ECOLOGY CONSULTING

Kronospan 132kV, Chirk, Wrexham

Ecological Impact Assessment Report

Prepared for Axis PED Ltd, January 2026

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Report reference: P_Ax_04_EcIA_Rev03
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Version	Date	Status
01	03/07/2025	First issue
02	06/11/2025	Final issue
03	14/01/2026	Final issue – updated to include new survey information

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Executive Summary

An Ecological Impact Assessment was undertaken along the route of two 132kV electricity cable routes and a fibre cable proposed near Chirk, Wrexham. The assessment included a desk study, extended UKHab survey, otter survey and tree climbing bat surveys.

The site is located adjacent to the River Dee and Bala Lake Special Area of Conservation, the River Dee Site of Special Scientific Interest, two Local Wildlife Sites, several ancient woodlands and priority habitats.

Potential significant ecological impacts were identified and scoped in for assessment for designated sies, priority habitats, bats and otters. Subject to the implementation of mitigation and compensation measures, no significant adverse impacts are anticipated on any of the ecological features assessed.

Recommendations include replacement hedgerow and tree planting, avoidance of vegetation clearance during the bird nesting season where possible, precautionary measures for trees with bat potential which need to be removed, a pre-construction survey and precautionary measures for otters and precautionary measures for hedgehogs during site clearance and construction.

1 Introduction

1.1 Terms of Reference

Ecology Consulting Ltd was instructed by Axis PED Ltd to undertake an Ecological Impact Assessment (EcIA) of two 132kV electricity cable routes proposed near Chirk, Wrexham. The EcIA is required to gather baseline information and undertake an assessment of potential ecological impacts arising from the proposed cable installation works.

1.2 Objectives

The objectives of this study are to:

- Report the current ecological baseline of the site.
- Identify the presence of protected sites and irreplaceable or priority habitats present.
- Identify habitats present within the site.
- Identify the presence or potential presence of protected, notable or invasive species.
- Assess the ecological importance of features identified.
- Identify potential ecological impacts and specify mitigation and/or compensation measures where necessary.

1.3 Proposed Works

The Proposed Development comprises the installation of two 132kV circuits and two fibre cables between the existing Legacy to Oswestry 132kV wood pole overhead line and the consented Kronospan 132kV substation. The proposed cables would be installed via open trench, unless with the exception of Special Engineering Difficulties (SEDs) where relevant sections will be installed by Horizontal Directional Drilling (HDD). The proposed cable installation routes are shown on Figure 1.

It should be noted that the Proposed Development overlaps with the consented (P/2022/1080) Kronospan Northern Access Road scheme and the ecological assessment of cabling and associated works within this area is covered separately within documentation submitted as part of the consented scheme.

2 Methodology

2.1 Desk Study

Records of protected sites, protected or notable habitats and species within a 1km radius of the project site were obtained from Cofnod, the North Wales biological records centre. The records were analysed to determine their relevance to the site and any future development, taking into consideration the dates and locations of each record and the sensitivity of the recorded feature to likely impacts.

Please note that only records from the last 20 years are analysed and records prior to the year 2005 are excluded on the basis that records prior to this time are unlikely to be reflective of the current site baseline. Furthermore, records were filtered to remove duplicate records for species recorded on multiple occasions and the closest location each species was recorded to the site is reported.

It should be noted that a lack of species records within an area may not reflect an actual absence of that species but could simply be a function of limited recording/survey effort in that area.

2.1.1 Extended UKHab Survey

A UKHab survey was undertaken on 05 June 2025. UKHab uses a classification system to comprehensively classify habitats and provide a consistent basis for identifying and recording species assemblages and ecological communities

Table 1: UKHab Methodology

Metadata	Information
Area surveyed	Total area of the site (see Figure 2)
Edition of UKHab used	UKHab-Professional V2
Minimum mapping unit	25m^2

The UKHab survey was supplemented through the recording of specific features indicating the presence, or likely presence, of protected/notable or invasive species. Notes on habitats and species were recorded as Target Notes (see Figure 2 and Appendix A). Please note that as the Proposed Development comprises a narrow, linear, cable route over a large distance it is not feasible to map the habitats present on a standard UKHab baseline plan. Therefore, additional Target Notes were taken, documenting each of the habitat types identified within or immediately adjacent to the site, supported by photographs shown in Appendix A.

The survey was undertaken by Lee Bagnall, a Full Member of the Chartered Institute for Ecology and Environmental Management, a Chartered Ecologist (CEcol) and Charted Environmentalist (CEnv). Weather conditions were 20°C, partly cloudy and mostly dry with occasional showers and a slight breeze (Beaufort 2).

2.1.2 Bats

During the extended UKHab survey, trees with the potential to support roosting bats (restricted to trees located within or immediately adjacent to the scheme that could be potentially affected by the works in that area), were subject to an initial ground-based inspection to confirm the requirements for further bat surveys. At that stage, a detailed ground level tree roost inspection survey was not undertaken as where trees had Potential Roosting Features (PRFs), these were then flagged for detailed tree climbing inspections.

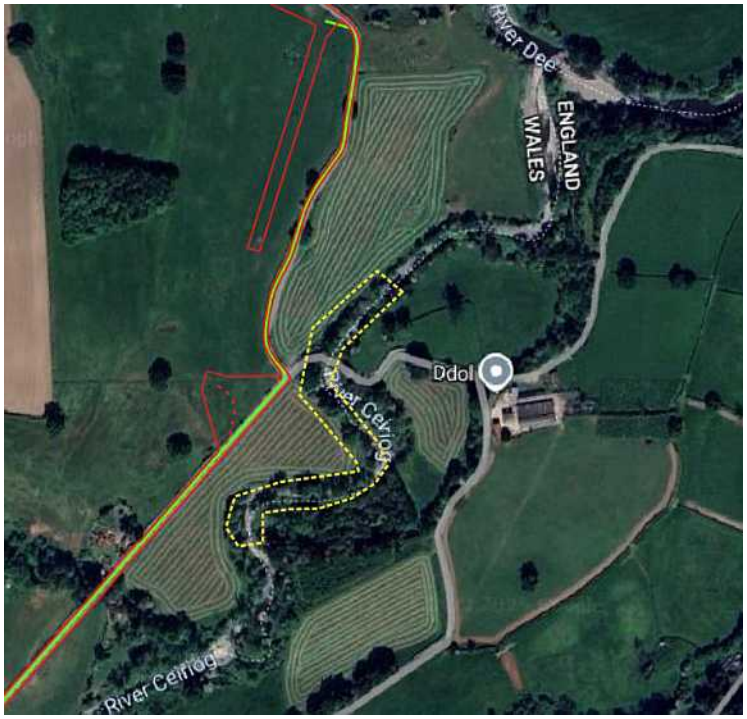
Tree climbing bat surveys were undertaken during the active bat season between July and September 2025, on 08-09 July, 19 August and 19 September. Tree climbing bat surveys were also undertaken on trees with hibernation potential during the hibernation period, with surveys undertaken on 18 December 2025 and 13 January 2026. The surveys were led by a Natural Resources Wales licenced bat surveyor and climber. The aim of a tree climbing bat survey is to reclassify PRFs and determine the presence/absence of bats or bat evidence at the time of the survey and the need for further survey and/or mitigation. This process involves inspecting PRFs by eye using torches and endoscopes to look for roosting bats or signs of roosting bats such as bat droppings, staining, markings and feeding remains. In addition, the inspection of each PRF evaluates its overall suitability to support roosting bats. This considers the size, shape and orientation of the PRF in addition to presence of competitor species and external factors such as prevailing weather conditions and artificial light sources. PRFs are classified on a scale of Negligible, PRF-I (potential for individual/small numbers of bats) and PRF-M (potential for multiple bats e.g. a maternity roost) in accordance with Bat Conservation Trust survey guidelines[1].

2.1.3 Otters

Due to the potential presence of otters within a watercourse within close proximity to the Proposed Development, an otter survey was undertaken on part of the River Ceiriog on 13 January 2026. The survey was undertaken by Lee Bagnall, a Full Member of the Chartered Institute for Ecology and Environmental Management, a Chartered Ecologist (CEcol) and Charted Environmentalist (CEnv). Weather conditions were 7°C, cloudy with light drizzle and a slight breeze (Beaufort 2). Whilst the river level was high and the river was in partial spate; the river banks were not covered by the water and were accessible to search for signs of otter. The otter survey followed published methodologies including Chanin (2003)[2] and involved a search for evidence of otter activity including spraints, footprints, feeding remains, holts, couches and slides. It was considered that otters, if present, would be unlikely to be disturbed at a distance if greater than 50m given the relatively low impact of the Proposed Development and temporary nature of the works and setting of the river at the bottom of a steep embankment away from the works. Therefore, the otter survey was undertaken on a section of the watercourse which is broadly within 50m of the Proposed Development, as shown below.

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

[2] CHANIN. 2003. Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series, No 10. Peterborough: English Nature.



Otter survey extent (yellow dashed line), cable routes shown dashed red and green

2.1.4 Ecological Impact Assessment

Defining the Study Area

The assessment methodology follows that set out in the CIEEM Guidelines for Ecological Impact Assessment (EcIA [3]. The study area used for this assessment is defined as the Zone of Influence (ZoI) of the Proposed Development. The ZoI is defined as the area over which a project or its activities can have an influence on resources and varies for different ecological features depending on their sensitivity to an environmental change. The ZoI was determined through review of the baseline conditions in comparison with the Proposed Development.

The following parameters have been used for the ZoI:

- International statutory designated sites up to 1km from the Proposed Development, including Special Areas of Conservation (SACs), SPAs and Ramsar sites;
- National statutory designated sites up to 1km from the Proposed Development including SSSIs, National Nature Reserves (NNRs) and Local Nature Reserves (LNRs);
- Non-statutory designated sites (e.g. LWSs) up to 1km from the Proposed Development;
- Protected/notable species present or potentially present within the Proposed Development boundary and within up to 1km;
- Priority habitats within the Proposed Development boundary and up to 1km; and
- Non-priority habitats within the Proposed Development boundary.

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

Evaluation of Importance

The importance ecological features are considered within a defined geographical context. The following frame of reference has been used in this case:

- International (European).
- United Kingdom.
- Wales.
- Regional (North East Wales).
- County (Wrexham).
- Local (Chirk).
- Site (the site and immediately adjacent areas).

