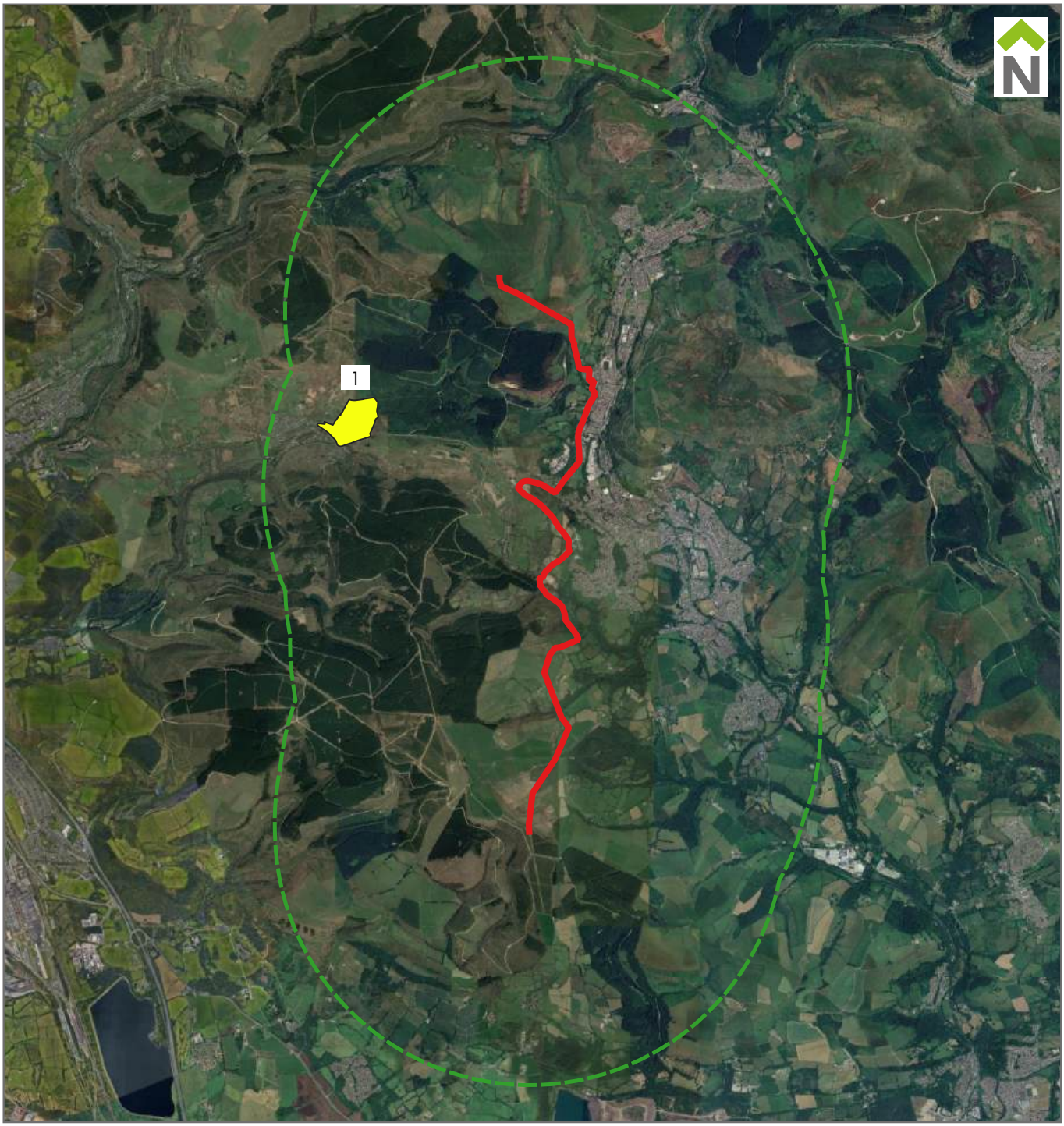
Policy	Summary
	4) The quality of its natural resources including water, air and soil. Areas having a high and/or unique environmental quality will be protected and the following strategically important areas within the County Borough will specifically be protected from inappropriate development which 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 (pre-mitigation) 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



Route_realign

3km buffer

Sites of Specific Scientific Interest (SSSI)

Local Nature Reserve (LNR)

National Nature Reserve (NNR)

Distance and direction from the Site:

1. Bryn Tip LNR 1.8km west

0 1,000 2,000 m

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Project: Foel Trawsnant		Date: August 2024	Drawing No.: CSA/7086/103
Drawing Title: Designated Sites 3km Search		Scale: Refer to scale	Rev: -
Client: Fisher German		Drawn: BK	Checked: CT

- Proposed route
- 10km buffer
- Ramsar
- Special Protected Areas (SPA)
- Special Areas of Conservation (SAC)

Distance and direction from the Site:

1. Cefn Cribwr Grasslands c. 4.2km south
2. Kenfig/ Cynffig c. 6km south-west and 10km south
3. Blackmill Woodlands c. 8km

