TI’R ISHA EMPLOYMENT SITE

Preliminary Ecological Assessment Report

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1 INTRODUCTION

1.1 Purpose and Scope of this Report

1.1.1 RPS was commissioned by Cenin Renewables Ltd (the Applicant) to prepare a Preliminary Ecology Assessment (PEA) Report for a site known as Ti'r Isha, located near Sarn, to the north of Bridgend in South-east Wales.

1.1.2 The Applicant proposes to develop the site as a 'Special Employment Area' which will include two warehouse / industrial units, with office spaces on the first floor, a service yard and an access road. The development proposals also include landscape planting and sustainable drainage. This is hereafter referred to as the 'Proposed Development'.

1.1.3 The surveys and desk-based assessments provide an assessment of the habitats present within the site and their potential to support protected and priority species.

1.1.4 This PEA Report provides details of the findings of the desk-based assessment and results of surveys undertaken in 2024, with the dormouse and bat activity surveys to be completed in 2025:

- Ecological scoping survey / protected species audit;
- Desk study;
- Marsh fritillary walkover;
- Dormouse survey – interim results for August, September and October 2024;
- Bat activity survey – interim results for August, September and October 2024.

1.1.5 This assessment is considered 'preliminary' until any required protected species, habitat or invasive species surveys are completed.

1.1.6 The PEA Report also provides an initial assessment of the potential impact of the Proposed Development on biodiversity. It also provides outline options for avoidance / mitigation / compensation measures as appropriate; and makes recommendations for appropriate biodiversity enhancements in line with national and local planning policy.

1.1.7 This report pertains to these results only; recommendations included within this report are the professional opinion of an experienced ecologist and therefore the view of RPS. The surveys and desk based assessments undertaken as part of this review and subsequent report including the Ecological Appraisal Notes are prepared in accordance with the British Standard for Biodiversity Code of Practice for Planning and Development (BS42020:2013).

1.2 Previous Ecological Survey

1.2.1 A Preliminary Ecological Appraisal was undertaken of the site and additional land to the north by Cadno Contracting & Consultancy in 2024. The report includes the findings of a field survey of the woodland and grassland within the site and has been included within Appendix B of this report.

1.3 Study Area and Zone of Influence

1.3.1 The site is approximately 4.95 ha in size, centred on Ordnance Survey Grid Reference SS 90284 82915. The site location and surrounding area are shown on the Site Location Plan (Figure 1).

1.3.2 The site comprises six fields, most of which are neutral grassland divided by hedgerows and treelines. Two small parcels of semi-natural woodland adjoin the site, one of which is designated as ancient semi-natural woodland. A small stream flows from east to west through the centre of the site.

1.3.3 The site is located immediately north of the M4 and adjoins the Sarn Park Motorway Service Area to the east. The A4063 borders the site to the north. Linear sections of young plantation woodland buffer the site from the M4 and A4063.

1.3.4 The site adjoins broadleaved woodland to the west with the River Ogmore flowing through the woodland 140m south-west of the site at the closest point.

1.3.5 The site is located between the northern edge of Bridgend and the village of Sarn. In the wider area, common land and farmland lie to the east with areas of woodland, farmland and the villages of Aberkenfig and Pen-y-Fai to the west.

1.4 Legislation and Policy

1.4.1 Relevant legislation, policy and guidance are referred to in this report where appropriate. Their context and application are explained in the relevant sections of this report. The relevant legislation, policy and guidance include:

- Environment (Wales) Act 2016;
- The Conservation of Habitats and Species Regulations 2017;
- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019;
- The Wildlife and Countryside Act 1981 (as amended);
- The Protection of Badgers Act 1992;
- The Countryside and Rights of Way Act 2000 (as amended);
- The Natural Environment and Rural Communities Act 2006;
- Planning Policy Wales Edition 12;
- Future Wales: The National Plan 2040;
- Technical Advice Note 5 (TAN5); and
- Bridgend County Borough Local Biodiversity Action Plan.

1.4.2 A summary of legislation relevant to protected or other species identified as potential constraints in this report is provided in Appendix A.

2 METHODS

2.1 Desk Study

2.1.1 Ecological records within a 2 km radius of the site were requested from South-East Wales Biodiversity Records Centre (SEWBReC). Data requests were limited to records for protected species recorded within the last ten years and sites of nature conservation interest within 2 km of the site.

2.1.2 The desk study also included a search for information on statutory sites of nature conservation interest, such as Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs), Special Area of Conservation (SACs) and National Nature Reserves (NNRs); and non-statutory sites, such as Sites of Importance for Nature Conservation (SINCs) and Local Wildlife Sites (LWSs).

2.1.3 Locations of statutory designated sites were accessed via DataMapWales.

2.1.4 A 1:25,000 OS map was used to identify nearby features such as ponds or green corridors that could provide habitat or connectivity to other areas.

2.1.5 Ordinance survey mapping was accessed via the government 'MAGIC' website (https://www.magic.defra.gov.uk) which was used to determine the number and locations of ponds within 500m of the site boundary.

2.2 Ecological Scoping Survey

2.2.1 A site walkover was undertaken which assessed the potential value of habitats within the site and their potential to support protected species and other species of conservation concern which would require consideration as part of the Proposed Development.

2.2.2 The site walkover was undertaken on 4th September 2024 by a suitably competent ecologist. Habitats within the site were assessed and mapped in accordance with the UK Habitat Classification (UKHab Ltd, 2023). The survey followed the standard methodology described in the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017).

2.2.3 The on-site habitats were assessed for their suitability to support protected species and other species of conservation importance that would require due consideration as part of a planning application. The suitability of adjacent off-site habitats, and the site's connectivity with suitable habitats in the surrounding area was taken into account when assessing the site's potential to support protected species.

2.2.4 Areas of habitat and other features of interest considered suitable for protected species or those of conservation interest, such as refuges and ponds were recorded where present. A preliminary search was made of suitable habitat for evidence of use by protected species although this search was not exhaustive.

2.3 Dormouse Survey

2.3.1 The nest tube surveys to date have been undertaken following a methodology based on published best practice guidelines (Bright, Morris & Mitchell Jones, 2006; Chanin & Woods, 2003).

2.3.2 Dormouse are arboreal, spending the majority of their time during the active season in the canopy. The nest tubes provide shelter in which dormouse nests can be constructed, enabling the presence of dormouse to be confirmed. Nest tubes can also be used by other mouse species but differences in the structure of nests enables identification of features created by dormice.

2.3.3 The nest tubes used were based on the standard design described in the published guidelines and as recommended by the mammal society and were set following the methodology described by Chanin and Woods (2003).

2.3.4 A total of 50 nest tubes were installed in woodland, hedgerows and along the boundaries of scrub throughout the site on 2nd August 2024. The survey covered all areas of suitable habitat within the site.

2.3.5 Nest tubes were installed at a recommended tube spacing of 20m (Chanin & Woods, 2003).

2.3.6 All the nest tubes were then inspected on the following dates:

- 4th September 2024;
- 28th November 2024.

2.3.7 Each nest tube was checked and any signs of dormouse occupation or evidence of activity by small mammals or other species was recorded.

2.3.8 The nest tubes will remain in-situ until late spring 2025 unless dormouse presence is confirmed.

2.4 Bat Remote Recording Survey

2.4.1 Remote recording was undertaken using automated bat detectors (Anabat Ranger). Recording was carried out for two five-night periods in August, September and October 2024. The dates and weather conditions during the five-night recording periods analysed are provided in Table 2.1.

2.4.2 On each night, recording began at 30 minutes before sunset and ending 30 minutes after sunrise to cover the peak times that bats would be commuting to and from their roosts. Analysis of recordings was carried out using British Trust for Ornithology's (BTO) Acoustic Pipeline software.

2.4.3 The outputs of the BTO analysis were then manually checked using Kaleidoscope software. All calls identified as bats other than pipistrelle species *Pipistrellus* sp. were checked and reclassified where the parameters of the sonogram more closely matched those of an alternative bat species. A total of 10% of calls identified as pipistrelle species or noise were also checked.

Table 2.1: Remote recording dates and weather conditions

Month	Dates	Precipitation	Weather Nighttime temperatures	Wind Speed	Time of sunrise	Time of sunset
August	28th August – 2nd September 2024	Dry except for periods of heavy rain on evening of 1st and brief periods of light rain on mornings of 1st and 2nd	10 – 19°C	2 – 15 mph	06:22 – 06:29	20:08 – 19:59
September	4 – 9th September 2024	Periods of dry weather and rain throughout recording period.	11 – 18°C	2 - 18 mph	19:52 – 19:43	06:33 – 06:40
October	9 – 14th October 2024	Dry except for light rain on evening of 10th and 12th, and light to heavy rain on 13-14th	2 – 16°C	3-14 mph	18:30 – 18:24	07:30 – 07:37

2.5 Marsh Fritillary Larval Web Walkover

2.5.1 A marsh fritillary larval web walkover was undertaken on 14th September 2024. The survey was based on the methodology outlined by the UK Butterfly Monitoring Scheme for marsh fritillary larval web surveys (Guidance Note Ng2, as detailed at https://ukbms.org/guidance-recording-forms).

2.5.2 The survey was undertaken during a period of dry weather when larval food webs would be present.

2.5.3 A transect route was walked following a zig-zag pattern through each of the grassland fields. All devil's-bit scabious *Succisa pratensis* plants within 1m either side of the transect were checked for marsh fritillary larval webs. The route was 1.48 km in length. Where devil's-bit scabious plants where identified outside of the transect, these plants were also checked for larval webs.

2.6 Notes and Limitations

Desk Based Assessment

2.6.1 The desk study data is third party controlled data, purchased for the purposes of this report only. RPS cannot vouch for its accuracy and cannot be held liable for any error(s) in these data.

Survey

2.6.2 This report has been prepared based on the results obtained by surveys undertaken by RPS between August and November 2024. Further survey visits will be undertaken in 2025 to provide a full assessment of the value of the site for bats and dormouse. Consequently the results presented in this report are interim findings at this stage.

2.6.3 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation and prediction of the natural environment.

2.6.4 The protected/notable species assessment provides a preliminary view of the likelihood of these species occurring on the site, based on the suitability of the habitat, known distribution of the species in the local area provided in response to our enquiries and any direct evidence on the site. It should not be taken as providing a full and definitive survey of any protected/notable species group.

2.6.5 The interior of areas of dense scrub and woodland at the east of the site were inaccessible during the walkover survey. The habitat was assessed from the boundaries of the dense vegetation.

Accurate Lifespan of Ecological Data

2.6.6 The majority of ecological data remain valid for only short periods due to the inherently transient nature of the subject. The survey results contained in this report are considered accurate for two years, assuming no significant considerable changes to the site conditions.

3 RESULTS

3.1 Desk Study

3.1.1 The locations of statutory and non-statutory designated sites are shown on the Designated Sites Plan (Figure 2).

Statutory Designated Sites

Cefn Cribwr Grasslands SAC and SSSIs

3.1.2 Cefn Cribwr Grasslands SAC and SSSI is located approximately 2.08 km to the west of the site. The SAC covers 58 ha. There are four sections designated as SSSIs within the Cefn Cribwr SSSI group which in total cover 40 ha.

3.1.3 The SAC is one of four sites selected to represent *Molinia* meadows in south and central Wales. The designation comprises extensive stands of *Molinia – Cirsium dissectum* fen-meadow (M24), including the heathy sub-type with cross-leaved heath *Erica tetralix* as well as other forms with a stronger representation of native grasses, rushes and small sedges. Transitions to stands of more acidic *Molinia* and *Juncus* pasture, dry neutral grassland and wet scrub vegetation are well represented. Uncommon and declining species associated with the Molinia meadows at this site include the nationally rare viper's-grass *Scorzonera humilis* and the nationally scarce soft-leaved sedge *Carex montana*.

3.1.4 The SAC and SSSIs are also designated for the marsh fritillary, which is a qualifying feature for the SAC designation, but not a primary reason for site selection.

Blackmill Woodlands SAC and SSSI

3.1.5 Blackmill Woodlands is located approximately 2.90 km to the north-east of the proposed development site. The SAC and SSSI covers 70 ha.

3.1.6 The woodland is designated for its '*Old sessile oak woods with Ilex and Blechnum*'. The habitat is at the southern extreme of the habitat's range in Wales. The ground flora is restricted by the relative dryness. The main habitat is a sessile oak canopy, acidic ground flora of bilberry *Vaccinium myrtillus* and wavy hair-grass *Avenella flexuosa*, and a moderate cover of ferns and bryophytes.

Kenfig SAC

3.1.7 Kenfig SAC is located approximately 9.41 km south-west of the site. The SAC covers 1189 ha.

3.1.8 The SAC includes fixed dune vegetation with vegetation known as 'grey dunes'. The dunes support red fescue *Festuca rubra* and lady's bedstraw *Galium verum* and semi-fixed dune grassland with marram *Ammophila arenaria* and red fescue.

3.1.9 There is a relatively large area of more acidic vegetation dominated by sand sedge *Carex arenaria*, sheep's-fescue *Festuca ovina* and common bent *Agrostis capillaris.*

3.1.10 The site also contains one of the largest series of dune slacks in Wales. The dunes are species-rich and support *Salix repens ssp. argentea*, a mature phase in dune slack development.

3.1.11 The designation is considered the most important example of humid dune slacks in the UK. The dunes are amongst the most species-rich in the UK. They support communities of mosses and rare plants, notably the largest UK population of fen orchid *Liparis loeselii.* Also present is a large population of petalwort *Petalophyllum ralfsii*.

3.1.12 The SAC also includes Kenfig Pool, a shallow coastal lake system supporting rare and uncommon plants.

Non-statutory Designated Sites

3.1.13 There are 25 Sites of Interest for Nature Conservation (SINC) located within 2km of the site. These sites are listed in Table 3.1. The site also lies within a 'B-line', as described in Table 3.1.

Table 3.1: Non-statutory Nature Conservation Designations within 2km of the Site

Designation	Location	Description
B-line	Site and surrounding area	The site lies within a B-line. B-lines are described as 'a series of 'insect pathways' running through our countryside and towns, along which Buglife are restoring and creating a series of wildflower-rich habitat stepping stones. They link existing wildlife areas together, creating a network, like a railway, that will weave across the UK landscape.'
Cefn Hirgoed SINC	0.03	Acidic marshy grassland. Continuous bracken. Scattered bracken. Scattered scrub.
Penyfai Common SINC	0.22	Semi-improved and unimproved acidic grassland, acidic marshy grassland, continuous bracken, dense and scattered scrub, broad-leaved semi-natural woodland, and upland species-rich ledges.
Junction 36, Heath SINC	0.74	An area of common land beside the A4061 highway roundabout. Most of the area is grazed, and supports a mosaic of marshy grassland, semi-improved acid grassland and scattered scrub. The land nearest to the highway also supports marshy grassland with scattered heath and scrub, but this is a much taller sward, dominated by tussocky Purple Moor-grass, which has been planted with trees and fenced to exclude livestock.
Penylan Farm Wood SINC	0.80	Broad-leaved semi-natural woodland
Coed-y-Waun SINC	0.84	Broad-leaved semi-natural woodland
Tyncoed Farm, Bryncethin SINC	0.92	River corridor, with wet grassland and woodland
Pennsylvania Wood SINC	0.92	Coniferous plantation woodland. Broad-leaved seminatural woodland along eastern edge. Small area of marsh/marshy grassland to the south.
Derwen Wood SINC	0.93	Broad-leaved plantation woodland. Broad-leaved scattered trees. Small area of unimproved neutral grassland to the south of the site.
Coed-yr-Hela SINC	0.96	Broad-leaved woodland
Aberkenfig West SINC	1.04	A matrix of habitats comprising a stream corridor with broad-leaved woodland, seasonally wet grassland and areas of scrub and marshy vegetation.
Coed Caehelyg SINC	1.05	Broad-leaved semi-natural woodland
Ffwyl Wood (South) SINC	1.20	Mixed plantation woodland. Upland species-rich ledges (Tall ruderal).
Ffwyl Wood (North) SINC	1.21	Broad-leaved plantation woodland. Surrounding fields are improved grassland.
Angelton Common SINC	1.32	Semi-improved neutral grassland. Dense/continuous scrub. Orchard.
Parc Slip Nature Park SINC	1.37	North of site are three areas of unimproved neutral grassland and marshy grassland. Central part mixed plantation woodland and improved grassland. Small standing water areas in the south of the site.
Coed-y-Gains SINC	1.53	Unimproved neutral grassland, scattered broad-leaved trees. Broad-leaved semi-natural woodland and dense continuous scrub.
Rifle Range Wood SINC	1.54	Broad-leaved semi-natural woodland, semi-improved neutral grassland.
Longacre Meadow SINC	1.67	Marshy grassland, scattered scrub, scattered broadleaved tree

Designation	Location	Description
Coed-Ty-Maen SINC	1.69	Mixed plantation woodland, with areas of broad-leaved semi-natural woodland. Semi-improved neutral grassland and small area of marshy grassland
Brynmenyn SINC	1.76	Marshy grassland, dense continuous bracken, broad-leaved semi-natural woodland, semi-improved neutral grassland, unimproved acid grassland, tall ruderal.
Pant Farm/Hirwaun Common SINC	1.82	Acidic marshy grassland, continuous bracken, scattered scrub
Coed Tondu SINC	1.92	Broad-leaved semi-natural woodland, unimproved neutral grassland, dry heath/acid grassland mosaic
Cefn Cribwr Wood SINC	1.97	Broad-leaved woodland
Wildmill Community Park SINC	1.97	Amenity grassland. Broad-leaved semi-natural woodland.

