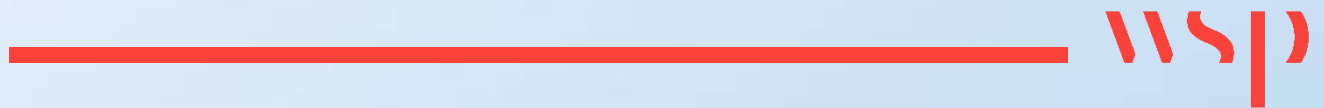


Annex 5B.1

**PARC YNNI CALON Y GWYNT
ACCESS ROAD PRELIMINARY
ECOLOGICAL APPRAISAL 2024**





Parc Ynni Calon y Gwynt

ENVIRONMENTAL STATEMENT

Annex 5B.1: Access Road Preliminary Ecological
Appraisal 2024





Parc Ynni Calon y Gwynt

ENVIRONMENTAL STATEMENT

Annex 5B.1: Access Road Preliminary Ecological Appraisal 2024

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Parc Ynni Calon y Gwynt

ENVIRONMENTAL STATEMENT

Annex 5B.1: Access Road Preliminary Ecological Appraisal 2024

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EXECUTIVE SUMMARY

WSP UK Limited (WSP) was commissioned by Wind2 to undertake a Preliminary Ecological Appraisal (PEA) to support the construction of an access road which would facilitate the construction of the Parc Ynni Calon Y Gwynt located in Powys, mid Wales. The construction of the access road is referred to in this report as the Proposed Development. The boundary of the Proposed Development extends from the southern grid reference SO 01372 93553 to the northern grid reference SO 01139 97325 (the Site). A separate PEA report has been produced for the construction of Parc Ynni Calon Y Gwynt (the Main Site), presented as **Appendix 5A** of the Environmental Statement. In this report, when discussed together, the Main Site and the Site are referred to as the 'Combined Site'.

This PEA is based on a desk study, a Phase 1 habitat survey, a Daytime Bat Walkover (DBW) and a protected/notable species assessment. This report has been compiled with reference to relevant nature conservation legislation, planning policy and the UK Biodiversity Framework.

A desk study was carried out in February 2024. The Proposed Development was considered to have potential to impact the Severn Estuary Special Area of Conservation (SAC), Llyn Mawr SSSI, three non-statutory designated sites, four Ancient Woodland Inventory (AWI) parcels and Priority Habitats. Eight waterbodies and several watercourses were identified to be of relevance to the Proposed Development, ultimately these watercourses were all tributaries connected to the River Severn/Severn Estuary SAC.

A habitat survey was carried out on the 22 June 2023 and 12 October 2023. The survey covered the Site and an additional 30m buffer (the Survey Area). Twenty habitat types were identified within the Survey Area. Of these, four were identified as Priority Habitats as listed under Section 7 of the Environment (Wales) Act 2016. These included lowland deciduous woodland, hedgerows (including lines of trees), rivers and upland heathland.

The Survey Area was suitable for bats, badgers *Meles meles*, hazel dormice *Muscardinus avellanarius*, otter *Lutra lutra*, hedgehog *Erinaceus europaeus*, brown hare *Lepus europaeus*, reptiles, amphibians including great crested newt (GCN) *Triturus cristatus*, breeding birds, invertebrates, Invasive Non-Native plant Species (INNS) and notable plants.

Further ecological input is required for the Proposed Development. Further surveys have been recommended for Priority Habitats, bats, dormouse, otter, and GCN. Works are recommended to be carried out under a Precautionary Method of Works (PMoW) for badger, hedgehog, brown hare, reptiles, amphibians, breeding birds and INNS. A Habitat Regulations Assessment (HRA) has also been recommended for the Severn Estuary SAC and further measures are detailed for relevant sites.

Avoidance, mitigation and compensation measures are provided in this report where relevant. These include working to best environmental practice and production of a Construction Environmental

Management Plan (CEMP). Ecological enhancement measures are also provided with the intention of contributing towards creating a Net Benefit for Biodiversity.

It was recommended that the above recommendations should be re-visited following the issue of a preliminary design. As such, an update PEA has been carried out in 2026, to which this report is appended. The figures relating to the update PEA report have been updated accordingly.

1. INTRODUCTION

1.1. BACKGROUND

- 1.1.1. WSP UK Limited (hereafter referred to as 'WSP')¹ was commissioned by Wind2 to undertake a Preliminary Ecological Appraisal (PEA) to support the construction of an access road which would facilitate the construction of Parc Ynni Calon Y Gwynt located in Powys, mid Wales (approximate central grid reference: SO 00115 98316), hereafter referred to as the 'Main Site'. The construction of this access road is hereafter referred to as the 'Proposed Development'.
- 1.1.2. An Access Road is proposed to extend 4.6km south from the Site, to comprise 3.1km of new Access Road, and 1.5km of upgrades to an existing road. The access road is hereafter referred to as the 'Site' which is shown in **Figure 5B.1**.
- 1.1.3. A separate PEA has been carried out for the Main Site and results are displayed in a separate report (**Appendix 5A** of the Environmental Statement (ES)). In this report, when discussed together, the Main Site and the Site are referred to as the 'Combined Site'.
- 1.1.4. It is our understanding that further ornithological surveys of the Main Site have been commissioned to BSG Ecology and therefore any further ornithological recommendations beyond those outlined in this report are provided separately (see **Chapter 6: Ornithology** and the associated appendices).
- 1.1.5. Ecological survey data is typically valid for two years², and as such an update PEA has been carried out in 2026, and forms **Appendix 5B** of the Environmental Statement, to which this report is appended. It should be read alongside this report. The figures relating to **Appendix 5B** have been updated accordingly to reflect the 2026 PEA.

1.2. SCOPE OF REPORT

- 1.2.1. Wind2 commissioned WSP to complete a PEA of the Site in July 2023. The brief was:
- To provide baseline ecological information about the Site and a surrounding study area with particular reference to whether legally protected and/or notable sites, species or habitats are present or likely to be present;
 - To provide recommendations to enable compliance with relevant nature conservation legislation and planning policy; and
 - If necessary, to identify the need for avoidance, mitigation, compensation or enhancement measures and/or further ecological surveys.

¹ WSP have provided this report solely for the use of the recipient and accepts no liability to any third parties or any other party using or reviewing the report or any part thereof. WSP makes no warranties or guarantees, actual or implied, in relation to this report, or the ultimate commercial, technical, economic, or financial effect on the project to which it relates, and bears no responsibility or liability related to its use other than as set out within the scope of the contract under which it was supplied.

² CIEEM (2019). Advice Note on the Lifespan of Ecological Reports & Surveys. [Available online: <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>].

1.3. RELEVANT LEGISLATION AND POLICY

- 1.3.1. The appraisal has been compiled with reference to the following relevant nature conservation legislation, planning policy and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in Wales. The context and applicability of each item is explained as appropriate in the relevant sections of the report and additional details are presented in **Annex 1**.

LEGISLATION

- The Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats Regulations)³;
- The Wildlife and Countryside Act 1981 (as amended) (WCA)⁴;
- The Town and Countryside (Environmental Impact Assessment) (Wales) Regulations 2017⁵;
- The Protection of Badgers Act 1992⁶;
- The Wild Mammals (Protection) Act 1996⁷;
- The Hedgerow Regulations 1997⁸;
- Environment (Wales) Act 2016⁹;
- The Wellbeing of Future Generations (Wales) Act 2015¹⁰;

POLICY

- The UK Post-2010 Biodiversity Framework (2011-2020) (JNCC and DEFRA, 2012)¹¹;
- UK Biodiversity Action Plan (UKBAP)^{12,13};
- Planning Policy Wales (PPW) (Edition 12) 2024¹⁴;

³ HMSO (2019). The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations).

⁴ HMSO (1981). Wildlife and Countryside Act (as amended by the Countryside and Rights of Way Act 2000). HMSO, Norwich.

⁵ HMSO (2017). the Town and Countryside (Environmental Impact Assessment) (Wales) Regulations.

⁶ HMSO (1992). The Protection of Badgers Act.

⁷ HMSO (1996). The Wild Mammals (Protection) Act. HMSO, London.

⁸ HMSO (1997). The Hedgerows Regulations, SI 1997/1160. HMSO, London.

⁹ National Assembly for Wales (2016). Environment (Wales) Act 2016.

¹⁰ National Assembly for Wales. 2015. Well-being of Future Generations (Wales) Act 2015.

¹¹ JNCC and DEFRA (2012) UK Post 2010 Biodiversity Framework. Available online: <http://jncc.defra.gov.uk/page-6189>. [Accessed July 2014].

¹² The UK BAP has now been replaced by the UK Post-2010 Biodiversity Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant.

¹³ The UK BAP has now been replaced by the UK Post-2010 Biodiversity Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant.

¹⁴ Welsh Government (2024). Planning Policy Wales Edition 12.



- Future Wales: The National Plan 2040¹⁵; and
- Powys Local Biodiversity Action Plan (LBAP), which is incorporated within Powys Nature Recovery Action Plan¹⁶.

¹⁵ Welsh Government (2021) Future Wales: The National Plan 2040, February 2021. [online]. Available at: <https://gov.wales/future-wales-national-plan-2040>. [Accessed 16 March 2026].

¹⁶ Powys Nature Partnership 2022-2023. Powys Nature Recovery Action Plan. [online]. Available at: <https://en.powys.gov.uk/article/2573/Powys-Nature-Recovery-Action-Plan>. [Accessed 17 March 2026].

2. METHODS

2.1. OVERVIEW

- 2.1.1. This appraisal has been prepared with reference to current good practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM)^{17,18,19}, and Joint Nature Conservation Committee²⁰; and guidance contained in the British Standard - Code of Practice for Biodiversity and Development BS42020:2013²¹.
- 2.1.2. This PEA is based on the following data sources:
- An ecological desk study;
 - An extended Phase 1 habitat survey;
 - A Daytime Bat Walkover (DBW); and
 - A protected/notable species assessment.
- 2.1.3. Although Phase 1 habitat data is discussed in this report, the original habitat data was collected as UK Habitat Classification (UKHab) data, whereby habitats were described and mapped following the standard UKHab survey methodology (UKHab Ltd, 2023). Following the survey, the UKHab data was converted into Phase 1 habitat data as the standard habitat classification system in Wales. This was used to futureproof the report for any changes in assessment. The original UKHab data is presented in a habitat map in **Annex 6**. Throughout the following report, results are described following Phase 1 habitat survey guidelines²⁰.

2.2. DESK STUDY

- 2.2.1. The desk study was undertaken in February 2024 to review the existing ecological baseline information available in the public domain and to obtain information held by relevant third parties. For the purpose of the desk study exercise, records were collated within various radii from around the Combined Site. This approach is consistent with current good practice guidance published by the CIEEM^{17,18}. To provide the baseline data for the ecological desk study, the following information was requested from Biodiversity Information Service for Powys & Brecon Beacons National Park (BIS). All distances are taken from around the boundary of the Combined Site:
- Records of non-statutory nature conservation sites within 2km;
 - Records of Ancient Woodland Inventory (AWI) parcels within 2km;

¹⁷ Chartered Institute of Ecology and Environmental Management (CIEEM) (2017). Guidelines for Preliminary Ecological Appraisal. CIEEM, Winchester.

¹⁸ CIEEM (2017). Guidelines for Ecological Report Writing. CIEEM, Winchester.

¹⁹ CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland, Terrestrial, Freshwater and Coastal. CIEEM, Winchester.

²⁰ JNCC (2016). Handbook for Phase 1 habitat survey – a technique for environmental audit. JNCC, Peterborough.

²¹ British Standards Institute (2013) Biodiversity code of practice for planning and development: BS42020. BSI. London.

- Records of legally protected and/or notable species within 1km; and
- Bats records within 10km.

2.2.2. DataMapWales²² is a freely available source of desk study data and was used to identify:

- Records of national statutory nature conservation sites within 2km;
- Records of international statutory nature conservation sites within 10km;
- Records of statutory Sites designated for bat within 30km; and
- Records of statutory Sites designated for birds within 20km.

2.2.3. DataMapWales was also used to identify any Priority Habitats that may be present within the Combined Site.

2.2.4. Open source 1:25,000 Ordnance Survey mapping was used to identify any mapped waterbodies within 500m of the Combined Site.

2.2.5. The findings of the desk study have been incorporated within Section 3 of this report and are shown on **Figure 5B.2, Figure 5B.3, Figure 5B.4, Figure 5B.5, Figure 5B.6 and Figure 5B.7.**

2.2.6. The ecological desk study was carried out by a member of CIEEM, who has completed numerous ecological desk studies within the last year.

2.3. HABITAT SURVEY

2.3.1. A habitat survey of the Site was carried out on 22 June 2023 for the northern sections of the Site and was revisited on 12 October 2023 following an extension of the boundary further to the south. The survey was carried out by four ecologists (two per visit) with experience carrying out numerous habitat surveys of similar habitat types. A 30m buffer was applied to the Site and was surveyed where safe and accessible. This extended area is hereafter referred to as the 'Survey Area', as shown on **Figure 5B.1.**

2.3.2. Habitats have been described and mapped following the standard Phase 1 habitat survey methodology²⁰. Phase 1 habitat survey is a standard technique for classifying and mapping British habitats. The dominant plant species were recorded, and habitats are classified according to their vegetation types. Where appropriate, consideration was given to whether habitats qualify, or could qualify, as a Priority Habitat following habitat descriptions published by the Joint Nature Conservation Committee²³.