0 2,500 5,000 m

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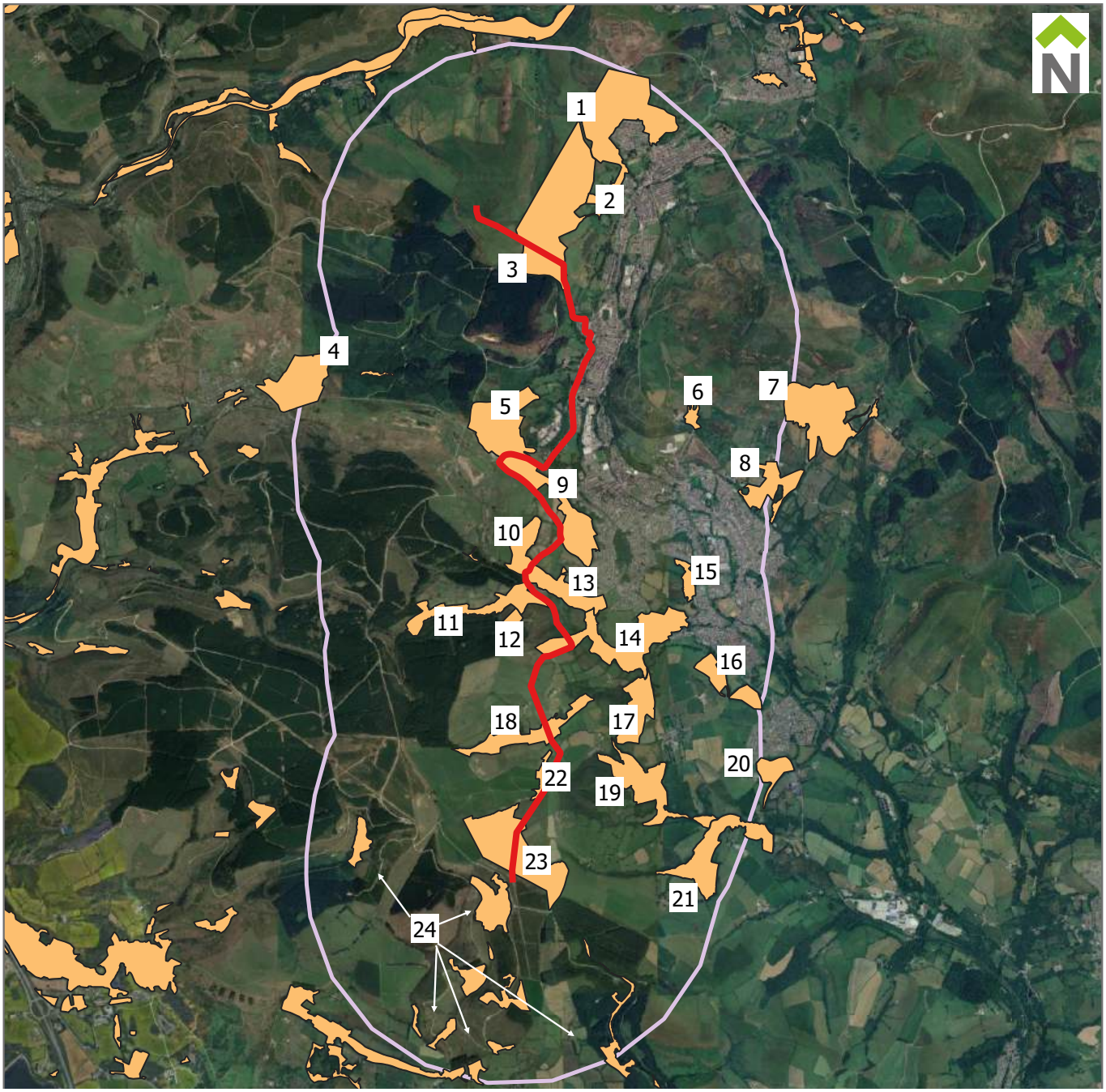
Project: Foal Trawsnant Wind Farm		Date: Auagust 2024	Drawing No.: CSA/7086/102
Drawing Title: International Designations 10km Search		Scale: Refer to scale	Rev: -
Client: Fisher German		Drawn: BK	Checked: CT



Proposed route

2km buffer

SINCs

0 1,000 2,000 m

Ref	SINC	Distance
1	Caerau North	c. 1km north
2	Tudor West	c. 0.6km north
3	Caerau West	On-site
4	Bryn Tip	c. 1.8km west
5	Nant-y-Castell	Adjacent to Site
6	Craig Tal-y-Fan	c. 1.2km east
7	Blaen-Cwmdu	c. 1.8km east
8	Cemetery Fields	c. 1.7km east
9	Y Parc (north)	Adjacent to Site
10	Cwm Cerwyn	Adjacent to Site
11	Cwm Sychbant	Adjacent to Site
12	Sychbant Fields	c. 0.3km west
13	Y Parc (south)	Adjacent to Site
14	Abercerdin Wood	On-Site
15	Llwydarth Wood	c. 1.2km east
16	Drysity'n-y-waun	c. 1.2km east
17	Llan Road Woods	c. 0.05km
18	Cwm Cerdin	On-site
19	Waun-y-Gilfach Woods	c. 0.03km
20	Ty'n-y-Waun	c. 1.9km east
21	Nant Bryncynan Woods	c. 1.3km east
22	Nant-y-Crynwydd	On-site
23	Gilfach Uchaf	On-site
24	NPT Ancient Semi-Natural Woodland	c. 0.06km south