NRW Priority Habitats

3.1.14 There are two Heathland and Grassland Natural Resources Wales (NRW) Priority Habitats within 2km of the site. The closest of these is located beyond the A4063, immediately north-east of the site.

3.1.15 There are 11 NRW Plantation on Ancient Woodland Priority Areas. The closest of these is 0.36 km south of the site.

Ancient Woodland

3.1.16 The area of woodland adjoining the site to the east is designated as a Restored Ancient Woodland Site. This forms part of a larger block of four Restored Ancient Woodland Sites located immediately north of the A4063 and immediately south of the M4.

3.1.17 A further 22 Restored Ancient Woodland Sites are located within 2km of the site.

3.1.18 There are also 22 Areas of Ancient Semi-Natural Woodland Sites within the search area, the closest of which is 0.57 km south of the site. The 11 woodland blocks identified as Plantation on Ancient Woodland Sites are also defined as the NRW Plantation on Ancient Woodland Priority Areas.

Protected and Notable Species

3.1.19 Records of protected species were obtained from the SEWBReC. A number of species of conservation importance or otherwise notable were recorded within the 2 km search radius of the site. A summary of these records is provided in Table 3.2.

3.1.20 The summary includes records of protected species recorded within the past ten years, for which a 6-figure grid reference resolution or higher was provided.

Table 3.2: Species records from the last 10 years within 2 km of the site

Common name	Scientific name	Nearest distance from site (km)	Year of most recent record	Number of locations	Conservation Status[1]
Bat (unknown species)	*Chiroptera*	0.51	2019	1	EPS, WCA5
Serotine	*Eptesicus serotinus*	1.59	2015	1	EPS, WCA5
Myotis species	*Myotis*	0.31	2022	2	EPS, WCA5
Daubenton's bat	*Myotis daubentonii*	0.51	2016	1	EPS, WCA5
Whiskered bat	*Myotis mystacinus*	1.91	2015	1	EPS, WCA5
Natterer's bat	*Myotis nattereri*	0.62	2024	2	EPS, WCA5
Greater horseshoe bat	*Rhinolophus ferrumequinum*	1.59	2015	1	EPS, WCA5
Lesser horseshoe bat	*Rhinolophus hipposideros*	1.53	2019	3	EPS, WCA5
Noctule	*Nyctalus noctula*	1.23	2020	4	EPS, WCA5, S7
Common pipistrelle	*Pipistrellus pipistrellus*	0.48	2024	11	EPS, WCA5, S7
Soprano pipistrelle	*Pipistrellus pygmaeus*	0.63	2020	4	EPS, WCA5, S7
Brown long-eared bat	*Plecotus auritus*	1.59	2019	2	EPS, WCA5, S7
European otter	*Lutra lutra*	0.29	2021	3	EPS, WCA5, S7
Eurasian badger	*Meles meles*	0.58	2023	9	PBA
Hazel dormouse	*Muscardinus avellanarius*	1.68	2020	1	EPS, WCA5, S7
West European hedgehog	*Erinaceus europaeus*	0.06	2022	32	S7, LBAP
Adder	*Vipera berus*	1.64	2024	2	WCA5 part, S7
Grass snake	*Natrix helvetica*	1.59	2020	3	WCA5 part, S7
Slow-worm	*Anguis fragilis*	0.47	2023	11	WCA5 part, S7

3.1.21 The following Birds of Conservation Concern Wales (BoCCW) red and amber list, Priority Species as listed on Section 7 of the Environment (Wales) Act 2016 and Wildlife and Countryside Act Schedule 1 bird species for which potentially suitable habitats occur within the site have been recorded within 2km of the site:

- Red list: Goldcrest *Regulus regulus,* grasshopper warbler *Locustella naevia* (S7), greenfinch *Chloris chloris,* kestrel *Falco tinnunculus* (S7), linnet *Linaria cannabina* (S7), meadow pipit *Anthus pratensis,* spotted flycatcher *Muscicapa striata* (S7), starling *Sturnus vulgaris,* tree pipit *Anthus trivialis* (S7), whitethroat *Curruca communis,* willow warbler *Phylloscopus trochilus,* wood warbler *Phylloscopus sibilatrix* (S7).

[1] Abbreviations: **EPS**: European Protected Species. Fully protected under the Conservation of Habitats and Species Regulations 2017. **WCA5**: Fully protected under the Wildlife and Countryside Act 1981 – as amended. **WCA5 Part:** Protected from killing and injuring under the Wildlife and Countryside Act 1981 – as amended. **S7**: Listed as a species of principal importance for conservation in Wales under Section 7 of the Environment (Wales) Act 2016. **LBAP:** Local Biodiversity Action Plan priority species in Bridgend. **PBA**: Protection of Badgers Act 1992

- Amber list: Bullfinch *Pyrrhula pyrrhula* (S7), dunnock *Prunella modularis* (S7), green woodpecker *Picus viridis*, grey wagtail *Motacilla cinerea* house sparrow *Passer domesticus* (S7), lesser redpoll *Acanthis cabaret* (S7), mistle thrush *Turdus viscivorus.*
- WCA1.1: Barn owl *Tyto alba*.

3.2 Habitats

3.2.1 Habitats within and adjoining the site are described below and shown on the Habitat Plan (Figure 3). Two sections of woodland were present within the site. These are referred to as woodland W1 and W2 as shown on the Habitat Plan. Woodland descriptions are also included in the PEA prepared by Cadno Contracting & Consultancy (Appendix B).

3.2.2 Photographs of habitats within the site are provided in Appendix C.

Woodland

Ancient Semi-natural Woodland

3.2.3 At the east of the site was a block of ancient semi-natural woodland (W1) comprise a range of broadleaved species including sessile oak *Quercus petraea*, ash *Fraxinus excelsior*, field maple *Acer campestre*, wild cherry *Prunus avium* and large-leaved lime *Tilia platyphyllos*.

3.2.4 Along the field edge were pedunculate oak *Quercus robur*, willow *Salix* sp., holly *Ilex aquifolium*, hawthorn *Crataegus monogyna*, beech *Fagus sylvatica*, aspen *Populus tremula*, elm *Ulmus* sp. and white poplar *Populus alba*. Mature and veteran oak trees were present within the woodland. Coppiced hazels *Corylus avellana*, and hawthorn and holly shrubs were present throughout.

3.2.5 Piles of brash and smaller log piles were present along the edges of both blocks of woodland during the survey walkover.

3.2.6 In 2024 the ground flora recorded woodland W1 comprised red campion *Silene dioica*, bluebell *Hyacinthoides non-scripta*, honeysuckle *Lonicera periclymenum*, wood sorrel *Oxalis acetosella*, lady fern *Athyrium filix-femina*, broad buckler-fern *Dryopteris dilitata* and tufted hair-grass *Deschampsia cespitosa* (Cadno Contracting and Consultancy, 2024).

3.2.7 A small stream with shallow banks flows through the woodland. The water was slow-flowing with a depth of under 0.1m at the time of survey. The section of stream within the woodland was entirely shaded by the tree canopy.

3.2.8 W1 classifies as the Priority Habitat type ‘Lowland Mixed Deciduous Woodland’ but is small in extent.

Semi-natural Broadleaved Woodland

3.2.9 At the west of the site was a block of semi-natural broadleaved woodland, the majority of which comprised dense willow (W2).

3.2.10 The woodland lacks a distinct understorey and was heavily shaded by the willow canopy. The ground flora was limited at the time of the survey visit, characterised by ivy *Helix hedera helix* and scattered enchanter’s-nightshade *Circaea lutetiana* and hart’s-tongue fern *Asplenium scolopendrium*.

3.2.11 Mature oak and ash were present along the southern boundary of the woodland.

Plantation Broadleaved Woodland

3.2.12 Two sections of plantation broadleaved woodland border the site. To the north, a plantation woodland was present between the grassland fields and the A4063.

3.2.13 A second section of woodland was present between the grassland fields and the M4 to the south.

3.2.14 The woodlands comprised young trees and shrubs including ash, sycamore *Acer pseudoplatanus*, field maple and hawthorn. They had a dense canopy cover but lacked a distinct shrub layer and had a limited woodland ground flora.

Neutral Grassland

3.2.15 The four larger fields within the site (F1 – F4) were characterised by abundant Yorkshire fog *Holcus lanatus* and common bent *Agrostis capillaris* with scattered soft rush present in low abundance. Occasional to frequent tussocks of cock's-foot *Dactylis glomerata* were present in the southern half of fields F2 – F4. Other grasses present throughout F1 – F4 in lower abundance included Timothy *Phleum pratense*, marsh foxtail *Alopecurus geniculatus* and localised patches of floating sweet-grass *Glyceria fluitans*. Other species that were occasional within the sward included common fleabane *Pulicaria dysenterica*, silverweed *Potentilla anserina*, common mouse-ear *Cerastium fontanum*, betony *Betonica officinalis* and marsh ragwort *Jacobaea aquatica*.

3.2.16 In wetter areas, mainly at the west of fields F2 and F4, sharp-flowered rush *Juncus articulatus*, hard rush *Juncus inflexus*, floating sweet-grass *Glyceria fluitans*, and patches of sedges including hairy sedge *Carex hirta* and remote sedge *Carex remota* were rarely to occasionally present. Several devil's-bit scabious plants were present at the north of field F1.

3.2.17 Across the fields the average sward height was between 10 cm and 20 cm at the time of the survey walkover.

3.2.18 Bramble had encroached along the boundaries of field F6 and Himalayan balsam *Impatiens glandulifera* had spread throughout the field. The sward includes Yorkshire fog, cock's-foot, false oat-grass *Arrhenatherum elatius*, common bent, common fleabane and greater willowherb *Epilobium hirsutum*.

3.2.19 Historic mapping obtained from DataMapWales shows field F6 and the adjoining woodland as 'Purple Moor Grass and Rush Pastures', a Priority Habitat in Wales. During the survey walkover the field lacked the species and structure associated with this Priority Habitat.

Modified Grassland

3.2.20 The small field in the south of the site (F5) was dominated by perennial rye-grass *Lolium perenne.* Other species present amongst the sward included common bent, cock's-foot and Yorkshire fog.

Treelines

3.2.21 The site was divided by a central treeline comprising pedunculate oak and ash, some of which have been pollarded with stems up to approximately 0.3 m diameter at breast height (DBH). Holly, hawthorn and blackthorn *Prunus spinosa* were also present along the treeline.

3.2.22 The base of the treeline had a small earth bank up to 0.3 m in height. Hart's tongue-fern, ivy and soft shield-fern *Polystichum setiferum* were growing on the bank during the habitat walkover.

3.2.23 A shorter length of treeline was present in the southern section of the site. Larger trees along the treeline included sycamore and ash with a DBH of 0.4m. These are labelled as target notes TN1 and TN2 on the Habitat Plan. A dead ash tree was present at the centre of the treeline (TN3).

Hedgerows

3.2.24 Two hedgerows divided fields within the southern section of the site. The hedgerows comprised a mixture of ash, holly, blackthorn and hawthorn. Both hedgerows were typically 3 m in width and have a height of 2 m to 4 m. They showed signs of infrequent management, with some shrubs developing into small trees and the whole hedgerow lacked a dense structure.

3.2.25 The hedgerows lacked larger trees with the exception of a mature ash tree at TN 4.

3.2.26 A small section of hawthorn hedgerow adjoined the central treeline.

Stream

3.2.27 A small stream flows westwards through the centre of the site. The stream was culverted beneath the lane to the east of the site where it enters the ancient woodland (W1). Downstream it runs alongside the central treeline and through the woodland to the west (W2).

3.2.28 The stream channel had a water depth of less than 0.1 m at the time of the walkover survey and a channel width of under 0.3 m for most of its length. The banks were shallow at the east of the site and less than 0.3 m in height, increasing in gradient and to a height of 0.5 m to the west of the site. The banksides were dominated by grasses.

3.2.29 Ragged robin *Silene flos-cuculi*, brooklime *Veronica beccabunga*, purple loosestrife *Lythrum salicaria*, meadowsweet *Filipendula ulmaria* and rushes *Juncus* spp. were present along the margins of the stream.

3.3 Protected and Notable Species

3.3.1 The following section provides a summary of the suitability of the habitats for protected and notable species and any incidental observations. Where appropriate, interim results of the ongoing targeted species surveys have been included.

Bats

Roosting

3.3.2 The dead ash tree (TN3) has lifted bark along the stem which have potential to be used by individual roosting bats. No other trees within the treelines or hedgerows have features suitable for use by roosting bats. Larger trees within the woodland parcel W1 may also have features suitable for roosting bats.

Foraging and Flightlines

3.3.3 The woodlands and hedgerows provide flightlines and foraging habitat for bats.

3.3.4 The woodland edge is expected to be associated with higher levels of foraging activity than other habitats within the site.

3.3.5 A minimum of seven species (five identified species and two groups) were recorded at both recording locations during the late August – October 2024 remote recording periods, these were: common pipistrelle, soprano pipistrelle, brown long-eared bat, lesser horseshoe bat, serotine, Nyctaloid[2] bats and *Myotis* species.

[2] Nyctaloid bats include species of the genus *Nyctalus* and *Eptesicus* which include noctule, Leisler's bat and serotine.

3.3.6 The recordings at the two remote static detector locations are described below. 'Passes' refers to registrations with one or more calls with typically less than 1 second between calls.

3.3.7 A summary of the results is provided in Table 3.3 below. The locations of remote static detectors are shown on the Static Detector Locations Plan (Figure 4).

Table 3.3: Remote recording results summary

Species	Average number of passes* per night					
	August		September		October	
	Central treeline	Eastern woodland	Central treeline	Eastern woodland	Central treeline	Eastern woodland
Common pipistrelle	281.2	152.2	333.6	377.4	31.6	146.0
Soprano pipistrelle	280.0	525.2	402.6	195.6	77.8	82.8
Myotis species	3.6	7.2	2.6	1	0	4.8
Serotine	0.6	0.2	0	0.2	0	0
Nyctalus species bat	0.2	0.2	0	0	0	0.2
Noctule	2.2	3.4	0	0	0	0.4
Brown long-eared bat	1.8	3.2	0	0.6	0.2	1.8
Lesser horseshoe	0.2	0.2	0	0.2	1.4	0.6

*Pass = discrete series of calls representing a single bat flight within the range of the bat detector

Eastern Woodland

3.3.8 Of the 1,887 common pipistrelle passes recorded in September, 1,744 were recorded during a single night (5-6th September) where the species was recorded throughout night. Between 27 – 42 passes were recorded on other nights. Activity was lower in August and October.

3.3.9 Of the 3,358 soprano pipistrelle passes recorded in August, 2,361 passes were recorded over two nights (30-31st August and 31-1st September). Activity on other nights in August varied from 75 to 471 passes per night.

3.3.10 In September, soprano pipistrelle were mainly recorded on 5-6th September, when 720 passes were recorded throughout night. A total of 214 passes were recorded on 4-5th September, with between 3 and 27 passes recorded on other nights. Lower numbers of passes were recorded in October.

3.3.11 *Myotis* species bat were record in relatively low numbers during August, September and October. The earliest call was recorded 1 hour and 14 minutes after sunset.

3.3.12 Three brown long-eared bat passes were recorded, all on the 4th September. The first pass was at 50 minutes after sunset, followed by two passes an hour later.

3.3.13 Noctule and Nyctaloid bats were recorded in relatively low numbers in August and October only. The earliest call was recorded at 53 minutes after sunset.

3.3.14 Two serotine passes were recorded in September and a single call in August. The earliest call was at 1 hour and 30 minutes after sunset.