Taking into account the CIEEM guidance, features of less than Local importance are generally considered unlikely to trigger mitigation requirements in EcIA terms. However, where it is helpful to characterise and evaluate features within the site, this assessment also uses the term "site importance". This includes features which are assessed to be of value only in the context of the site (and its immediate zone of influence). Features of site importance are typically unlikely to require further assessment for the reasons set out above.

A wide range of sources can be used to assign importance to ecological features, including legislation and policy. In the case of designated sites, their importance reflects the geographic context of the designation. For example, sites designated as SACs are recognised as being of importance at an International level (Europe), which equates to 'High' importance. Ecological features not included in legislation and policy may also be assigned importance, due to, for example, local rarity or decline, or provision of a functional role for other ecological features. Ecological features are assessed in relation to their size, diversity, naturalness, rarity, fragility, typicalness, connectivity with surroundings, intrinsic value, recorded history and potential value. In all cases, professional judgement has been used to assign importance.

Assessment of Effects

The CIEEM Guidelines provide a robust framework for Ecological Impact Assessment (EcIA), which is then informed by the interpretation of contextual information and professional judgement. The assessment of effects comprises the following steps:

- The baseline is fully defined (i.e. an assessment of the existing baseline has been made and an assessment of ecological importance of each feature has been assigned a geographic frame of reference);
- The potential effects from the Proposed Development (direct and indirect) and sources of impact on important ecological features has been defined and, where possible, quantified – relevant characteristics used to define effects include beneficial or adverse, magnitude, extent, duration, reversibility and timing/ frequency;
- Consideration has been given to avoidance, mitigation, compensation and enhancement measures (the 'mitigation hierarchy') integral to the Proposed Development; and
- Once measures to avoid and mitigate ecological effects have been finalised, the level and significance of the residual effects (after mitigation) on ecological features have been identified.

It is only necessary to assess and report significant residual effects (effects that remain after mitigation measures have been taken into account). However, it is good practice to make clear both the potential significant effects without mitigation and the residual significant effects

following mitigation. This process of assessment without mitigation helps to identify necessary and relevant mitigation measures that are proportionate to the size, nature and scale of anticipated effects.

Determining Magnitude of Scale of Impact

The magnitude of change (or impact) has been considered as the change experienced from the relevant baseline conditions at the sensitive receptor/ecological feature and has been considered on a geographic scale. The criteria, used collectively to identify and assign the magnitude of change (or impact), are in accordance with CIEEM Guidelines are shown in the table below.

Table 2: Criteria to determine magnitude of impact

Parameter	Description
Direction	Impacts have either adverse (negative) or beneficial (positive), or neutral (no change) on the environment.
Extent	The spatial extent over which the impact occurs.
Duration	The time for which the impact is expected to last prior to recovery of the ecological feature or replacement of the feature by similar resource (in terms of quality and / or quantity). This is expressed as a short-term, medium-term or long-term effect relative to the ecological feature that is impacted. Duration will vary based on the ecological feature affected but as a general guide the following parameters are identified: 'Short-term': within 1 year; 'Medium-term': within approximately 1 to 10 years; and 'Long-term': more than 10 years.
Reversibility	Reversible impact: temporary changes in which spontaneous recovery is possible or for which effective mitigation (avoidance / cancellation / reduction of effect) or compensation (offset / recompense / offer benefit) is possible. Irreversible impacts: permanent changes from which recovery is not possible within a reasonable time scale or for which there is no reasonable chance of action being taken to reverse it.
Frequency and timing	The number of times an activity occurs will influence the resulting effect (if appropriate, described as low to high and quantified, where possible). The timing of an activity or change may result in an impact if it coincides with critical life-stages or seasons e.g. the breeding season of a particular species.

Determining the Magnitude of Impact and Effect Significance

Magnitude of impact has been assigned on a scale of Negligible, Low, Medium and High, with these being classified using the following criteria:

- High: Total / near total loss of a population due to mortality or displacement or major reduction in the status or productivity of a population due to mortality or displacement or disturbance. Total / near total loss of a habitat.
- Medium: Partial reduction in the status or productivity of a population due to mortality or displacement or disturbance. Partial loss of a habitat.
- Low: Small but discernible reduction in the status or productivity of a population due to mortality or displacement or disturbance. Small proportion of habitat lost.
- Negligible: Very slight reduction in the status or productivity of a population due to mortality or displacement or disturbance. Reduction barely discernible, approximating to the 'no change'.

The significance of effects has been determined using professional judgement and expressed with reference to feature importance on a geographic frame of reference as recommended within CIEEM guidance and the table below has been used as a tool which has assisted with this process.

Table 3: Matrix to support determining the level of effect

		Importance of Ecological Feature			
		International, National or Regional ecological importance	**County ecological importance**	**Local or Site level ecological importance**	**Negligible**
Magnitude of change	High	Major	Moderate to Major	Minor to Moderate	Negligible
	Medium	Moderate to Major	Moderate	Minor	Negligible
	Low	Minor to Moderate	Minor	Negligible to Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

The following terms have been used to define the level of the effects identified and these can be 'beneficial' or 'adverse':

- Major effect: Where the Proposed Scheme is likely to cause a considerable change from the baseline conditions and the receptor has limited adaptability, tolerance or recoverability or is of the highest importance;
- Moderate effect: Where the Proposed Scheme is likely to cause either a considerable change from the baseline conditions at a receptor which has a degree of adaptability, tolerance or recoverability or a less than considerable change at a receptor that has limited adaptability, tolerance or recoverability;
- Minor effect: Where the Proposed Scheme is likely to cause a small, but noticeable change from the baseline conditions on a receptor which has limited adaptability, tolerance or recoverability or is of the highest importance; or where the Proposed Scheme is likely to cause a considerable change from the baseline conditions at a receptor which can adapt, is tolerant of the change and / or can recover from the change; and
- Negligible: Where the Proposed Scheme is unlikely to cause a noticeable change at a receptor, despite its level of importance or there is a considerable change at a receptor which is not considered sensitive to a change.

The duration of the effect has been assessed as either 'short-term', 'medium-term' or 'long-term'. Short-term is considered to be up to 1 year, medium-term is considered to be between 1 and 10 years and long-term is considered to be greater than 10 years.

Significance of Effects

For the purposes of this EcIA, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for important ecological features or for biodiversity in general. and significance is presented as Negligible, Minor, Moderate or Major at the appropriate geographic level.

2.2 Limitations

The Cofnod data search output covers the majority of the 1km search area although a small area within the south eastern extent of the 1km search area falls under another jurisdiction, Shropshire Ecological Data Network. As the Cofnod search covers all areas within the site boundary it was not deemed necessary to conduct an additional data search for a small area outside of the site boundary and this is not considered to present a significant limitation.

An ecological survey is a snapshot in time and presence or absence of protected/notable species may vary across seasons and in response to change in habitats and site conditions. Furthermore, whilst biological records can provide information on the presence of protected/notable species, an absence of records does not necessarily mean a species is absent from the site, it may be that surveys have not been undertaken locally for this species.

3 Ecological Baseline

3.1 Desk Study

3.1.1 Designated Sites

The locations of designated sites and priority habitats are shown on Figure 1.

The River Dee and Bala Lake Special Area of Conservation and River Dee Site of Special Scientific Interest (SSSI) are located approximately 30m east of the Proposed Development, near Cable Route 2. Whilst the River Dee is not present in close proximity to the site, the River Ceiriog Tributary is present 30m to the east and this is hydrologically connected to the River Dee and therefore forms part of the SAC and SSSI which share the same boundary at this location.

The River Dee SAC is designated for its Annex I habitat Watercourses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation and its primary Annex II species Atlantic salmon *Salmo salar* and floating water plantain *Luronium natans*. Otter *Lutra lutra*, bullhead *Cottus gobio*, brook lamprey *Lampetra planeri*, river lamprey *Lampetra fluviatilis* and sea lamprey *Petromyzon marinus* are also qualifying features.

The River Dee SSSI is of special interest for its fluvial geomorphology, Carboniferous geology, range of river habitat types, saltmarsh transition habitats, populations of floating water plantain, slender hare's-ear *Bupleurum tenuissimum*, sea barley *Hordeum marinum*, hard-grass *Parapholis strigosa*, otter, salmon, bullhead, brook lamprey, river lamprey, sea lamprey, club-tailed dragonfly *Gomphus vulgatissimus* and other aquatic invertebrates.

Three Local Wildlife Sites (LWS) are present within 1km of the site. Bola's Dingle LWS is located immediately west of the Proposed Development, west of Pont Y Blew Road. Bola's Dingle comprises a semi-natural broad-leaved woodland, with many wet flushes on the banks of a stream valley. Barracks Field LWS is located immediately to the south of the Proposed Development, south of Old Black Park Road and the LWS comprises semi-improved neutral grassland. Canal Wood LWS is located approximately 420m west of the Proposed Development and comprises semi-natural broad-leaved woodland on embankments either side of the canal.

The data search returned one Environment Act (Wales) 2016 Section 7 Habitat of Principal Importance adjacent to the site. Immediately south of Colliery Road, there is a large area of wood-pasture and parkland.

Several areas of Ancient Woodland were identified within the data search area, including part of Bola's Dingle LWS described above. A plantation on an Ancient Woodland site is present immediately north of the Proposed Development, north of Pont Y Blew Road. There are also several areas of Ancient Woodland to the north east of the Proposed Development, located either side of the River Dee and these woodlands form part of a Priority Ecological Network.

Several ancient trees are recorded within the search area, including trees north and south of Pont Y Blew Road in close proximity to the Proposed Development.

3.1.2 Protected & Notable Species

Cofnod returned multiple records of protected and/or notable species within 1km of the site. Records are reproduced due to data sharing restrictions and the volume of records available, but a full copy of the records can be made available upon request and subject to licensing permission.

The records include species protected by European and UK legislation including the Conservation of Habitats and Species Regulations 2017 (as amended), the Wildlife and Countryside Act (WCA) 1981, Welsh priority species listed under The Environment (Wales) Act 2016 (Section 7) the for the purpose of maintaining and enhancing biodiversity in Wales, Global Red List, British Red Data Book, Nationally Rare & Scarce, Welsh Red and Amber Birds & Welsh Vascular Plant Red Data List and locally important species as specified by local experts.