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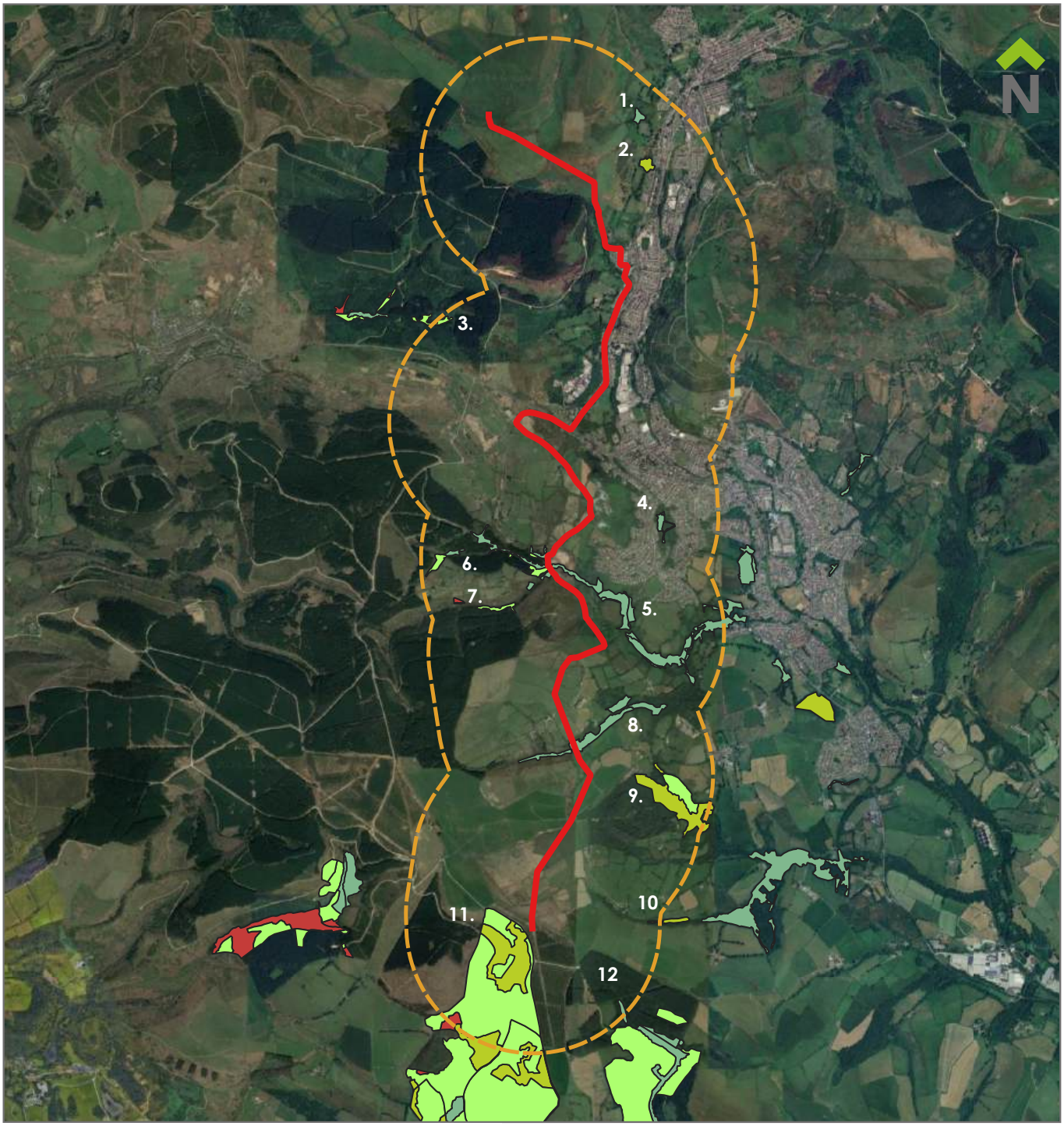
Project	Foel Trawsnant Wind Farm	Date: August 2024	Drawing No.: CSA/7086/104
Drawing Title	Non-designated Sites	Scale: Refer to scale	Rev: -
Client	Fisher German	Drawn: BK	Checked: CT



Proposed route

1km buffer

Ancient semi natural woodland

Restored ancient woodland site

Plantation on ancient woodland site

Ancient woodland (unknown category)

0 125 250 m

Distance and direction from the Site:

1. c. 700m north-east
2. c. 470m north-east
3. c. 950m north-west
4. c. 510m east
5. On-site
6. c. 700m west
7. c. 530m west
8. On-site
9. c. 370m east
10. 900m east
11. c. 60m south-west
12. c. 890m south-east