²² <https://datamap.gov.wales/>

²³ JNCC Biodiversity Reporting and Information Group (2008). UK Biodiversity Action Plan

- 2.3.3. A list of plant species was compiled (**Annex 3**), with relative plant species abundance estimated using the DAFOR scale²⁴. The scientific names for plant species follow those in the New Flora of the British Isles²⁵ and are also listed in **Annex 3**.
- 2.3.4. Habitats were marked on mobile mapping software and were subsequently digitised using a Geographical Information System (GIS).
- 2.3.5. Target notes (TNs) were made to provide information on specific features of ecological interest (e.g., a badger *Meles meles* sett) or habitat features too small to be mapped. These are included in **Annex 4**.
- 2.3.6. Any invasive non-native plant species (INNS) listed on Schedule 9 of the WCA which were evident during the Phase 1 habitat survey were also recorded as target notes. Detailed mapping of such species; or a full survey of the Site for all invasive plant species is beyond the scope of this commission.

2.4. DAYTIME BAT WALKOVER

- 2.4.1. A DBW of trees, buildings and structures was undertaken within the Survey Area. The DBW was intended to identify the presence of trees, buildings and structures that could support bat roosts, with the aim to inform any further bat survey requirements. All observations were made from ground level.
- 2.4.2. Following the surveys, buildings and structures were classified as having one of the following levels of suitability to support roosting bats (as per Collins (2023)²⁶); none, negligible, low, moderate or high suitability. These are described below in **Table 2-1**.

Table 2-1 - Bat Roosting Suitability Categorisation for Buildings and Structures (as per Collins (2023)²⁶)

Category	Description
None	No habitat features within the Survey Area likely to be used by any roosting bats at any time of the year (i.e., a complete absence of crevice/suitable shelter at all ground/underground levels).
Negligible	No obvious habitat features within the Survey Area likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.

²⁴ The DAFOR scale has been used to estimate the frequency and cover of the different plant species as follows: Dominant (D) - >75% cover, Abundant (A) – 51-75% cover, Frequent (F) – 26-50% cover, Occasional (O) – 11-25% cover, Rare (R) – 1-10% cover., The term 'Locally' (L) is also used where the frequency and distribution of a species are patchy and 'Edge' (E) is also used where a species only occurs on the edge of a habitat type.

²⁵ Stace, C. (2010). *New flora of the British Isles*. Cambridge university press.

²⁶ Collins J. (ed.) (2023) *Bat Surveys for Professional Ecologists, Good Practice Guidelines (4th Edition)*. The Bat Conservation Trust, London.

Category	Description
Low	A structure with one of more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e., unlikely to be suitable for maternity and not a classic cool/stable hibernation site but could be used by individual hibernating bats).
Moderate	A structure with one of more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat by unlikely to support a roost of high conservation status.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g., maternity, or classic cool/stable hibernation sites.

- 2.4.3. Trees were categorised as having one of the following suitability to support roosting bats (as per Collins (2023)²⁶); none, Further Assessment Required (FAR) and Potential Roost Feature (PRF). These are described below in Table 2-2.

Table 2-2 - Bat Roosting Suitability Categorisation for Trees (as per Collins (2023)²⁶)

Category	Description
None	Either no PRFs in the tree or highly unlikely to be any.
Further Assessment Required (FAR)	Further assessment required to establish if PRFs are present in the tree.
Potential Roost Feature (PRF)	A tree with at least one PRF present.

- 2.4.4. Buildings and structures were considered as requiring further surveys if they were assessed as having suitability to support roosting bats. Trees were considered as requiring further surveys if they were categorised as FAR or PRF.

2.5. PROTECTED SPECIES ASSESSMENT

- 2.5.1. The potential for the Survey Area to support legally protected and notable species was assessed using the desk study results and combined with field observations during the habitat survey. The assessment of habitat suitability for protected and notable species was based on professional experience and judgement. This was supplemented by standard sources of guidance on habitat

suitability assessment for key faunal groups: birds^{27,28}; reptiles^{30,29}; amphibians including great crested newts (GCN) *Triturus cristatus*^{30,31}; bats^{26,32}; badger^{33,34}; hazel dormouse *Muscardinus avellanarius*³⁵; otter *Lutra lutra*³⁶ and invertebrates^{37,38}.

2.6. NOTES AND LIMITATIONS

2.6.1. Every effort has been made to provide a comprehensive description of the Survey Area; however, the following specific limitations apply to this assessment:

- Ecological survey data is typically valid for 18-24 months unless otherwise specified, for example if conditions are likely to change more quickly due to ecological processes or anticipated changes in management².
- Records held by local biological record centres and local recording groups are generally collected on a voluntary basis; therefore, the absence of records does not demonstrate the absence of species, it may simply indicate a gap in recording coverage.
- The ecological desk study was carried out from the Combined Site boundary. This was done because these were connected sites and desk study records within the search area relevant to both sites.
- A portion of the survey was not completed during the optimal survey season for Phase 1 habitat survey, generally accepted to be from April-September (inclusive). However, due to the highly managed nature of much of the Survey Area, habitat types could be confidently assigned outside the optimal botanical survey period.
- Botanical surveys are seasonally limited, and throughout the spring and summer period certain species will be more or less evident at different times (i.e., depending on the flowering season).

²⁷ Gilbert, G., Gibbons, D.W. and Evans, J. (1998). Bird Monitoring Methods: A Manual of Techniques for Key UK Species. RSPB

²⁸ Bibby C.J, Burgess N.D, Hill D.A, Mustoe S.H. (2000) Bird Census Techniques. Second Edition. Elsevier Ltd.

²⁹ Froglife (1999). Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice sheet 10. Froglife, Halesworth

³⁰ Gent, A. and Gibson, S. (2003). Herpetofauna Workers Manual. JNCC. Peterborough

³¹ English Nature (2001). Great Crested Newt Mitigation Guidelines. English Nature, Peterborough.

³² Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature.

³³ Harris S, Cresswell P and Jefferies D (1991). (Report) Surveying Badgers. The Mammal. Society, Bristol.

³⁴ Roper, T.J. (2010). Badger. Harper Collins.

³⁵ English Nature (2006). The Dormouse Conservation Handbook. 2nd Edition. Natural England. Peterborough

³⁶ Chanin P (2003). Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough

³⁷ Drake C.M., Lott D.A., Alexander K.N.A. and Webb J. (2007). Surveying terrestrial and freshwater invertebrates for conservation evaluation. Natural England Research Report NERR005. Natural England, Peterborough.

³⁸ Kirby, P. (2001). Habitat Management for Invertebrates: A Practical Handbook. RSPB Management Guides.

However, it is considered that sufficient information was gathered to enable an assessment of the habitat types present, in line with standard Phase 1 habitat categories and the potential for these to support protected or notable species.

- A 30m buffer was applied to the Site and referred to as the Survey Area. This 30m extension could not be accessed in all locations. This is not considered a significant limitation as the majority of the 30m buffer could be accessed and where it could not, it could be mapped from a vantage point or aerial imagery. One area could not be accessed or mapped from a vantage point or aerial imagery, this can be seen on page 6 of **Figure 5B.9**.
- One area of broadleaved semi-natural woodland could not be fully accessed. A habitat assessment could be made but a detailed species list could not be provided and therefore absence of INNS could not be determined in this location. Furthermore, trees could not be assessed for their suitability to support roosting bats. However, this area was accessed fully during the 2026 survey, and is reported upon in **Appendix 5B** of the ES.
- Restricted access to residential and farm complexes meant that the buildings B3-B6 could not be assessed for their potential to support roosting bats.
- The habitat survey was carried out over the period of two days over a large area, which is considered sufficient to map and characterise the habitats of the Survey Area. However, only a selection of all species that occur within the Survey Area will have been recorded. The desk study data discussed within this report will supplement the survey data.
- The Phase 1 habitat map (**Figure 5B.9**) has been reproduced from mobile mapping software. Whilst this provides a sufficient level of detail to fulfil the requirements of a PEA, the maps are not intended to provide exact locations of key habitats.

3. RESULTS

3.1. DESK STUDY

STATUTORY DESIGNATED SITES

- 3.1.1. One designated site of international importance is located within 10km of the Combined Site: Coedydd Llawr-y-Glyn SAC.
- 3.1.2. The desk study identified one statutory designated site of national importance within 2km of the Combined Site. This is Llyn Mawr Site of Special Scientific Interest (SSSI) which is located partially within the Combined Site on its western side.
- 3.1.3. Further details of Coedydd Llawr-y-Glyn SAC and Llyn Mawr SSSI are provided in **Table 3-1** and their locations are shown on **Figures 5B.2** and **5B.3**.

Table 3-1 – Statutory designated sites within 2km of the Combined Site

Site Name	Designation	Size (ha)	Approximate Distance and Orientation from the Combined Site	Description
Coedydd Llawr-y-Glyn	SAC	99	7.6 km southwest	Designated for the presence of old sessile oak <i>Quercus petraea</i> woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles.
Llyn Mawr	SSSI	20	Within the Combined Site	An upland lake only partially modified by agricultural improvement with marginal vegetation consisting of mainly rushes and sedges, with yellow water-lily <i>Nuphar lutea</i> occurring in discrete zones. The lake has ornithological importance for waterfowl including species such as whooper swan <i>Cygnus cygnus</i> and Greenland white-fronted geese <i>Anser albifrons</i>. The lake also hosts eleven species of caddisfly and four species of dragonfly. Botanically species-rich habitats surround the lake catchment.

- 3.1.4. The search was extended to 20km for sites designated for birds and 30km for sites designated for bats. Two Special Protection Areas (SPAs) for birds were identified within 20km of the Combined Site and are listed in **Table 3-2** and shown on **Figure 5B.3**. A total of 15 sites designated for bats were identified, these are listed in **Table 3-3**. Internationally important sites for bats are shown on **Figure 5B.3** and nationally important sites for bats are shown on **Figure 5B.4**.

Table 3-2 – Statutory designated sites within 20km of the Combined Site which are designated for birds

Site Name	Designation	Size (ha)	Approximate Distance and Orientation from the Combined Site	Description
Berwyn	SPA	24,272	15km northwest	Berwyn SPA is a site dominated by bogs, marshes and fens with heath, scrub and dry grassland habitats. It is a known breeding site for hen harrier <i>Circus cyaneus</i> , merlin <i>Falco columbarius</i> , peregrine falcon <i>Falco peregrinus</i> and red kite <i>Milvus milvus</i> .
Elenydd - Mallaen	SPA	30,008	19km south	This site is dominated by humid grassland. It is a known breeding site for merlin and red kite.

Table 3-3 – Statutory designated sites within 30km of the Combined Site which are designated for bats

Site Name	Designation	Size (ha)	Approximate Distance and Orientation from the Combined Site	Description
Gregynog	SSSI	55	6km east	This site supports foraging lesser horseshoe bats <i>Rhinolophus hipposideros</i> .
River Wye/Afon Gwy (Wales)	Special Area of Conservation (SAC)	1,274	13km southeast	The River Wye is an inland waterbody designated as a watercourse of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation. Annex II species which are primary reasons for selection of the site include lesser horseshoe and greater horseshoe bats <i>Rhinolophus ferrumequinum</i>.
River Ithon	SSSI	177	13km southeast	River Ithon is a tributary of the River Wye. The river and bankside trees support large populations of flying insects, which provide an important food source for bats, including Daubenton's bat <i>Myotis daubentonii</i> .

Site Name	Designation	Size (ha)	Approximate Distance and Orientation from the Combined Site	Description
Glascoed, Meifod	SSSI	1	18km northeast	The site is of species interest because it supports a major maternity roost of the lesser horseshoe bat. This site is of national importance for lesser horseshoe bats and forms part of a wider group of sites in this part of Wales that are considered to be internationally important for the conservation of the species.
Tanat and Vyrnwy Bat Sites/Safleoedd Ystlumod Tanat ac Efyrrwy	SAC	12	23km northeast	Lesser horseshoe bats are Annex II species that are a primary reason for selection of this. This area in central Wales and contains a good mixture of lesser horse bat maternity and hibernation sites. It is thought to support 4% of the UK species population, though counts in hibernation sites suggests this may be underestimated.
Allt Y Main Mine	SSSI	1	23km northeast	Forms part of Tanat and Vyrnwy Bat Sites/Safleoedd Ystlumod Tanat ac Efyrrwy SAC.
Leighton Bat Roosts	SSSI	0.5	24km east	This site is of special interest as the largest known nursery roost and one of the largest known hibernation site for the lesser horseshoe bat in the Montgomeryshire Area. This site is of national importance for lesser horseshoe bats and forms part of a wider group of internationally important sites for the species.
Bryngwyn Hall Stables and Coach House	SSSI	0.1	25km northeast	Forms part of Tanat and Vyrnwy Bat Sites/Safleoedd Ystlumod Tanat ac Efyrrwy SAC.
Penygarnedd Mine	SSSI	2	26km northeast	Forms part of Tanat and Vyrnwy Bat Sites/Safleoedd Ystlumod Tanat ac Efyrrwy SAC.
West Llangynog Slate Mine	SSSI	6	27km north	Forms part of Tanat and Vyrnwy Bat Sites/Safleoedd Ystlumod Tanat ac Efyrrwy SAC.

Site Name	Designation	Size (ha)	Approximate Distance and Orientation from the Combined Site	Description
Garth-Eyr	SSSI	0.5	29km northeast	Forms part of Tanat and Vyrnwy Bat Sites/Safleoedd Ystlumod Tanat ac Efyrynwy SAC.
Coedydd Derw a Safleoedd Ystlumod Meirion/Meirionnydd Oakwoods and Bat Sites	SAC	2,813	29km northwest	Lesser horseshoe bats are Annex II species that are a primary reason for selection of this site. This large composite site includes most of the know maternity roosts in Meirionnydd and some hibernation roosts. It is considered the centre of distribution for lesser horseshoe bats in Wales. The sheltered river valleys provide excellent tree cover and numerous suitable maternity roosts. Annex I habitats that are a primary reason for selection of this site include old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> and Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padino</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>). Further Annex I habitats present include water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation, Northern Atlantic wet heaths with <i>Erica tetralix</i>, European dry heaths, <i>Tilio-Acerion</i> forests of slopes, screes and ravines and bog woodland.
Coed Dyffryn Wnion	SSSI	189	29km northwest	Forms part of Coedydd Derw a Safleoedd Ystlumod Meirion/Meirionnydd Oakwoods and Bat Sites SAC.
Mwyngloddiau Wnion A Eglwys Sant Marc	SSSI	1	30km northwest	Forms part of Coedydd Derw a Safleoedd Ystlumod Meirion/Meirionnydd Oakwoods and Bat Sites SAC.
Hendre, Llangedwyn	SSSI	1	30km north-east	Forms part of Tanat and Vyrnwy Bat Sites/Safleoedd Ystlumod Tanat ac Efyrynwy SAC.