Amphibians

Great crested newts *Triturus cristatus* have been recorded in a garden pond approximately 20m from the Proposed Development, to the south of Old Black Park Road. Common frog *Rana temporaria* and smooth newt *Lissotriton vulgaris* have also been recorded near Old Black Park Road, approximately 50m to the north.

Badgers

Whilst records of badgers *Meles meles* were returned within the 1km search area, none of these records are in close proximity to the Proposed Development.

Bats

Two bat records were returned within the 1km search area, both of which were recorded approximately 285m south of the Proposed Development, south of Trevor Road. Species recorded were common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, lesser horseshoe *Rhinolophus hipposideros* and Brandt's/whiskered bats *Myotis brandtii/mystacinus*.

Birds

A full list of species recorded within 1km of the site is provided with the table below. Due to the large number of records, only the closest record each species was recorded to the site is listed.

Table 4: Bird species recorded within 1km of the site

English Name	Scientific Name	Distance (m)	Category
Barn Owl	*Tyto alba*	44	Category 1 Species
Black-headed Gull	*Chroicocephalus ridibundus*	101	Category 1 Species
Brambling	*Fringilla montifringilla*	441	Category 1 Species
Bullfinch	*Pyrrhula pyrrhula*	6	Category 1 Species
Chaffinch	*Fringilla coelebs*	123	Category 2 Species
Coal Tit	*Periparus ater*	126	Category 2 Species
Collared Dove	*Streptopelia decaocto*	123	Category 2 Species
Coot	*Fulica atra*	657	Category 2 Species
Cormorant	*Phalacrocorax carbo*	1075	Category 2 Species
Crossbill	*Loxia curvirostra*	657	Category 1 Species
Dipper	*Cinclus cinclus*	48	Category 2 Species
Dunnock	*Prunella modularis*	48	Category 1 Species
Fieldfare	*Turdus pilaris*	388	Category 1 Species
Garden Warbler	*Sylvia borin*	478	Category 2 Species
Goldcrest	*Regulus regulus*	411	Category 2 Species
Greenfinch	*Chloris chloris*	123	Category 2 Species
Grey Heron	*Ardea cinerea*	120	Category 2 Species
Grey Wagtail	*Motacilla cinerea*	48	Category 2 Species
Greylag Goose	*Anser anser*	155	Category 2 Species
Herring Gull	*Larus argentatus*	126	Category 1 Species
House Martin	*Delichon urbicum*	48	Category 2 Species
House Sparrow	*Passer domesticus*	123	Category 1 Species
Kestrel	*Falco tinnunculus*	126	Category 1 Species

Kingfisher	*Alcedo atthis*	155	Category 1 Species
Lapwing	*Vanellus vanellus*	58	Category 1 Species
Lesser Black-backed Gull	*Larus fuscus*	169	Category 2 Species
Lesser Redpoll	*Acanthis cabaret*	441	Category 1 Species
Linnet	*Linaria cannabina*	169	Category 1 Species
Magpie	*Pica pica*	101	Category 2 Species
Mallard	*Anas platyrhynchos*	169	Category 2 Species
Marsh Tit	*Poecile palustris*	231	Category 1 Species
Meadow Pipit	*Anthus pratensis*	169	Category 2 Species
Merlin	*Falco columbarius*	453	Category 1 Species
Mistle Thrush	*Turdus viscivorus*	169	Category 2 Species
Moorhen	*Gallinula chloropus*	411	Category 2 Species
Osprey	*Pandion haliaetus*	411	Category 1 Species
Pied Flycatcher	*Ficedula hypoleuca*	212	Category 1 Species
Red Kite	*Milvus milvus*	48	Category 1 Species
Redstart	*Phoenicurus phoenicurus*	657	Category 2 Species
Redwing	*Turdus iliacus*	48	Category 1 Species
Rook	*Corvus frugilegus*	123	Category 2 Species
Skylark	*Alauda arvensis*	453	Category 1 Species
Song Thrush	*Turdus philomelos*	86	Category 1 Species
Sparrowhawk	*Accipiter nisus*	48	Category 2 Species
Spotted Flycatcher	*Muscicapa striata*	123	Category 1 Species
Starling	*Sturnus vulgaris*	126	Category 1 Species
Stock Dove	*Columba oenas*	169	Category 2 Species
Swift	*Apus apus*	2	Category 2 Species
Tawny Owl	*Strix aluco*	657	Category 2 Species
Tree Sparrow	*Passer montanus*	657	Category 1 Species
Whitethroat	*Curruca communis*	169	Category 2 Species
Wigeon	*Mareca penelope*	358	Category 2 Species
Willow Tit	*Poecile montanus*	478	Category 1 Species
Willow Warbler	*Phylloscopus trochilus*	20	Category 2 Species
Woodpigeon	*Columba palumbus*	101	Category 2 Species
Wren	*Troglodytes troglodytes*	123	Category 2 Species

Higher and Lower Plants

A large number of higher plant records were returned within the 1km search area although none of these were within or adjacent to the site. Higher plants recorded are listed in the table below.

Table 5: Higher plants recorded within 1km of the site

English Name	Scientific Name	Distance (m)	Category
Amphibious Bistort	*Persicaria amphibia*	505	Category 3 Species
Annual Pearlwort	*Sagina apetala*	411	Category 3 Species
Bee Orchid	*Ophrys apifera*	270	Category 3 Species
Bladder Campion	*Silene vulgaris*	9	Category 2 Species
Bluebell	*Hyacinthoides non-scripta*	169	Category 1 Species
Box	*Buxus sempervirens*	235	Category 2 Species
Bugloss	*Anchusa arvensis*	1075	Category 3 Species
Butterbur	*Petasites hybridus*	169	Category 3 Species
Caper Spurge	*Euphorbia lathyris*	32	Category 3 Species
Common Fleabane	*Pulicaria dysenterica*	718	Category 3 Species
Corn Mint	*Mentha arvensis*	441	Category 2 Species
Cowslip	*Primula veris*	71	Category 3 Species
Creeping Yellow-cress	*Rorippa sylvestris*	71	Category 3 Species
Creeping-Jenny	*Lysimachia nummularia*	505	Category 3 Species
Crosswort	*Cruciata laevipes*	453	Category 3 Species
Daffodil	*Narcissus pseudonarcissus*	235	Category 3 Species

Feverfew	*Tanacetum parthenium*	453	Category 3 Species
Field Bindweed	*Convolvulus arvensis*	441	Category 3 Species
Field Maple	*Acer campestre*	71	Category 3 Species
Fritillary	*Fritillaria meleagris*	235	Category 2 Species
Goldilocks Buttercup	*Ranunculus auricomus*	2	Category 3 Species
Greater Knapweed	*Centaurea scabiosa*	235	Category 3 Species
Greater Pond-sedge	*Carex riparia*	352	Category 3 Species
Greater Tussock-sedge	*Carex paniculata*	411	Category 3 Species
Green Field-speedwell	*Veronica agrestis*	231	Category 3 Species
Grey Sedge	*Carex divulsa subsp. divulsa*	6	Category 3 Species
Guelder-rose	*Viburnum opulus*	169	Category 3 Species
Hairy St John's-wort	*Hypericum hirsutum*	169	Category 3 Species
Hairy-brome	*Bromopsis ramosa*	71	Category 3 Species
Hard Rush	*Juncus inflexus*	71	Category 3 Species
Hoary Willowherb	*Epilobium parviflorum*	71	Category 3 Species
Hybrid Cinquefoil	*Potentilla anglica x reptans = P. x mixta*	71	Category 3 Species
Lesser Chickweed	*Stellaria pallida*	0	Category 3 Species
Long Smooth-headed Poppy	*Papaver dubium*	478	Category 3 Species
Meadow Saxifrage	*Saxifraga granulata*	185	Category 3 Species
Mistletoe	*Viscum album*	657	Category 3 Species
Nettle-leaved Bellflower	*Campanula trachelium*	235	Category 3 Species
Pendulous Sedge	*Carex pendula*	411	Category 3 Species
Plicate Sweet-grass	*Glyceria notata*	169	Category 3 Species
Rat's-tail Fescue	*Vulpia myuros*	478	Category 3 Species
Reed Sweet-grass	*Glyceria maxima*	411	Category 3 Species
Rough Hawkbit	*Leontodon hispidus*	411	Category 3 Species
Rusty Willow	*Salix cinerea subsp. oleifolia*	411	Category 3 Species
Scented Mayweed	*Matricaria chamomilla*	71	Category 3 Species
Scentless Mayweed	*Tripleurospermum inodorum*	1075	Category 3 Species
Skullcap	*Scutellaria galericulata*	345	Category 3 Species
Spear Mint	*Mentha spicata*	88	Category 3 Species
Square-stalked Willowherb	*Epilobium tetragonum*	231	Category 3 Species
Stinking Hellebore	*Helleborus foetidus*	441	Category 2 Species
Sweet Violet	*Viola odorata*	411	Category 3 Species
Tansy	*Tanacetum vulgare*	235	Category 3 Species
Thyme-leaved Sandwort	*Arenaria serpyllifolia*	657	Category 3 Species
Trifid Bur-marigold	*Bidens tripartita*	657	Category 3 Species
Water Figwort	*Scrophularia auriculata*	411	Category 3 Species
Water-cress	*Rorippa nasturtium-aquaticum*	718	Category 3 Species
Welsh Groundsel	*Senecio cambrensis*	2	Category 2 Species
Welsh Poppy	*Meconopsis cambrica*	235	Category 2 Species
White Campion	*Silene latifolia*	235	Category 3 Species
Wild Pansy	*Viola tricolor*	88	Category 2 Species
Wild Parsnip	*Pastinaca sativa*	359	Category 3 Species
Wild Teasel	*Dipsacus fullonum*	441	Category 3 Species
Winter-cress	*Barbarea vulgaris*	505	Category 3 Species
N/A	*Lamiastrum galeobdolon subsp. montanum*	71	Category 3 Species
N/A	*Ficaria verna subsp. verna*	169	Category 3 Species
N/A	*Sagina apetala subsp. apetala*	411	Category 3 Species
N/A	*Rubus echinatoides*	478	Category 3 Species

No lower plant records were returned but one record of the fungi *Clavaria flavipes* was recorded within the search area, approximately 185m south of the Proposed Development.