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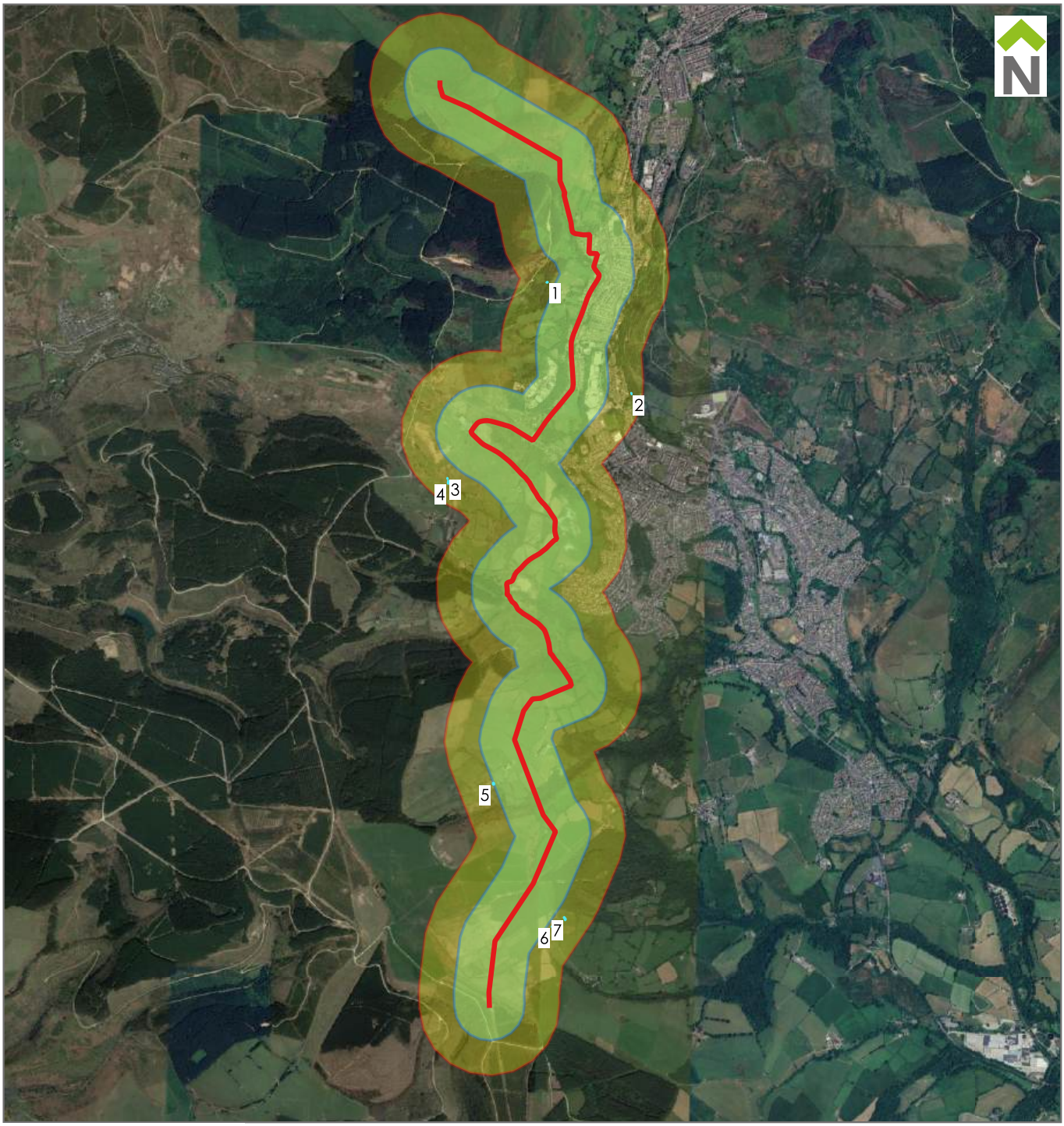
Project: Foel Trawsnant Wind Farm		Date: June 2024	Drawing No.: CSA/7086/106
Drawing Title: 1km Ancient Woodland Search		Scale: Refer to scale	Rev: -
Client: Fisher German		Drawn: GG	Checked: CT



Site boundary

250m buffer

500m buffer

Ponds:

1. c. 260m north-west
2. c. 380m east
3. c. 500m west
4. c. 520m west
5. c. 250m west
6. c. 340m east
7. c. 360m east

0 1,000 2,000 m

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Project: Foel Trawsnant Wind Farm		Date: August 2024	Drawing No.: CSA/7086/105
Drawing Title: Pond Search		Scale: Refer to scale	Rev: -
Client: Fisher German		Drawn: GG	Checked: CT

Appendix D

Habitat Summary Table

Table 1. UK Habitat Classification Survey Results (Areas and Linear Habitats)

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
F1 & F2	Modified grassland	G4 102	Fields F1 to F2 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 F2, 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.	
F3	Upland acid grassland	g1b 102	Field F3 was managed through sheep grazing and had occasional ant hills 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's 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.	
F4	Upland acid grassland	g1b 102, 124,	Upland acid grassland, abundant ant hills, sheep grazed. the upland acidic grassland varies 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	

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
			*Rumex acetosella. T*he field was currently managed through the grazing of sheep with frequent ant hills across its entirety	
F5	Purple moor-grass and rush pasture	f2b 128, 504, 521	A large area of purple moor grass dominated habitat with very few other species present, with boggy ground between the hummocks. Towards the northern half of the field the species composition transitioned to areas of dense soft rush pasture and shorter acid grassland 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,	 View across PMG in April 24
	Upland acid grassland	g1b6 521,		 View south across acid grassland to PMG

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
F6	Upland rush pasture	g1b, 14, 102	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*	
F7	Purple moor-grass and rush pasture	f2b 128, 504, 521,	Similar to that of field F5 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 hair's-tail cotton-grass.	
Southern section (south of underground section along highways)				

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
F8 – F9	Modified grassland	g4 101	Short cattle grazed pasture sloping eastwards, but with acid species present. On eastern and northern banks widespread bluebells present, and lower levels in F8 higher coverage of bracken sloping into the woodland edge. Widespread tormentil and field woodrush with scattering of bramble saplings where it's not been grazed recently. Also dandelion, ribwort plantain, sweet vernal, red clover, creeping buttercup, white clover, but also bird's foot trefoil, meadow thistle, yellow rattle and some patches of devil's bit scabious in the short sward of F9.	 
F10 – F12	Upland acid grassland	g1b 102,	Upland pasture, high level of low growing gorse cover (40-50%) and high sphagnum cover, with heath bedstraw, field woodrush, tormentil, purple moor grass, mat grass, sheep's fescue, sweet vernal, marsh thistle, heath milkwort, purple lousewort, foxglove, with some scattered rush.	