NON-STATUTORY SITES

- 3.1.5. Four non-statutory designated sites were identified within 2km of the Combined Site. These are shown below in Table 3-4 and on **Figure 5B.5**.

Table 3-4 – Non-statutory designated sites within 2km of the Combined Site

Site Name	Designation	Size (ha)	Approximate Distance and Orientation from the Combined Site	Description
Llyn Mawr	Wildlife Trust Reserve	17	Within the Combined Site	See Table 3-1, Llyn Mawr SSSI. This site has recently been closed to the public and made wildlife-only.
B-lines	B-lines*	150,000	Within the Combined Site	B-lines are locally important insect pollinator dispersal pathways between areas of existing wildflower-rich habitat.
Llyn Du	Wildlife Site/Site of Importance for Nature Conservation (SINC) (Adopted)	4	300m west	Upland lake, 250m south of Llyn Mawr SSSI.
Grofftydd	Road Verge Nature Reserve	0.3	1.2km southwest	Designated by Montgomeryshire Wildlife Trust as part of the 'Living Highways Project' with the aim to recognise the ecological value of road verges.
*B-Lines have been mapped by Buglife to address the problem of the loss of flowers and pollinators. The B-Lines are 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. https://www.buglife.org.uk/our-work/b-lines/b-lines-wales/ (Accessed July 2023).				

OTHER HABITATS OF CONSERVATION IMPORTANCE

- 3.1.6. The desk study identified 84 AWI parcels within 2km of the Combined Site. Of these, four parcels of Ancient Semi-Natural Woodland (ASNW) were identified within the Combined Site. The AWI parcels are shown on **Figure 5B.6** and detailed in **Table 3-5** below.

Table 3-5 – AWI parcels identified in desk study records within 2km of the Combined Site

AWI parcels	Number of parcels within 2km of the Combined Site	Number of parcels within Combined Site
Ancient Semi-Natural Woodland	72	4
Restored Ancient Woodland Site	4	0
Ancient Woodland Site of Unknown Category	1	0
Plantation on Ancient Woodland (PAWS)	7	0
Total	84	4

- 3.1.7. The desk study identified records of four Priority Habitats within the Combined Site. These are provided in **Table 3-6** along with the areas covered by each. These are shown on **Figure 5B.6**.

Table 3-6 – Priority Habitats identified in desk study records within the Combined Site

Priority Habitats	Total area (Ha)
Lowland Dry Acid Grassland	0.776
Lowland Heathland	0.002
Purple Moor Grass and Rush Pastures	0.691
Upland Heathland	12.24

- 3.1.8. The desk study identified 13 waterbodies within 500m of the Combined Site. Several watercourses were identified within the Combined Site. All watercourses within the study area were tributaries of three larger named rivers/streams, these were the Afon Carno, Nant Cwmgerwyn and Nant y Llyn Mawr. All of these rivers/streams have connectivity with the River Severn. This highlights that the Combined Site has hydrological connectivity with the Severn Estuary, which is designated as a Special Area of Conservation (SAC).

- 3.1.9. All waterbodies and watercourses are shown on **Figure 5B.7**.

3.2. HABITAT SURVEY

OVERVIEW

- 3.2.1. The following account summarises the findings of the habitat survey. Although Phase 1 habitat data is discussed in the following section, the original habitat data was collected as UK Habitat Classification (UKHab) data, whereby habitats were described and mapped following the standard

UKHab survey methodology³⁹. Following the survey, the UKHab data was converted into Phase 1 habitat data as the standard habitat classifying system in Wales. The original UKHab data is presented in a habitat map in **Annex 6**.

- 3.2.2. Twenty Phase 1 habitat types were identified within the Survey Area in addition to areas of hard standing and areas not accessed. They are mapped on **Figure 5B.9** and are listed in **Table 3-7** along with areas in hectares (or length for linear features). A description of the dominant and notable species, the composition and management of each habitat is provided below, and an indicative species list is provided in **Annex 3**. TNs are provided in **Annex 4** and photographs in **Annex 5**. Alpha-numeric codes used in this section cross-refer to the JNCC Phase 1 habitat survey classification²⁰. The order of the habitat descriptions below reflects their ordering in the Phase 1 habitat survey manual and does not reflect habitat importance.

Table 3-7 - Phase 1 Habitat Areas

Phase 1 Habitat	Area (ha)	Length (m)	% of Site Area
A1.1.1 – Broadleaved semi-natural woodland	3.53	-	7.76
A1.3.2 – Mixed plantation woodland	0.23	-	0.50
A2.1 – Dense scrub	0.19	-	0.41
A3.1 – Broadleaved scattered trees	-	873.07	-
A3.3 – Mixed scattered trees	-	237.68	-
B2.2 – Semi-improved neutral grassland	6.54	-	14.34
B4 – Improved grassland	23.9976	-	52.59
B5 – Marshy grassland	0.39	-	0.86
C1.1 – Continuous bracken	0.99	-	2.19
D5 – Dry heath/acid grassland mosaic	0.32	-	0.70
G2 – Running water	-	940.75	-

³⁹ Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020) The UK Habitat Classification User Manual Version 1.1 at <https://ukhab.org/>.

Phase 1 Habitat	Area (ha)	Length (m)	% of Site Area
I2 – Scree	0.06	-	0.14
J1.1 – Arable land	5.77		
J2.1.1 – Intact species-rich hedge	-	603.94	-
J2.1.2 – Intact species-poor hedge	-	1,281.90	-
J2.2.2 – Defunct species-poor hedge	-	621.45	-
J2.5 – Wall	-	1,048.81	-
J3.6 – Buildings	0.41	-	0.90
J4 – Bare ground	1.84	-	4.04
J5 – Other habitat	0.44		
HS – Hardstanding	0.61	-	1.33
NA – Not accessed	0.30	-	0.66
TOTAL	45.61	5,607.61	100

A1.1.1 – BROADLEAVED SEMI-NATURAL WOODLAND

- 3.2.3. Broadleaved semi-natural woodland formed field boundaries, particularly in the southern half of the Survey Area. This occurred in three locations and on each occasion the woodland parcels connected with wider woodland habitat beyond the Survey Area (**Annex 5**: Photograph 1 and 2). Running water was recorded within two of the parcels. Tree species present within these parcels included silver birch *Betula pendula*, hazel *Corylus avellana*, hawthorn *Crataegus monogyna*, ash *Fraxinus excelsior*, oak *Quercus sp.*, willow *Salix sp.*, and holly *Ilex aquifolium*. Trees with suitability to support roosting bats were identified in all accessible parcels, details of which are given in Section 3.3. Mammal holes were identified within one the of the woodland parcels, these were not considered to have been created by badger (**Annex 4**: TN1; **Annex 5**: Photograph 3).
- 3.2.4. Broadleaved semi-natural woodland within the Survey Area can be considered as Priority Habitat under Section 7 of the Environment (Wales) Act 2016⁹. It is categorised as lowland deciduous woodland.

A1.3.2 – MIXED PLANTATION WOODLAND

- 3.2.5. There was one parcel of plantation woodland within the Survey Area. This parcel could not be accessed and for this reason no species list or photos could be collected. It was a small parcel

located towards the middle of the Survey Area and formed part of an agricultural residency, isolated from surrounding woodland parcels. A line of trees in front of the property contained rowan *Sorbus aucuparia*, sycamore *Acer pseudoplatanus*, juniper *Juniperus communis* and willow, hence this woodland was categorised to also contain a mix of both broadleaved and coniferous species.

A2.1 – DENSE SCRUB

- 3.2.6. Dense scrub was identified within the south of the Survey Area. All parcels were dominated by bramble *Rubus fruticosus* agg. and common nettle *Urtica dioica*. One parcel was located within a field of improved grassland as a boundary feature, it included young tree and shrub species such as blackthorn *Prunus spinosa*, hawthorn, ash, dog rose *Rosa canina* agg. and grey willow *Salix cinerea* (**Annex 5**: Photograph 4).
- 3.2.7. The other parcels were present around an agricultural complex of buildings and structures in the very south of the Survey Area. In addition to bramble and common nettle, creeping thistle *Cirsium arvense* and dog rose was also present (**Annex 5**: Photograph 5).

A3.1 – BROADLEAVED SCATTERED TREES

- 3.2.8. Broadleaved scattered trees were present as tree lines forming field boundaries and as ornamental features (**Annex 5**: Photograph 6). Species within the field boundaries were comprised of a wide variety of native broadleaved trees including hazel, hawthorn, ash and rowan, among other species which are listed in **Annex 3**.
- 3.2.9. Most notably, ornamental lines of trees included a poplar *Populus* sp. treeline which had been planted within the agricultural complex in the south of the Survey Area (**Annex 4**: TN2; **Annex 5**: Photograph 7). These were possibly black poplar *Populus nigra* ssp. *betulifolia* which is a rare and declining species of tree in the United Kingdom but as this portion of the survey was carried out outside of the optimal botanical survey period, this could not be confirmed as these trees can easily be confused with hybrid varieties at that time of year.
- 3.2.10. Tree lines are recognised as hedgerows under Section 7 of the Environment (Wales) Act 2016⁹. All hedgerows within the Survey Area can be considered as Priority Habitats.

A3.3 – MIXED SCATTERED TREES

- 3.2.11. Mixed scattered trees were present as broadleaved scattered trees habitat, however, some tree lines contained conifers such as juniper *Juniperus communis*, cypress *Cupressus* sp. and spruce *Picea* sp. (**Annex 5**: Photograph 8).
- 3.2.12. Tree lines are recognised as hedgerows under Section 7 of the Environment (Wales) Act 2016⁹. All hedgerows within the Survey Area can be considered as Priority Habitats.

B2.2 – SEMI-IMPROVED NEUTRAL GRASSLAND

- 3.2.13. Semi-improved neutral grassland was located predominantly in the north of the Survey Area. The northmost parcels were heavily grazed by cattle, sheep and horses (**Annex 5**: Photograph 9). Sheets of corrugated metal and wood piles were identified within these parcels which could provide suitable reptile hibernacula (**Annex 4**: TN3; **Annex 5**: Photograph 10) and scattered trees were located on the field boundary (**Annex 4**: TN4; **Annex 5**: Photograph 11). These trees included ash, rowan and birch *Betula* sp.

- 3.2.14. Further south, parcels of semi-improved neutral grassland were less intensively grazed with a medium to long sward height. Marsh thistle *Cirsium palustre* and rushes *Juncus sp.* were scattered within these parcels, with increased bracken *Pteridium aquilinum* and also foxglove *Digitalis purpurea* (**Annex 5: Photograph 12**). Scattered willow trees were located within these parcels (**Annex 4: TN4**).
- 3.2.15. Two parcels existed around the agricultural complex of buildings and structures in the south of the Survey Area. One of the parcels here was small but with a tall sward height and dominated by cock's foot *Dactylis glomerata* within a scattered scrub mosaic which included bramble, common nettle, dog rose and oak, hawthorn and ash saplings (**Annex 5: Photograph 13**). The scattered scrub in this parcel was too small to map and therefore is identified in **Figure 5B.9** with TN5. The second small parcel consisted of perennial rye grass *Lolium perenne*, false oat grass *Arrhenatherum elatius*, common bent *Agrostis capillaris* and cock's-foot. Creeping thistle, dove's foot cranesbill *Geranium molle*, creeping buttercup *Ranunculus repens* and ragwort *Jacobaea vulgaris* were also frequent within this parcel (**Annex 5: Photograph 14**).

B4 – IMPROVED GRASSLAND

- 3.2.16. Improved grassland was the most dominant habitat within the Survey Area (**Annex 5: Photograph 15**). Parcels were heavily grazed by sheep and dominated by perennial rye-grass with common nettle and creeping thistle abundant at the field boundaries. Scattered trees were present within a northern parcel of improved grassland, dominated by holly (**Annex 4: TN4**). There were also small patches of gorse *Ulex sp.* scrub present within improved grassland parcels. These parcels were too small to be mapped so are represented on **Figure 5B.9** as TN6 (**Annex 4: TN6; Annex 5: Photograph 16**). Numerous types of debris were recorded within improved grassland parcels which were considered to provide suitable hibernacula for reptiles (**Annex 4: TN3**), these were in the form of piles of bricks (**Annex 5: Photograph 17**), piles of logs (**Annex 5: Photograph 18**) and an old, crumbling stone wall (**Annex 5: Photograph 19**).

B5 – MARSHY GRASSLAND

- 3.2.17. There was one parcel of marshy grassland in the north of the Survey Area. In this parcel, the habitat was damp with dense clumps of rushes *Juncus sp.* throughout.

C1.1 – BRACKEN

- 3.2.18. There were eleven bracken dominant parcels scattered throughout the Survey Area. These tended to be small parcels located at field margins, mostly in the northern half of the Survey Area (**Annex 5: Photograph 20**).

D5 – DRY HEATH/ACID GRASSLAND MOSAIC

- 3.2.19. There were two parcels of dry heath/acid grassland mosaic identified within the Survey Area. These were both located in the north half of the Survey Area. These parcels were dominated by gorse and scattered trees including rowan and willow (**Annex 5: Photograph 21**). Other species recorded within the habitat included bilberry *Vaccinium myrtillus*, sheep's fescue *Festuca ovina agg.*, deergrass *Trichophorum germanicum*, heath bedstraw *Galium saxatile* and heather *Calluna vulgaris*.
- 3.2.20. Dry heath/acid grassland mosaic within the Survey Area can be considered as Priority Habitat under Section 7 of the Environment (Wales) Act 2016⁹. It is categorised as upland heathland.