Hedgehogs

Several hedgehog *Erinaceus europaeus* records were returned within the 1km search area, including records in close proximity to the Proposed Development in residential areas and along roads within the Proposed Development boundary.

Invertebrates (terrestrial)

Cofnod returned records of four butterfly or moth species within the search area with small heath butterfly *Coenonympha pamphilus* recorded 230m south of the Proposed Development and three moth species (buff ermine *Spilosoma lutea*, green-brindled crescent *Allophyes oxyacanthae* and figure of eight *Diloba caeruleocephala*) recorded approximately 50m north of the Proposed Development.

A small number of other invertebrates were recorded within the search area including the non-native harlequin ladybird *Harmonia axyridis*, *Oedemera femoralis* and the freshwater *Crangonyx pseudogracilis/floridanus* although none of these were recorded within the site boundary.

Polecat

One polecat *Mustela putorius* record was retuned within the 1km search area, along the A483 to the north of the Proposed Development.

Reptiles

Grass snake *Natrix helvetica* has been recorded in a garden at the same location that great crested newt was recorded, near Old Black Park Road. Slow worm *Anguis fragilis* has been recorded approximately 300m to the south of the Proposed Development.

Invasive Species

Several records of invasive plant and animal species were retuned although none of these were located within the site. The closest records are for is for Himalayan balsam *Impatiens glandulifera* which is plotted as a 1km grid square and native bluebell x Spanish bluebell hybrid *Hyacinthoides x massartiana.*

3.2 UK Habitat Survey

3.2.1 Habitats

The following habitats were recorded on or adjacent to the site during the extended UKHab survey.

- G3c – other neutral grassland.
- G4 – modified grassland.
- H2a5 – species-rich native hedgerow.
- H2a6 – other native hedgerow.
- U1c – artificial unvegetated, unsealed surface.
- U1e5 – built linear feature.
- W1g – other broadleaved woodland
- Individual tree

G3c – Other Neutral Grassland

UKHab Essential secondary codes: N/A. UKHab Additional secondary codes: 106 (mown)

The majority of the Proposed Development route goes through existing sealed surfaces, comprising public highways and pavements. However, prior to crossing the A483 dual carriageway, Cable Route 2 passes through a highway verge before entering an HDD pit. The grassland verge (TN22) is approximately 7m wide and comprises species-poor other neutral grassland. A 1m section at the road edge had been recently cut. The grassland comprised grasses including cock's-foot *Dactylis glomerata,* false oat grass *Arrhenatherum elatius*, common bent *Agrostis capillaris,* Yorkshire fog *Holcus lanatus,* rough meadow grass, *Poa trivialis,* creeping and meadow buttercup *Ranunuclus repens/acris* and ribwort plantain *Plantago lanceolata.* Several areas of other neutral grassland are also present adjacent but outside of the proposed cable route, such as at TN4 west of the B5070 near Kronospan. At TN4, the grassland species present included Yorkshire fog, rough meadow grass, annual meadow grass *Poa annua*, cock's-foot, meadow foxtail *Alopecurus pratensis*, common bent, yarrow *Achillea millefolium*, creeping cinquefoil *Potentilla reptans*, creeping buttercup, ribwort plantain, daisy *Bellis perennis*, creeping thistle *Cirsium arvense*, ragwort *Senecio jacobaea* and white clover *Trifolium repens*.

G4 – Modified Grassland

UKHab Essential secondary codes: N/A. UKHab Additional secondary codes: 100 (grazed)

Areas of modified grassland comprise roadside amenity grassland located outside of the cable route e.g. TN2 and areas of pasture which are crossed by the cable route in three locations. At TN2 the grassland comprises amenity grassland with mature cherry *Prunus species* and silver birch *Betula pendula* trees. The grassland had been recently mown and had a limited diversity of species included perennial ryegrass *Lolium perenne*, white clover, Yorkshire fog, dandelion *Taraxacum officinale agg. species*, creeping buttercup, daisy, ribwort plantain and a few ornamental planted shrubs. Immediately east of TN23, Cable Routes 1 and 2 pass through an area of modified grassland before the cables enters an HDD pit. The grassland is a pasture field which is a dominated by perennial ryegrass with frequent creeping buttercup, curled dock, *Rumex crispus,* broadleaved dock *Rumex obtusifolius,* creeping thistle and white clover. At TN24, the HDD receptor pit for Cable Routes 1 & 2 is located in a former arable field vegetated with perennial ryegrass, white and red clover *Trifolium pratense*, ribwort plantain, chicory *Cichorium intybus*, daisy, creeping buttercup and curled dock. At TN30, Cable Route 1 diverts from Cable Route 2, leaving the highway and entering cattle grazed pasture. The pasture comprises modified grassland with a low diversity of species, mainly perennial ryegrass, Yorkshire fog, cock's-foot and creeping thistle. At TN31, Cable Route 2 diverts from Colt Lane and enters sheep grazed pasture. The pasture comprises modified grassland with a low diversity of species, mainly perennial ryegrass, Yorkshire fog, cock's-foot and creeping thistle as at TN30 to the south west.

H2a5 – Species-rich Native Hedgerow

UKHab Essential secondary codes: N/A. UKHab Additional secondary codes: 116 (Flailed hedgerow), 801 (Road verge).

The proposed cable routes largely follow existing highways and large parts of the highways are bordered by species-rich native hedgerows. This is particularly apparent either side of the section of the cable route which runs east of the A483 along the Pont Y Blew Road from east of the Brynkinalt Estate. At TN30, Cable Route 1 diverts from Cable Route 2, leaving the highway and passing through a species-rich hedgerow before entering cattle grazed pasture. This section of hedgerow comprises an intact, species-rich hedgerow which is approximately 1.8m tall and 1.5m wide. Species present include hawthorn *Crataegus monogyna*, oak *Quercus species*, elder *Sambucus nigra*, sycamore *Acer pseudoplatanus*, blackthorn *Prunus spinosa* and dog rose *Rosa canina*. Other examples of species-rich hedgerow along the route, but outside of the proposed cable routes, include hedgerows either side of the road at TN27 and east of the main road at TN12. At TN27, roadside hedgerows are species-rich and comprise hawthorn, hazel, holly *Ilex*

aquifolium, field maple *Acer campestre*, blackthorn, ash *Fraxnius excelsior* and sycamore. At TN12, a species-rich managed hedgerow borders a residential garden and comprises hawthorn, blackthorn, ash, sycamore, oak, holly.

H2a6 – Other Native Hedgerow

UKHab Essential secondary codes: N/A. UKHab Additional secondary codes: 116 (Flailed hedgerow)

At TN1 the cable route turns west off the highway and crosses through a roadside hedgerow. The hedgerow is a hawthorn dominated hedgerow which is approximately 3m high and 2.5m wide. Other species present include occasional elder, ash and hazel also present with nettle *Urtica dioica present* at the base, soft brome *Bromus hordeaceus*, cleavers, dandelion, perennial ryegrass and coltsfoot *Tussilago farfara*.

At TN31 Cable Route 2 deviates from Colt Lane and enters a grazed pasture field. Whilst there is a small gap in the hedgerow at this point, the hedgerow either side comprises hawthorn and hazel *Corylus avellana*.

U1c – Artificial unvegetated, unsealed surface

UKHab Essential secondary codes: N/A. UKHab Additional secondary codes: 510 (Bare ground), 839 (Track).

Part of Cable Route 2 and the proposed Fibre Cable Route follow Colt Lane which is an unsurfaced lane, largely comprising bare ground with a narrow central strip of species-poor grassland in places but largely unvegetated.

U1e – Built Linear Feature

UKHab Essential secondary codes: N/A. Additional secondary codes: 800 (Road)

The majority of the Proposed Development follows existing highways including the B5070, Colliery Road, Pont Y Blew Road and Old Black Park Road. The roads are bordered by a mixture of grassland, hedgerows, woodland and developed land.

W1g – Other Broadleaved Woodland

UKHab Essential secondary codes: 29 (Plantation). Additional secondary codes: N/A

There are several areas of other broadleaved woodland present within close proximity to the Proposed Development although only one small area of woodland is located within the scheme. East of the A483 and south of Pont Y Blew Road a short section of Cable Routes 1 and 2 pass through the edge of a small woodland at TN25. The woodland is bordered by a low hawthorn and holly hedgerow. The woodland comprises ash, sycamore, Leyland cypress *Cupressus x leylandii*, larch *Larix decidua* and hazel. Bramble *Rubus fruticosus* dominates the understorey making the majority of the woodland inaccessible, with some lying deadwood amongst the brambles. Dogs mercury *Mercurialis perennis* is present along the woodland edge near the roadside hedgerow. There are several other areas of woodland which are present outside of the cable routes, including areas of Ancient Woodland at TN26, TN29 and TN32. At TN26 woodland comprises ash, western hemlock *Tsuga heterophylla*, beech *Fagus sylvatica* and sycamore with a shrub layer comprising elder, cherry laurel *Prunus laurocerasus*, holly and young ash. A hawthorn and holly hedgerow with dog's mercury at the base borders the woodland on the south side, with a stone wall on the north side and the ground flora is dominated by bramble. At TN29, An ancient woodland abuts the road and a stream flows north to south under the road. The woodland edge which abuts the road comprises ash, oak, holly, hawthorn, hazel and sycamore. At TN32, an ancient woodland abuts the north side of the road. The woodland comprises oak, wych elm *Ulmus glabra*, sycamore, wild cherry *Prunus avium*, beech, elder, holly, hawthorn and hazel. Ground flora comprises wood avens *Geum urbanum*, solomon's seal

Polygonatum × *hybridum*, common nettle, bramble, variegated yellow archangel *Lamium galeobdolon subsp argentatum*, great woodrush *Luzula sylvatica*, comfrey *Symphytum officinale*, cleavers *Galium aparine* and herb Robert *Geranium robertianum*. Other areas of woodland are located outside of the Proposed Development including several areas west of the B5070 at TN10 and TN15, north of Colliery Road at TN21and either side of the A483.

Individual Trees

UKHab Essential secondary codes: N/A. UKHab Additional secondary codes: 203 (Mature tree)

Mature trees are present in close proximity to the route, either as a row of trees such as trees west of the B5070 or as individual trees such as mature oak trees south of Colliery Road and along both sides of Colt Lane. This includes some veteran oak trees, both living and standing deadwood. Notable specimens are located at TN18, between TN30 and 31 and between TN31 and Halton Farm. It is understood that all of these trees are located outside of the cable routes although there is potential for tree roots to be present within the cable routes.