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
F13 – F17	Modified grassland	g4 102	Traditional low intensity sheep grazed pasture enclosed by hedgerows. Uniform short sward with acidic species present, including field wood rush, frequent to dominant ribwort plantain and sweet vernal, with red clover, yellow rattle, common bird's foot trefoil, creeping buttercup, common sorrel and dandelion. In F17, north of W2, ribwort plantain, sweet vernal, and field wood rush dominating overall appearance, with scattered bluebell to edges and hedge banks and frequent yellow rattle, and other species including tormentil, red clover, bird's foot trefoil, and eyebright species.	 F13  F17
F18	Modified grassland	g4 102	Woodland edge field, dominated by short-grazed field of low diversity, however northern edge grades into woodland ecotone, with additional diversity recorded on the slope, including sedges, tormentil, gorse, with incidental common lizard sighting.	 View north towards W2

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
F19 – F24	Modified grassland	g4 102	Lush short intensively sheep grazed pasture, with low diversity more indicative of higher nutrient level, including sweet vernal, Yorkshire fog, perennial rye, cock's foot, with rare to occasional dock, marsh thistle, creeping buttercup, common mouse-ear, and daisy. A small section at the northern tip of F23 is more diverse where the brook meanders and passes under the track, with addition of soft rush, field woodrush, tormentil, annual meadow-grass, common nettle, creeping thistle, bracken, wavy bittercress, hard rush and ribwort plantain.	 View south across F19 to F20  View north along F21 western boundary  View north across F23 and F25 to the west

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
F25 – F26	Upland rush pasture	g1b 14, 102	Rush dominated pasture with open grazed areas in F26, mossy in areas, low herb content with rare to occasional bird's foot trefoil and sorrel. Northern extent of F26 (see photo) and F25 are continuous dense cover of tussocky rushes with wet ground, with scattered foxglove, bramble and bluebell in patches within F25, particularly along the adjacent brook corridor.	 View north across F26
F27	Purple moor grass and rush pasture	f2b 128, 504, 521	Wet and tussocky purple moor grass grassland with scattered rushes and ditches through the field. Southern edge alongside woodland was more diverse with cuckoo flower, marsh thistle, meadow thistle, marsh bedstraw, purple lousewort, clubrush, tormentil, foxglove with rare to occasional cross leaved heath and gorse. Lines of willow trees in depression along wet northern boundary.	 View north across PMG towards northern willow boundary (April 24)
W1	Broadleaved woodland	w1 128, 201,	Replanted broadleaved woodland with occasional (<20%) coniferous species, with a cleared area around the existing pylon. Woodland species include birch, oak, rowan, alder, bilberry, bramble and rare-occasional rhododendron and sitka spruce. Shrub and ground flora species include bramble, bracken, soft rush, honeysuckle, heath bedstraw, foxglove,	 View south towards W1 and pylon

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
				 Clearing in woodland around pylon
W2	Broadleaved woodland	w1 28, 521, 205, 214,	Mature woodland with ancient component, oak dominant with standing and fallen deadwood and a watercourse within the base of the wooded valley. Dampy and wet areas, moss cover on trees and higher component of willow. Shrub layer of hawthorn, holly, birch, hazel, rowan and honeysuckle with ground flora of bluebell, pignut and wood anemone. Group of larch on north-western edge of survey area in poor condition, otherwise broadleaved species. An existing c.5m wide cleared corridor is already present through the woodland for an existing line.	 Southern edge of woodland  Group of larch on northern edge

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
W3	Broadleaved woodland	w1 111, 113,	Scrubby woodland along the western edge, to 4-5m tall with down birch, hazel, rowan and gorse, very dense in areas. Single lane track continues north through the woodland, with hedge banks and stone walls (c. 1.5-2m tall) along its length with mature trees and shrubs including pedunculate oak, sycamore, birch, holly, hazel and hawthorn. Ground flora includes bluebell, wood sorrel, common dog violet, angelica and slender St John's wort. Leads into scrubby younger woodland to the north, with dense young growth, with maturer hazel stools and trees continuing along the track.	 Track through woodland W3
Hedgerows and trees	Native hedgerows	h2a 11, 111, 521, 522, 524	Fields F8 to F17 are bound by a number of native species hedges under varying management, often not under regular management and associated with old hedge banks. Species composition often include western gorse, hazel, hawthorn, pedunculate oak, holly, birch, rowan, willow, sycamore. Hedges bounding F10 to F12 are dominated by western gorse. Himalayan balsam present in a number of hedgerows. Some hedgerows are sparse with gaps and high component of bracken or bramble, with newer planting along the southern boundary of F16.	 Gorse hedge in F12  Native mixed hedge along F15

Habitat Reference	Habitat Type	UKHab Codes	Description	Photograph
	Lines of trees	33, 203, 204	Lines of mature trees line the brook that flows north to south along F23, F21 and F20, dominated by willows and oak on steep sided banks. Lines of willow within a depression form part of the northern boundary of F27. A line of seven mature oak trees on a shallow bank with some interspersed rowan are present on the northern boundary of F19.	 Line of trees along brook (F21)  Line of mature oak northern boundary F19