G2 – RUNNING WATER

- 3.2.21. Running water was recorded within the Survey Area in the form of shallow streams (**Annex 5: Photograph 22**) and wet ditches choked with rushes (**Annex 5: Photograph 23**). Such networks of running water have connectivity with Afon Carno which flows into the River Severn.
- 3.2.22. Running water within the Survey Area can be considered as Priority Habitat under Section 7 of the Environment (Wales) Act 2016⁹. This is because these habitats are associated with rivers within 2.5km.
- 3.2.23. Furthermore, the presence of running water within the Survey Area connecting to the River Severn, highlights that the Survey Area has hydrological connectivity with the Severn Estuary, which is designated as a SAC.

I2 – SCREE

- 3.2.24. Scree habitat was exposed in the north of the Survey Area. Here there was exposed rock with several piles of stone and logs, which could provide suitable reptile hibernacula (**Annex 4: TN3; Annex 5: Photograph 24**).

J1.1 – ARABLE LAND

- 3.2.25. Arable land was present in the form of ploughed fields in the south of the Survey Area (**Annex 5: Photograph 25**).

J2.1.1 – INTACT SPECIES-RICH HEDGE

- 3.2.26. There were nine intact species rich hedges within the Survey Area, these consisted of species such as sycamore, hawthorn, dog rose, hazel, blackthorn, elder *Sambucus nigra*, field maple *Acer campestre*, honeysuckle *Lonicera sp.* and oak (**Annex 5: Photograph 26**).
- 3.2.27. All hedgerows within the Survey Area can be considered as Priority Habitats under Section 7 of the Environment (Wales) Act 2016⁹.

J2.1.2 – INTACT SPECIES-POOR HEDGE

- 3.2.28. There were seven intact species-poor hedge within the Survey Area, these consisted of similar species as in the species-rich hedges described above, however, each hedge consisted of fewer than five woody, native species (**Annex 5: Photograph 27**).
- 3.2.29. All hedgerows within the Survey Area can be considered as Priority Habitats under Section 7 of the Environment (Wales) Act 2016⁹.

J2.2.2 – DEFUNCT SPECIES-POOR HEDGE

- 3.2.30. There were two species-poor defunct hedges within the south of the Survey Area. These consisted of hawthorn, hazel and blackthorn, with some meadowsweet *Filipendula ulmaria* dispersed amongst the woody species.
- 3.2.31. All hedgerows within the Survey Area can be considered as Priority Habitats under Section 7 of the Environment (Wales) Act 2016⁹.

J2.5 – WALL

- 3.2.32. Stone walls within the Survey Area were present as boundary features between land parcels (**Annex 5: Photograph 28**).

J3.6 – BUILDINGS

- 3.2.33. Three agricultural or residential complexes and a barn were recorded within the Survey Area. See Section 3.3 for further information about each of the building complexes including a description and details on their suitability to support roosting bats. Further information about the suitability of habitats to support other species such as birds within the Survey Area is described in Section 3.4. These suitable habitats include buildings.

J4 – BARE GROUND

- 3.2.34. Bare ground was present as the country lane which was running north-south through the centre of the Survey Area in the north.

J5 – OTHER HABITAT

- 3.2.35. Other habitat was assigned to built-up areas within the Survey Area which could not be assigned as buildings or hardstanding, for example. residential gardens or similar.

HS – HARDSTANDING

- 3.2.36. Hardstanding was present within the Survey Area surrounding built up areas for agricultural or residential purposes.

NA – NOT ACCESSED

- 3.2.37. There was one area of the Survey Area which could not be accessed nor assigned a habitat type from a vantage point. This area is shown in the south of the Survey Area in **Figure 5B.9**. It appears to be associated with the southern-most agricultural complex.

3.3. DAYTIME BAT WALKOVER

BUILDINGS

- 3.3.1. Three agricultural or residential complexes and a barn were recorded within the Survey Area. Of these, the barn and one farm shed within one of the agricultural complexes could be assessed for their potential for supporting roosting bats. Restricted access to residential and farm complexes meant that the remaining buildings could not be assessed. Photographs are provided in **Annex 5** where available. These are shown on **Figure 5B.9** as B1-2 and detailed in **Table 3-8** below:

Table 3-8 - Descriptions and bat roosting suitability of buildings within the Survey Area

Building ID	Description	Suitability	Photo Reference (Annex 5)
B1	A barn/shed with a corrugated metal roof and open sides with metal supports. Due to how exposed it was, B1 was considered Low suitability for roosting bats (however may provide suitability for roosting or nesting birds).	Low	29
B2	A farm shed with a corrugated metal roof and walls. Some limited potential for roosting bats	Low	30

Building ID	Description	Suitability	Photo Reference (Annex 5)
	due to gaps above the shed doors. (May also provide suitability for roosting or nesting birds).		

3.3.2. The remaining buildings within the Survey Area could not be accessed in order to assess their suitability to support roosting bats, however, due to age and condition, all unassessed buildings are considered to be suitable to support roosting bats as a precaution. These are shown as B3-6 in **Figure 5B.9**.

3.3.3. Although not assessed in detail for other species, it is likely that buildings within the Survey Area may also provide suitable habitat for nesting birds, as well as potentially for including birds listed on Schedule 1 of the WCA such as barn owl *Tyto alba*.

TREES

3.3.4. Sixteen trees were recorded as having suitability for roosting bats during the survey. Of these, T1-T13 were recorded within the Survey Area. T14-T16 were just outside the Survey Area following a site boundary change. T14-T16 have been referenced below for completeness but are not considered likely to be impacted and will not be considered further in this report. Photographs of T1-T16 are provided in **Annex 5** where available. These are shown on **Figure 5B.9** as T1-T16 and detailed in **Table 3-9** below:

Table 3-9 – Descriptions and bat roosting suitability of trees within the Survey Area

Tree ID	Description	Suitability	Photo Reference (Annex 5)
T1	Dead tree with lifting bark and a knot hole on the eastern aspect, approximately 4m high	FAR	NA
T2	Oak tree located next to a fence with a knothole on its limb.	FAR	31
T3	Oak tree with knot hole on eastern branch.	FAR	32
T4	Ash tree with woodpecker hole approximately 6m high on its southern aspect.	FAR	33
T5	A small oak with two holes within stems. One hole was a woodpecker hole approximately 3m high on a stem. The other hole was a knothole approximately 6m high on another stem.	FAR	34
T6	An oak tree located next to a fence with a knothole approximately 4m high.	FAR	35

Tree ID	Description	Suitability	Photo Reference (Annex 5)
T7	An oak tree with a knothole which may go in further than the eye could see.	FAR	36
T8	An oak tree with two knotholes.	FAR	37
T9	An oak tree with a knothole on the limb.	FAR	38
T10	An oak tree with a split limb overhanging a ditch.	FAR	49
T11	An oak tree with a knothole on a limb approximately 6m high.	FAR	40
T12	An oak tree with a knothole on a limb approximately 8m high.	FAR	41
T13	A tree with a knothole on its eastern aspect, approximately 6m high.	FAR	42
T14	Hazel on the northern side of a stream with a woodpecker hole on a branch on its southeastern aspect.	FAR	43
T15	Hazel next to a stream with two holes on separate stems.	FAR	44
T16	A tree with two features approximately 10m high.	FAR	45

- 3.3.5. The northern parcel of broadleaved semi-natural woodland could not be fully accessed and therefore trees in this parcel have not been assessed for their suitability to support roosting bats. However, this area was accessed fully during the 2026 survey, and is reported upon in **Appendix 5B** of the ES.

3.4. PROTECTED AND NOTABLE SPECIES ASSESSMENT

- 3.4.1. The potential for the Survey Area to support legally protected species and notable species has been assessed using the observations made during the habitat survey within the Survey Area. Habitats present within the Survey Area are suitable for the following species; further consideration is given below to the likelihood for these species to be present within the Survey Area:

- Bats;
- Badger;
- Hazel dormouse;
- Otter;
- Hedgehog *Erinaceus europaeus*;

- Brown hare *Lepus europaeus*;
- Reptiles;
- Amphibians;
- Birds;
- Invertebrates
- INNS; and
- Notable plants.

3.4.2. The Survey Area does not provide suitable habitat for other protected or notable species, beyond those listed above. Therefore no other species will be considered further in this PEA.

BATS

3.4.3. Records of seven species of bat were identified within 10km of the Combined Site in the desk study. This included brown long-eared bat *Plecotus auritus*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, Daubenton's bat, *Myotis daubentonii*, lesser horseshoe bat *Rhinolophus hipposideros*, Natterer's bat *Myotis nattereri* and noctule *Nyctalus noctula*. There were also records of myotis and pipistrelle bats not identified to species level.

3.4.4. The Survey Area had suitable habitat to support roosting bats due to the suitability of buildings and trees present within broadleaved semi-natural woodland habitat (see Section 3.3). Furthermore, linear habitats provided suitable commuting corridors and foraging opportunities. Within the Survey Area, these included hedgerows, lines of trees, dry-stone walls and rivers.

BADGER

3.4.5. One record of badger was identified within 1km of the Combined Site in the desk study.

3.4.6. No signs of badgers or setts were recorded within the Survey Area, however, suitable habitat for foraging badger existed within the Survey Area in the form of woodland and grassland habitats. The woodland habitat also provided suitable opportunities for sett excavation.

HAZEL DORMOUSE

3.4.7. No records of hazel dormice were identified within 1km of the Combined Site in the desk study.

3.4.8. Suitable habitat for supporting dormice existed within the Survey Area in the form of woodland, lines of trees, hedgerows and dense scrub habitat. This habitat was assessed as suitable for foraging, commuting and nest building activities.

OTTER

3.4.9. One record of otter was identified within 1km of the Combined Site in the desk study.

3.4.10. No spraints or other signs of otter were identified within the Survey Area during the survey, however streams existed within the Survey Area were assessed as being suitable for otter. Streams and wet ditches within the Survey Area were hydrologically connected with Afon Carno and the River Severn. These are not designated for otter but are much larger river systems with suitability for otter.

HEDGEHOG

3.4.11. One record of hedgehog was identified within 1km of the Combined Site in the desk study.

3.4.12. Suitable habitat for supporting foraging and commuting hedgehogs existed within the Survey Area in the form of grassland, woodland and scrub habitat.



BROWN HARE

- 3.4.13. Nine records of brown hare were identified within 1km of the Combined Site in the desk study.
- 3.4.14. The open farmland nature of the Survey Area provided suitable habitat for brown hare. Brown hare will use the open mosaic of grassland, woodland and hedgerow habitat for foraging, commuting and creating forms⁴⁰.

REPTILES

- 3.4.15. Two records of common lizard *Zootoca vivipara* were identified within 1km of the Combined Site in the desk study.
- 3.4.16. Suitable habitat for common and widespread reptiles existed within the Survey Area in the form of scrub, woodland, scree, dry heath and grassland habitats. These habitats could provide suitability for hibernating and basking reptiles. Additionally, suitable hibernacula was identified within the grassland habitat in the form of sheets of corrugated metal, stone, brick wood and log piles (**Annex 4: TN3**). Scree habitat may provide basking opportunities.

AMPHIBIANS

- 3.4.17. Two records of common frog *Rana temporaria* and two records of common toad *Bufo bufo* were identified within 1km of the Combined Site in the desk study.
- 3.4.18. Suitable terrestrial habitat for amphibian species existed within the Survey Area in the form of scrub, marshy grassland and woodland habitat. No suitable pond habitat was recorded within the Survey Area, however, common and widespread species of amphibian such a common frog *Rana temporaria* and common toad *Bufo bufo* may make use of wetter marshy grassland habitat and wet ditches. Furthermore, 13 ponds were identified within 500m of the Combined Site. These included Llyn Mawr Site of Special Scientific Interest (SSSI) which was located 90m west of the Survey Area and Llyn Du SINC which were located 330m west of the Survey Area.

BIRDS

- 3.4.19. A total of 41 species of bird were identified within 1km of the Combined Site in the desk study. These are listed within **Table B-4** of **Annex 2**. Of these, 38 were identified as Local Biodiversity Action Plan (LBAP) species for Powys County Council (PCC)⁴¹, 14 were listed under Section 7 of the Environment (Wales) Act 2016⁹, and five were listed within the WCA. These five species included barn owl (WCA1.1, WCA9), fieldfare *Turdus pilaris* (WCA1.1), goldeneye *Bucephala clangula* (WCA1.2), hoopoe *Upupa epops* (WCA1.1) and red kite (WCA1.1, WCA9).

⁴⁰ Hares do not use burrows as rabbits do, instead they use a form. A form is a small depression in the ground among long grass which is used for shelter and rest.

⁴¹ As listed in the Powys Nature Recovery Action Plan 2022-2032 (Powys Nature Partnership, 2022)

- 3.4.20. Suitable habitat for breeding birds, including birds listed on Schedule 1 of the WCA, existed within the Survey Area in the form of buildings, woodland, scrub and hedgerows.

INVERTEBRATES

- 3.4.21. Thirteen species of notable invertebrates were identified within 1km of the Combined Site in the desk study. These are listed within **Table B-5** of **Annex 2**. All of these species were listed under Section 7 of the Environment (Wales) Act 2016⁹.
- 3.4.22. Overall, the Survey Area had suitability for common and widespread invertebrates due to the poor quality and highly managed grassland habitats present. Of all the habitats within the Survey Area, the less managed habitats such as dry heath/acid grassland mosaic and semi-improved grassland provide more opportunities for invertebrates.