3.3.15 Individual lesser horseshoe passes was recorded on single nights in August (4 hours 49 minutes after sunset) and September (3 hours and 51 minutes before sunrise). A further three lesser horseshoe passes were recorded in October, the earliest at 1 hour and 1 minute after sunset.

Central Treeline

3.3.16 In September, both common pipistrelle and soprano pipistrelle were recorded on three of the five nights of recording, with the majority of passes (1,071 of 1,668 common pipistrelle passes and 1,204 of 2,013 soprano pipistrelle passes) being recorded throughout a single night (5 - 6th September). Activity of both species was slightly lower in August with passes recorded throughout the five night period. The number of passes of both species recorded in October was much lower.

3.3.17 In August *Myotis* sp. bat passes were recorded on four of the five recording nights with up to six passes recorded in a single night. In September, *Myotis* sp. bats were recorded on two nights only, with a total of 13 passes. The earliest call was recorded at 1 hour and 22 minutes after sunset. No *Myotis* sp. were recorded in October.

3.3.18 Brown long-eared bat was recorded in August and October. In August brown long-eared bats were recorded on three nights in low numbers, with the earliest pass being 1 hour and 10 minutes after sunset. A single brown long-eared bat pass was recorded along the central treeline in October at 1 hour after sunset on the 9th October.

3.3.19 Noctule and a single Nyctaloid bat were only recorded on a single night in August with a relatively low number of passes, the earliest being one minute before sunset.

3.3.20 Serotine were recorded in August only, with three passes on a single night, the earliest being at 29 minutes after sunset.

3.3.21 Lesser horseshoe were recorded once in August (2 hours and 18 minutes after sunset) and on two nights in October when a total of seven passes were recorded over two short periods approximately 1 hour and 15 minutes after sunset. No lesser horseshoe activity was not recorded in September.

Dormouse

3.3.22 The woodlands, treelines and hedgerows provide suitable habitat for dormouse.

3.3.23 No dormouse, or evidence of dormouse nests were recorded during the September and November 2024 dormouse survey visits. Wood mouse and berry caches were recorded within the two woodland parcels in November.

3.3.24 The locations of dormouse nest tubes are shown on the Dormouse Survey Plan (Figure 5).

Badger

3.3.25 There were no signs of badger during the walkover survey, and no other incidental recordings of badger were identified from other surveys undertaken at the site. The woodland and grassland provide suitable habitat for foraging and sett building.

Otter

3.3.26 Woodland W2 provides cover suitable for otter to use as a terrestrial area providing shelter from disturbance and lies within 130m of the River Ogmore. The lack of dense vegetation cover at ground level will limit the value of the habitat for the species. The desk study returned records of otter using the river.

3.3.27 No signs of otter using the area such as mammal pathways or holts were recorded during the survey walkover.

Nesting Birds

3.3.28 The woodlands, central treeline and hedgerows provide habitat for nesting birds. The tall sward of the grassland during the later summer – autumn 2024 visits is sub-optimal for ground-nesting birds.

Great Crested Newts

3.3.29 The low-lying area of ground within the woodland at the east of site may hold a small amount of water during wet periods but would lack the depth and aquatic vegetation to support great crested newt (GCN). It is considered to have negligible potential to support a GCN breeding population.

3.3.30 There are no ponds within the site and there are no known ponds within 250m to the west, east and north of the site. There are ponds to the south of the site that could support GCN. The M4 to the south of the site proposes a significant barrier to movement for GCN in the wider landscape. The A4063 to the north of the site and River Ogmore to the west also provide barriers to dispersal for GCN.

Reptiles

3.3.31 The grassland provides suitable foraging and basking habitat for reptiles. The woodland habitat including piles of brash and logs provide areas of shelter which may be used during the active season as well as during hibernation.

Marsh Fritillary

3.3.32 The site lies 2 km from Cefn Cribwr Grasslands SAC and SSSI which is designated for marsh fritillary. Devil's-bit-scabious, the foodplant for marsh fritillary on which eggs are laid, is present at low abundance within the site.

3.3.33 Several devil's-bit-scabious plants were recorded at the north of field F1 only, and no larval nests were present within the site during the survey. The areas of site supporting devil's-bit-scabious are shown on the Marsh Fritillary Walkover Results Plan (Figure 6).

Invertebrate Assemblage

3.3.34 Higher value habitat for invertebrates within the site includes W1 and the more botanically diverse and marshy areas of grassland within fields F4 and F2.

3.3.35 The site as a whole would be expected to support species of invertebrates which will be present within similar habitat within the wider local area.

4 EVALUATION AND POTENTIAL IMPACTS

4.1 Designated Sites

4.1.1 Low number of devil's-bit scabious plants were present within the site during the 2024 walkover, limiting the potential value of the site for marsh fritillary. No signs of larvae were found during targeted searches.

4.1.2 The site is unlikely to be an important nesting area for marsh fritillary or be functionally linked to the Cefn Cribwr Grasslands SAC and SSSI. The potential for adverse effects on the Cefn Cribwr Grasslands SAC and SSSI marsh fritillary population is therefore limited.

4.1.3 The site comprises a small section of a wider 'B-line' corridor. The design of the Proposed Development proposes the removal of habitats within the site with value for invertebrates. The development will retain areas of higher value invertebrate habitat and mitigation is proposed to offset the loss of these habitats within the site. Further mitigation within the locality and within the 'B-line' corridor would further reduce potential impacts in invertebrates. The Proposed Development is not anticipated to significantly affect the overall status of the 'B-line' corridor.

4.1.4 Provided good practice measures are employed during construction to prevent pollution, there are no other anticipated impacts on other designations within the study area.

4.2 Habitats

4.2.1 The Proposed Development design includes the removal of parts of grassland and woodland habitats within the site. Select areas of these habitats would be retained and protected as part of the Proposed Development design. This would include the partial retention of more botanically diverse and higher value grassland within field F4.

4.2.2 The development has been designed to minimise the potential for any impacts on the ancient semi-natural woodland at the east of the site (W1) with the retention of this block and a 15m buffer zone in the proposed layout to avoid direct habitat loss. The buffer zone and suitable protection and mitigation measures will be required to protect woodland features from root damage, pollution and light spill. Ancient woodland adjacent to the site should also be protected from potential indirect effects.

4.2.3 The areas of wet neutral grassland have local conservation importance due to the botanical composition but do not classify as a Priority Habitat.

4.2.4 The central treeline and hedgerows would be removed to facilitate the Proposed Development.

4.2.5 The Proposed Development is expected to remove a small number of semi-mature and dead/decaying trees within field boundaries, including young trees at the north of the site to facilitate the new access road.

4.2.6 The proposals include diverting the stream to accommodate the development. The diversion rather than culverting of the stream will enable biodiversity features including marginal bankside vegetation and open, flowing water to be maintained within the site.

4.2.7 During construction, there would be the potential for retained habitats including the stream, woodland and grassland to be affected by dust pollution or run-off in the absence of pollution prevention measures.

4.3 Protected Species

Roosts

4.3.1 In the absence of mitigation, the removal of tree TN3 which has features suitable for bats would have potential impacts on bat roosts if present.

4.3.2 The Proposed Development should protect trees within woodland W1 from light spill, protecting any roosts if present within the woodland from disturbance.

Flight lines and foraging

4.3.3 The removal of treelines and woodland would affect flight lines and / or reduce the extent of potential foraging habitat. This could affect less common bat species and those more sensitive to light such as lesser horseshoe and brown long-eared bat which have been recorded within the site during activity surveys.

4.3.4 The central treeline currently provides an unlit linear feature along which bats would be expected to commute and forage which would not be replaceable within the site given the current Proposed Design parameters.

4.3.5 The wooded boundary to the south of the site and the majority of wooded features to the north are due to be retained and may provide an alternative flight line for less light sensitive species, through the proximity of these features to roads would be expected to limit their use by some species of bat.

4.3.6 Overall there will be a reduction in the extent of suitable foraging habitat for bats within the site, however some higher value woodland edge habitat will be retained and should be protected from light spill.

4.3.7 Some sections of hedgerows, grassland and the section of stream along the west of the site will also be retained and should remain unlit.

Dormouse

4.3.8 No dormouse were recorded during the late 2024 survey visits, however the full dormouse survey will not be complete until 2025. Confidence in the likely absence of dormice cannot be fully assessed until the surveys are completed.

4.3.9 If present, dormouse would be impacted by the removal of woodland, hedgerow and treeline habitats. This would include construction related impacts including the loss of suitable habitat.

4.3.10 In addition, light spill onto retained woodland edges would reduce the suitability of the habitat for dormouse and deter dormice from using these habitats in the future.

Badger

4.3.11 At the time of the survey walkover there were no signs of badgers using the site and no incidental observations were recorded during other surveys. As a result, it is considered that badgers are likely absent.

4.3.12 In the event that badgers colonise the site from the surrounding area, there would be potential for the species to be affected by the proposed development through damage or disturbance to a sett, a reduction in foraging habitat and potentially the creation of barriers to movement.

Otter

4.3.13 At the time of the habitat walkover there were no signs of otter using the site, with no resting places or natal dens identified. It is considered that they are likely absent from the site.

4.3.14 Based on the absence of otter from the woodland, the setting of the site (between two large roads) and the availability of more suitable habitat closer to the Ogmore River, there are no anticipated effects on the species.

4.3.15 Should otter utilise the site in future, there would be potential for the species and any areas of rest established within the site to be affected during the construction phase.

Nesting birds

4.3.16 There would be a reduction in the extent of suitable habitat for nesting birds within the site, though the partial retention of the woodlands and hedgerows will maintain some areas of suitable habitat.

4.3.17 In the absence of mitigation the removal of trees and hedgerow has the potential to directly affect nesting birds.

4.3.18 Light spill onto retained habitats and the change in context may deter species more averse to human activity from nesting in proximity to the Proposed Development.

Reptiles

4.3.19 The grasslands on site provides potential foraging habitat for reptiles. Protection of retained woodland will retain the majority of the reptile hibernacula within the site.

4.3.20 In the absence of mitigation, works affecting the grassland, hedgerow bases and brash or log piles would have potential to affect reptile populations.

Invertebrates including Marsh Fritillary

4.3.21 The development would require the removal of areas of grassland, treelines and the diversion / culverting of the stream which all provide suitable habitat for invertebrates.

4.3.22 While no signs of marsh fritillary were recorded during 2024, it is possible that the species could use the site during summer and may be affected by the Proposed Development in the absence of mitigation.

4.3.23 The current design of the Proposed Development proposes the removal of many of the habitats within the site which have potential value for invertebrates. The retention of a proportion of the higher value habitat for invertebrates and recreation of habitats for invertebrates would reduce the potential impact on the invertebrate assemblage.

4.4 Invasive Non-native Species

4.4.1 Himalayan balsam was present throughout parts of the site having spread throughout field F6 and with stands along many of the other field boundaries. It is also established at the existing site entrance.

4.4.2 In the absence of mitigation there is potential for this non-native invasive plant species to be spread during the construction and operational phases.

5 RECOMMENDATIONS

5.1 Ecosystem Resilience and Net Benefit for Biodiversity

5.1.1 The detailed development design should be designed to maintain ecosystem resilience as set out in Planning Policy Wales 12. The diversity, extent connectivity, context and adaptability of the site should be considered as set out in the DECCA framework.

5.1.2 The development proposals are currently at an outline stage. The development proposals have been designed to minimise impacts on woodland, including retention and protection of the ancient semi-natural woodland and partial retention of areas of woodland and grassland. The detailed design proposals should include measures to retain, create and enhance habitats with biodiversity value as far as is practicably possible.

5.1.3 The development would be designed to deliver a net benefit for biodiversity as the design progresses from outline to the detailed design stage. In accordance with Section 6 of Planning Policy Wales 12, where habitat loss cannot be fully avoided, and where minimisation has been exhausted, any residual loss of habitat would be offset through mitigation, restoration and as a last resort, compensation. This would include the creation of new habitats with greater biodiversity value, and through restoration and enhancement of existing habitats.

5.2 Best Practice Measures

5.2.1 The following best practice measures would be required during construction to protect the retained and adjoining habitats from adverse impacts. This will include safe storage of materials and pollution prevention measures. Materials should be stored on hardstanding or bare ground and away from watercourses.

5.2.2 All environmentally sensitive working practices should be detailed in clear action lists in full within the Construction Environmental Management Plan (CEMP)

5.3 Ecological Protection Zones

5.3.1 The detailed design should be designed in accordance with the ‘Step-wise Approach’ as described in Planning Policy Wales 12, with the first priority being to avoid damage to biodiversity. Minimisation and mitigation/restoration will need to be factored into the Proposed Development.

5.3.2 The proposed design includes a buffer between the Proposed Development and ancient semi-natural woodland to minimise potential impacts on the habitat. Heras or a similar type of fencing should be installed along the proposed stand-off during construction to prevent incursion into the woodland or potential impacts on the root zones of mature trees. It is assumed that design parameters of the Proposed Development at the current stage avoids all features of the ancient woodland adjacent to the site.

5.3.3 Retained habitats such as the woodland W1 and sections of grassland, woodland W2 and the stream should be protected through the implementation of protection zones during construction. Heras fencing should be installed around the areas and there should be no vehicle access or material storage within these areas. Root protection areas (RPA) of all retained trees, including those on the edge of retained woodlands should be calculated and form part of the protection zones. A suitable stand-off from retained woodland should be defined and implemented, to be informed by the RPA with a recommended minimum buffer of 10 m to minimise potential impacts on wildlife within the woodland.

5.4 Replacement Habitat Creation and Tree Planting

5.4.1 In accordance with Planning Policy Wales 12, where trees cannot be avoided as part of the Proposed Development design, they should be replaced at a ratio of three trees for everyone one lost. Replacement woodland planting should be at a minimum of 1,600 trees per hectare for the loss of broadleaved trees and should be at a scale, design and species mix reflective of that area lost.

5.4.2 At the current stage of the Proposed Development, it is uncertain how many trees would be lost. Woodland loss is estimated to be 0.7 ha.

5.4.3 Where practicably possible, trees would be planted within the site (such as within the woodland in the west of the site) to replace those lost. Where the estimated number of replacement trees cannot be replanted within the site, they would be planted off-site. Off-site land in proximity to the site would be explored to ensure sufficient compensation is delivered. This would include improving the quality of surrounding woodlands, and locating areas suitable for tree planting to deliver compensatory woodland planting. Similarly, the loss of hedgerows and treelines should be mitigated through planting, which should be undertake within the site where possible.

5.4.4 Retained areas of grassland would be subject to enhancement through planting and sensitive management. The area of grassland loss is estimated to be 2 ha. Measures should be undertaken to mitigate the loss and may include either creation or enhancement of off-site grassland.

5.4.5 Off-site habitat creation and enhancement should be undertaken within close proximity to the site where possible to minimise impacts on protected species using the site.

5.5 Habitat Enhancement

5.5.1 A series of enhancements for biodiversity would be proposed for retained habitats within the site. The biodiversity enhancements should be provided for a minimum of 20 years, or as agreed with BCBC.

5.5.2 Following the initial targeted habitat creation/ enhancement, ongoing management actions aligned to biodiversity objectives would build on existing value and maintain the benefits achieved over the operational life of the Proposed Development.

5.5.3 The operational area of the development could incorporate urban green infrastructure and reduce the impact of loss of connectivity, which could include green and blue roofs where feasible. Urban green infrastructure would reconnect the eastern woodland to the woodland in the west and provide a new feature for species such as birds and bats to commute and forage.

5.5.4 There are opportunities to enhance woodland W2 as part of the Proposed Development. The management would seek to establish a structurally diverse woodland which would comprise a range of native woody and herbaceous species. Sections of the dense willow could be selectively thinned and a range of native shrubs planted along the woodland edge.

5.5.5 Veteranisation of trees within the woodland would have potential to create new features of value for bats and invertebrates.

5.5.6 As part of the ongoing design of the Proposed Development, suitable locations would be explored for the installation of bird, dormouse and bat boxes. This would include retained woodland and larger trees. Integrated features within the built infrastructure would also be explored where suitable and in discussion with BCBC.

5.5.7 The stream would be sensitively managed. Measures would be undertaken to maintain and where possible enhance the biodiversity value of the retained, undiverted section of the stream. This would include Himalayan balsam control, to reduce pressure on native flora within the retained section.

5.5.8 The attenuation basins that form part of the Sustainable Drainage System would be designed to provide biodiversity value whilst maximising the site's ability to deliver nature-based solutions. Native aquatic species would be planted within the feature and managed to promote the biodiversity value of the habitat. Devil's-bit scabious would also be plug planted to reinstate vascular plants lost to the Proposed Development.