Appendix E

Habitats and Flora Species List

Table 1. Habitat Polygons

Site Name	Foel Trawsnant													
Survey Date and Surveyor(s)	07/05/2024 KC, CM, TR, CSm													
Scientific Name	**Common Name**	**Habitat Parcel** F27	F26	F23	F25	F24	F22	F21	F20	F19	F18	F17	F16	F15	F14
Bryophytes															
Polytrichum sp.	Polytrichum moss														
Sphagnum sp.	Sphagnum moss														
x															
Blechnum spicant	Hard fern														
Polypodium vulgare	Common polypody	X													
Pteridium aquilinum	Bracken						X		X			X	X		
	Fern														
Herb Species															
Achillea millefolium	Yarrow														
Bellis perennis	Daisy			X		X									
Cardamine flexuosa	Wavy bitter-cress						X								
Cardamine hirsuta	Hairy bitter-cress														
Cardamine pratensis	Cuckooflower	X			X		X								
Cerastium sp.	Common mouse-ear			X		X		X							
Cirsium arvense	Creeping thistle						X			X					
Cirsium dissectum	Meadow thistle														
Cirsium palustre	Marsh thistle	X	X		X	X	X								
Cirsium vulgare	Spear thistle			X											
Conopodium majus	Pignut														
Digitalis purpurea	Foxglove	X			X		X								
Erica tetralix	Cross-leaved heath	X			X										
Euphrasia officinalis	Eyebright											X			
Ficaria verna	Lesser celandine						X			X					
Galium saxatile	Heath bedstraw														
Hieracium pilosella	Mouse-ear-hawkweed														
Humulus lupulus	Hop														
Hyacinthoides non-scripta	Bluebell				X						X	X			
Hypericum perforatum	Perforate St John's-wort														
Hypericum sp.	St John's-wort														
Hypochaeris radicata	Cat's-ear														
Impatiens glandulifera	Himalayan balsam						X			X					
Lotus corniculatus	Common bird's-foot-trefoil	X	X		X							X	X	X	X
Pedicularis palustris	Purple lousewort	X			X										
Plantago lanceolata	Ribwort plantain						X					X	X	X	X
Plantago major	Greater plantain														
Polygala serpyllifolia	Heath milkwort														
Potentilla anserina	Silverweed														
Potentilla erecta	Tormentil	X			X		X					X			
Potentilla sterilis	Barren strawberry														
Prunella vulgaris	Selfheal														
Ranunculus acris	Meadow buttercup														
Ranunculus aquatilis	Common water-crowfoot														
Ranunculus bulbosus	Bulbous buttercup														
Ranunculus repens	Creeping buttercup			X		X	X		X	X	X		X	X	X
Rhinanthus minor	Yellow-rattle											X	X	X	X
Rumex acetosa	Common sorrel		X										X	X	X
Rumex acetosella	Sheep's sorrel	X			X										
Rumex sp.	Dock			X		X	X	X	X		X				
Stellaria aquatica	Water chickweed														
Succisa pratensis	Devil's-bit scabious														
Taraxacum agg.	Dandelion						X					X	X	X	X
Trifolium pratense	Red clover	X	X		X							X	X	X	X
Trifolium repens	White clover						X								
Trifolium sp.	Clover														
Urtica dioica	Common nettle						X			X					
Veronica chamaedrys	Germander speedwell													X	X
Veronica serpyllifolia	Thyme-leaved speedwell					X	X								
Vicia sativa	Common vetch														
Viola palustris	Marsh violet														
Viola riviniana	Common dog-violet														
Viola sp.	Violet														

Scientific Name	Common Name	Habitat Parcel													
		F27	F26	F23	F25	F24	F22	F21	F20	F19	F18	F17	F16	F15	F14
Sedges and Rushes															
Carex sp.	Sedge						X								
Carex nigra	Common sedge														
Eleocharis palustris	Common spike-rush														
Juncus effusus	Soft-rush	X	X	X	X		X			X			X	X	X
Juncus inflexus	Hard rush						X								
Luzula campestris	Field wood-rush											X	X	X	X
Luzula multiflora	Heath wood-rush														
Luzula sp.	Wood-rush	X			X		X								
Schoenoplectus lacustris	Common club-rush	X			X										
Grasses															
Agrostis sp.	Bent grass	X	X		X		X					X	X	X	X
Anthoxanthum odoratum	Sweet vernal-grass	X	X		X	X	X			X		X	X	X	X
Dactylis glomerata	Cock's-foot			X			X	X		X					
Deschampsia flexuosa	Wavy hair-grass	X			X										
Eriophorum vaginatum	Hare's-tail cottongrass														
Festuca ovina	Sheep's-fescue														
Festuca rubra	Red fescue									X		X			
Festuca sp.	Fescue														
Glyceria fluitans	Floating sweet-grass														
Holcus lanatus	Yorkshire-fog	X	X	X	X	X	X			X					
Lolium perenne	Perennial rye-grass			X		X		X	X	X	X				
Molinia caerulea	Purple moor-grass	X													
Nardus stricta	Mat-grass														
Poa annua	Annual meadow-grass			X			X	X	X	X			X		
Poa sp.	Meadow-grass														
Crops															
Woody Species															
Coniferous															
Broadleaved															
Cornus sp.	Dogwood														
Quercus sp.	Oak														
Rubus fruticosus agg.	Bramble														
Salix caprea	Goat willow														
Ulex europaeus	Gorse	X			X										