INNS

- 3.4.23. One species of INNS was identified within 1km of the Combined Site in the desk study. This was one record of a non-native species of yellow archangel *Lamiastrum galeobdolon subsp. montanum*.
- 3.4.24. During the habitat survey, no species of INNS was identified, however, it should be noted that an exhaustive INNS survey was beyond the scope of this assessment. INNS may be present within the Survey Area but have remained undetected.

NOTABLE PLANTS

- 3.4.25. One notable plant species was identified within 1km of the Combined Site in the desk study. This included seven records of bluebell *Hyacinthoides non-scripta*, which is listed in schedule 8 of the WCA.
- 3.4.26. Overall, the Survey Area consisted of mostly managed, agricultural habitats. No notable plants were identified during the survey, however, presence cannot be ruled out as a portion of the habitat survey was carried out outside of the optimal botanical season. The habitat survey identified four Priority Habitats within the Survey Area. This included lowland deciduous woodland, hedgerows (including lines of trees), rivers and upland heathland. These habitats are most likely to include notable plant species if present.

4. DISCUSSION AND RECOMMENDATIONS

- 4.1.1. This section considers the potential for effects on designated sites, legally protected species, notable species and notable habitats as a consequence of the Proposed Development. Where further surveys or detailed assessment of potential effects are required in order to design suitable mitigation this is identified.
- 4.1.2. This PEA has been undertaken in the absence of detailed design information pertaining to the Proposed Development. As a result, the assessment and recommendations included below are based on a realistic worst-case scenario and should be re-assessed should the Proposed Development design parameters change.

4.2. PROTECTED SITES

STATUTORY DESIGNATED SITES

- 4.2.1. Due to the nature of the Proposed Development, being an Access Road for Parc Ynni Calon y Gwynt, it is not anticipated that any statutory designated sites designated for bats or birds beyond 2km will be impacted specifically by the Proposed Development. The following discusses those statutory designated sites identified within 2km of the Survey Area or with hydrological connectivity.

International statutory designated sites

- 4.2.2. No international statutory designated sites were identified within 2km of the Survey Area, However, watercourses within the Survey Area have connectivity with the Severn Estuary SAC which lies downstream of the Site.
- 4.2.3. The Habitats Regulations provide strict protection to sites of European and/or international importance. This includes requiring projects or plans to be screened for likely significant effects upon SPAs, SACs and candidate SACs (cSACs). It is, therefore, recommended that a Habitats Regulations Assessment (HRA) Stage 1: Screening assessment is undertaken for the Severn Estuary SAC.
- 4.2.4. Once sufficient design information is available, a report to inform the HRA Screening should be produced to inform the assessment made by the Competent Authority, in this case the Local Planning Authority (LPA), likely in consultation with Natural Resources Wales (NRW). Given the nature of the Proposed Development and the distance between the Site and the SAC, Significant Effects are unlikely, however this cannot be assumed in the absence of detailed design information. Should a Likely Significant Effect (LSE) be identified in the HRA, this would trigger an Appropriate Assessment (Stage 2 of the HRA). This further recommendation is provided within **Table 4-1**.

National statutory designated sites

- 4.2.5. One SSSI was identified within 2km of the Survey Area. This was Llyn Mawr SSSI which was located partially within the Survey Area on its western side.
- 4.2.6. SSSIs are subject to strict protection under the WCA. This requires landowners to maintain these sites in favourable condition and works within these sites are managed by the appropriate national statutory body via the consent process. Certain operations within SSSIs require consent; these are specific to each SSSI. Some operations may require consent even if outside the SSSI, if they will have an effect on the SSSI.

- 4.2.7. As Llyn Mawr SSSI lies within the Survey Area, in the absence of a design, it is possible that it could be impacted by the Proposed Development. Furthermore, it was identified in the desk study that there may be hydrological connectivity with rivers and streams running throughout the Survey Area (**Figure 5B.7**). Work within the SSSI itself should be avoided if possible and ecological best practice must be followed to protect the SSSI from pollution and disturbance. These measures will likely be outlined in a Construction Environmental Management Plan (CEMP) following agreement within the Local Planning Authority (LPA) at planning submission and determination. These avoidance and mitigation measures are detailed within Section 4.5. In the event that Llyn Mawr SSSI is directly impacted by the Proposed Development, consent must be sought from NRW.

NON-STATUTORY DESIGNATED SITES

- 4.2.8. Four non-statutory designated sites were identified within 2km of the Combined Site. Of these there were three recorded within 2km of the Survey Area. These included the B-line, Llyn Mawr Wildlife Trust Reserve and Llyn Du SINC.
- 4.2.9. The B-line was located throughout the entire Survey Area. Further consideration of the B-line in the context of the Proposed Development is required. This could include avoidance of vegetation clearance where practicable to avoid unnecessary fragmentation of the B-line and invertebrate habitat. Habitat restoration or compensation would be required where this is not possible. The creation and/or enhancement of suitable invertebrate habitats within or connected to the B-line should be sought where practicable. See Section 4.7.
- 4.2.10. Llyn Mawr Wildlife Trust Reserve, which is also designated as a SSSI, was located within the Survey Area and therefore measures to protect this site are required. These are discussed in 4.2.7 above.
- 4.2.11. Llyn Du SINC lies 300m west of the Survey Area and also has hydrological connectivity with the Survey Area. Works within the SINC itself is considered unlikely due to the nature of the Proposed Development, however avoidance measures and ecological best practice must be followed to protect the SINC from pollution and disturbance. These measures will likely be outlined in a CEMP.

OTHER HABITATS OF CONSERVATION IMPORTANCE

- 4.2.12. Four AWI parcels were identified within the Combined Site, these were all ASNW and all present within the Survey Area. It is considered that these AWI parcels have potential to be impacted by the Proposed Development as the parcels stretch horizontally across the Access Road. To minimise the impact to these AWI parcels a stepwise approach should be followed as outlined in Chapter 6 of PPW¹⁴. Following this guidance, the first priority would be to avoid removal of AWI as much as possible. If all opportunities to avoid the AWI parcels have been considered and exhausted, the second step would be to minimise the initial impact of the habitat removal. This could be done through retaining as much of the AWI parcel as the design allows and maintaining habitat connectivity as much as possible. Following this, if AWI parcels are still considered to be impacted by the Proposed Development, then mitigation or restoration should be implemented. Compensation will be the final step if mitigation is not considered sufficient. This would involve identifying a compensation site, which should be sought within the Site in the first instance. Planning permission may be refused if these steps cannot be shown to have been worked through sufficiently.
- 4.2.13. Any trees that are required to be removed as part of the Proposed Development should be mitigated by replanting a minimum of three trees to every one tree removed (3:1). This is also referred to in Chapter 6 of PPW¹⁴.

- 4.2.14. In the desk study, a search for Priority Habitats within the Combined Site identified lowland dry acid grassland, lowland heathland, purple moor-grass and rush pastures and upland heathland. Of these, only upland heathland was identified during the habitat survey of the Survey Area, lowland dry acid grassland, lowland heathland and purple moor-grass and rush pastures were not identified to be present. In total, the habitat survey identified four Priority Habitats within the Survey Area. This included lowland deciduous woodland, hedgerows (including lines of trees), rivers and upland heathland. These are shown in **Figure 5B.8**.
- 4.2.15. Public bodies have an obligation under Sections 6 and 7 of the Environment (Wales) Act 2016⁹ to maintain and enhance Priority Habitats for the purpose of maintaining and enhancing biodiversity in Wales as far as is consistent with the proper execution of their statutory functions. In accordance with PPW¹⁴, this obligation requires Local Planning Authorities to ensure Section 7 listed habitats have been properly considered as part of planning applications and that appropriate measures in line with the stepwise approach will be implemented to maintain and enhance the diversity, extent, condition and connectivity of Priority Habitats present on a Site.
- 4.2.16. Impacts to all Priority Habitats should be avoided where possible. A stepwise approach should be taken as described for AWI parcels in 4.2.15. and as outlined in Chapter 6 of PPW¹⁴, with the first priority being to avoid removal of Priority Habitats where possible. In unavoidable, steps should be taken to minimise, mitigate and, as a last resort, compensate for the loss or damage to a Priority Habitat.
- 4.2.17. In the desk study a search for waterbodies and watercourses identified 13 waterbodies within 500m of the Combined Site, as well as several tributaries which run from within the Combined Site and the Survey Area into Afon Carno, Nant Cwmgerwyn and Nant y Llyn Mawr. These rivers all eventually run into the River Severn. Environmental good practice measures should be included within the CEMP to include measures to avoid impact to watercourses within the Survey Area and connected watercourses, such as pollution.
- 4.2.18. Waterbodies should also be protected by following environmental best practice. Eight waterbodies were identified to lie within 500m of the Survey Area. The locations of these eight waterbodies are shown in **Figures 5B.7 and 5B.8** and a labelled as Pond 1-8.

4.3. PROTECTED AND NOTABLE SPECIES

BATS

- 4.3.1. All species of bats recorded within the UK are protected from killing, injury and disturbance⁴² and their roosts protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the WCA (as amended) with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licensed by NRW for certain purposes.

⁴² Disturbance is defined within the Habitats Regulations as that which is likely to impair a species ability to survive, breed or reproduce, hibernate or migrate or to significantly affect the local distribution or abundance of the species.

- 4.3.2. Certain species of bats, including the Bechstein's bat *Myotis bechsteinii*, greater and lesser horseshoe bats, noctule bat, brown long eared bat and soprano pipistrelle bat are also listed as Priority Species under Section 7 of the Environment (Wales) Act 2016⁹. Public bodies have an obligation under Sections 6 and 7 of the Act to maintain and enhance habitats for these species as far as is consistent with the proper execution of their statutory functions. For development, this obligation requires Local Planning Authorities to ensure Section 7 listed species have been properly considered as part of planning applications and that appropriate measures in line with the stepwise approach will be implemented to maintain and enhance their populations if present.
- 4.3.3. The Survey Area has been assessed as having suitability for supporting roosting, foraging and commuting bats.
- 4.3.4. The Proposed Development has the potential to present the following risks to bats:
- Disturbance to bats roosting in suitable buildings and trees.
 - Disturbance to roosting, foraging and commuting bats caused by artificial lighting, should it be required during construction and operational phases.
 - Loss of suitable roosting habitat, such as buildings and trees with bat roosting potential.
 - Loss of discrete areas of suitable commuting and foraging habitat.
- 4.3.5. Further surveys for roosting bats will be required (see **Table 4-1**).

BADGER

- 4.3.6. The Protection of Badgers Act 1992 makes it illegal to wilfully kill, injure or take any badger, or attempt to do so. It also makes it an offence to intentionally or recklessly damage, destroy or obstruct access to any part of a badger sett. Activities that would otherwise constitute an offence under this legislation may be licensed by NRW for certain purposes.
- 4.3.7. No evidence of badger was recorded within the Survey Area during the habitat survey. However, suitable habitat for foraging badger was recorded throughout the Survey Area with sett excavation opportunities within broadleaved semi-natural woodland. Furthermore, badgers are highly mobile and can quickly excavate new setts, meaning that their presence should not be ruled out.
- 4.3.8. The Proposed Development has the potential to present the following risks to badgers:
- Damage to a sett or disturbance of a badger using a sett during vegetation clearance and construction activities.
 - Loss of suitable habitat for badger.
 - Harm to badgers from moving plant or entrapment in excavations.
- 4.3.9. To control the risk of harm to badgers away from their setts, site clearance and excavation works should be completed under a Precautionary Method of Works (PMoW), as detailed in a CEMP. Further surveys for badger will be required (see **Table 4-1**).

HAZEL DORMOUSE

- 4.3.10. Dormice are protected from killing, injury and disturbance and their places of rest or shelter (occupied habitat) protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the WCA with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licensed by NRW for certain purposes.

- 4.3.11. Dormice are also listed as Priority Species under Section 7 of the Environment (Wales) Act 2016⁹. Public bodies have an obligation under Sections 6 and 7 of the Act to have regard for these species.
- 4.3.12. No evidence of dormouse was recorded in the Survey Area, however, suitable habitat existed within the Survey Area in the form of broadleaved woodland, lines of trees and hedgerows.
- 4.3.13. The Proposed Development has the potential to present the following risks to dormice:
- Disturbance to dormice and their places of rest/shelter.
 - Loss of suitable habitat for dormice.
- 4.3.14. Further surveys for dormice will be required (see **Table 4-1**).

OTTER

- 4.3.15. The otter is protected from killing, injury and disturbance and its place of rest or shelter (holt) is protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the WCA with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licensed by NRW for certain purposes.
- 4.3.16. Otters are also listed as Priority Species under Section 7 of the Environment (Wales) Act 2016⁹. Public bodies have an obligation under Sections 6 and 7 of the Act to have regard for these species.
- 4.3.17. Suitable otter habitat was recorded during the survey in the form of streams and wet ditches within the Survey Area which had connectivity with Afon Carno and the River Severn.
- 4.3.18. The Proposed Development has the potential to present the following risks to otter:
- Disturbance to otters and/or their resting places.
 - Disturbance to otters caused by artificial lighting, should it be required.
 - Loss of suitable habitat.
- 4.3.19. Further surveys for otter will be required (see **Table 4-1**).

HEDGEHOG

- 4.3.20. Hedgehogs are listed on Schedule 6 of the WCA. This protects hedgehog from certain methods of killing or taking.
- 4.3.21. No hedgehogs were recorded during the survey, however records of hedgehog were returned as part of the desk study, and suitable habitat was recorded within the Survey Area.
- 4.3.22. The Proposed Development has the potential to present the following risks to hedgehog:
- Killing/injury through vegetation clearance/other intrusive works.
 - Loss of suitable habitats.
- 4.3.23. To prevent this, any removal of suitable habitat should be carried out in the presence of an Ecological Clerk of Works (ECoW) and under a PMoW, as detailed in a CEMP. No further surveys are required.