5.5.9 Newly created and retained areas of grassland would be sown with a seed mixture comprising a range of native grasses and wildflowers appropriate to neutral grasslands. Where practical, these areas should be left to grow throughout the spring and summer to allow flowering, followed by a single hay cut. This would include a protective 15m buffer alongside the ancient woodland.

5.5.10 Retained grassland within field F4 and F6 should be subject to sensitive management and invasive species eradication to encourage the development and maintenance of a wildflower rich sward.

5.6 Species Specific Measures

Bats

5.6.1 The bat activity survey will continue during the 2025 active season to fully assess the use of the site by bats.

5.6.2 A sensitive lighting design would be prepared for the site which minimises light spill onto adjoining habitats.

5.6.3 The outline development proposals require the removal of tree TN3. Ground based and aerial inspections should be undertaken to ascertain presence or likely absence of roosting bats. Appropriate mitigation will be required if roosting bats are identified within the suitable features, which would form part of an application for a European Protected Species licence from Natural Resources Wales. This would include measures to minimise impacts to bats during site clearance and provision of alternative roost features.

Dormouse

5.6.4 The dormouse survey will continue during 2025 to assess presence / likely absence of dormouse within the site.

5.6.5 If present, there is potential for the development to affect the dormouse population and species-specific mitigation and compensation will be required. Construction timing, sensitive construction techniques and dormouse habitat provision will be required as part of a method statement, which would form part of an application for a European Protected Species licence from Natural Resources Wales.

Badger

5.6.6 A pre-commencement site walkover would be undertaken to update the ecological baseline in relation to badgers. This would be to ascertain the presence or likely absence of badger, including a search for signs and evidence such as setts

5.6.7 Construction related measures would be developed as the outline design progresses. This would include appropriate site closure overnight to prevent entrapment.

Nesting Birds

5.6.8 Protection of retained woodland through stand-offs and the avoidance of light-spill onto these areas would avoid direct impacts on habitats that will be used by nesting birds and minimise the potential for indirect effects during construction activities.

5.6.9 Loss of nesting habitat would be mitigated through new native tree and shrub planting within and off-site.

5.6.10 As part of the detailed design of the Proposed Development, a sensitive lighting design would be prepared which maintains the retained boundaries as dark corridors to prevent a degradation in the potential value of the off-site habitats.

5.6.11 Where the removal of hedgerows, trees or shrubs is required, this should be undertaken outside of the nesting bird season (March-August inclusive) where possible.

5.6.12 Where this is not possible, an ecologist would need to confirm the absence of nests within the habitat no more than 48 hours before removal. Any active nest sites within the site would need to be protected from damage through exclusion zones. A minimum exclusion zone of between 5 and 10 metres would be implemented until nestlings have fledged.

Reptiles

5.6.13 Measures to protect reptiles would be undertaken where construction activities are undertaken within areas of suitable reptile habitat, including the grassland, hedgerow bases, woodland and stream banks.

5.6.14 Grasslands should be subject to two-phase cutting and supervised by an Ecological Clerk of Works. Site clearance activities would be undertaken between April-September when conditions are warm and dry.

5.6.15 Any areas of potential hibernacula, including log piles, brash piles, hedgerow bases and the roots of larger trees should be carefully dismantled under Ecological Clerk of Works supervision. Excavation work would avoid the hibernation period (later October to early March).

5.6.16 These measures would additionally protect amphibians, including GCN in the unlikely event they are encountered in the grassland.

5.6.17 The detailed development proposals should include habitat creation to offset the loss of areas of grassland and hibernation features.

Invertebrates

5.6.18 There are opportunities for planting and sensitive management of the retained grassland and woodland at the west of the site to provide enhancements for invertebrates.

5.6.19 Planting of devil's-bit scabious within the attenuation basin would provide potential egg-laying habitat for marsh fritillary. Retained habitat will be enhanced to increase its botanical diversity and provide foraging resources for invertebrates.

5.7 Invasive Non-native Species

5.7.1 An invasive species management plan to control Himalayan balsam should be prepared, with specific measures implemented as part of construction. Long-term management of the site's Himalayan balsam population would be undertaken to diminish the seed bank and reduce pressure on native species of vascular plants.

6 CONCLUSIONS

6.1.1 Habitats within the site include five neutral grassland fields, a modified grassland field, hedgerows, treelines, a stream, ancient semi-natural broadleaved woodland and semi-natural broadleaved woodland.

6.1.2 The layout has incorporated the retention and protection of the ancient semi-natural woodland and minimised the effects on other higher value habitats including the stream and western woodland. A biodiversity management plan should be prepared which includes measures to maintain and where possible enhance the value of retained and newly created habitats. The detailed Proposed Development should fully offset biodiversity loss and provide additional enhancement. This would comprise maximising the retention and enhancement of habitats within the site including replacement of trees at a ratio of 3:1. Where the design has exhausted avoidance, minimisation and mitigation measures on-site, habitat creation and enhancement would be targeted off-site, in a suitable location proximal to the Proposed Development.

6.1.3 The detailed Proposed Development design would be designed to maintain and enhance biodiversity, in line with the requirements of Planning Policy Wales and the Environment (Wales) Act 2016 to ensure a net benefit for biodiversity can be delivered. The resilience of ecosystems in the developed site is an important component for delivering a net benefit for biodiversity. To ensure ecosystem resilience is maintained and enhanced, the biodiversity design would incorporate the diversity, extent, condition, connectivity and adaptability of the existing habitats..

6.1.4 Artificial lighting (during construction and operation) should be designed to avoid light spill on retained habitats.

6.1.5 Tree TN3 is the only tree with potential value for bats which would be removed as part of the development. Mitigation should be designed to offset the loss and minimise potential impacts on roosting bats. All retained trees should be protected from disturbance wherever possible.

6.1.6 Both the bat activity survey and dormouse survey which were started in 2024 would be continued in 2025.

6.1.7 Precautionary working methods should be undertaken to protect any reptiles present from injury during vegetation removal.

6.1.8 Removal of trees, shrubs and hedgerows should be undertaken as advance works outside of the nesting bird season (March-August inclusive) and would be pursuant to a method statement specific to dormouse, should presence of dormouse be confirmed following survey work in 2025.

6.1.9 Prior to the start of construction, a walkover should be undertaken to update the ecological baseline pertaining to badger.

6.1.10 An invasive species management plan targeting Himalayan balsam eradication should be prepared and implemented. Measures should be undertaken during construction and operation to avoid the spread of the species.

6.1.11 During the construction phase, best practice measures should be followed to protect retained habitats and populations of resident species as detailed in a CEMP.

7 REFERENCES

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Figures

APPENDICES

Appendix A

Relevant Legislation

Great Crested Newts

Great Created Newts *Triturus cristatus* are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (and as amended), which affords the species protection under Section 9. The species is also listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017. In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.) a Great Crested Newt;
- possess a Great Crested Newt;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by Great Crested Newt for shelter or protection, or disturb any animal occupying such a structure or place; and sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

Great Crested Newts are also listed on the UKBAP as a Priority Species and are listed as a species of principal importance for biodiversity in Wales under Section 7 of the Environment (Wales) Act (2016).

Reptiles

All common UK reptile species (Adder *Vipera berus*, Grass Snake *Natrix helvetica*, Common Lizard *Zootoca vivipara* and Slow Worm *Anguis fragilis*) are protected through part of Section 9(1 and 5) of the Wildlife & Countryside Act 1981 (as amended). This prohibits:

- Intentional or reckless injuring or killing;
- Selling, offering or exposing for sale, or having in possession or transporting for the purpose of sale, any live or dead wild animal or any part of, or anything derived from, such an animal; or
- Publishing or causing to be published any advertisement likely to be understood as conveying buying or selling, or intending to buy or sell, any of those things.

Birds

All birds, their nests and eggs are afforded protection under the Wildlife and Countryside Act 1981, as updated by the Countryside and Rights of Way Act 2000. It is an offence to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; and
- intentionally take or destroy the egg of any wild bird.

Schedule 1 birds cannot be intentionally or recklessly disturbed when nesting and there are increased penalties for doing so. Licences can be issued to visit the nests of such birds for conservation, scientific or photographic purposes but not to allow disturbance during a development even in circumstances where that development is fully authorised by consents such as a valid planning permission.

Bats

All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981, as updated by the Countryside and Rights of Way Act 2000. All British bats are also included on Schedule 2 of The Conservation of Habitats and Species Regulations 2017 as European Protected Species. It is an offence to:

- intentionally or recklessly kill, injure or capture bats;
- deliberately or recklessly disturb bats (whether in a roost or not); and
- damage, destroy or obstruct access to bat roosts.

A roost is defined as 'any structure or place which [a bat] uses for shelter or protection'. As bats tend to reuse the same roosts, legal opinion is that a roost is protected whether or not bats are present at the time of survey.

A licence will therefore be required by those who carry out any operation that would otherwise result in offences being committed.

The following bat species are listed as Species of Principal Importance within the Environment (Wales) Act 2016: Barbastelle, Bechstein's, Noctule, Soprano Pipistrelle, Common Pipistrelle, Brown Long-eared, Greater Horseshoe, and Lesser Horseshoe.

Badger

Badgers are protected under the Protection of Badgers Act 1992. This act is based on the need to protect badgers from baiting and deliberate harm or injury. The act makes it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so;
- Intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access routes.

A sett is defined as "any structure or place that displays signs indicating current use by a badger".

Dormouse

Hazel Dormouse *Muscardinus avellanarius* is fully protected under Schedule 2 of the Conservation of Habitats and Species Regulations 2017. The Regulations prohibit:

- Intentionally, recklessly or deliberately kill, injure or take a Dormouse;
- The deliberate disturbance of this species in such a way as to be significantly likely to affect:
  - their ability of to survive, hibernate, migrate, breed, or rear or nurture their young; or;
  - the local distribution or abundance of Dormice.
- Damage or destruction of a breeding site or resting place (nest);
- The possession or transport of Dormice or any other part of.

Dormice are also protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion in Schedule 5. Under the Act, they are protected from:

- Intentional or reckless disturbance (at any level);
- Obstruction of access to any place of shelter, breeding or rest;
- Selling, bartering or exchange of these species, or parts of.

Offences can be deliberate, intentional or reckless and penalties for any of the above include fines of up to £5k and imprisonment of up to 6 months, per animal affected.

Dormice are also listed as Species of Principal Importance within the Environment (Wales) Act 2016.

Otter

Otter *Lutra lutra* and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to:

- Capture, kill or injure an Otter;
- Damage, destroy or obstruct access to a breeding site or resting place (i.e. burrow);
- Disturb an Otter whilst in a place of shelter;
- Possess or control an Otter (live or dead), any part of an or Otter or anything derived from an Otter;
- Sell, barter or exchange an Otter (live or dead), any part of an Otter or anything derived from an Otter; and / or
- Advertise or offer for sale, barter or exchange an Otter (live or dead), any part of an Otter or anything derived from an Otter.

Offences can result from intentional or reckless actions. Penalties include fines of up to £5000 and / or imprisonment for up to six months, per offence. Under certain circumstances a licence can be granted by Natural England to permit activities that would otherwise constitute an offence.

Otters are also listed as a European Protected Species (EPS) under Conservation of Habitats and Species Regulations 2017. This makes it an offence to deliberately or recklessly:

- Capture, injure or kill an Otter;
- Harass an Otter or group of Otters;
- Disturb an Otter in a holt or any other structure or place it uses for shelter or protection;
- Disturb an Otter while it is rearing or otherwise caring for its young;
- Obstruct access to a holt or other structure or place Otters use for shelter or protection or to otherwise deny the animal use of that place;
- Disturb an Otter in a manner that is, or in circumstances which are, likely to significantly affect the local distribution or abundance of the species;
- Disturb an Otter in a manner that is, or in circumstances which are, likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young.

It is also an offence to:

- Damage or destroy a breeding site or resting place of such an animal (note that this does not need to be deliberate or reckless to constitute an offence);
- Keep, transport, sell or exchange or offer for sale or exchange any wild Otter or any part or derivative of one (if obtained after 10 June 1994).

Otters are also listed as Species of Principal Importance within the Environment (Wales) Act 2016.

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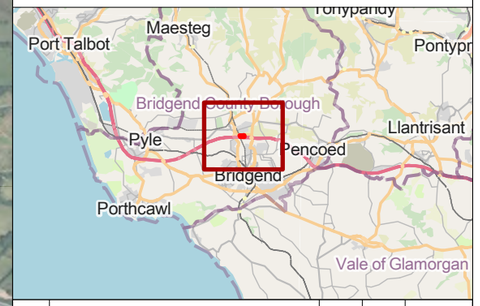
Legend

Site Boundary



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Project: Ti'r Isha Employment Site

Title: Site Location

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Project Number	**Scale @ A3**	**Date Created**
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Figure Number		**Rev**
1		**01**

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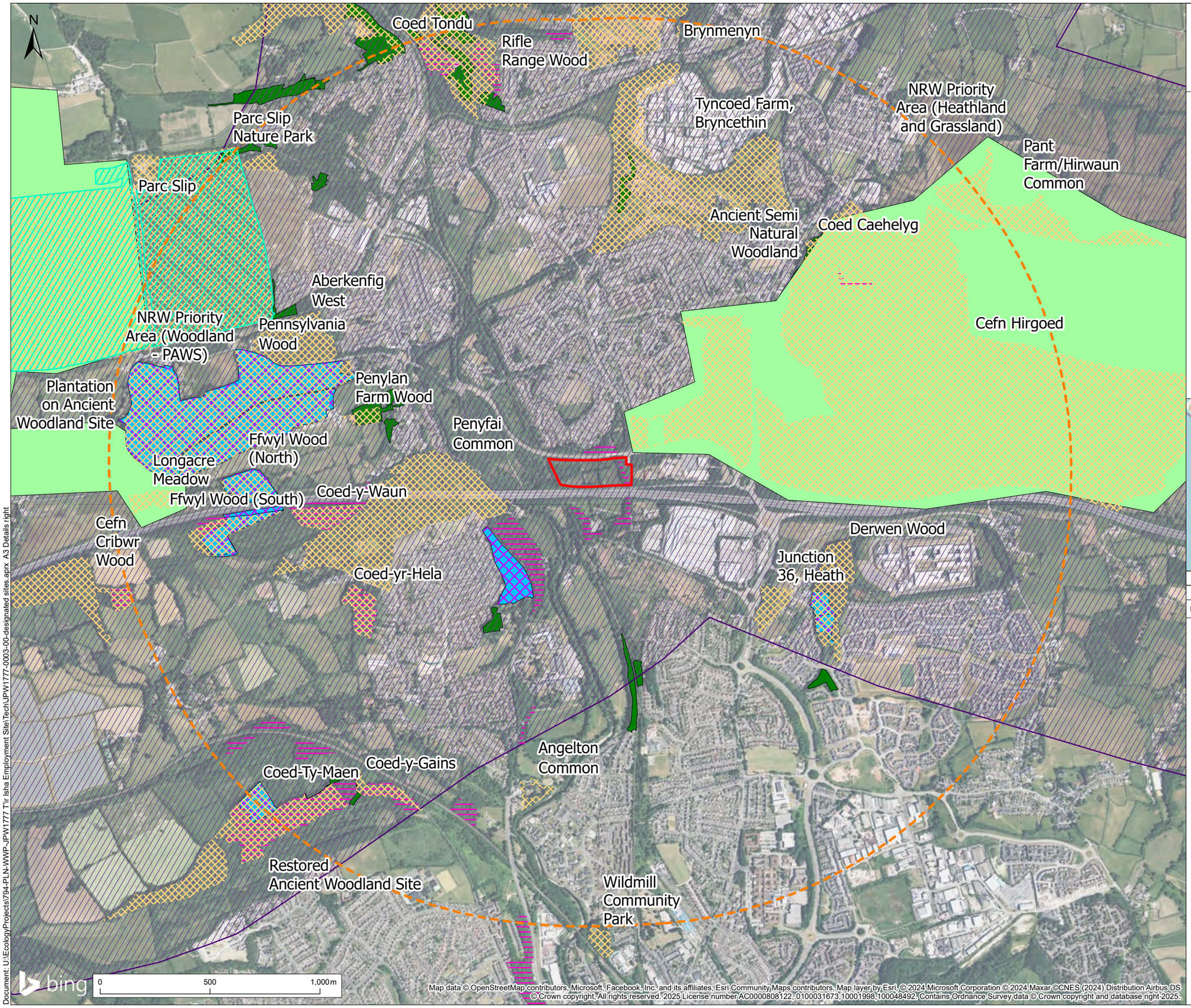