Table 1. Habitat Polygons

Site Name	Foel Trawsnant														
Survey Date and Surveyor(s)	07/05/2024 KC, CM, TR, CSm														
Scientific Name	**Common Name**	F13	F11	F12	F10	F9	F8	F1	F2	F4	F3	F5	F5	F6	F7
Bryophytes															
Polytrichum sp.	Polytrichum moss								X	X		X			
Sphagnum sp.	Sphagnum moss												X		
x															
Blechnum spicant	Hard fern														
Polypodium vulgare	Common polypody												X		
Pteridium aquilinum	Bracken	X				X	X			X		X	X		
	Fern														
Herb Species															
Achillea millefolium	Yarrow								X			X			
Bellis perennis	Daisy														
Cardamine flexuosa	Wavy bitter-cress											X			
Cardamine hirsuta	Hairy bitter-cress														
Cardamine pratensis	Cuckooflower														
Cerastium sp.	Common mouse-ear														
Cirsium arvense	Creeping thistle														
Cirsium dissectum	Meadow thistle						X								
Cirsium palustre	Marsh thistle		X	X	X		X			X		X	X	X	
Cirsium vulgare	Spear thistle													X	
Conopodium majus	Pignut									X					
Digitalis purpurea	Foxglove		X	X	X					X	X	X	X		
Erica tetralix	Cross-leaved heath										X		X		X
Euphrasia officinalis	Eyebright														
Ficaria verna	Lesser celandine						X								
Galium saxatile	Heath bedstraw						X			X		X	X		
Hieracium pilosella	Mouse-ear-hawkweed									X					
Humulus lupulus	Hop														
Hyacinthoides non-scripta	Bluebell					X	X								
Hypericum perforatum	Perforate St John's-wort														
Hypericum sp.	St John's-wort														
Hypochaeris radicata	Cat's-ear							X							
Impatiens glandulifera	Himalayan balsam	X				X	X			X					
Lotus corniculatus	Common bird's-foot-trefoil	X				X	X			XX		X			
Pedicularis palustris	Purple lousewort		X	X	X										
Plantago lanceolata	Ribwort plantain	X				X	X	X		X	X				
Plantago major	Greater plantain											X			
Polygala serpyllifolia	Heath milkwort		X	X	X										
Potentilla anserina	Silverweed											X	X		
Potentilla erecta	Tormentil		X	X	X	X	X			X		X			
Potentilla sterilis	Barren strawberry									X			X		
Prunella vulgaris	Selfheal											X			
Ranunculus acris	Meadow buttercup	X													
Ranunculus aquatilis	Common water-crowfoot												X		
Ranunculus bulbosus	Bulbous buttercup														
Ranunculus repens	Creeping buttercup	X				X	X				X		X	X	
Rhinanthus minor	Yellow-rattle	X				X									
Rumex acetosa	Common sorrel	X				X	X	X	X	X		X			X
Rumex acetosella	Sheep's sorrel		X	X	X				X	X		X	X		
Rumex sp.	Dock														
Stellaria aquatica	Water chickweed													X	
Succisa pratensis	Devil's-bit scabious					X									
Taraxacum agg.	Dandelion	X				X	X				X	X		X	
Trifolium pratense	Red clover	X					X								
Trifolium repens	White clover					X									
Trifolium sp.	Clover							X	X					X	
Urtica dioica	Common nettle										X	X	X		
Veronica chamaedrys	Germander speedwell						X								
Veronica serpyllifolia	Thyme-leaved speedwell													X	
Vicia sativa	Common vetch										X				
Viola palustris	Marsh violet												X		
Viola riviniana	Common dog-violet														
Viola sp.	Violet											X			

Scientific Name	Common Name	F13	F11	F12	F10	F9	F8	F1	F2	F4	F3	F5	F5	F6	F7
Sedges and Rushes															
Carex sp.	Sedge								X						
Carex nigra	Common sedge												X		
Eleocharis palustris	Common spike-rush												X		X
Juncus effusus	Soft-rush	X	X	X	X	X			X	X		X	X	X	X
Juncus inflexus	Hard rush														
Luzula campestris	Field wood-rush	X	X	X	X	X	X	X	X	X		X	X		X
Luzula multiflora	Heath wood-rush												X		
Luzula sp.	Wood-rush														
Schoenoplectus lacustris	Common club-rush														
Grasses															
Agrostis sp.	Bent grass	X				X									
Anthoxanthum odoratum	Sweet vernal-grass	X	X	X	X	X	X		X	X	X	X	X		
Dactylis glomerata	Cock's-foot														
Deschampsia flexuosa	Wavy hair-grass														
Eriophorum vaginatum	Hare's-tail cottongrass														X
Festuca ovina	Sheep's-fescue		X	X	X	X	X						X		X
Festuca rubra	Red fescue									X		X		X	
Festuca sp.	Fescue								X						
Glyceria fluitans	Floating sweet-grass													X	
Holcus lanatus	Yorkshire-fog					X	X					X	X		
Lolium perenne	Perennial rye-grass													X	
Molinia caerulea	Purple moor-grass		X	X	X								X		X
Nardus stricta	Mat-grass		X	X	X										
Poa annua	Annual meadow-grass											X			
Poa sp.	Meadow-grass													X	
Crops															
Woody Species															
Coniferous															
Broadleaved															
Cornus sp.	Dogwood										X				
Quercus sp.	Oak														
Rubus fruticosus agg.	Bramble						X				X		X		
Salix caprea	Goat willow														
Ulex europaeus	Gorse		X	X	X					X		X	X		