BROWN HARE

- 4.3.24. Brown hare is listed as a Priority Species under Section 7 of the Environment (Wales) Act 2016⁹. Public bodies have an obligation under Sections 6 and 7 of the Act to have regard for these species.

- 4.3.25. The open farmland nature of the Survey Area provided suitable habitat for brown hare.
- 4.3.26. The Proposed Development has the potential to present the following risks to brown hare:
- Killing/injury through vegetation clearance/other intrusive works.
 - Loss of suitable habitats.
- 4.3.27. To prevent this, any removal of suitable habitat should be carried out in the presence of an ECoW and under a PMoW, as detailed in a CEMP. No further surveys are required.

REPTILES

- 4.3.28. Native widespread reptile species (common lizard, adder *Vipera berus*, grass snake *Natrix helvetica* and slow worm *Anguis fragilis*) are partially protected under Schedule 5 of the WCA. This includes protection from killing and injury.
- 4.3.29. All reptile species are also listed as Priority Species under Section 7 of the Environment (Wales) Act 2016⁹. Public bodies have an obligation under Sections 6 and 7 of the Act to have regard for these species.
- 4.3.30. Habitat suitable to support reptiles is present throughout the Survey Area including hibernation and basking opportunities.
- 4.3.31. The Proposed Development has the potential to present the following risks to reptiles:
- Killing/injury through vegetation clearance/other intrusive works.
 - Loss of suitable habitats.
- 4.3.32. To prevent this, any removal of suitable habitat should be carried out in the presence of an ECoW and under a PMoW, as detailed in a CEMP. No further surveys are required.

AMPHIBIANS

- 4.3.33. GCN are protected from killing, injury and disturbance and their places of rest or shelter (occupied habitat) protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the WCA with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licensed by NRW for certain purposes.
- 4.3.34. GCN, common frog, common toad, palmate newt *Lissotriton helveticus* and smooth newt *Lissotriton vulgaris* are listed as a Priority Species under Section 7 of the Environment (Wales) Act 2016⁹. Public bodies have an obligation under Sections 6 and 7 of the Act to have regard for these species.
- 4.3.35. Suitable habitat for common and widespread amphibians in their terrestrial life stage was identified within the Survey Area. Furthermore, Ponds 1-8 were identified within 500m of the Survey Area which may provide suitable habitat for amphibians including GCN, as shown in **Figure 5B.8**. The

Survey Area lies right on the edge of the known distribution of GCN within Wales⁴³. This means that their presence is less likely than in other parts of the country but cannot be ruled out.

4.3.36. The Proposed Development has the potential to present the following risks to amphibians:

- Killing, injury and/or disturbance to GCN and/or their place of rest or shelter.
- Killing/injury of amphibians through vegetation clearance/other intrusive works
- Removal of suitable terrestrial habitats.

4.3.37. Further surveys for GCN will be required (see **Table 4-1**).

4.3.38. Additionally, to protect common and widespread amphibians, any removal of suitable habitat should be carried out in the presence of an ECoW and under a PMoW, as detailed in a CEMP.

BIRDS

4.3.39. The Habitat Regulations 2017 Part 1 Regulation 10(2) & (3) state that local authorities '*must take such steps in the exercise of their functions as they consider appropriate to contribute to...the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK including by means of the upkeep, management and creation of such habitat...*'. The legislation continues to state that economic and recreation requirements must be taken into consideration in considering which measures are appropriate.

4.3.40. Under the WCA all wild birds are protected from killing and injury, and their nests and eggs protected from taking, damage and destruction whilst in use. Additional protection is extended to species listed under Schedule 1 of the Act, meaning it is also an offence to disturb these species at or near the nest, or whilst they have dependent young.

4.3.41. Suitable habitat for breeding birds, including birds listed on Schedule 1 of the WCA, existed within the Survey Area in the form of buildings, woodland, scrub and hedgerows.

4.3.42. Should suitable habitat be impacted, the Proposed Development presents the following risks to birds:

- Loss of potential breeding, commuting and foraging bird habitat.
- Destruction of active nests through vegetation clearance.
- Disturbance of birds while nesting or with dependent young.

4.3.43. To prevent this, any removal of suitable habitat should be carried out outside of the breeding bird season (March-September incl.). If this is not possible, then works should be carried out following a pre-work check to identify Schedule 1 species in the presence of an ECoW and under a PMoW, as detailed in a CEMP.

4.3.44. No further ornithological surveys are recommended for the Proposed Development, however, further ornithological surveys of the Main Site have been commissioned to BSG Ecology and therefore any

⁴³ Oldham R.S., Keeble J., Swan M.J.S., and Jeffcote M. (2000) Evaluating the suitability of habitat for the great crested newt. *Herpetological Journal* 10: 143-155



further ornithological recommendations beyond those outlined in this report are provided separately (see **Chapter 6: Ornithology** and the associated appendices).

INVERTEBRATES

- 4.3.45. Several invertebrate species are listed under Section 7 of the Environment (Wales) Act 2016⁹. Public bodies have an obligation under Sections 6 and 7 of the Act to have regard for these species.
- 4.3.46. The desk study identified that Section 7 listed invertebrates are present in the vicinity of the Site. Common and widespread habitats within the Survey Area were considered suitable to support mainly common invertebrate species.
- 4.3.47. The Proposed Development has the potential to result in the loss of suitable habitat for invertebrates.
- 4.3.48. Targeted invertebrate presence/likely absence surveys are not considered necessary, however enhancement measures to ensure the Survey Area remains suitable for invertebrates are included in Section 4.7.

INNS

- 4.3.49. Some INNS are listed on Schedule 9 of the WCA. It is an offence to plant or otherwise cause these species to grow in the wild.
- 4.3.50. Presence of INNS was not recorded within the Survey Area, however, a record of a non-native species of yellow archangel was identified in the desk study. The presence of INNS species within the Survey Area cannot be ruled out. For these reasons, the Proposed Development may present a risk causing Schedule 9 WCA plant species to spread, resulting in an offence under the WCA.
- 4.3.51. Suitable measures to ensure any INNS which may be present do not spread from activities associated with the Proposed Development should be followed. These measures should be detailed in an INNS management plan, which should be presented within the CEMP. A pre-works check should be undertaken to confirm the spread of any ONNS. In the event of any vegetation clearance where INNS may be present, clearance works should be carried out in the presence of an ECoW and under a PMoW, as detailed in a CEMP.

NOTABLE PLANTS

- 4.3.52. Presence of notable plant species cannot be ruled out within the Survey Area. It is considered that presence of notable plants is most likely within Priority Habitats. Priority Habitats should be avoided as far as possible, and any impact should be mitigated for as per the stepwise approach.

4.4. FURTHER RECOMMENDATIONS

- 4.4.1. Potential ecological constraints for which further surveys are recommended are listed in **Table 4-1**. These are required to ensure legal and planning policy compliance.

Table 4-1 - Further Survey Requirements and Recommendations

Ecological Receptor	Potential Constraints	Further Survey Requirements	Seasonal Constraints
International statutory designated sites	Impact to Severn Estuary SAC.	A HRA Stage 1: Screening assessment – is recommended to be undertaken. This would assess the potential for Likely Significant Effects (LSEs) on the Severn Estuary SAC.	N/A
Bats	Risk of disturbance to bats roosting in suitable buildings and trees. Risk of disturbance to roosting, foraging and commuting bats caused by artificial lighting, should it be required.	PRF inspection surveys for trees –likely to be directly impacted by the Proposed Scheme where safe aerial access is possible. Repeat inspections may be required. And emergence surveys may be required in lieu of internal inspections if safe access is not possible.	Internal inspections and PRF inspection surveys for trees including aerial tree climbing surveys can be carried out at any time of year. Emergence surveys can be carried out between May – September incl.
Badger	Risk of damage or disturbance to a sett or a badger using its sett during vegetation clearance activities of woodland habitat. Risk of loss of suitable habitat.	A pre-works check – of suitable habitat within the Survey Area (which cannot be retained) to determine presence of badgers/setts prior to the commencement of the Proposed Development/clearance of suitable habitat.	Badgers can build setts at any time of year. Licences to exclude and close setts are typically only issued for use between 1st July and 30th November.

Ecological Receptor	Potential Constraints	Further Survey Requirements	Seasonal Constraints
Hazel dormouse	Risk of disturbance to dormice and their places of rest/shelter. Risk of loss of suitable habitat.	Further dormouse surveys – of suitable dormouse habitat within the Survey Area (which cannot be retained) to determine presence or likely absence of dormice. This would involve the placement of at least 50 nest tubes to be checked monthly over the survey period.	Dormouse surveys can take place between April-November incl.
Otter	Risk of disturbance to otters and/or their places of shelter via direct impact and/or artificial lighting. Risk of loss of suitable habitat.	Otter survey – to be carried out of all suitable habitat to establish presence/likely absence of otter.	Surveys and can be carried out at any time of the year but should be conducted in different months. One survey is recommended to be conducted to inform the planning application stage of the Proposed Development.
GCN	Risk of killing, injury and/or disturbance to GCN and/or their place of rest or shelter.	Habitat Suitability Index (HSI) – to be carried out of all ponds within 500m of the Survey Area to establish suitability for GCN. Environmental DNA (eDNA) – to be carried out of all ponds within 500m of the Survey Area with suitability for GCN to establish presence/absence (where access allows)..	HSI and surveys can be carried out at any time of the year. eDNA surveys can be undertaken between April – June.

4.5. PRELIMINARY AVOIDANCE, MITIGATION AND COMPENSATION MEASURES

- 4.5.1. To enable compliance with relevant legislation and planning policy, as described above within Section 4.2, 4.3 and 4.4, the following avoidance, mitigation and compensation measures should be designed into the Proposed Development. These will be refined following completion of further surveys recommended in **Table 4-1**.
- Avoidance of all works within Llyn Mawr SSSI. SSSI assent will be required if works within Llyn Mawr SSSI are required or adjacent works could impact the SSSI.
 - Avoidance of works within the B-line designation. Where this is not possible, works should be micro-sited to avoid the habitats of highest suitability for invertebrates. In addition, areas suitable for habitat creation and/or enhancement would be required to compensate for the impact. Habitat creation and enhancements to include planting of pollinator friendly plant species to encourage higher suitability for invertebrates.
 - Avoidance of all works within Priority Habitats, AWI parcels and habitats suitable for protected species. Where designs do indicate an impact to such habitats, a stepwise approach should be followed to minimise the impacts as outlined in Chapter 6 of PPW¹⁴.
 - Production of a CEMP to ensure that works are carried out as per environmental best practice to avoid indirect impacts to habitats outside the works footprint. Details are to be agreed with the Local Planning Authority (LPA).
 - The CEMP will also include details of a PMoW for hedgehog, brown hare, reptiles, amphibians, breeding birds and INNS.
 - Retain all trees where practicable, particularly those of higher conservation value i.e. black poplar. In the event that trees should be removed, this should be mitigated by replanting a minimum of three trees to every one tree removed (3:1).
 - In the event that further surveys identify the presence of bat roosts, dormice within the Site, otter resting places within 200m of the Site or GCN breeding in ponds within 500m of the Site then additional avoidance measures may be required. Where impacts on these receptors cannot be avoided then appropriate mitigation, compensation and licencing may be required. Details of these measures will be provided within the relevant survey reports.
 - an active badger sett is discovered during pre-works checks an appropriate exclusion zone must be set up with no works to occur within it. If works cannot be avoided within the exclusion zone, a licence to exclude/close the sett may be required.
 - If required, artificial lighting should be designed to minimise impacts on foraging and commuting bats and otters, as per environmental best practice (Section 4.6).
 - In the event that INNS are found to be present at any point in advance of, or during works an appropriate exclusion zone must be set up with no works to occur within it. An INNS management plan should be followed as presented within the CEMP. If areas where INNS are present cannot be avoided, these should be treated and removed by a suitably certified contractor.

4.6. ENVIRONMENTAL GOOD PRACTICE

- 4.6.1. The ecological measures described above are based on the assumption that general industry good practice environmental protection measures will be implemented during the construction phase of the Proposed Development. Such measures include good environmental practice guidance outlined in the Guidance for Pollution Prevention produced by NRW, the Northern Ireland Environment

Agency (NIEA), the Scottish Environment Protection Agency (SEPA) and the Oil Care Campaign (see NetRegs.org.uk⁴⁴) and those outlined by the Construction Industry Research and Information Association guidance⁴⁵. The following minimum standards must be adhered to prevent ecological impacts beyond the Survey Area boundary:

- Measures must be taken to prevent dust and other emissions from construction affecting land beyond the Survey Area.
- Chemicals and fuels must be stored in secure containers located away from watercourses or waterbodies. Spill kits must be available.
- Excavations must be covered or securely fenced (with no potential access points beneath fencing) when the Site is closed (e.g., overnight) to prevent entrapment of animals.
- Retained trees must be protected in accordance with BS5837;
- Noise and vibration must be controlled and kept to the minimum necessary.
- Lighting used for construction should be sensitive to commuting bats and otters. For example, it must be switched-off when not in use and positioned so as not to spill on to adjacent land, retained vegetation or river habitat within or adjacent to the Site.