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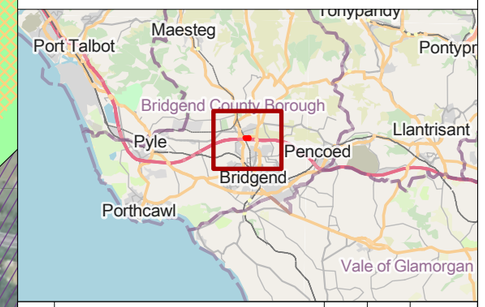
Legend

- Site Boundary
- Search area (2km)

Designated sites

- Ancient Semi Natural Woodland
- B-Lines
- NRW Priority Area (Heathland and Grassland)
- NRW Priority Area (Woodland - PAWS)
- Plantation on Ancient Woodland Site
- Restored Ancient Woodland Site
- Wildlife Site / SINC (Adopted)
- Wildlife Trust Reserve



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Legend

- Site boundary
- w1g - Broadleaved woodland
- w1f – Restored ancient woodland (broadleaved)
- g3c - Other neutral grassland, with dense Himalayan balsam
- g3c - Other neutral grassland
- g4 - Modified Grassland
- D D Himalayan balsam (scattered)
- ! ! Broadleaved treeline
- Stream
- Species-poor hedgerow
- Stone wall
- Scattered broadleaved tree
- TN 1 - 3 Target Note

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Project: Ti'r Isha Employment Site

Title: Habitat Map

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Figure Number		**Rev**
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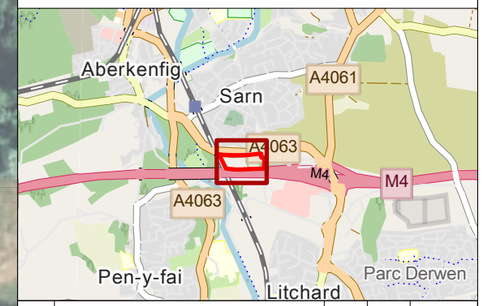
Legend

- Site Boundary
- Recording location
  - 1: Central treeline
  - 2: Eastern woodland



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Title: Bat remote recording locations

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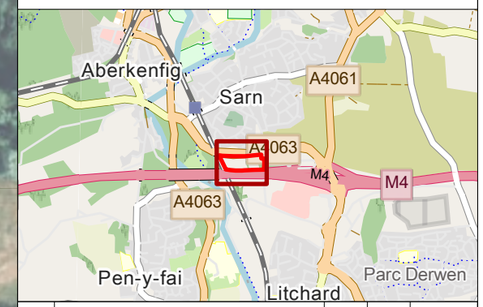
Legend

- Site Boundary
- Dormouse Tubes



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Project: Ti'r Isha Employment Site

Title: Dormouse survey plan

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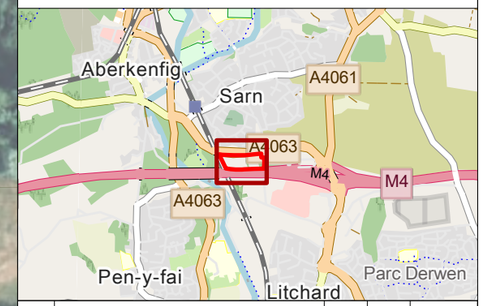
Legend

- Site Boundary
- Transect route
- Devil's-bit-scabious plant



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Project: Ti'r Isha Employment Site

Title: Marsh fritillary survey plan

Status	Drawn By	PM/Checked By
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Project Number	**Scale @ A3**	**Date Created**
JPW1777	1:1,300	02/01/25
Figure Number		**Rev**
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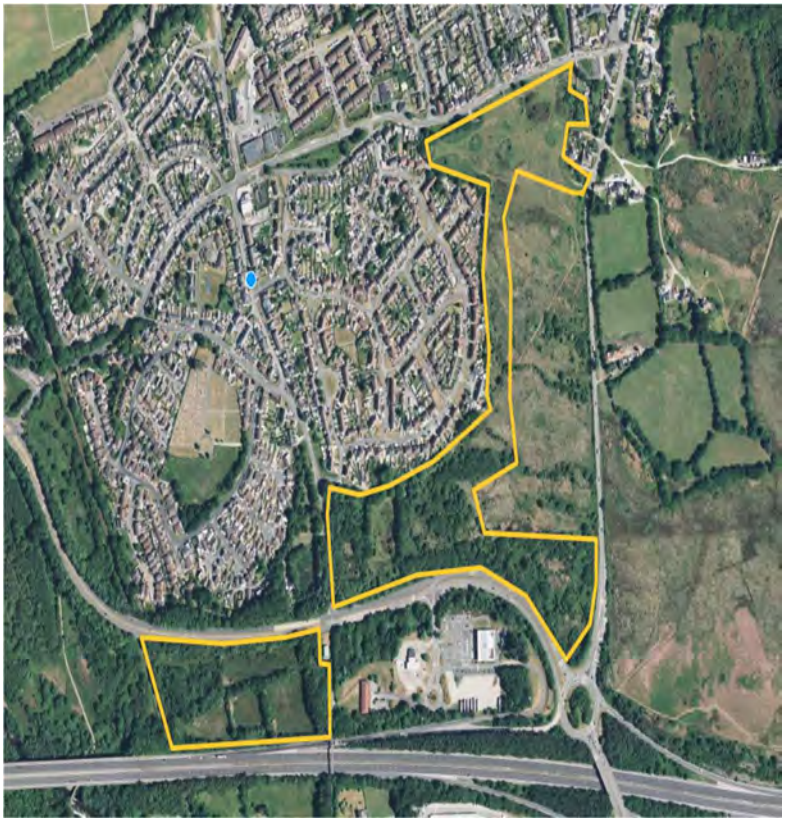
Appendix B
Preliminary Ecological Assessment of land at Sarn, Bridgend

Preliminary Ecological Assessment of land at Sarn, Bridgend to inform future site development.

Report prepared on behalf of Farm Tack Ltd

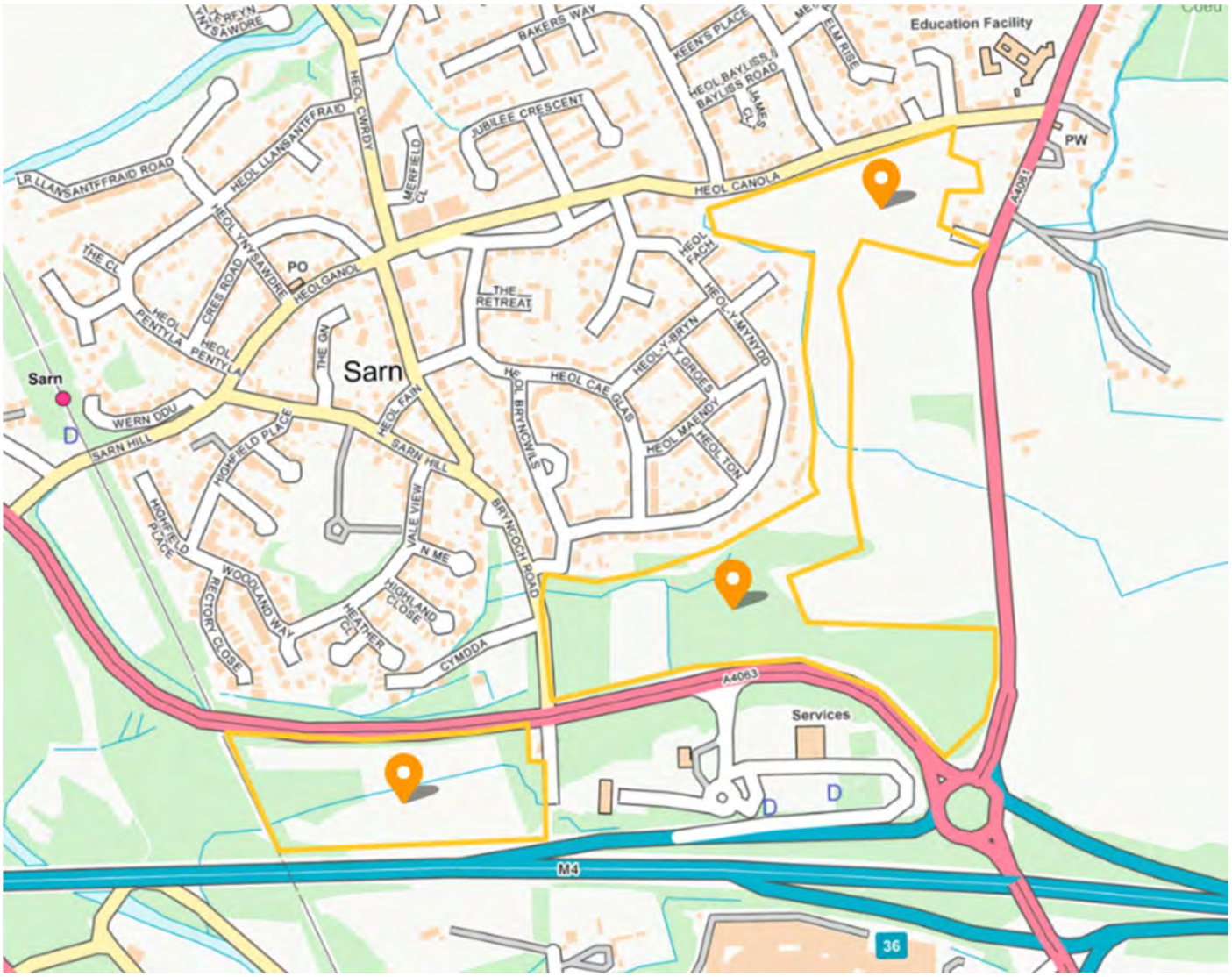
Christopher RS Matts BSc MICFor.



Chris Matts
CADNO CONTRACTING & CONSULTANCY

1.0 Site Context

Cadno Contracting & Consultancy has been contracted by Farm Track Ltd to undertake a preliminary ecological scoping exercise of the woodland and wooded components of land located to the north and south of the A4063 (SS 90264 82929 – 4.7ha & SS 90812 83339 9.1ha)



Map Above: South & North survey areas outlined in yellow. (Source: OS Opendata)

The survey is comprised of approximately 4.7ha of grazed pasture, including small areas of woodland and mature hedgerows, located to the south of the main A4063 highway with the remainder located to the north, comprising of approximately 9.1ha.

The land to the south is gently undulating with a gentle south facing aspect of predominantly improved pastures with areas of mature woodlands to the east and west, inter-cut by a series of mature Ash and Holly dominated hedges. Some small areas of semi-improved damp pastures occur

in hollows and fringes where agricultural improvement has been difficult. The land appears to be farmed for livestock and haylage making purposes.

To the north, comprises of areas of purple moor grass and willow scrub mosaics with willow and damp soils forming the western fringes of the search area. The majority of this land is level with a gentle south facing aspect throughout, bordered by housing to the west and north and areas of open ground, damp purple moor grass pastures to the east. This assessment will highlight any areas of ecological note.

2.0 Site Survey method and aims.

The site survey was undertaken on 2nd and 19th May 2024. A walkover survey was undertaken to assess the main habitat types and target noting of areas of particular ecological note. Target notes (TN) in the test are shown on the maps on the following page. The survey focused on the woodland areas including hedgerows.

In addition to the field assessment, a request was made to SE Wales Biodiversity Records Centre (SEWBREC) for the following data within a 500m buffer of the site;

- EU Protected & Priority species (Section 42, UK BAP, CITES)
- Other Species of Conservation Concern (Red Data Book, Nationally Scarce, EU Birds
- Directive)
- Locally Important Species/Sites
- Schedule 9 Wildlife & Countryside Act 1981 Invasive species.
- Barn owls and bats
- International, National and Local designations
- Phase 1 habitat data

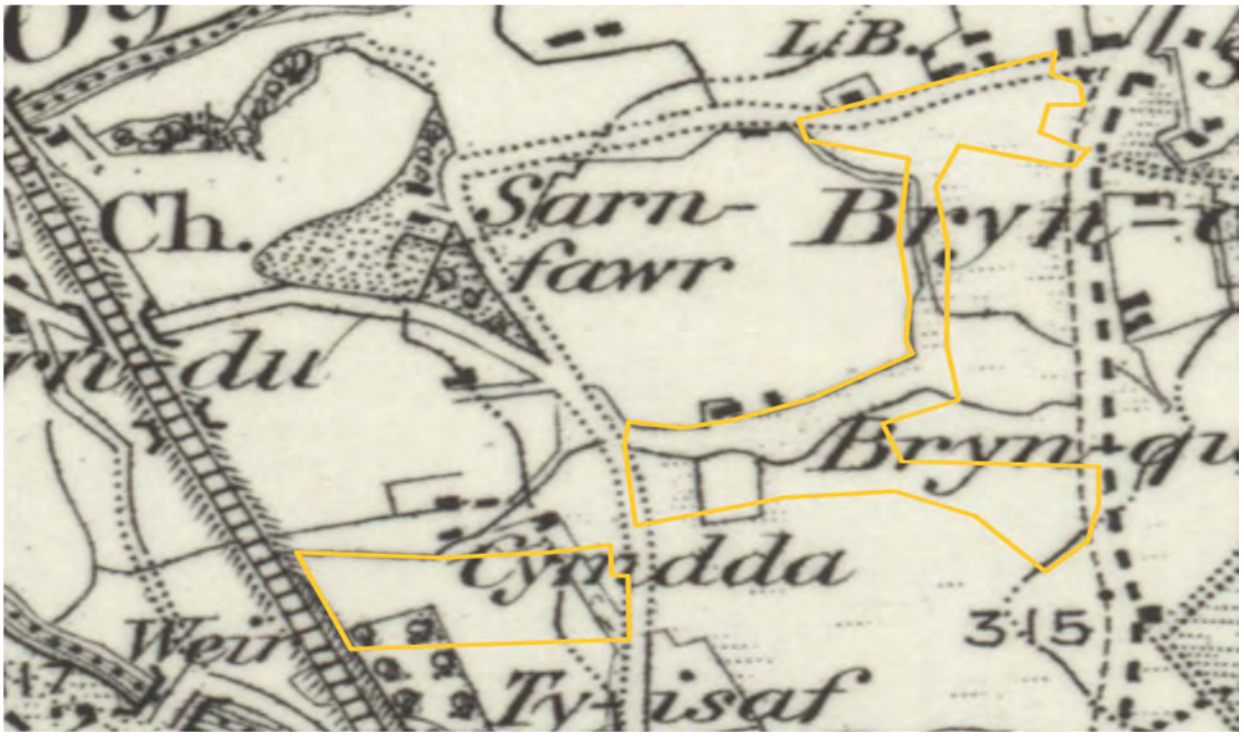
The final section of the report uses this information to make recommendations about the most suitable sites for woodland creation, species choice and areas that could be retained as open habitats. Advice is also offered for the management of retained habitats to enhance their value for wildlife.

3.0 Habitat Assessment

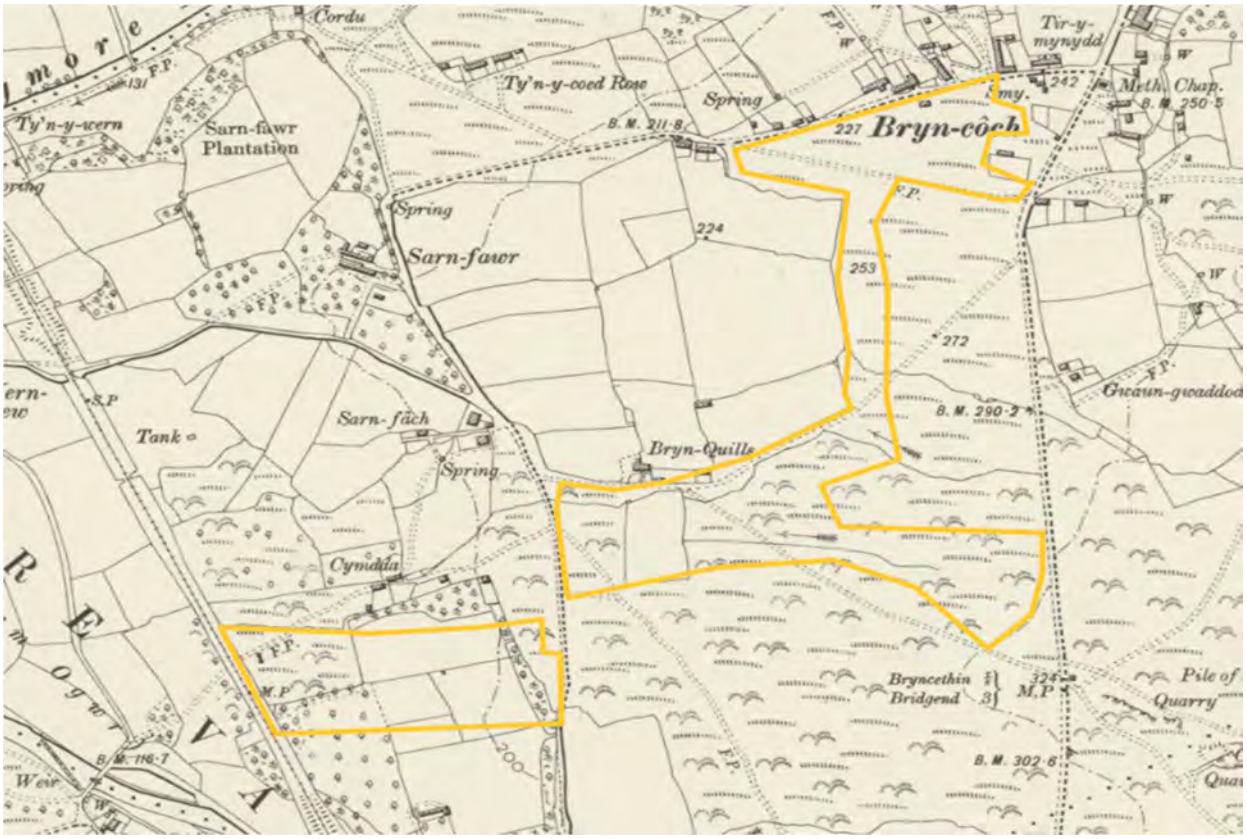
Land to the south of the main highway A4063, comprised of a series of small pasture fields, lies around 60m asl, falling gently to the west, to a height of 45m asl. Bedrock of the land comprises mostly of Siliciclastic and Ferroan Carbonate, associated with river and coastal marine habitats. Given the close proximity of the Afon Ogwr / Ogmore River, this would suggest that the landforms part of the riparian corridor and Ogmore Valley.