Table 1. Habitat Polygons

Site Name	Foel Trawsnant			
Survey Date and Surveyor(s)	07/05/2024 KC, CM, TR, CSm			
Scientific Name	**Common Name**	**Habitat Parcel**		
		W1	W2	W3
Extra notes (delete later)			Larch is in north edge only.	
Bryophytes				
x				
Polypodium vulgare	Common polypody	X		
Pteridium aquilinum	Bracken	X		
	Fern			
Herb Species				
Anemone nemorosa	Wood anemone		X	
Angelica archangelica	Angelica		X	
Conopodium majus	Pignut		X	
Digitalis purpurea	Foxglove	X		
Galium saxatile	Heath bedstraw	X		
Hyacinthoides non-scripta	Bluebell	X	X	X
Hypericum androsaemum	Tutsan			X
Hypericum pulchrum	Slender St John's-wort			X
Impatiens glandulifera	Himalayan balsam			
Lysimachia nemorum	Yellow pimpernel		X	
Oxalis acetosalla	Wood sorrel			X
Potentilla erecta	Tormentil	X	X	
Rhododendron sp.	Rhododendron	X		
Scrophularia nodosa	Common figwort			
Sorbus aucuparia	Rowan (saplings)	X		
Urtica dioica	Common nettle			
Vaccinum myrtillus	Bilberry	X		
Viola riviniana	Common dog-violet			X
Sedges and Rushes				
Juncus effusus	Soft-rush	X	X	
Luzula sp.	Wood-rush	X	X	
Grasses				
Anthoxanthum odoratum	Sweet vernal-grass	X	X	
Deschampsia flexuosa	Wavy hair-grass	X		
Molina caerulea	Purple moor-grass	X		
Crops				
Woody Species				
Coniferous				
Larix sp.	Larch		X	X
Picea abies	Norway spruce			
Picea sitchensis	Sitka spruce	X		
Broadleaved				
Acer campestre	Field maple			
Acer pseudoplatanus	Sycamore			X
Alnus glutinosa	Common alder	X		
Betula sp.	Birch	X	X	X
Corylus avellana	Hazel		X	X
Crataegus monogyna	Hawthorn		X	X
Fraxinus excelsior	Ash			
Ilex aquifolium	Holly		X	X
Lonicera periclymenum	Honeysuckle	X	X	X
Prunus spinosa	Blackthorn			
Quercus robur	Pedunculate oak			X
Quercus sp.	Oak	X	X	
Rubus fruticosus agg.	Bramble	X	X	
Salix caprea	Goat willow			X
Sorbus aucuparia	Rowan		X	X
Ulex europaeus	Gorse		X	

Table 2. Linear Habitats

Site Name	Foel Trawsnant																
Survey Date and Surveyor(s)	07/05/2024 KC, CM, TR, CSm																
		Habitat Parcel Number/Habitat Type															
Scientific Name	**Common Name**	Ditch 1	Brook F3/F4	Verge W1	H1	H2	H3	H4	H5	H6,7	H8	H9	H10	H11	H12	H13	H14
Bryophytes																	
Ferns																	
Pteridium aquilinum	Bracken																
	Fern																
Herb Species																	
Anemone nemorosa	Wood anemone																X
Bellis perennis	Daisy																
Calluna vulgaris	Heather																
Cerastium sp.	Common mouse-ear																
Conopadium majus	Pignut																X
Digitalis purpurea	Foxglove																
Equisetum arvense	Field horsetail																
Erica tetralix	Cross-leaved heath																
Impatiens Glandulifera	Himalayan balsam																
Lotus corniculatus	Common bird's-foot-trefoil																
Meconopsis cambrica	Welsh poppy																X
Narcissus sp.	Daffodil																
Oxalis acetosella	Wood sorrel																X
Reynoutria japonica	Japanese knotweed																
Rhododendron sp.	Rhododendron																
Rumex acetosa	Common sorrel																
Rumex sp.	Dock																
Taraxacum agg.	Dandelion																
Urtica dioica	Common nettle																
Vaccinum myrtillus	Bilberry																X
Sedges and Rushes																	
Juncus effusus	Soft-rush																
Juncus inflexus	Hard rush																
Luzula campestris	Field wood-rush																
Grasses																	
Anthoxanthum odoratum	Sweet vernal-grass																
Dactylis glomerata	Cock's-foot																
Festuca rubra	Red fescue																
Holcus lanatus	Yorkshire-fog																
Lolium perenne	Perennial rye-grass																
Nardus stricta	Mat-grass																X
Schedonorus arundinaceus	Tall fescue																
Crops																	
Triticum aestivum	Bread wheat																
Woody Species																	
Coniferous																	
Cupressus × leylandii	Leyland cyrpress																
Broadleaved																	
Acer pseudoplatanus	Sycamore														X	X	X
Betula sp.	Birch																
Carpinus betulus	Hornbeam																
Corylus avellana	Hazel					X							X		X	X	X
Crataegus monogyna	Hawthorn				X	X						X	X	X	X	X	X
Fraxinus excelsior	Ash					X											X
Ilex aquifolium	Holly				X	X					X		X			X	X
Lonicera periclymenum	Honeysuckle					X											X
Prunus avium	Cherry																
Prunus laurocerasus	Cherry laurel																
Quercus robur	Pedunculate oak							X			X					X	X
Quercus sp.	Oak																
Rubus fruticosus agg.	Bramble						X	X			X			X			X
Salix caprea	Goat willow																
Sorbus aucuparia	Rowan					X		X			X	X	X				X
Tilia x europaea	Common lime																
Ulex europaeus	Gorse																

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