4.7. ECOLOGICAL ENHANCEMENT OPPORTUNITIES

- 4.7.1. PPW¹⁴ states *‘By protecting, maintaining and enhancing biodiversity, increasing the resilience of ecosystems and our natural environment more generally, it will be possible to future proof economic assets in response to the challenges presented by the climate emergency, to promote low carbon and appropriate resource choices which address the causes of climate change and to provide cost effective ecosystems services such as clean air and water.’* At a local level, the Powys Nature Recovery Action Plan 2022-2032¹⁶ aims: *“...to halt and reverse the declines in biodiversity across Powys”*.
- 4.7.2. Net Benefit for Biodiversity in association with development is encouraged by PPW¹⁴ and under Section 6 of Part 1 of the Environment (Wales) Act 2016⁹. The below recommendations aim to comply with a NBB approach, in the way of delivering an overall improvement in biodiversity. By engaging with these recommendations in the early stages of the Proposed Development, it is hoped that ecosystem resilience and wider ecosystem benefits can be achieved. This approach will support local authorities in achieving their Section 6 duty to *“maintain and enhance biodiversity ... and in so doing promote the resilience of ecosystems”* when determining planning applications.
- 4.7.3. Any measures to be considered to provide a net benefit for biodiversity must be above and beyond any measures required to mitigate and compensate for impacts from the Proposed Development. To encourage compliance with planning policy the following measures are recommended for inclusion where appropriate within the Proposed Development. These measures should be included within an NBB report and outline Habitat Management Plan (oHMP):

⁴⁴ <http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/>

⁴⁵ CIRIA (2015) Environmental good practice on site (fourth edition) (C741) Charles, P., Edwards, P (eds). CIRIA, London.

- Inclusion of bat boxes on the sides of buildings or on trees.
- Inclusion of nesting bird boxes on the sides of buildings or on trees.
- Inclusion of retained habitats within management of overall design.
- Strengthening protection and planting/habitat features along river corridor through the Site.
- Avoid use of herbicides and/or pesticides.
- Planting of pollinator friendly plant species to encourage higher suitability invertebrates.

4.7.4. It is recommended that a detailed record is maintained of all considerations and decisions associated with the stepwise approach set out in PPW¹⁴ with regard to the avoidance, minimisation, mitigation and compensation of ecological impacts from the Proposed Works, as well as any enhancement measures included. This record should be maintained throughout the design, construction and operation/habitat management phases of the Proposed Development to evidence that a NBB can, or has been delivered as appropriate at each stage, and inform any remedial actions required.

5. CONCLUSIONS

- 5.1.1. In conclusion, the Proposed Development has the potential to impact upon designated sites, Priority Habitats, bats, badger, dormouse, otter, brown hare, reptiles, amphibians including GCN, breeding birds and invertebrates.
- 5.1.2. The following recommendations have been outlined in this report:
- A HRA Stage 1: Screening assessment for the River Severn SAC.
 - Avoidance of all works within Llyn Mawr SSSI. SSSI assent will be required from the LPA if works within Llyn Mawr SSSI are required.
 - Avoidance of all works within the B-line designation. Where this is not possible, habitat creation and/or enhancement would be required.
 - Avoidance of all works within Priority Habitats, AWI parcels and habitats suitable for protected species. A stepwise approach should be followed to minimise the impact on Priority Habitats and AWI parcels as outlined in Chapter 6 of PPW¹⁴.
 - Further surveys are required for Priority Habitats, bats, dormouse, otter and GCN and works should be carried out under a PMoW for badger, hedgehog, brown hare, reptile, amphibians and breeding birds.
 - EPS Development Licenses may be required following surveys in the event bats, dormouse, otter or GCN are discovered.
 - In the event an active badger sett is discovered an appropriate exclusion zone must be set up with no works to occur within it. If works cannot be carried out within appropriate exclusion zone, a licence to exclude/close the sett may be required.
 - Production of a CEMP to ensure that works are carried out as per environmental best practice to avoid indirect impacts within or adjacent to the Site. Details are to be agreed with the LPA. The CEMP will also set out a PMoW.
 - Avoidance of working within exclusion zones around INNS are found to be present. An INNS management plan should be followed as presented within the CEMP. If areas where INNS are present cannot be avoided, these should be treated and removed by a suitably certified contractor.
 - Retain all trees where practicable, particularly those of higher conservation value, i.e. black poplar. Should trees be removed, this should be mitigated by replanting a minimum of three trees to every one tree removed (3:1).
 - If required, artificial lighting should be designed to minimise impacts on foraging and commuting bats and otters, as per environmental best practice.
 - Ecological enhancements to include planting of pollinator friendly plant species to encourage higher suitability for invertebrates.
 -

FIGURES

Figure 5B.1 – Site location

Figure 5B.2 – Statutory designated sites within 2km

Figure 5B.3 – Statutory designated sites of international importance within the relevant search areas of the Site

Figure 5B.4 – SSSI sites designated for bats within 30km

Figure 5B.5 – Non-statutory designated sites within 2km

Figure 5B.6 – Priority Habitats and AWI areas identified within the desk study, within the Combined Site

Figure 5B.7 – Waterbodies within 500m of the Combined Site

Figure 5B.8 – Habitats of conservation importance

Figure 5B.9 – Phase 1 habitat map

Annex 1

**RELEVANT LEGISLATION AND
PLANNING POLICY**



ENGLAND & WALES LEGISLATION AND POLICY CONTEXT

This report has been compiled with reference to relevant wildlife legislation, planning policy and the UK Biodiversity Framework. An overview and context of relevant legislation is provided, with the relevant protection each species groups or species receives summarised in Table 1.

The Wildlife and Countryside Act 1981, (as amended) (WCA)

Protected birds, animals and plants are listed under Schedules 1, 5, 8 respectively of the WCA, while Schedule 9 lists non-native and/or invasive species the spread of which in the wild is prohibited by the WCA. A description of these Schedules and their meaning is provided below.

Under the WCA (England and Wales) all birds, their nests and eggs (with exception of species listed under Schedule 2) are protected by the WCA. It is an offence to:

- Intentionally kill, injure, or take any wild bird,
- Take or destroy an egg of any wild bird.
- Damage or destroy the nest of any wild bird (whilst being built, or in use). Under the WCA the clearance of vegetation within the Site boundary, or immediately adjacent to the survey area during the bird nesting season could result in an offence occurring by the disruption or destruction of nest sites. The bird breeding season can be taken to occur between March - August inclusive, although is subject to variations based on species, geographical and seasonal factors.

Schedule 1

Birds listed under Schedule 1 of the WCA⁴⁶ are afforded additional protection with regard to intentional or reckless disturbance whilst nest-building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Schedule 5

Species listed in Schedule 5 can either be fully protected or be partially protected under Section 9, which makes it unlawful to intentionally:

- Part 1: kill, injure or take;
- Part 2: possess or control (live or dead animal, part or derivative);
- Part 4 (a): damage or destruct any structure used for shelter or protection;
- Part 4 (b): disturb them in a place of shelter or protection;
- Part 4 (c): obstruct access to place of shelter or protection;
- Part 5 (a): sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative);
- Part 5 (b): advertise for buying or selling.

Schedule 8

The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.

Schedule 9

Invasive species listed under Schedule 9 are prohibited from release into the wild and the Act prohibits planting or “causing to grow” in the wild of any plant species listed in Schedule 9. It should be noted that certain bird species listed on Schedule 1 of the WCA are also listed on Schedule 9 to prevent release of non-native and captive individuals, this includes barn owl, red kite, goshawk and corncrake.

Countryside Rights of Way Act 2000 (CRoW Act)

The CRoW Act has amended the WCA in England and Wales strengthening the protection afforded to Sites of Special Scientific Interest (SSSI) and the legal protection for threatened species. It adds the word ‘reckless’ to the wording of the offences listed under Section 9(4) of the WCA. This alteration makes it an offence to recklessly commit an offence, where previously an offence had to be intentional to result in a breach of legislation.

⁴⁶ To view the current list of Schedule 1 listed birds visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/1> [Accessed 01/11/2023].

Natural Environment and Rural Communities (NERC) Act 2006

Species and Habitats of Principal Importance in England are listed under Section 41 and Section 42 respectively of the NERC Act. The Section 41 and 42 lists detail species that are of principal importance for the conservation of biodiversity in England and should be used to guide decision-makers such as local and regional authorities when implementing their duty to have regard for the conservation of biodiversity in the exercise of their normal functions – as required under Section 40 of the NERC Act 2006.

The Environment (Wales) Act 2016

The Environment (Wales) Act 2016 (<http://www.legislation.gov.uk/anaw/2016/3/contents/enacted>) puts in place the legislation needed to plan and manage Wales' natural resources in a more proactive, sustainable and cohesive way. Section 7 replaces the duty in Section 42 of the NERC Act 2006 and it places a duty on the Welsh Ministers to publish, review and revise lists of living organisms and types of habitats which they consider are of key significance to sustain and improve biodiversity in Wales. The species and habitat lists are identical to those in Section 42 but it should be noted it is currently under review (23.03.2017).

The Protection of Badgers Act (1992)

It is an offence to wilfully take, kill, injure, possess or ill-treat a badger. Under the Act their setts are protected against intentional or reckless interference. Sett interference includes damaging or destroying a sett, obstructing access to any part of the sett, or disturbance of a badger whilst it is occupying a sett. The Act defines a badger sett as 'any structure or place, which displays signs indicating the current use by a badger' and Natural England (NE) takes this definition to include seasonally used setts that are not occupied but that show sign of recent use by badgers (Natural England, 2009⁴⁷).

If impacts to badgers or their setts are unavoidable then authorised sett disturbance requires a licence.

The UK Post-2010 Biodiversity Framework (2011-2020) (JNCC and DEFRA, 2012)

This Framework lists the UK's most threatened species and habitats and sets out targets and objectives for their management and recovery. The UK Biodiversity Action Plan (BAP) process is delivered nationally, regionally and locally and should be used as a guide for decision-makers to have regards for the targets set by the framework and the goals they aim to achieve. The UK BAP has now been replaced by the UK Post-2010 Biodiversity Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant (UK Post-2010 Biodiversity Framework, 2012⁴⁸).

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations came into force on 30th November 2017, and extend to England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters). In Scotland, the Habitats Directive is transposed through a combination of the Habitats Regulations 2010 (in relation to reserved matters) and the Conservation (Natural Habitats &c.) Regulations 1994. The Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) transpose the Habitats Directive in relation to Northern Ireland.

All species listed under Annex IV of the Habitats Directive require strict protection and are known as European Protected Species (EPS). Under Regulation 42 of the Habitats Regulations it is unlawful to:

- Deliberately kill, capture or disturb;
- Deliberately take or destroy the eggs of; and
- Damage or destroy the breeding site/resting place of any species protected under this legislation.

If the Ecologist determines that impacts to an EPS are unavoidable then the works may need to be carried out under a site-specific mitigation licence from Natural England (NE) or Natural Resources Wales (NRW). Low Impact Class licences are also available in both England and Wales for bats and great crested newts. This enables Registered Low Impact Consultants to undertake certain low impact activities reducing the EPS application paperwork and process length.

⁴⁷ Natural England, June 2009, Protection of Badgers Act 1992 (as amended), Guidance on 'Current Use' in the definition of a Badger Sett WMLG17, Natural England, Peterborough.

⁴⁸ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group), July 2012, UK Post-2010 Biodiversity Framework, Available from: http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf [Accessed 01/11/2023].



Certain EPS are also listed under Annex II of the Habitats Directive and are afforded protection by the establishment of core areas of habitat known as Special Areas of Conservation. This means these species are a relevant consideration in a Habitats Regulations Assessment (HRA).

The Birds Directive seeks to maintain populations of all wild bird species across their natural range (Article 2). All bird species listed under Annex I⁴⁹ of the Birds Directive are rare or vulnerable and afforded protection by the classification of Special Protection Areas (SPAs), these are also designated under all regularly occurring migratory species, with regard to the protection of wetlands of international importance (Article 4). This means these bird species and communities are a relevant consideration in HRA.

⁴⁹ To view birds listed under Annex I visit: http://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index_en.htm [Accessed 01/11/2023]

Table 0-1 - Key Species and National Wildlife Legislation, Policy and Biodiversity Framework Applicable in England & Wales

Table A:1: Key Species and National Wildlife Legislation, Policy and Biodiversity Framework Applicable in England & Wales								
Species	Legislation, Planning Policy and UK Biodiversity Framework							
	Wildlife and Countryside Act 1981 (as amended), (WCA)				The Conservation of /Habitats and Species Regulations 2010 (as amended) (Habitats Regulations) - Regulation 41	Natural Environment and Rural Communities (NERC) Act 2006 / The Environment(Wales) Act (2016)	The Protection of Badgers Act 1992	The UK Post-2010 Biodiversity Framework 2011-2020 (JNCC and DEFRA, 2012)
	Schedule1	Schedule 5	Schedule 8	Schedule 9	European Protected Species (Annex IV of the EC Habitats Directive),			
Badger							✓	
Bats		✓ ⁵⁰ (part)			✓ ⁵¹	✓ ⁵²		✓ ⁵³
Hazel Dormouse		✓ 5(part)			✓	✓		✓
Otter		✓ 5(part)			✓	✓		✓
Water vole		✓ ⁵⁴ (full)				✓		✓
Birds	✓			✓ ⁵⁵		✓ ⁵⁶		✓ ⁵⁷

⁵⁰ These species are partially protected under section 9(4)(b), (4)(c) and (5).

⁵¹ Only Barbastelle (*Barbastella barbastellus*), Bechstein’s bat (*Myotis bechsteinii*), greater horseshoe bat (*Rhinolophus ferrumequinum*) and lesser horseshoe bat (*Rhinolophus hipposideros*) are listed on Annex II of the Habitats Directive.

⁵² Greater horseshoe bat, lesser horseshoe bat, Bechstein’s bat, noctule (*Nyctalus noctula*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*) and barbastelle are listed as Species of Principal Importance in England with the addition of common pipistrelle (*Pipistrellus pipistrellus*) in Wales listed under Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

⁵³ Barbastelle bat, Bechstein’s bat, noctule, soprano pipistrelle, brown long-eared bat, greater horseshoe bat, lesser horseshoe bat are listed as UK BAP species of bat.

⁵⁴ Class Licences are available to Registered Consultants to intentionally disturb, damage or destroy water vole burrows or to displace water voles from their burrows in relation to a development proposal where the licensed action provides a conservation benefit for water voles. Certain displacement operations may be carried out under a Class licence by a registered person in England, however in Wales all displacement operations must be carried out under a site specific licence.