Areas of Ancient Woodland (AW) are located to the east, adjoining the narrow public highway adjacent to the Dwr Cymru station. The majority of the centre ground, forming the grazed component is listed as Acid grassland under the phase 1 habitat survey for Wales. The remaining, sloping aspects on the western flanks are noted as Marsh/Marsh grassland B.5, often known as Wet Meadows. Overall, the southern section wooded areas lie within Britain's 'oceanic zone' - the climatic region in which temperate rainforest is most likely to thrive. This zone covers around 20% of Britain. As part of this classification, it means likely results for lower plant life may be found on site that are temperate climate specific, although no records to date have been recorded.

The land areas have changed quite dramatically over the last 200 years with gradual decline in woodland cover, leaving remnant ground flora, changing to rhos pasture habitats as result of industrial usages locally and part of agricultural intensification.



Map Above: 1885 – 1900 OS One-Inch – Site search boundaries in Yellow.



Map Left: 1888-1915 OS Six Inch Map – Site boundaries in yellow.

The land to the north (9.1ha) is listed as mostly Marsh/Marsh grassland B.5 and C.1 Bracken to the northern sections of the survey area. Purple moor-grass and rush pasture is wetland acid grassland. It is called rhôs pasture in Wales. It is flower rich with ragged-robin, wavy St John's-wort, three-lobed water-crowfoot, greater and lesser butterfly orchids, flowering rush and purple moor-grass. The marsh fritillary is particularly associated with rush pasture and devil's-bit scabious, which is the sole food plant for caterpillars.

Recent record centre searches show that some of the area has *Succisa pratensis* (Devil's Bit Scabious) present, which is a positive indicator of Marhsy grasslands along with *Ficaria verna* (Lesser Celendine). However, some or possibly many of these records are incomplete for mis-identified and mapped in error as much of the zone marked as M24 purple moor-grass is now dominated by Willow and Ash scrub areas and is mostly dry (possibly due to adjacent ditch line) with examples of garden escapee plants along the western boundaries of the majority of the site.

Photo: Example of secondary woodland and scrub succession along western boundaries with adjacent housing of Sarn village (TN 2.1)

Much of the area is dominated by Grey Willow *Salix cinerea* and Downy Birch *Betula Pubescens* with a field layer of Marshy grassland species including Molinia and Lesser Celandine species. Much of the canopy shading is reducing the vigour of the field layer species associated with a M24 purple moor-grass, Molinia caerulea-Cirsium dissectum fen-meadow. This is a commonly occurring and most widespread throughout Wales. Marsh fritillary *Euphydryas aurinia*, is closely associated with marshy grassland hotspots in Wales, and especially areas with a strong presence of M24 (the larval food-plant devil's-bit scabious Succisa pratensis is a constant of the community). Occasional areas of Reed mace *Typha latifoli* can be seen throughout the areas of Willow succession across the southern half of the larger site, north of the A4063.

Photo: Pockets of Great Reedmace throughout secondary woodlands along periphery of site (TN 2.2).

Photo: Internal understory of secondary woodlands, heavily dominated by Himalayan Balsam *Impatiens glandulifera*

There are a number of damp areas on low lying land in the target area and in particular where the surrounding soil is poorly drained allowing certain plants to thrive. The commonly occurring soft rush is the dominant plant with patches of compact rush J. conglomeratus and more notably sharp flowered rush J. acutiflorus. Amongst the rushes a few flowering plants typically grow including marsh thistle Cirsium palustre, greater birds foot trefoil Lotus pedunculatus, marsh bedstraw Galium palustre, sneezewort Achillea ptarmica, fleabane Pulicaria dysenterica, tufted hairgrass Deschampsia cespitosa, hoary willowherb Epilobium parviflorum, broad-leaved willowherb Epilobium montanum, lady fern Athyrium felix-femina, oval sedge Carex laporina and buckler fern (possibly narrow buckler fern Dryopteris carthusiana). Grey willow Salix cinerea and goat willow S. caprea have become established in these wetter areas. The wider range of flowering plants in these small areas of rush pasture are attractive to pollinating insects and other invertebrates, dragonflies and damselflies in particular.

Photo: adjacent open ground habitat lined by mature trees a characteristic of the site generally

The drier areas to the north shown as the uncut “brown” bank with scrub above the wetter habitat in the photograph above (TN1.0) supports some quite interesting unimproved grassland more characteristic of NVC MG5 grassland with meadow plants such as tormentil Potentilla erecta, self-heal, common knapweed Centaurea nigra, sneezewort, lesser birds foot trefoil, field vetchling, meadow buttercup and red clover. The bank is west facing and sheltered. The drier areas show likelihood of historic drainage as indicated by presence of Bracken species. The loss of grazing on the bank in recent years has
allowed a thatch of dead grasses to build up beneath the sward and rank grasses such as cocksfoot are becoming established along with dominance of Bracken and Willow scrub. Reinstatement of a grazing regime in association with the wet area below is likely to increase the botanical interest of this bank and provide some valuable grassland habitat within the site that would be particularly beneficial for insect life and small mammals.

A narrow linear woodland feature along the course of a small, incised stream (TN 3.0) is a feature of this site. It includes an Oak/Willow lined riparian corridor which should be retained or buffered to enhance the current habitat present. Wetland species including Water Mint *Mentha aquatica* and Watercress *Rorippa nasturtium-aquaticum* are found along this corridor and an indicator of clean water quality.

Much of the area as a whole is dominated by external INNS including Impatiens glandulifera (Balsam), Lady Fern and general garden plants that have made their way into the northern section of the site or through discarded fly-tipping garden waste from adjacent housing.

3.2 Woodlands and trees

Note: Ash is frequent along field boundaries and streams and observations about the status of Ash Dieback/Chalara were made using the Ash Dieback Class Classification in the Tree Council Ash Dieback Action Plan Toolkit; Class 1 - >75% canopy remaining, Class 2 - >50% canopy remaining, Class 3 ->25% canopy remaining, Class 4< 25% canopy remaining.

Maure woodland areas are located to the east of the southern section of land to the south of the A4360 highway, bordered by the Dwr Cymru pumping station.

This area is identified as Ancient Semi Natural and comprises of a diverse number of woodland species associated with the ancient natu8re of the stand. These include Field Maple, Ash, Cherry, Large Leaved Lime, Aspen, Crab Apple, Beech, Holly, Sweet Chestnut, Alder Wych Elm, Hazel and Hawthorn.

Much of the area has historic disturbance shown, likely as result of location adjacent to a public right of way (PROW). Historic embankments are likely a 'sunken highway' as shown by early Ordnance Survey Maps (appendix 1.0 Target Notes) and shown as part of TN5.0. The woodland flora is quite diverse; red campion Silene dioca, bluebell Hyacinthoides non-scripta, honeysuckle Lonicera periclymenum, wood sorrel Oxalis acetosella, lady fern Athyrium felix-femina, broad buckler fern D. dilitata and tufted hairgrass all occur indicative of NVCW8 Fraxinus excelsior - Acer campestre - Mercurialis perennis woodland. Ivy and non-native (INNS) species and coarse vegetation are an

immediate threat to this area of woodland which is also scattered with historic and recent fly-tipping and general litter. There is a particularly mature Sessile Oak *Quercus Patrea* within the wooded area (TN4.0) which is of conservation significance and should be conserved, particularly due to the decline of Ash within the area as result of Ash die-back and would form an important refugia for bat species.

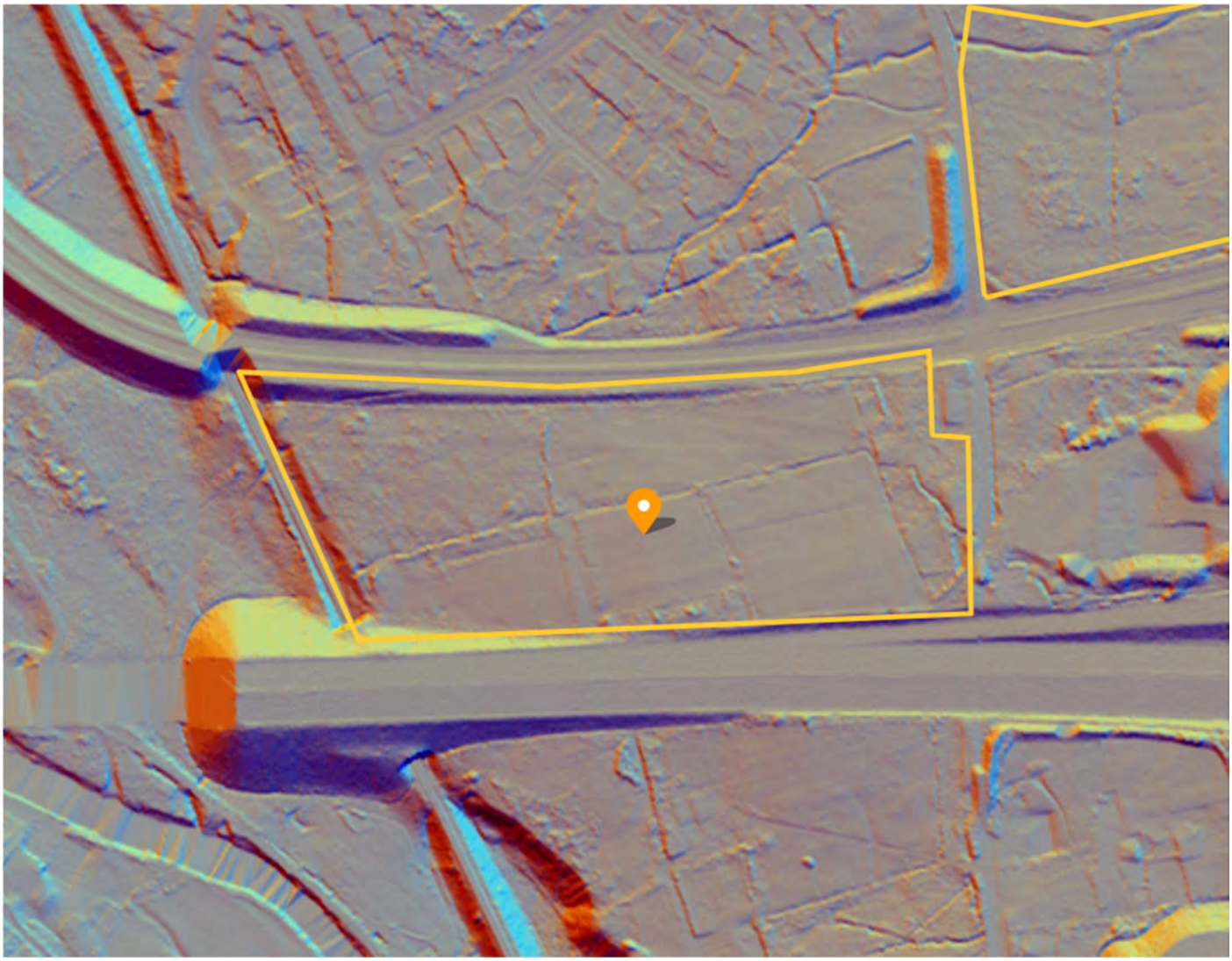
Many of the ash trees are showing early signs of ash dieback (Class 1) and should be monitored due to their location close to tracks used by walkers.

Photo: View inside small area of Ancient Semi Natural Woodland along eastern boundary with Dwr Cymru

To the north of the ASNW stand, a mature Sessile Oak tree (see left photo TN4.0), which is classified as 'veteran'. Veteran trees may support a wide range of faunae and fugal bodies, many of which are only associated with long periods of continuity in their habitat, so combined with the inventory status, and species diversity, this part of the site would form possibly the most ecologically diverse section for woodland components.

The remainder of the southern half of the site, is lined with mature hedgerows dominated by Ash and Holly species. These hedgerows are part of historic landscape

and include stone banks and walls (TN5.1) to form small field parcels or boundaries. A historic stone wall is located to the south bordering the M4 motorway and provides suitable conditions for lime-loving ferns to establish. Rusty back fern Asplenium ceterach and black spleenwort A. adiantum-nigrum occur, both noteworthy species.



Map: LiDAR DTM 50cm-1m Eng Scot Wales. Nat. Library Scot 2024.Note Historic field boundaries and ditch line features. Note sunken pathway through area of ancient woodland along eastern boundary.

Photo: Mature Hedgerows as internal boundaries across site

Photo: Historic stone wall (TN6.0) along southern boundary of southern section of woodland. Note presence of Dog Mercury *Mercurialis perennis* at base of wall indicating ancient woodland origins for the remainder of the site, not currently forming part of the 20212 AWI.

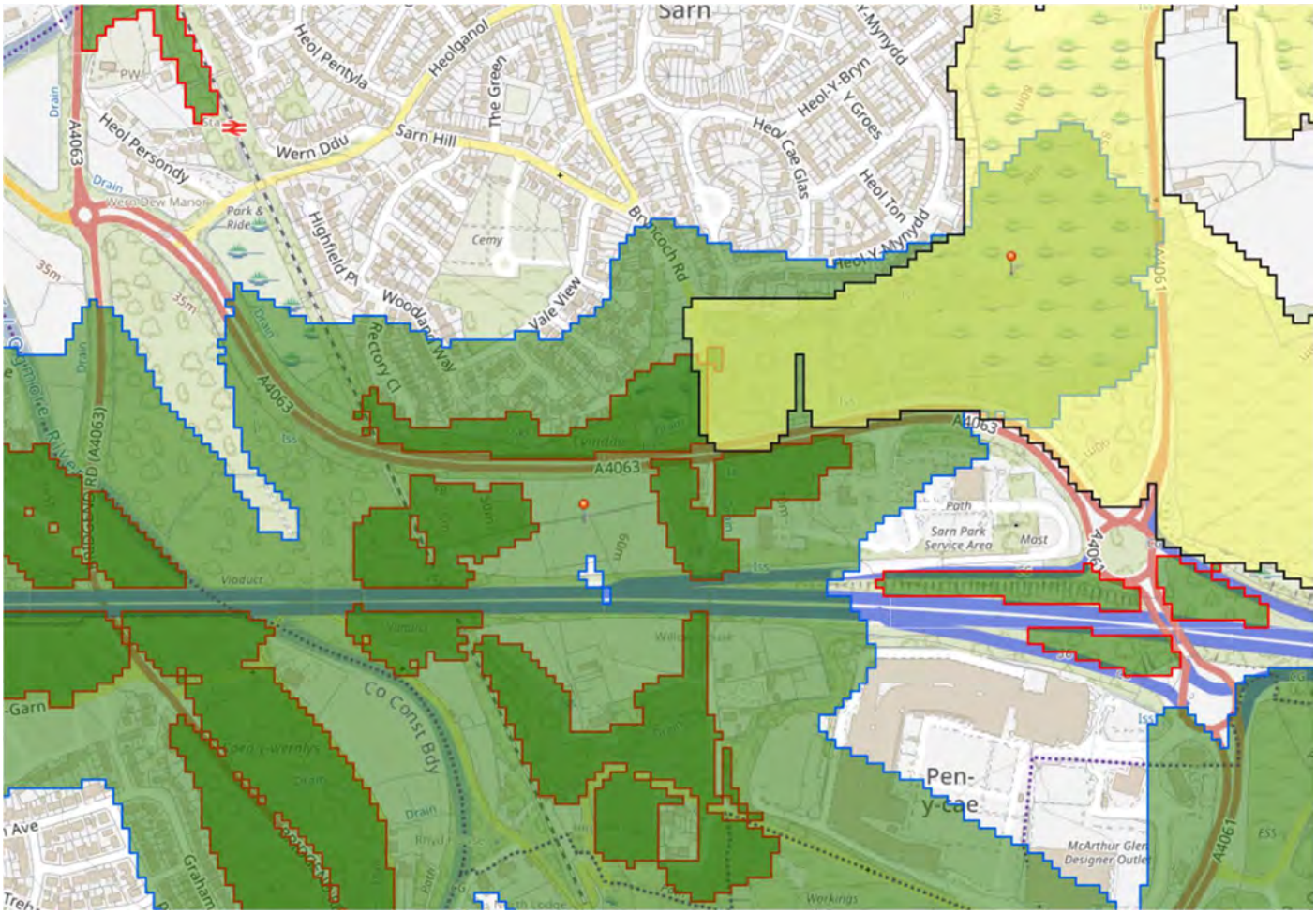
The woodland areas to the northern section of the site are dominated by secondary willow scrub, but with occasional Oak and Ash regeneration. A small, wooded glade (TN2.0) in the southwestern corner of the site forms a structurally complex woodland feature, previously grazed and includes Oak, Guelder rose and Ash species with notable mature Oak species along narrow streams and ditch lines. This area provides a warm south facing sheltered part of the site with examples of likely ancient woodland components and secondary and successional natural regeneration examples and would benefit from occasional grazing or low livestock numbers, ideally cattle at between 0.2 and 0.8 livestock units per hectare.