3.2.2 Protected/Notable Plants

No protected or notable plant species were found within the boundary of the site.

3.2.3 Invasive Species

No invasive species were found within the habitats crossed by the Proposed Development. However, several Invasive Non Native Species (INNS) were noted locally in the desk study within 1km of the Proposed Development and the invasive variegated yellow archangel was recorded in the woodland north of the Proposed Development at TN32.

3.3 Fauna

3.3.1 Amphibians and Reptiles

GCNs have been recorded in residential garden areas in close proximity to the Proposed Development. However, at this location, cable installation is restricted to open trenching within the existing highway where GCN would not be present. Furthermore, works are temporary and short-term with each open cut cable trench backfilled following cable installation.

There are three locations where the cable routes deviate from existing roads and either open cut or HDD is required. The first location is at SED2, immediately west of the A483. It is proposed to open cut a short section of the trench across a grazed modified grassland field where an HDD launch pit. On the east side of the A483 an HDD receptor pit will be installed in a modified grassland field as well as a short section of open cut through a small woodland to return the cable route back to the highway. There are no GCN records close to these locations and there are no ponds present in close proximity. The two areas of modified grassland comprise sub optimal habitat for GCN due to limited cover available and as such it is considered unlikely that GCN would be present in these areas. Whist the small section of woodland provides suitable habitat, the lack of GCN records and ponds nearby makes the presence of GCN unlikely.

The second and third locations where the cable route/s leave the highway into semi-natural habitats are of a very similar nature. In both cases, the cable route crosses through a hedgerow and is open cut for a short section across modified grassland (pasture fields), heavily grazed by either cattle or sheep and providing poor quality GCN habitat. GCNs may use hedgerows within their terrestrial lifestage but the absence of ponds in close proximity to either location makes the presence of GCN unlikely.

There is no high suitable reptile habitat within the scheme are and there is limited potential for reptiles in hedgerows and the small woodland plantation at SED3. The scheme will affect very

short sections of hedgerow immediately adjacent to highways and as such the presence of reptiles is considered unlikely. The small woodland has a very scrubby understorey which provides poor quality habitat for reptiles and therefore presence of reptiles at this location is also considered unlikely.

3.3.2 Badger

No badger setts or signs of badgers were found during the survey. Whilst this species is present locally, the majority of work is within existing highway and badgers are unlikely to be affected by the proposed works.

3.3.3 Bats

Roosting

There are no buildings within the Proposed Development boundary. There is one tree (T1) within the Proposed Development boundary which was considered to have moderate or high suitability to support bats (PRF-M) during the extended UKHab survey although a climbing survey later confirmed this to only have Low (PRF-I) potential to support roosting bats. This comprises a mature ash tree within the woodland at TN25, south of Pont Y Blew Road. Several other trees with low bat potential (PRF-I) were also identified in the woodland. The location of the ash tree is provided on Figure 2.

Several mature trees with potential to support roosting bats are present along Colt Lane, as shown on Figure 2. Photos of some of the trees, identified during the extended UKHab survey, with roosting potential are provided below.

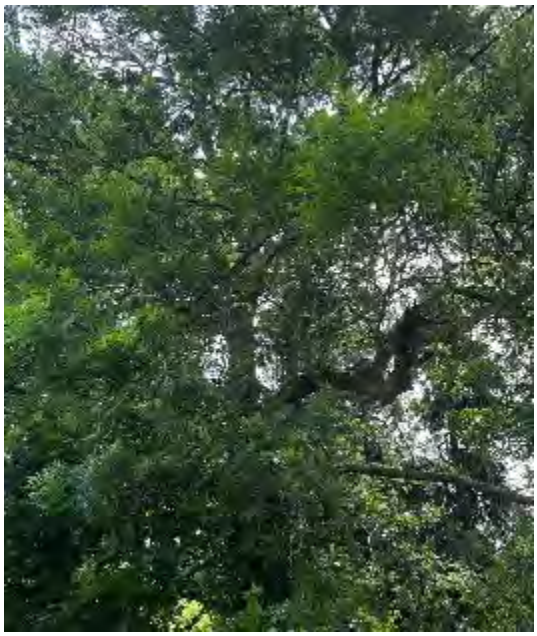


Plate 1: Ash tree at TN25 with several broken limbs and potential to supporting roosting bats.



Plate 2: Oak on east side of Colt Lane with broken branches and potential cavities for roosting bats.



Plate 3: Standing deadwood on east side of Colt Lane with several rot holes.



Plate 4: Standing deadwood on east side of Colt Lane with a large central hollow.



Plate 5: Sycamore on east side of Colt Lane with a large stem cavity.



Plate 6: Sycamore with a tearout on a limb facing Colt Lane.

Due to the potential for these trees to support roosting bats, and potentially be disturbed during the works, the trees were subject to tree climbing surveys between July and September 2025 and December 2025 to January 2026. The locations of the trees surveyed are shown on Figure 2. Results of the surveys are summarised in the table below and provided in full in Appendix C with photos of potential roost features provided in Appendix D. No roosting bats or evidence of roosting bats was found during any of the surveys.

Table 6: Tree Climbing Bat Survey Results

Tree ID	Species	PRF No.	Type	Height (m)	Suitability	Summer surveys undertaken	Hibernation Surveys undertaken	Bat Evidence
T1	Ash	1	Tearout	7.5	PRF-I	1	No	None
		2	Knot hole	3.5	PRF-I	1	No	None
		3	Knot hole	3	PRF-I	1	No	None
T2	Oak	1	Knot hole	3.5	PRF-I	3	Yes	None
		2	Desiccation	5	PRF-I	3	Yes	None
		3	Knot hole	5	PRF-I	3	Yes	None
		4	Rot hole	3	PRF-M	3	Yes	None
T3	Oak	1	Tearout	4	PRF-I	3	Yes	None
		2	Rot hole	3	PRF-M	3	Yes	None

		3	Split	4	PRF-I	3	Yes	None
		4	Split	4	PRF-I	3	Yes	None
		5	Desiccation	7	PRF-M	3	Yes	None
T4	Sycamore	1	Tearout	2.5	PRF-I	1	No	None
T5	Sycamore	1	Desiccation	N/A	PRF-I	1	No	None
T6	Oak	1	Hazard beam	6	PRF-M	3	Yes	None
T7	Oak	1	Knot hole	3	PRF-M	3	Yes	None
		2	Tearout	3	PRF-I	3	Yes	None
		3	Knot hole	4	PRF-I	3	Yes	None
		4	Tearout	3	PRF-I	3	Yes	None
		5	Rot hole	3	PRF-I	3	Yes	None
T8	Oak	1	Knot hole	4	PRF-I	1	No	None
T9	Oak	N/A	Desiccation	N/A	Neg-PRF-I	1	No	None
T10	Sycamore	1	Desiccation	N/A	PRF-I	1	No	None
T11	Sycamore	1	Knot hole	4	PRF-M	3	Yes	None

Commuting and Foraging

Most of the Proposed Development is located within existing highways and therefore, with the exception of temporary works through a few very small areas, there will be no impact on foraging or commuting habitats.

3.3.4 Breeding birds

Breeding birds may be present in the three hedgerows and one woodland crossed by the Proposed Development. Breeding birds may also be present within offsite hedgerows, individual trees and woodland. During the tree climbing bat surveys, old evidence of breeding birds was found in T2 and in T7 a tawny owl was found to be breeding and also roosting outside of the breeding season. No evidence of ground nesting birds was found in the areas where the cables cross fields and the presence of ground nesting birds is considered unlikely in these areas if they continue to be heavily grazed.

3.3.5 Invertebrates - terrestrial

Whilst the Proposed Development crosses a species-rich hedgerow, the area affected will be very small (approximately 5-10m of hedgerow) and it is considered unlikely that there would be an important invertebrate assemblage in this area or areas of species-poor grassland crossed by the Proposed Development.

3.3.6 Hedgehog and Polecat

The data search shows that hedgehogs are present locally. Whilst the majority of the Proposed Development is within existing highway, minor hedgerow and woodland clearance will be required where hedgehogs could be present.

3.3.7 Otter

The majority of the Proposed Development is located within existing highway or highway verge, with very low potential for otter to be present. However, part of the Proposed Development is in close proximity to suitable otter habitat. At the termination of Cable Route 1 and along Cable Route 2, the works are in close proximity to the River Ceiriog which forms part of the River Dee and Bala Lake SAC/SSSI of which otters are a qualifying feature. As shown in the photos below, the River Ceiriog section adjacent to the Proposed Development comprises suitable otter habitat in the form of a fast flowing, meandering river section with deep pools for hunting, a rocky substrate, occasional mud banks and a steep embankment on the west side lined with scrub and mature trees to provide cover and potential refuge/breeding habitat.



Plate 7: River Ceiriog, north/western bank, looking south



Plate 8: River Ceiriog, looking east from road bridge, steep embankment on northern side



Plate 9: River Ceiriog, exposed mudbanks on western/north western side

The survey did not identify any otter holts or lying up areas although features which could be used as holts are present on the western embankment in the form of partially washed out and decayed tree roots as shown on the plate below.



Plate 10: Suitable Otter Holt Habitat

Otter footprints were found on the exposed mudbanks on the western/northern side of the river.



Plate 11: Otter footprint, five toes and pad visible

3.3.8 Polecat

The data search shows that this species is present locally. However, the majority of Proposed Development is within existing highway and no highly suitable polecat habitats will be affected by the Proposed Development.

4 Evaluation of Ecological Features

The table below identifies ecological features which have been identified as important, justification for the importance rating assigned and a list of features which have been scoped in or out for ecological impact assessment. Features which are scoped out are considered to be features which are sufficiently widespread, unthreatened and resilient to development impacts or at minimal risk of impact. However, due to legal protection and as good practice, mitigation and/or compensation measures may still be proposed in Section 6 for specific ecological features which are scoped out from further impact assessment.