Photo: Tree lined glade in southwestern corner of northern search area and mature veteran oak lining nearby stream/ditch line (TN2.0).

4.0 Data search – SEWBREC Biological Records

A search for biological records within a 500m buffer of the survey site was requested from the local biological records centre SEWBREC. There are no Nationally or Internationally important sites (e.g. SSSIs, SACs, SPAs) within the search buffer, however a number of Sites of Importance for Nature Conservation sites (SINCs) within the area, namely Penyfai Common (ref: NH-3-M) to the west, a Semi-improved acidic grassland. Acidic marshy grassland. Continuous bracken. Improved grassland. Dense scrub. Broad-leaved semi-natural woodland. Scattered scrub. Upland species-rich ledges. Unimproved acidic grassland which includes part of the Ogwr river itself.

Much of the northern and southern section's form part of the Habitat Networks for Welsh Woodlands, Grasslands, Heathlands, Bogs and Fens (CCW), with the purpose of data capture was to allow the scope and range of potential networks to be rapidly explored. Predicted habitat networks can be used to guide large-scale planning for nature conservation, provide insight into how the landscape is likely to be functioning and prioritise action to improve the connectivity and viability of protected sites. The northern parts of the site are listed as Lowland Grassland and southern sections classified as potential for woodland connectivity. This contradicts the Priority habitats map for Wales somewhat, which was carried out between 1970 and 1990, whereby it classifies some of the land to the west of the southern section as Purple Moor Grass and Rush Pastures, which goes against the historic context as shown in the 1888-1915 OS map which suggests there to be a greater woodland component and possibly cleared as part of periodic railway track side maintenance given the historic mineral railway to the west.



Map: Habitat Networks for Welsh Woodlands, Grasslands, Heathlands, Bogs and Fens (CCW) Woodland – Green, Grasslands – Yellow.

Priority species within the buffer area

There are a number of Invasive Non-Native Species (INNS) within the buffer area and should be monitored and controlled if necessary. Those recorded by SEWBREC are yellow archangel, cherry laurel (recorded near the Dwr Cymru building), wall cotoneaster, Japanese knotweed, Himalayan balsam, Himalayan honeysuckle. (present at number of locations).

The Phase 1 map data supplied by SEWBREC record areas of semi-improved neutral grassland on the fields (see below hatched diagonal). It is likely that the fields may have been more species-rich in the past as indicated by patchy distribution of species 15 such as self-heal, yellow rattle and field vetchling etc. However, this diversity appears to have declined and the swards are rather homogenous, punctuated in places by localised but relatively low plant diversity and areas of greater species interest on damp soils where marshy grassland occurs.

Datamap Wales lists part of the northern section of the site(s) as being Purple Moor Grass Rush Pastures but also Marsh Fritillary Habitat adjacent to the housing areas (TN1.1). This with the presence of Devil's Bit Scabious (primary food source), would suggest the woodland now covering a large proportion of the area to be secondary and successional scrub. (TN 2.1)

5.0 Recommendations for woodland & Other Habitats

Land to North of A4063

- Implement program of INNS removal, focusing on Himalayan Balsam which could be achieved through cutting or periodic grazing to reduce dominance of secondary woodland areas.
- Remove garden debris from along western boundaries.
- Continue grazing of wooded glade in southwestern corner of site (TN 2.0)
- Allow development of secondary woodland in northern section of search area, to north of A4063, to allow willow scrub to develop within areas outlined in Habitat Networks for Welsh Woodlands, Grasslands, Heathlands, Bogs and Fens (CCW)
- Retain mature Field Maple *Acer campestre* (TN4.0) and Sessile Oak (Quercus Patrea) in northwest corner of search site and along ditch lines/stream around wooded glade TN2.0

Land to South of A4063

- Control INNS including Balsam and garden debris (Honeysuckle) along eastern boundary with public footpath.
- Expansion of woodland alongside eastern area of ASNW into field area (up to 'drip line'), through natural succession and removal of grazing/mowing by re-fencing accordingly. (TN5.0)
- Clear fly-tipped rubbish and litter from eastern flanks of ASNW
- Coppice/cut within northwest corner of southern section of land (TN5.2) to develop structural complexity and conserve remnants of Purple Moor grass habitats as shown on Datamap Wales priority habitats layer, focussing on Willow Coppice. Retain mature and semi-mature tree species and allow to develop.
- Retain mature tree-lined internal hedges to retain as possible flight corridors for bat species within the area. (TN 5.1)
- Buffer all internal hedges on south aspect with movement of fence to allow woodland edge habitat to develop (TN 5.1)
- Continue with low impact grazing regime (summer) to allow plant assemblages to develop within sward. If this is not possible, buffering hedgerows by moving fence lines into field areas could be considered to remove/restrict grazing, creating a 1 to 2m buffer alongside each hedge line.

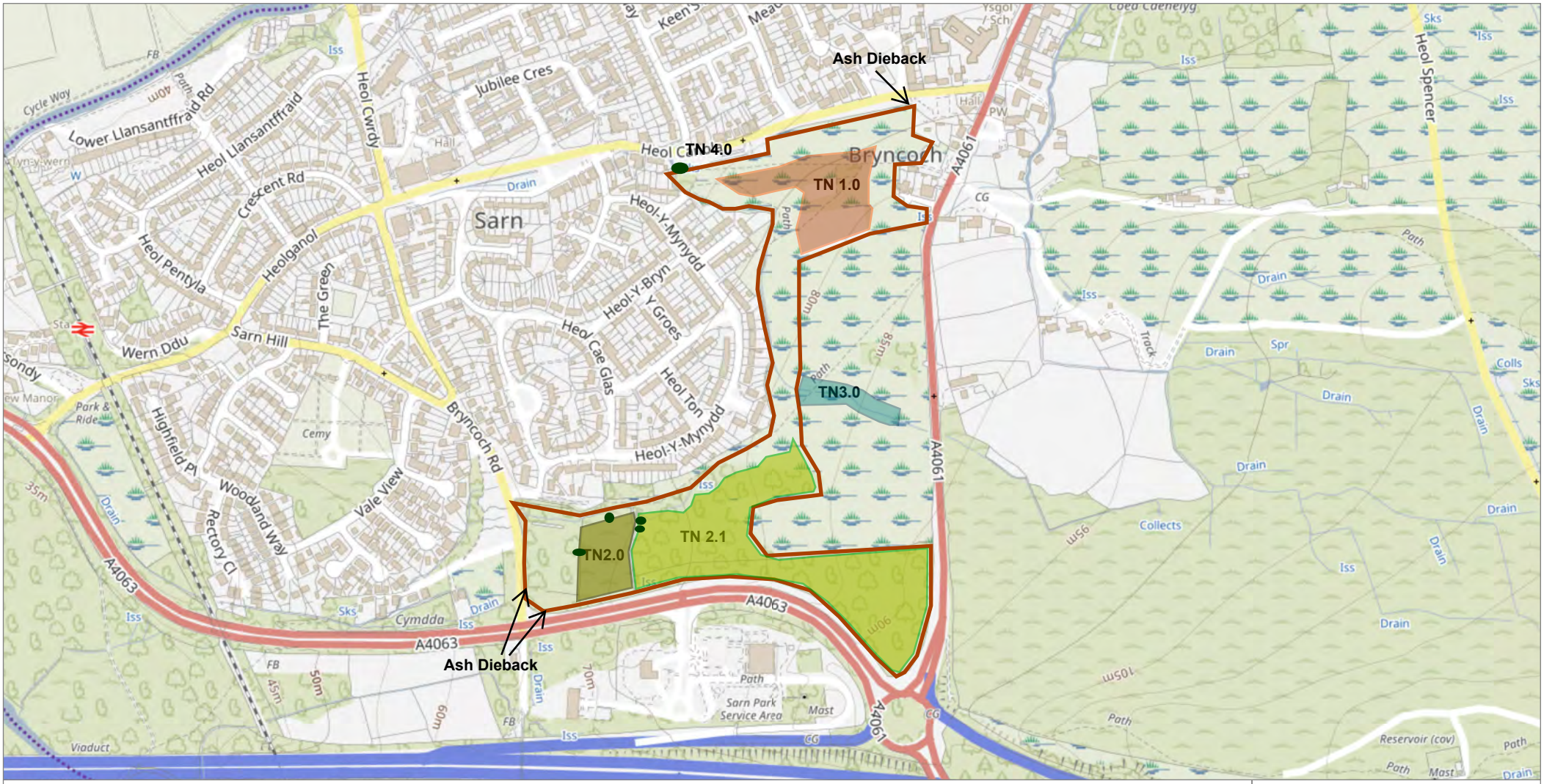
6.0 Suggestions for further survey work

Tree Safety Survey to BS5837 / 5998 along public footpath and boundaries with housing area

Tree Survey / Report once construction plans are in place to determine development area and in relation to retained trees and tree habitats on site.

7.0 References

I. Ash dieback Action Plan toolkit. The Tree Council (2019) https://www.treecouncil.org.uk/What-We-Do/Ash-Dieback
II. Ancient Woodland Inventory Wales, Natural Resources Wales http://lle.gov.wales/catalogue/item/AncientWoodlandInventory2011/?lang=en
III. Rodwell J.S. (Ed)1992 British Plant Communities Volume 3 Grasslands and montane 10) communities
IV. Soil Survey England & Wales (1983)