Table 7: Evaluation of Ecological Features

Feature	Importance	Scoped in/Out	Justification
Statutory designated sites	International /National	Scoped in	The works will be undertaken immediately adjacent to the River Dee and Bala Lake SAC and River Dee SSSI and there is a risk of indirect adverse impacts.
Non-statutory designated sites	County	Scoped in	The works will be undertaken immediately adjacent to two LWSs (Bola's Dingle and Barracks Field) and there is a risk of indirect adverse impacts.
Priority habitats	County	Scoped in	The works will involve the temporary loss of short sections of species-rich native and other native hedgerows, hedgerows are a priority habitat. The works will be undertaken immediately adjacent to ancient woodland and wood pasture and parkland priority habitats and there is a risk of adverse indirect impacts.
Non-priority habitats (modified grassland, other neutral grassland and woodland, built linear features)	Site	Scoped out	The majority of cabling runs through hardstanding, where cabling does pass through semi-natural habitats these comprise heavily grazed pasture and a very small scrubby woodland plantation.
Amphibians	Site	Scoped out	Whilst present locally, the majority of works are in the existing highway, habitats of sub optimal suitability or habitats which are potentially suitable but not in close proximity to suitable aquatic habitats.
Bats	Local	Scoped in	Whilst the majority of the cabling runs through busy existing highways, where bats are unlikely to be disturbed by cable installation even if present in adjacent areas, part of the cable route runs along a very quiet lane (Colt Lane) and there are several mature trees with PRF-M potential to support roosting bats which could be disturbed during works. Although bat surveys undertaken have not identified any trees with bat roosts, there is potential for roosts to be present in future.
Badger	Site	Scoped out	No badger setts were identified during the extended UKHab survey, likewise no evidence of foraging activity was observed. Therefore, badgers are considered generally absent from the site, with the exception of infrequent passing through, and so no significant impact is anticipated in relation this species and

			therefore it is excluded from further assessment.
Breeding birds	Site	Scoped out	Whilst breeding birds may be present in the areas of hedgerow and woodland, the affected areas are very small, habitat loss will be temporary and unlikely to affect the breeding bird assemblage significantly, subject to clearance outside of the nesting bird season or pre-clearance checks.
Invertebrates	Site	Scoped out	Whilst terrestrial invertebrates may be present in the areas of grassland, hedgerow and woodland, the affected areas are very small, habitat loss will be temporary and unlikely to affect the invertebrate assemblage significantly,
Hedgehogs	Site	Scoped out	Whilst present locally, the majority of works are in the existing highway and works in areas where hedgehogs may be present are limited in extent. On this basis, no significant impacts are predicted.
Otters	Local	Scoped in	Otters are present within an adjacent watercourse, the River Ceiriog. Whilst no holts or couches were identified, suitable habitat is present and the otters present form part of the wider River Dee and Bala Lake SAC catchment population which is important beyond site level.
Polecats	Site	Scoped out	Whilst present locally, the majority of works are in the existing highway or habitats of sub optimal suitability. On this basis, no significant impacts are predicted.
Reptiles	Site	Scoped out	Whilst present locally, the majority of works are in the existing highway or habitats of sub optimal suitability such as scrubby woodland, grazed pasture or very short sections of roadside hedgerow. On this basis, no significant impacts are predicted.

5 Assessment of Likely Significant Effects

Given the nature of the Proposed Development, underground cable installation, impacts are assumed to be applicable to the construction phase only. Potential impacts are listed in the table below.

Table 8: Assessment of Likely Significant Effects (in the absence of mitigation)

Feature	Effect	Activity	Effect Description	Effect details	Scale & Magnitude	Effect level
River Dee & Bala Lake SAC/SSSI	Habitat degradation	Open trenching	The cable installation will require open trenching which has the potential to generate dust which could be deposited onto SAC/SSSI habitats and lead to temporary degradation. Similarly, there is potential for surface water run-off polluted with silt, oil or other chemicals to reach the designated site and cause temporary habitat degradation.	Short-term, reversible, temporary adverse effect	International & Negligible	Negligible adverse at International level
Barracks Field & Bola's Dingle LWS	Habitat degradation	Open trenching	As above for statutory designated sites, potential for habitat degradation through dust generation and polluted surface water runoff.	Short-term, reversible, temporary adverse effect	County & Negligible	Negligible adverse at County level
Priority habitats	Habitat loss (hedgerow)	Site clearance	Clearance will require the removal of a short section (approx 10m) of species-rich hedgerow off Pont Y Blew Road and short sections (<10m) of other native hedgerow west of the B5070 and west of Colt Lane. The locations where hedgerows will be removed are shown on Figures 3a – 3c.	Medium-term, reversible, temporary adverse effect	County & Negligible	Negligible adverse at County level
	Habitat degradation (ancient woodland, wood pasture)	Open trenching	As above for statutory and non-statutory designated sites, there's potential for habitat degradation through dust generation and polluted surface water runoff.	Short-term, reversible, temporary adverse effect	County & Negligible	Negligible adverse at County level
Bats	Disturbance and potential reduction in population	Open trenching	There are several mature trees with PRF-I and PRF-M bat suitability along Colt Lane in immediate proximity to the works and one tree with PRF-I suitability within the works area off Pont Y Blew Road. Colt Lane is a lane not used by regular traffic and therefore baseline noise levels are likely to be low. Disturbance during bat maternity or hibernation periods could disturb bats and lead to a temporary partial reduction in population. If the tree in the works area off Pont Y Blew Road is	Medium-term adverse effect, reversible (with mitigation to reduce/avoid impacts)	Local & Low	Negligible to Minor adverse at Local level

			removed there is potential for disturbance, killing/injury and destruction of a bat roost. Whilst tree climbing surveys undertaken between July and September 2025 and December 2025 to January 2026 have not identified the presence of roosting bats in any of these trees, future presence cannot be ruled out.			
Otters	Disturbance and potential reduction in population	Open trenching and associated works e.g. temporary lighting	Should otters be present and have a holt within the section of the River Ceiriog which is in close proximity to the work they could be disturbed through noise, vibration or lighting during construction, leading to failed breeding and a partial reduction in population.	Medium-term adverse effect, reversible (with mitigation to reduce/avoid impacts)	Local and Low	Negligible to Minor adverse at Local level

6 Mitigation, Compensation and Residual Effects

In the absence of mitigation, the impact assessment has identified adverse impacts of negligible significance at international level and negligible to minor significance at local level. The table below describes the mitigation proposed for each ecological features which was scoped in to the impact assessment. In addition, where relevant, mitigation is included for features which were not scoped into the impact assessment but where mitigation measures are required to ensure legislative compliance or as part of good practice.

Table 9: Assessment of Likely Significant Effects (with mitigation)

Feature	Effect	Effect Pre Mitigation	Mitigation	Scale & Magnitude with Mitigation	Effect level
Features scoped into the EcIA					
River Dee & Bala Lake SAC/SSSI	Habitat degradation	Negligible adverse at International level	A CEMP will be prepared prior to the commencement of construction. The CEMP will include the following measures: • Dust prevention and containment measures near designated sites, such as screening stockpiles of materials, deployment of windbreak netting and dampening exposed soils and dust generated, as appropriate. • Contamination / pollution controls including that works will be undertaken in accordance with CIRIA Control of Pollution from Construction Sites (C532) and Guidance for Pollution Prevention and measures will include the provision of emergency spill kits, use of wheel washing, refueling away from drains and watercourses, use of sediment traps if necessary, careful use of concrete and containment of any polluted runoff.	International & Negligible	Negligible adverse at International level
Barracks Field & Bola's Dingle LWS	Habitat degradation	Negligible adverse at County level	CEMP to be implemented as described above.	County & Negligible	Negligible adverse at County level
Priority habitats	Habitat loss (hedgerow)	Negligible adverse at County level	The section of species-rich hedgerow which will be removed along Pont Y Blew Road shall be replanted with a double staggered hedgerow, using 90-120cm plants at a density of 5 plants per metre. The species mix should be 25% hawthorn, 25% blackthorn, 20% pedunculate oak, 10% hazel, 10% holly, 10% elder and provide betterment in terms of species-richness over the removed hedgerow section with additional	County & Negligible	Negligible adverse at County level

			species added if required. Planting should be undertaken between November and March, under suitable conditions. The sections of hedgerow removed along the B50570 and Colt Lane should be replanted with a double staggered hedgerow, using 90-120cm plants at a density of 5 plants per metre. The species mix should be 30% hawthorn, 20% blackthorn, 20% hazel 20% holly and 10% elder and provide betterment in terms of species-richness over the removed hedgerow section with additional species added if required. Planting should be undertaken between November and March, under suitable conditions. Hedgerow replanting locations are shown on Figures 3a-3c.		
	Habitat degradation (ancient woodland, wood pasture)	Negligible adverse at County level	CEMP to be implemented as described above.	County & Negligible	Negligible adverse at County level
Bats	Disturbance and slight potential reduction in population	Negligible to Minor adverse at Local level	Surveys of potentially affected PRF-I and-M trees were undertaken during the summer breeding period and no bat roosts were identified. Two winter hibernation surveys were also undertaken and no hibernation roosts were found. As no roosts were identified, there is no restriction on the timing of works although where possible works should be undertaken outside of the breeding season (May – September) in case roosts are present in future. Trees with potential to support bats which require felling should be soft-felled under a precautionary working method statement under the supervision of a licenced ecologist.	Local & Negligible	Negligible adverse at Local level
Otters	Disturbance and slight potential reduction in population	Negligible to Minor adverse at Local level	An otter survey undertaken in January 2026 identified the presence of otters within a section of the River Ceiriog which is present within 50m of the Proposed Development. To ensure otters are not disturbed during construction, the section of River Ceiriog which is within 50m of Cable Routes 1 and 2 will be subject to a pre-construction survey.	Local & Negligible	Negligible adverse at Local level

			The pre-construction otter survey will be undertaken to ensure there are no otter holts or couches on sections of watercourse within 50m of the site. If an active otter holt or lying up area is identified, a suitable exclusion zone would be clearly demarcated, at the discretion of the on-site ECoW (50m for breeding holts and 30m for non-breeding holts or active otter couches/lying up areas). Guidance will then be sought from the ECoW on how to proceed with works in the affected area and on the requirement to obtain a development derogation licence. During construction, any earthworks left open overnight shall be profiled such that at least one side of the excavation is sloped at a 45-degree angle or less to provide a means of escape for any animals accidentally captured. If this is not possible, a large plank or wooden beam shall be placed at the ends of the excavation at a shallow angle to allow any animals to escape. Any new or modified external lighting should be designed to avoid direct illumination of the habitats including the River Ceiriog to the east of Pont Y Blew Road. If lighting is required, a sensitive lighting strategy should be implemented during construction to avoid disturbance should otters be present.		
Features not scoped into the EcIA but where mitigation is required for legislative compliance or good practice					
Breeding birds	Potential for disturbance, injury, killing, nest damage and destruction during breeding	N/A	Only small areas of vegetation clearance are required. If possible, vegetation clearance should be undertaken outside of the breeding bird season March – August inclusive. If this is not possible, an inspection to check for the presence of nesting birds should be undertaken prior to clearance and if nesting birds are present, works should be delayed until breeding is complete and chicks have fledged.	N/A	N/A
Hedgehogs	Potential for killing/injury during site clearance	N/A	Staged vegetation clearance to be undertaken and hedgerow and woodland searched by an ecologist prior to works. Avoid removing potential hibernation habitats between November and March.	N/A	N/A

			Trenches should not be left open overnight, any trenches opened should be backfilled the same day or covered over overnight to prevent accidental capture of hedgehogs and other small mammals.		
Woodland	Woodland removal	N/A	Should the woodland need to be removed or partially removed at TN25, trees should be replanted at a ratio of two trees planted for each tree lost.	N/A	N/A

6.1 Cumulative Impacts

Given the short-term and temporary nature of the proposed cabling works, which will largely be undertaken within existing highways, the Proposed Development is not considered likely to give rise to any significant effects on ecological features, either alone or combination with other plans or projects.

7 Conclusions

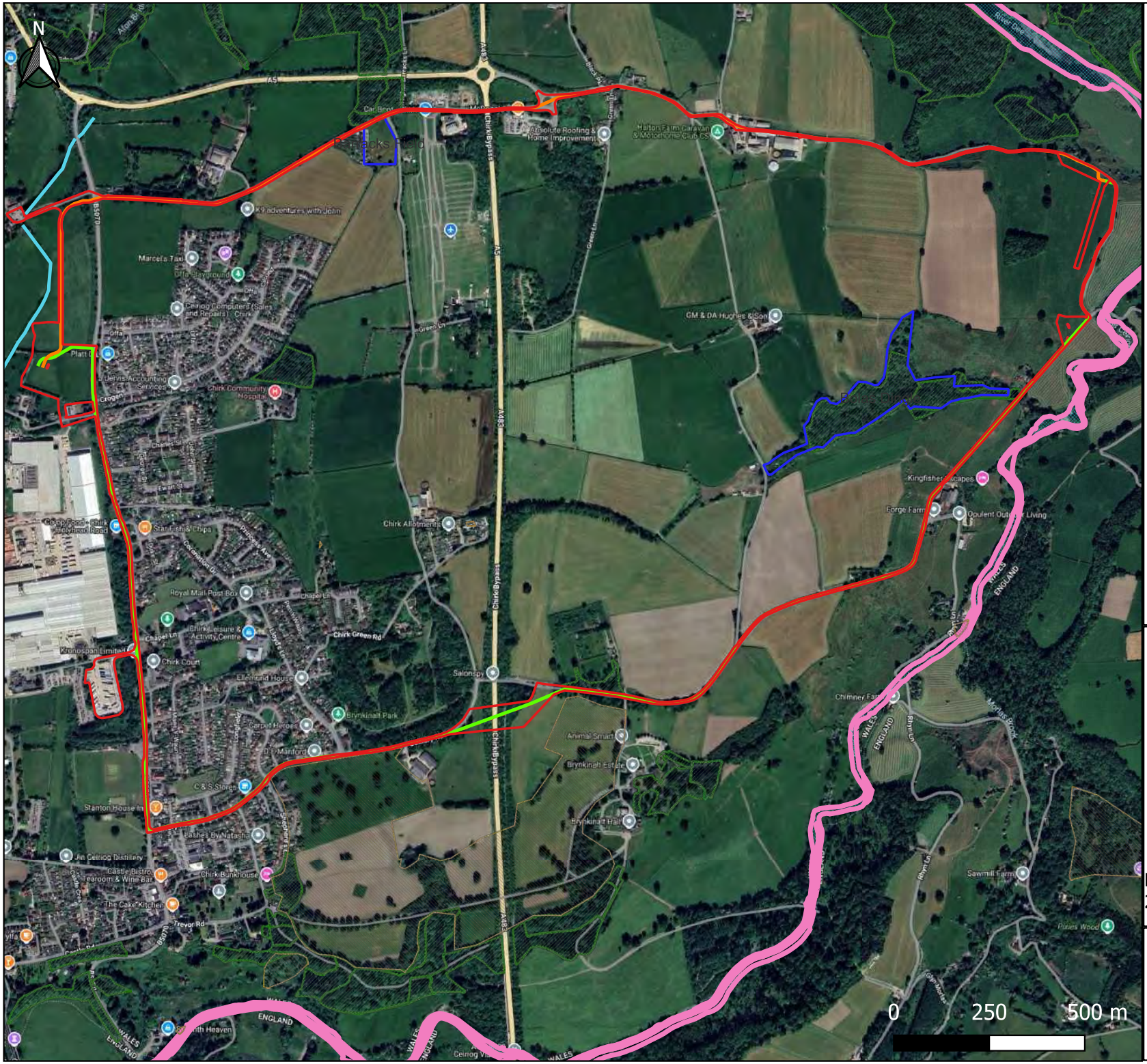
In the absence of mitigation, negligible adverse effects are predicted on statutory and non-statutory designated sites and priority habitats. Whilst these are not considered to comprise significant effects, mitigation is proposed as good practice and the post mitigation effect is the same as the pre-mitigation scenario (negligible at the geographic frame of reference specified).

In the absence of mitigation, negligible to minor significant adverse effects were predicted on bats and otters at the Local level. However, subject to proposed mitigation measures, a negligible adverse effect is predicted on both species/species group which is not considered significant.

Recommendations include replacement hedgerow and tree planting, avoidance of vegetation clearance during the bird nesting season, precautionary measures for any trees with bat potential which require felling, a pre-constriction otter survey and precautionary measures and precautionary measures for hedgehogs during site clearance and construction.

Subject to the proposed mitigation and compensation measures, it is predicted that the Proposed Development would have no significant effects on important ecological features.

Figure 1 – Designated Sites



- Red Line Boundary
- Cable Route 1
- Cable Route 2
- Fibre Cable Route
- Special Areas of Conservation (Wales)
- SSSI (Wales)
- LWS
- Ancient Woodland (Wales)
- Priority Habitat

Figure 1: Designated Sites

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Figure 2 – UKHab Target Note Plan

Target Notes only. See report Section 3 and Appendix A for habitat descriptions.