● **Trees Of Interest TN4.0**

North Site - Sarn

0 0.1 0.2 km

Scale: 1:7,500 @A4

Date: 24 May 2024

Author: C.Matts

Tree of interest TN4.0

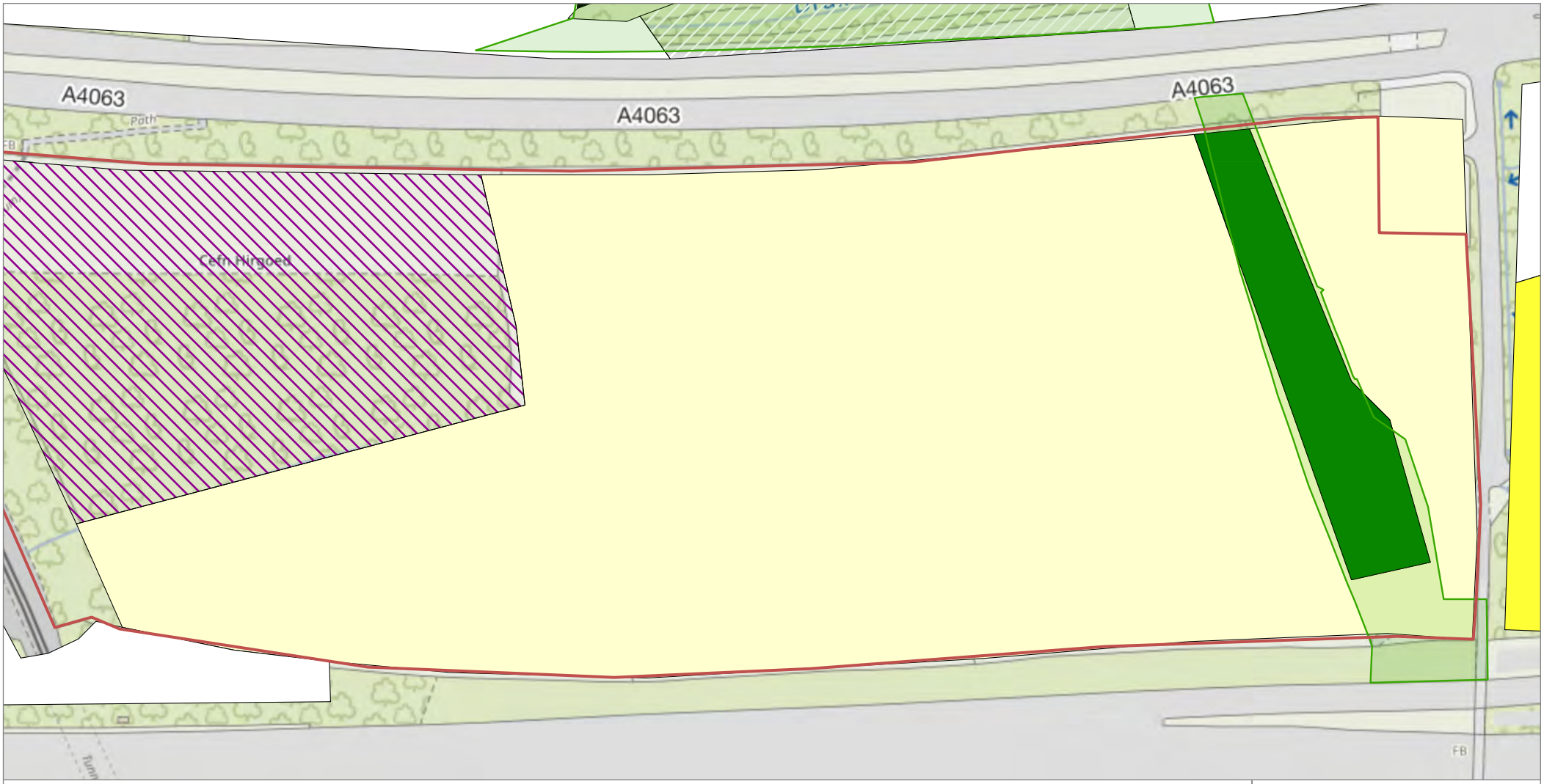
South Site - Sarn

0 0.03 0.05 km

Scale: 1:1,323 @A4

Date: 24 May 2024

Author: C,Matts



Override 1

Ancient Woodland Inventory 2021 (AWI) - Wales

Restored Ancient Woodland

Terrestrial Phase 1 Habitat Survey - Vegetation - Wales

A.1.1.1

A.1.1.2

B.4

B.5

J.1.2

J.3.6

NA

Land at Sarn - South

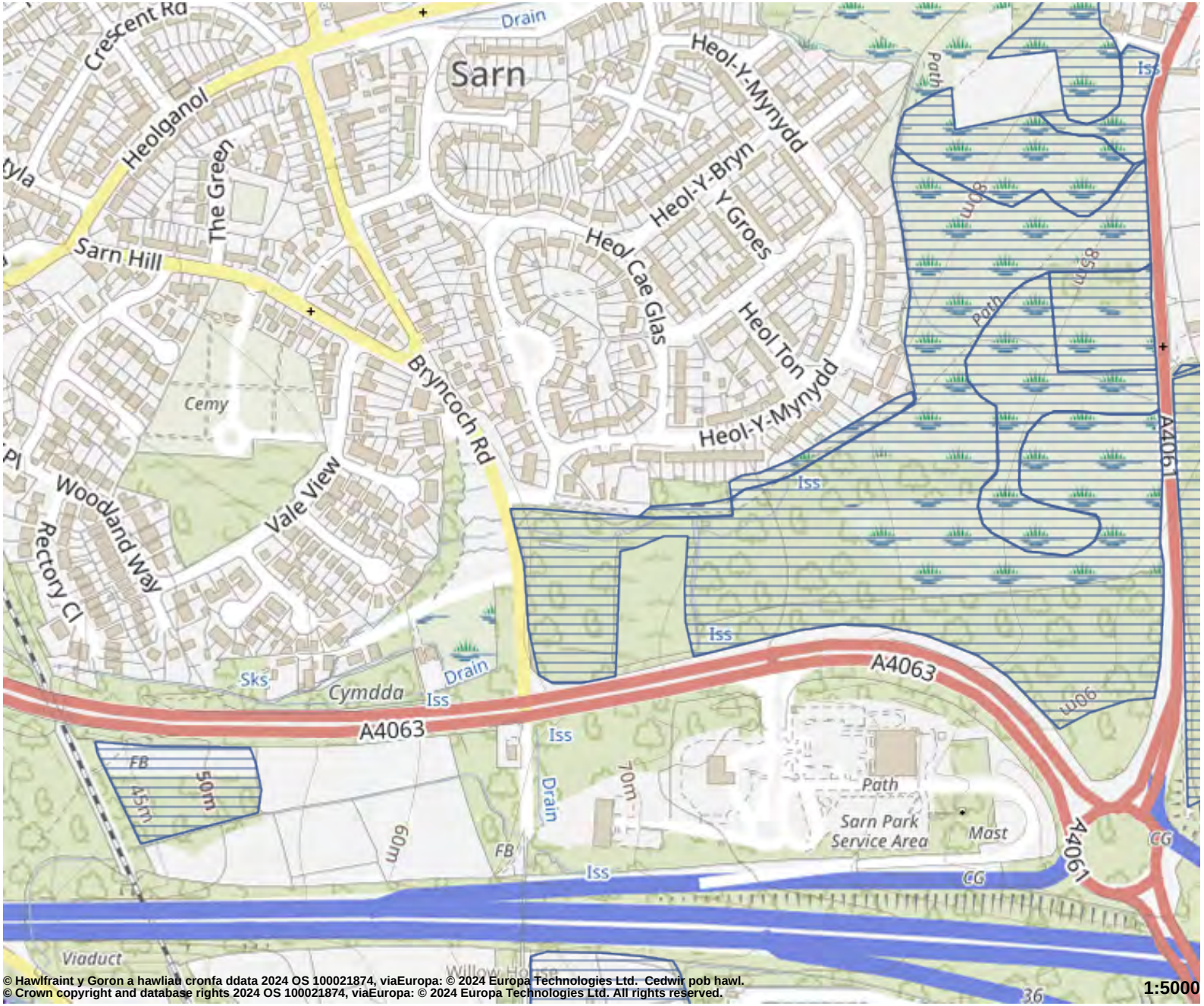
0 0.03 0.05 km

Scale: 1:1,323 @A4

Date: 18 May 2024

Author:

Priority Habitats for Wales



1:5000

WOM21 Priority Habitat - High Sensitivity

Priority Habitat - High Sensitivity

18/05/2024

actual_nam	common_nam	cat	taxon_group	super_group	count	first_recorded	last_recorded
Cardamine pratensis	Cuckooflower		flowering plant	Vascular Plants	1	19/04/2024	19/04/2024
Meloe proscarabaeus	Black Oil-beetle	CAT1	insect - beetle (Coleopte	Invertebrates (insect)	1	09/04/2024	09/04/2024
Ficaria verna	Lesser Celandine		flowering plant	Vascular Plants	1	29/03/2024	29/03/2024
Prunus spinosa	Blackthorn		flowering plant	Vascular Plants	1	29/03/2024	29/03/2024
Phragmatobia fuliginosa	Ruby Tiger		insect - moth	Invertebrates (insect)	1	18/03/2024	18/03/2024
Coloeus monedula	Jackdaw	CAT3	bird	Birds	3	29/03/2013	29/11/2023
Erithacus rubecula	Robin	CAT4	bird	Birds	2	27/06/2001	26/11/2023
Apodemus sylvaticus	Wood Mouse		terrestrial mammal	Mammals (terrestrial)	1	16/11/2023	16/11/2023
Pica pica	Magpie	CAT4	bird	Birds	2	01/10/2009	15/11/2023
Cirsium palustre	Marsh Thistle		flowering plant	Vascular Plants	1	27/10/2023	27/10/2023
Jacobaea vulgaris	Common Ragwort		flowering plant	Vascular Plants	1	27/10/2023	27/10/2023
Juncus effusus	Soft-rush		flowering plant	Vascular Plants	1	27/10/2023	27/10/2023
Psathyrella spadicea	Chestnut Brittlestem		fungus	Fungi and Slime Moulds	1	27/10/2023	27/10/2023
Ranunculus acris	Meadow Buttercup		flowering plant	Vascular Plants	1	27/10/2023	27/10/2023
Achillea millefolium	Yarrow		flowering plant	Vascular Plants	1	21/10/2023	21/10/2023
Angelica sylvestris	Wild Angelica		flowering plant	Vascular Plants	1	21/10/2023	21/10/2023
Erica	Heath		flowering plant	Vascular Plants	1	21/10/2023	21/10/2023
Parmeliaceae	Parmeliaceae		lichen	Lichens	1	21/10/2023	21/10/2023
Quercus robur	Pedunculate Oak		flowering plant	Vascular Plants	1	21/10/2023	21/10/2023
Salix cinerea	Common Sallow		flowering plant	Vascular Plants	1	21/10/2023	21/10/2023
Potentilla erecta	Tormentil		flowering plant	Vascular Plants	1	15/10/2023	15/10/2023
Betula pubescens	Downy Birch		flowering plant	Vascular Plants	1	11/10/2023	11/10/2023
Bombus pascuorum	Common Carder Bee	CAT3	insect - hymenopteran	Invertebrates (insect)	2	20/07/2013	10/10/2023
Succisa pratensis	Devil's-bit Scabious	CAT3	flowering plant	Vascular Plants	2	09/10/2002	10/10/2023
Sphagnum	Bog Moss	CAT4	moss	Bryophytes	1	10/10/2023	10/10/2023
Trifolium	Clover		flowering plant	Vascular Plants	1	10/10/2023	10/10/2023
Phalacrocorax carbo	Cormorant	CAT2	bird	Birds	1	27/08/2023	27/08/2023
Chamerion angustifolium	Rosebay Willowherb		flowering plant	Vascular Plants	1	19/06/2023	19/06/2023
Hyacinthoides non-scripta	Bluebell	CAT1	flowering plant	Vascular Plants	1	04/06/2023	04/06/2023
Dactylorhiza praetermissa	Southern Marsh-orchid	CAT3	flowering plant	Vascular Plants	1	04/06/2023	04/06/2023
Silene flos-cuculi	Ragged-Robin	CAT3	flowering plant	Vascular Plants	1	04/06/2023	04/06/2023
Digitalis purpurea	Foxglove		flowering plant	Vascular Plants	1	04/06/2023	04/06/2023
Myosotis sylvatica	Wood Forget-me-not		flowering plant	Vascular Plants	1	04/06/2023	04/06/2023
Ranunculus repens	Creeping Buttercup		flowering plant	Vascular Plants	1	04/06/2023	04/06/2023
Typha latifolia	Bulrush		flowering plant	Vascular Plants	1	04/06/2023	04/06/2023
Silene dioica	Red Campion		flowering plant	Vascular Plants	1	28/05/2023	28/05/2023
Corvus frugilegus	Rook	CAT4	bird	Birds	1	06/04/2023	06/04/2023
Acer pseudoplatanus	Sycamore		flowering plant	Vascular Plants	1	19/10/2022	19/10/2022
Pholidoptera griseoaptera	Dark Bush-cricket		insect - orthopteran	Invertebrates (insect)	1	19/10/2022	19/10/2022
Rhytisma acerinum	Sycamore Tarspot		fungus	Fungi and Slime Moulds	1	19/10/2022	19/10/2022
Erinaceus europaeus	West European Hedgehog	CAT1	terrestrial mammal	Mammals (terrestrial)	2	22/07/2021	12/05/2022
Accipiter nisus	Sparrowhawk	CAT3	bird	Birds	3	17/11/2006	14/01/2022
Anguis fragilis	Slow-worm	CAT1	reptile	Reptiles and Amphibians	4	29/04/2007	15/06/2019
Falco tinnunculus	Kestrel	CAT1	bird	Birds	5	30/10/2006	12/12/2018
Dendrocopos major	Great Spotted Woodpecker	CAT3	bird	Birds	2	02/06/2010	12/12/2018
Rana temporaria	Common Frog	CAT1	amphibian	Reptiles and Amphibians	2	10/08/2018	10/08/2018
Pararge aegeria	Speckled Wood		insect - butterfly	Invertebrates (insect)	2	17/08/2017	05/06/2018
Pieris brassicae	Large White		insect - butterfly	Invertebrates (insect)	2	17/08/2017	05/06/2018
Pieris rapae	Small White		insect - butterfly	Invertebrates (insect)	2	07/04/2017	05/06/2018
Vulpes vulpes	Red Fox		terrestrial mammal	Mammals (terrestrial)	1	13/02/2018	13/02/2018
Maniola jurtina	Meadow Brown		insect - butterfly	Invertebrates (insect)	3	17/07/2002	17/08/2017
Impatiens glandulifera	Himalayan Balsam	CAT4	flowering plant	Vascular Plants	3	13/05/1996	12/08/2017
Bombus hypnorum	Tree Bumblebee		insect - hymenopteran	Invertebrates (insect)	1	10/02/2016	10/02/2016
Mergus merganser	Goosander	CAT3	bird	Birds	2	09/02/2016	09/02/2016
Fallopia japonica	Japanese Knotweed	CAT4	flowering plant	Vascular Plants	11	13/05/1996	28/08/2015
Streptopelia decaocto	Collared Dove	CAT4	bird	Birds	3	27/03/2014	06/06/2015
Vanessa atalanta	Red Admiral		insect - butterfly	Invertebrates (insect)	1	04/06/2015	04/06/2015
Buteo buteo	Buzzard	CAT3	bird	Birds	2	17/02/2015	23/02/2015
Bombus hortorum	Small Garden Bumble Bee	CAT3	insect - hymenopteran	Invertebrates (insect)	1	20/07/2013	20/07/2013
Bombus lapidarius	Red-tailed Bumblebee	CAT3	insect - hymenopteran	Invertebrates (insect)	1	20/07/2013	20/07/2013
Bombus lucorum	White-tailed Bumblebee	CAT3	insect - hymenopteran	Invertebrates (insect)	1	20/07/2013	20/07/2013
Bombus terrestris	Buff-tailed Bumblebee	CAT3	insect - hymenopteran	Invertebrates (insect)	1	20/07/2013	20/07/2013
Cordulegaster boltonii	Golden-ringed Dragonfly	CAT3	insect - dragonfly (Odona	Invertebrates (insect)	1	20/07/2013	20/07/2013
Apis mellifera	Western Honey Bee		insect - hymenopteran	Invertebrates (insect)	1	20/07/2013	20/07/2013
Pseudochorthippus parallelus	Meadow Grasshopper		insect - orthopteran	Invertebrates (insect)	1	20/07/2013	20/07/2013
Curruca communis	Whitethroat	CAT2	bird	Birds	1	16/04/2013	16/04/2013
Ardea alba	Great White Egret	CAT3	bird	Birds	1	11/12/2012	11/12/2012
Cinclus cinclus	Dipper	CAT2	bird	Birds	1	04/08/2012	04/08/2012
Motacilla cinerea	Grey Wagtail	CAT2	bird	Birds	1	04/08/2012	04/08/2012
Bazzania trilobata	Greater Whipwort	CAT3	liverwort	Bryophytes	1	09/09/2011	09/09/2011

Bryum argenteum	Silver-moss	CAT3	moss	Bryophytes	1	09/09/2011	09/09/2011
Kindbergia praelonga	Common Feather-moss	CAT3	moss	Bryophytes	1	09/09/2011	09/09/2011
Tortula muralis	Wall Screw-moss	CAT3	moss	Bryophytes	1	09/09/2011	09/09/2011
Weissia controversa var. conti	Weissia controversa var. contr	CAT3	moss	Bryophytes	1	09/09/2011	09/09/2011
Barbula unguiculata	Bird's-claw Beard-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Brachythecium rivulare	River Feather-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Brachythecium rutabulum	Rough-stalked Feather-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Bryum capillare	Capillary Thread-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Bryum dichotomum	Dune Thread-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Calliergonella cuspidata	Pointed Spear-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Ceratodon purpureus	Redshank	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Dicranella schreberiana	Schreber's Forklet-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Dicranella varia	Variable Forklet-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Dicranoweisia cirrata	Common Pincushion	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Didymodon insulanus	Cylindric Beard-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Didymodon luridus	Dusky Beard-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Didymodon rigidulus	Rigid Beard-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Didymodon sinuosus	Wavy Beard-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Hypnum cupressiforme	Cypress-leaved Plait-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Metzgeria furcata	Forked Veilwort	CAT4	liverwort	Bryophytes	1	09/09/2011	09/09/2011
Mnium hornum	Swan's-neck Thyme-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Oxyrrhynchium hians	Swartz's Feather-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Plagiomnium undulatum	Hart's-tongue Thyme-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Rhytidiadelphus squarrosus	Springy Turf-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Schistidium crassipilum	Thickpoint Grimmia	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Syntrichia montana	Intermediate Screw-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Syntrichia ruralis	Great Hairy Screw-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Tortula acaulon var. acaulon	Schreberian Earth-moss	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Tortula truncata	Common Pottia	CAT4	moss	Bryophytes	1	09/09/2011	09/09/2011
Atrichum undulatum	Common Smoothcap		moss	Bryophytes	1	09/09/2011	09/09/2011
Chroicocephalus ridibundus	Black-headed Gull	CAT1	bird	Birds	1	01/10/2009	01/10/2009
Columba palumbus	Woodpigeon	CAT4	bird	Birds	1	01/10/2009	01/10/2009
Saxicola rubicola	Stonechat	CAT3	bird	Birds	1	21/12/2006	21/12/2006
Hydrobates leucorhous	Leach's Petrel	CAT1	bird	Birds	1	07/12/2006	07/12/2006
Phylloscopus collybita	Chiffchaff	CAT3	bird	Birds	1	04/04/2005	04/04/2005
Garrulus glandarius	Jay	CAT4	bird	Birds	1	04/04/2005	04/04/2005
Motacilla alba	Pied Wagtail	CAT3	bird	Birds	1	01/01/2003	01/01/2003
Aphantopus hyperantus	Ringlet		insect - butterfly	Invertebrates (insect)	2	17/07/2002	17/07/2002
Petrophora chlorosata	Brown Silver-line		insect - moth	Invertebrates (insect)	2	17/07/2002	17/07/2002
Thymelicus sylvestris	Small Skipper		insect - butterfly	Invertebrates (insect)	2	17/07/2002	17/07/2002
Locustella naevia	Grasshopper Warbler	CAT1	bird	Birds	1	27/06/2001	27/06/2001
Turdus philomelos	Song Thrush	CAT1	bird	Birds	1	27/06/2001	27/06/2001
Turdus merula	Blackbird	CAT3	bird	Birds	6	20/10/1989	27/06/2001
Acrocephalus schoenobaenus	Sedge Warbler	CAT3	bird	Birds	1	18/05/1995	18/05/1995
Cyanistes caeruleus	Blue Tit	CAT3	bird	Birds	2	16/11/1989	18/11/1990
Fringilla coelebs	Chaffinch		bird	Birds	1	30/05/1989	30/05/1989
Cuculus canorus	Cuckoo	CAT1	bird	Birds	1	02/04/1988	02/04/1988
Turdus iliacus	Redwing	CAT1	bird	Birds	1	10/03/1986	10/03/1986
Sturnus vulgaris	Starling	CAT1	bird	Birds	1	02/12/1962	02/12/1962

Appendix C
Site Photographs

Plate 1: Neutral grassland (F4)

Plate 2: Neutral grassland (F2)

Plate 3: Neutral grassland (F6)

Plate 4: Modified grassland (F5)

Plate 5: Ancient semi-natural woodland (W1)

Plate 6: Semi-natural broadleaved woodland (W2)

Plate 7: Plantation woodland at north of site

Plate 8: Plantation woodland at south of site

Plate 9: Central treeline

Plate 10: Hedgerow and ash tree

Plate 11: Stream

Plate 12: Dead tree with lifted bark (TN3)