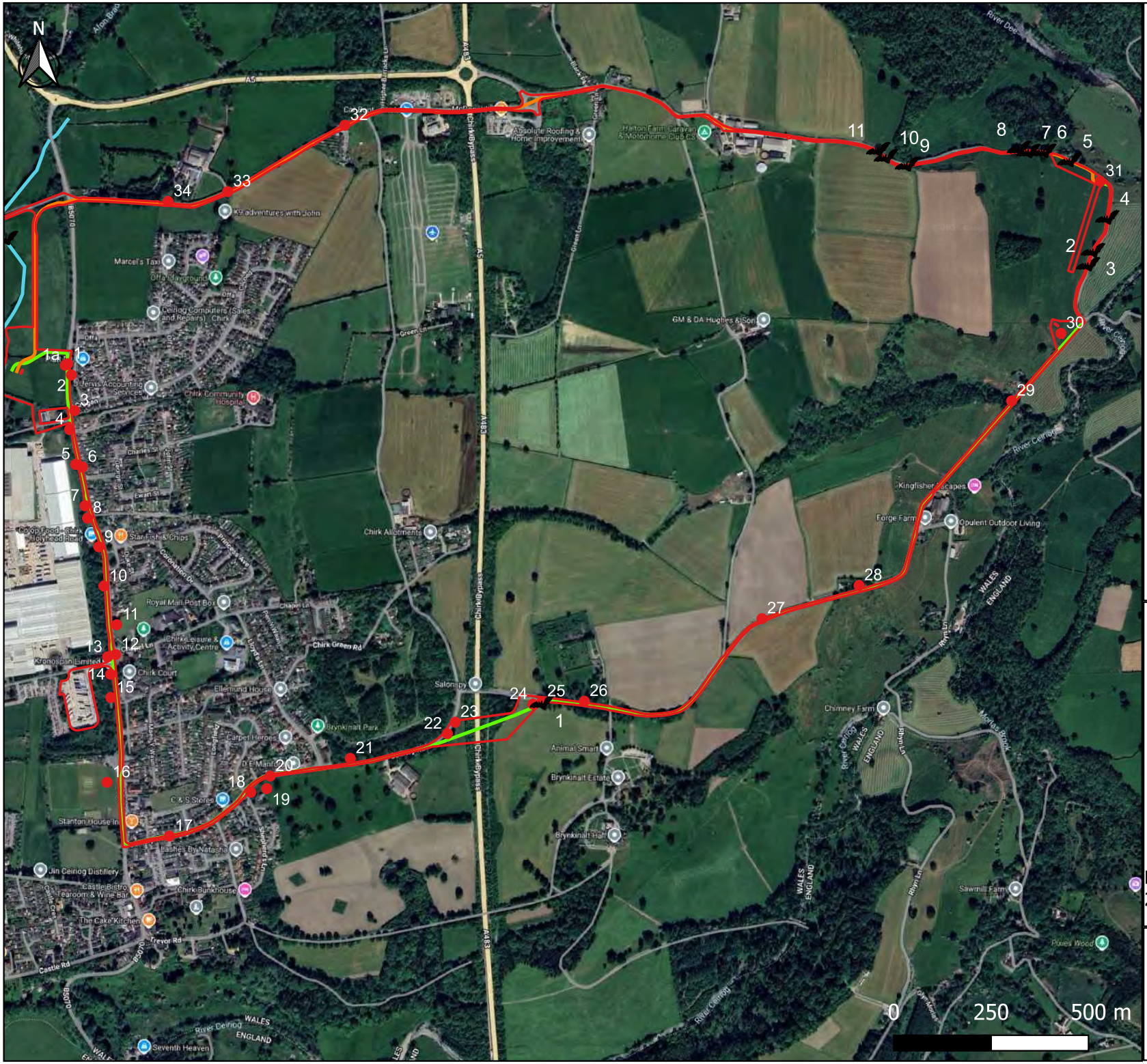


Figure 2: UKHab Target Note and Bat Results Plan

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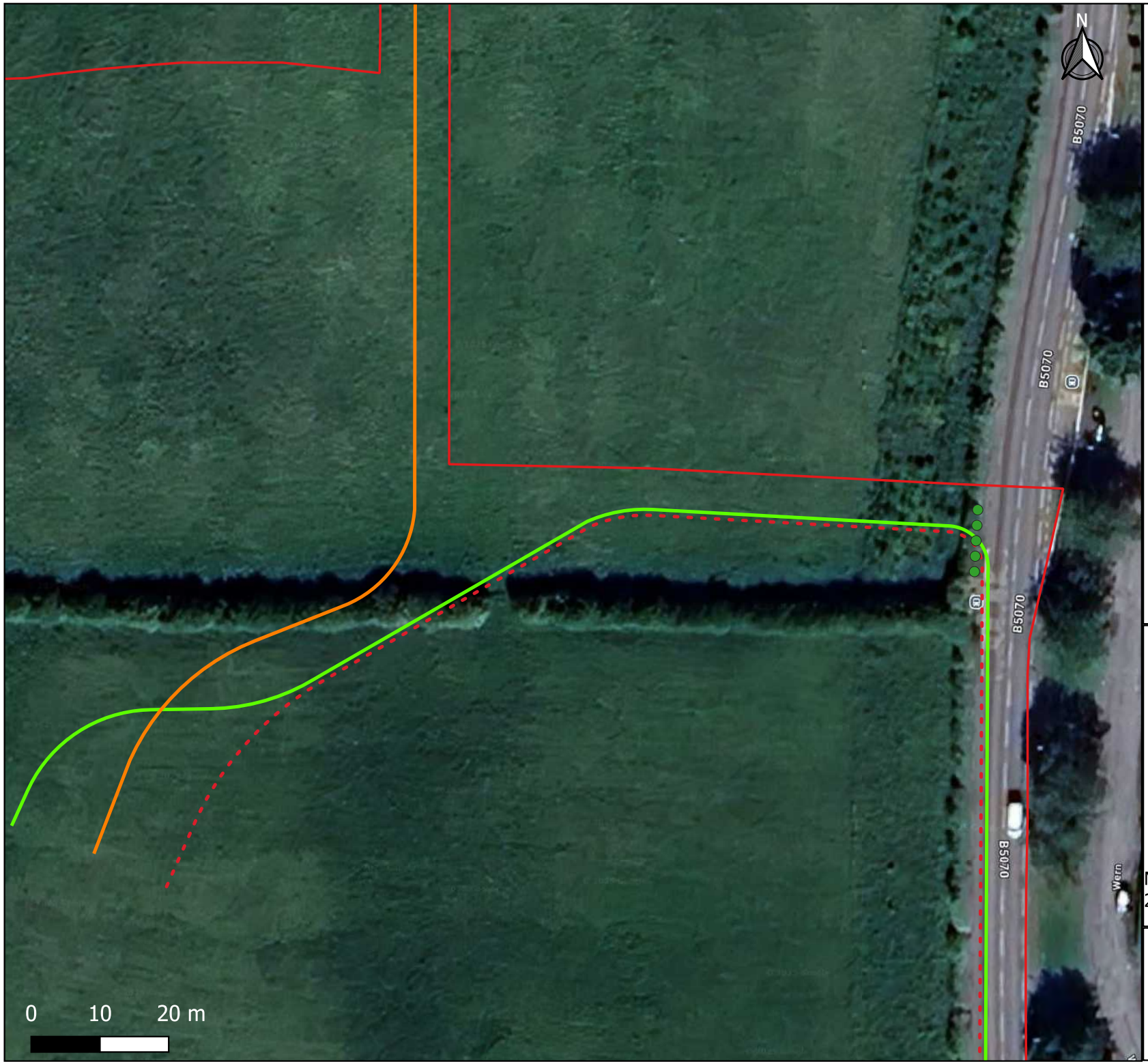
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Figures 3a-3c – Hedgerow Loss/Replanting Plans



Red Line Boundary

Cable Route 1

Cable Route 2

Fibre Cable Route

Hedgerow Loss/Re-planting Area

Figure 3a: Hedgerow Loss/Re-planting Area

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Red Line Boundary

Cable Route 1

Cable Route 2

Hedgerow Loss/Re-planting Area

Figure 3b: Hedgerow Loss/Re-planting Area

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Red Line Boundary

Cable Route 2

Fibre Cable Route

Hedgerow Loss/Re-planting Area

Figure 3c: Hedgerow Loss/Re-planting Area

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Appendices

Appendix A. Target Notes

Table 10: Target Notes

TN	Description	Photo
1	The cable route turns west off the highway into the northern planning application area and crosses through a roadside hedgerow. The hedgerow is a hawthorn dominated hedgerow which is approximately 3m high and 2.5m wide. Other species include elder, ash. Hazel also present, nettle at the base, soft brome, cleavers, dandelion, ryegrass, coltsfoot. The section of hedgerow shown in the photo is the crossing point based on the feasibility design. Whilst the crossing location identified within the detailed design drawing is slightly further north, this is a continuation of the same hedgerow with no significant differences apparent.	
2	Amenity grassland with mature cherry, silver birch. Ryegrass, white clover, Yorkshire fog, dandelion, creeping buttercup, daisy, ribwort plantain, a few ornamental shrubs adjacent to the scheme.	

3	Unmanaged species poor neutral grassland, cocksfoot and false oat grass dominated with Yorkshire fog, common bent, adjacent to the scheme.	
4	Row of trees west of road with a species poor neutral grassland verge. Sycamore, elder, ash, copper sycamore, hazel, holly, a few dead trees, hawthorn, a few newly planted birch, hawthorn and hazel. Grassland species Yorkshire fog, rough meadow grass, annual meadow grass, cocksfoot, meadow foxtail, common bent, yarrow, creeping cinquefoil, creeping buttercup, ribwort plantain, daisy, creeping thistle, ragwort, white clover, adjacent to the scheme.	

5	Trees are more densely packed with hazel and elder forming an informal hedgerow, adjacent to the scheme.	
6	East of the road there's a pavement, drives to residential houses and hedges border the pavement, adjacent to the scheme.	

7	Cherry laurel and Leyland cypress amongst trees, adjacent to the scheme.	
8	Fenced off species poor neutral grassland with a few saplings and young trees, adjacent to the scheme.	

9	Row of tall but thin sycamore trees densely packed with hawthorn below. The opposite side of the road comprises amenity grassland with shrubs and a mature cherry tree, adjacent to the scheme.	

10	Woodland roadside comprises ash, sycamore, hazel, Scot's pine, Leyland cypress, hawthorn, elder, rowan, horse chestnut, hedge at base formed by hawthorn, young ash, elder, dog rose, with nettle, coltsfoot, dock at road margin, adjacent to the scheme.	
11	Park with mature beech and cherry trees, adjacent to the scheme.	

12	Species rich hedgerow east of road, hawthorn, blackthorn, ash, sycamore, oak, holly, adjacent to the scheme.	
13	Kronospan entrance, amenity grassland with mature lime trees, adjacent to the scheme.	

14	Group of Leyland cypress with elder, amenity grassland at base between trees and road, adjacent to the scheme.	
15	Ash dominated woodland with open areas with scrub and young trees, adjacent to the scheme.	

16	Cricket field with an amenity grassland area to the south and playground. Hawthorn hedgerow with ivy and occasional elder along the west side of the road, adjacent to the scheme.	
17	Residential area, hedgerows occasionally border pavements on both sides of the road, adjacent to the scheme.	

18	Amenity grassland parcel south of the road with a dead standing oak stem, and three mature oak which may have been formerly part of adjacent wood pasture, adjacent to the scheme.	
19	Wood pasture and parkland south of road comprises mature oaks with neutral grassland which is cattle grazed, adjacent to the scheme.	

20	Blackthorn and hawthorn hedgerow on South side of road, adjacent to the scheme.	
21	Mature woodland northside of road comprises ash, sycamore, canopy species with young ash and sycamore, cherry, hawthorn, hazel, young horse chestnut, understorey comprises bramble, nettle, ivy dominate ground flora, occasional hedge woundwort, cleavers. On the opposite side of road there's a hawthorn hedgerow with occasional sycamore and a number of mature ash trees.	

22	East of the road the hedgerow terminates and there's a group of planted mature oak trees & 3 poplar trees at the edge of a pasture. Roadside there's a circa 7m wide grassland verge species poor other neutral grassland only the 1m to road edge appears cut regular. The woodland continues west of the road and the opposite section is ash and cherry dominated with occasional sycamore. The HDD launch location is within the road verge area to receive cables drilled under the A483 to the east.	
23	HDD passes under a pasture field which is a ryegrass field with creeping buttercup, curled and broadleaved dock creeping thistle, white clover. There's a hawthorn hedgerow along the post and rail fence with highways verge planting beyond, verge planting comprises ash, Scot's pine, cherry, oak, poplar.	

24	HDD receptor pit is located in an ex arable field which is vegetated with ryegrass, white and red clover, ribwort plantain, plant ID, daisy, creeping buttercup, curled dock. Boundary to road comprises a hawthorn, elder, hazel and sycamore managed hedge.	
25	Open cut to return cable to road goes through a group of trees encircled by a low hawthorn hedge with holly, trees comprise ash, sycamore, Leyland cypress, larch, hazel. Mature ash lightly clothed in ivy has deadwood and a number of broken branches and may be suitable for roosting bats, A sycamore has large, dead ivy boughs but no other features apparent. The woodland is very scrubby with lots of bramble at the base, some lying deadwood, dogs mercury near roadside hedgerow.	

26	Ancient woodland either side of the road. The woodland comprises ash, western hemlock, beech and sycamore with a shrub layer comprising elder, cherry laurel, holly and young ash. A hawthorn and holly hedgerow with dog's mercury at the base borders the woodland on the south side, with a stone wall on the north side. Ground flora is dominated by bramble.	
27	Either side of the road there is an intact, managed hedgerow which is species-rich and comprises hawthorn, hazel, holly, field maple, blackthorn, ash and sycamore..	