⁵⁵ To view plants and animals listed on Schedule 9 Part 1 visit <http://www.legislation.gov.uk/ukpga/1981/69/schedule/9> [Accessed 01/11/2023]

⁵⁶ There are 49 species of birds listed as Species of Principal Importance in England in Section 41 of the NERC Act 2006 and 51 species in Wales under Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

⁵⁷ To view the current list of UK BAP priority birds visit: <http://jncc.defra.gov.uk/page-5163> [Accessed 01/11/2023].

Table A:1: Key Species and National Wildlife Legislation, Policy and Biodiversity Framework Applicable in England & Wales

Reptiles		✓ ⁵⁸ (part)		✓ ⁹	✓ ⁵⁹	✓ ⁶⁰		✓ ⁶¹
Amphibians		✓ ⁶² (part)		✓ ⁶³	✓ ^{64, 65}	✓ ⁶⁶		
White-clawed Crayfish		✓ ⁶⁷ (partial)			✓ ⁶⁸	✓		✓
Invertebrates		✓ ⁶⁹ (full/part)		✓	✓ ^{70, 71}	✓ ⁷²		✓ ⁷³

⁵⁸ The four common reptile species, Adder (*Vipera berus*), Grass snake (*Natrix natrix*), Common lizard (*Zootoca vivipara*) and Slow worm (*Anguis fragilis*) are offered partial protection under section 9(5). The rarer UK reptile species (Smooth snake (*Coronella austriaca*) and Sand lizard (*Lacerta agilis*)) are partially protected under section 9(4)(b) and (c) and (5).

⁵⁹ Smooth snake (*Coronella austriaca*) and Sand lizard (*Lacerta agilis*) are the only reptiles to be designated as European Protected Species.

⁶⁰ All 6 reptile species are listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006 and 5 species, excluding smooth snake, listed under Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

⁶¹ To view the current list of UK BAP priority herptile species visit: <http://jncc.defra.gov.uk/page-5166> [Accessed 01/11/2023].

⁶² The four common reptile species, Adder (*Vipera berus*), Grass snake (*Natrix natrix*), Common lizard (*Zootoca vivipara*) and Slow worm (*Anguis fragilis*) are offered partial protection under section 9(5). The rarer UK reptile species (Smooth snake (*Coronella austriaca*) and Sand lizard (*Lacerta agilis*)) are partially protected under section 9(4)(b) and (c) and (5).

⁶³ Common frog (*Rana temporaria*), Common toad (*Bufo bufo*), Smooth newt (*Lissotriton vulgaris*) and Palmate newt (*Lissotriton helveticus*) are offered partial protection under section 9(5). Great crested newt (*Triturus cristatus*) and Natterjack toad (*Epidalea calamita*) are offered partial protection under section 9(4)(b) and (c) and (5). Pool frog (*Pelophylax lessonae*) is offered partial protection under section 9(4)(b) and (c)(1) only and with respect to England only.

⁶⁴ Great crested newt, Natterjack toad and Pool frog are the only amphibians to be designated European Protected Species.

⁶⁵ Great crested newt is the only amphibian listed on Annex II of the Habitats Directive.

⁶⁶ Great crested newt, Natterjack toad and Common toad are listed as Species of Principal Importance in England in Section 41 of the NERC Act 2006 and under Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

⁶⁷ Under the Wildlife and Countryside Act it is illegal to take or sell white clawed crayfish under the WCA. A licence is required to survey (hand net or trap) for the species. To undertake work within WCC inhabited rivers a Class Licence maybe issued by the relevant authority to move WCC away from harm prior to works. Although WCC are not protected from killing or injury Natural England state in their Class licence that due to declining numbers all efforts should be made to conserve the species.

⁶⁸ White clawed crayfish are listed under Annex II and V of the Habitats Directive.

⁶⁹ To view the current list of invertebrates that are protected under this Act either in part or full visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/5> [Accessed 01/11/2023].

⁷⁰ The Large blue butterfly (*Maculinea arion*), Fisher's estuarine moth (*Gortyna borelii lunata*) and Lesser whirlpool ram's-horn snail (*Anisus vorticulus*) are the only invertebrates to be designated European Protected Species.

⁷¹ There are currently twelve invertebrates listed in Annex II of the Habitats Directive; White-clawed crayfish (*Austroptamobius pallipes*), Southern damselfly (*Coenagrion mercuriale*), Marsh fritillary butterfly (*Eurodryas aurinia*), Violet click beetle (*Limonicus violaceus*), Stag beetle (*Lucanus cervus*), Freshwater pearl mussel (*Margaritifera margaritifera*), Narrow-mouthed whorl snail (*Vertigo angustior*), Round-mouthed whorl snail (*Vertigo genesii*), Geyer's whorl snail (*Vertigo geyeri*), Desmoulin's whorl snail (*Vertigo moulinsiana*), Lesser whirlpool ram's-horn snail (*Anisus vorticulus*) and Fisher's estuarine moth (*Gortyna borelii lunata*).

⁷² There are currently 379 invertebrate species (not including marine species) listed as Species of Principal Importance in England http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0ahUKEwivvu7J9trSAhXiCsAKHX4TBGcQFggvMAM&url=http%3A%2F%2Fpublications.naturalengland.org.uk%2Ffile%2F6518755878240256&usg=AFQjCNEpiUWYuOqhVcfSDvi_3iK2TJytfQ and 188 species in Wales http://www.eryri-npa.gov.uk/data/assets/pdf_file/0003/486156/SpeciesList.pdf listed under Section 41 of the NERC Act 2006 and listed under Section 7 of the of the Environment (Wales) Act 2016. [Accessed 01/11/2023]

⁷³ To view the current list of UK BAP priority invertebrates visit: <http://jncc.defra.gov.uk/page-5169> [Accessed 01/11/2023].

Table A:1: Key Species and National Wildlife Legislation, Policy and Biodiversity Framework Applicable in England & Wales

Fish		✓ ⁷⁴ (full/part)		✓ ⁹	✓ ^{75, 76}	✓ ⁷⁷		✓ ⁷⁸
Plants			✓ ⁷⁹	✓ ⁹	✓ ^{80, 81}	✓ ⁸²		✓ ⁸³

⁷⁴ To view the current list of fish either part or fully protected under the Act visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/5> [Accessed 01/11/2023].

⁷⁵ Sturgeon (*Acipenser sturio*) is the only fish to be designated a European Protected Species.

⁷⁶ There are eight fish species listed on Annex II of the Habitats Directive. To view the current list visit: <http://jncc.defra.gov.uk/page-1523> [Accessed 01/11/2023].

⁷⁷ There are 35 species of fish listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006 and 10 species in Wales listed under Section 7 of the Environment (Wales) Act 2016.

⁷⁸ To view the current list of UK BAP priority fish visit: <http://jncc.defra.gov.uk/page-5164> [Accessed 01/11/2023].

⁷⁹ To view the current list of Schedule 8 listed plants visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/8> [Accessed 01/11/2023].

⁸⁰ There are nine plant species designated as European Protected Species. To view the current list visit: <http://www.legislation.gov.uk/uksi/2010/490/schedule/5/made> [Accessed 01/11/2023].

⁸¹ To view the current list of plant species on Annex II of the Habitats Directive visit: <http://jncc.defra.gov.uk/page-1523> [Accessed 01/11/2023].

⁸² There are currently 152 vascular plants listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006 and 77 species in Wales listed under Section 7 of the Environment (Wales) Act 2016.³¹ To view the current list of UK BAP priority plants visit: <http://jncc.defra.gov.uk/page-5171> and <http://jncc.defra.gov.uk/page-5168> [Accessed 01/11/2023].

⁸³ To view the current list of UK BAP priority plants visit: <http://jncc.defra.gov.uk/page-5171> and <http://jncc.defra.gov.uk/page-5168> [Accessed 01/11/2023].

Annex 2

DESK STUDY RESULTS

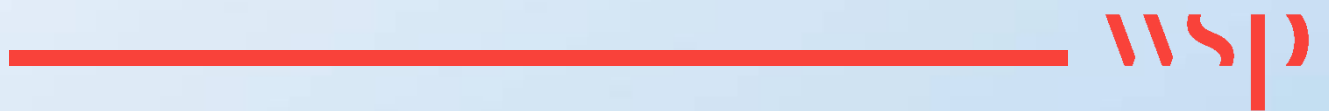


Table B-1 – Records of mammal species within 2km of the Combined Site

Common name	Latin name	Number of records within 2km	Conservation Status
Brown hare	<i>Lepus europaeus</i>	9	S7, LBAP
Eurasian badger	<i>Meles meles</i>	1	BA, LBAP
Eurasian otter	<i>Lutra lutra</i>	1	EPS, WCA5, S7
Eurasian water-shrew	<i>Neomys fodiens</i>	1	LBAP
Weasel	<i>Mustela nivalis</i>	1	LBAP
West European hedgehog	<i>Erinaceus europaeus</i>	1	S7, LBAP

Table B-2 – Records of bat species within 10km of the Combined Site

Common name	Latin name	Number of records within 10km	Conservation Status
Brown long-eared bat	<i>Plecotus auritus</i>	12	EPS, WCA5, S7, LBAP
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	33	EPS, WCA5, S7, LBAP
Daubenton's bat	<i>Myotis daubentonii</i>	5	EPS, WCA5, LBAP
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	1	EPS, WCA5, S7, LBAP
Myotis bat species	<i>Myotis</i>	6	EPS, WCA5
Natterer's bat	<i>Myotis nattereri</i>	5	EPS, WCA5, LBAP
Noctule bat	<i>Nyctalus noctula</i>	7	EPS, WCA5, S7, LBAP
Pipistrelle	<i>Pipistrellus pipistrellus</i>	2	EPS, WCA5, LBAP

Pipistrelle bat species	<i>Pipistrellus</i>	1	EPS, WCA5
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	22	EPS, WCA5, S7, LBAP

Table B-3 – Records of reptile and amphibian species within 2km of the Combined Site

Common name	Latin name	Number of records within 2km	Conservation Status
Common frog	<i>Rana temporaria</i>	2	WCA5, LBAP
Common lizard	<i>Zootoca vivipara</i>	2	WCA5, S7, LBAP
Common toad	<i>Bufo bufo</i>	2	WCA5, S7, LBAP

Table B-4 – Records of bird species within 2km of the Combined Site

Common name	Latin name	Number of records within 2km	Conservation Status
Barn owl	<i>Tyto alba</i>	6	WCA1.1, WCA9, LBAP
Black-headed gull	<i>Chroicocephalus ridibundus</i>	4	S7
Blue tit	<i>Cyanistes caeruleus</i>	2	LBAP
Buzzard	<i>Buteo buteo</i>	3	LBAP
Cormorant	<i>Phalacrocorax carbo</i>	1	LBAP
Cuckoo	<i>Cuculus canorus</i>	4	S7
Curlew	<i>Numenius arquata</i>	3	S7, LBAP
Dunnock	<i>Prunella modularis</i>	2	S7, LBAP
Fieldfare	<i>Turdus pilaris</i>	1	WCA1.1, LBAP

Garden warbler	<i>Sylvia borin</i>	2	LBAP
Goldeneye	<i>Bucephala clangula</i>	3	WCA1.2, LBAP
Goldfinch	<i>Carduelis carduelis</i>	1	LBAP
Goosander	<i>Mergus merganser</i>	3	LBAP
Grasshopper warbler	<i>Locustella naevia</i>	1	S7, LBAP
Great spotted woodpecker	<i>Dendrocopos major</i>	1	LBAP
Great tit	<i>Parus major</i>	20k c	LBAP
Grey wagtail	<i>Motacilla cinerea</i>	1	LBAP
Herring gull	<i>Larus argentatus</i>	2	S7, LBAP
Hoopoe	<i>Upupa epops</i>	1	WCA1.1
House martin	<i>Delichon urbicum</i>	2	LBAP
House sparrow	<i>Passer domesticus</i>	2	S7, LBAP
Kestrel	<i>Falco tinnunculus</i>	5	S7, LBAP
Lesser black-backed gull	<i>Larus fuscus</i>	1	LBAP
Linnet	<i>Linaria cannabina</i>	4	S7, LBAP
Pied wagtail	<i>Motacilla alba</i>	5	LBAP
Red kite	<i>Milvus milvus</i>	5	WCA1.1, WCA9, LBAP
Redstart	<i>Phoenicurus phoenicurus</i>	1	LBAP
Reed Bunting	<i>Emberiza schoeniclus</i>	3	S7, LBAP

Reed warbler	<i>Acrocephalus scirpaceus</i>	1	LBAP
Short-eared owl	<i>Asio flammeus</i>	2	LBAP
Skylark	<i>Alauda arvensis</i>	3	S7, LBAP
Snipe	<i>Gallinago gallinago</i>	1	LBAP
Song thrush	<i>Turdus philomelos</i>	1	S7, LBAP
Stonechat	<i>Saxicola rubicola</i>	3	LBAP
Swallow	<i>Hirundo rustica</i>	2	LBAP
Tree sparrow	<i>Passer montanus</i>	1	S7, LBAP
Tufted duck	<i>Aythya fuligula</i>	5	LBAP
Wheatear	<i>Oenanthe oenanthe</i>	2	LBAP
Whinchat	<i>Saxicola rubetra</i>	3	LBAP
Whitethroat	<i>Curruca communis</i>	1	LBAP
Yellowhammer	<i>Emberiza citrinella</i>	1	S7, LBAP

Table B-5 – Records of invertebrate species within 2km of the Combined Site

Common name	Latin name	Number of records within 2km	Conservation Status
Autumnal rustic	<i>Eugnorisma glareosa</i>	1	S7
Broom moth	<i>Ceramica pisi</i>	1	S7
Dusky brocade	<i>Apamea remissa</i>	1	S7
Feathered gothic	<i>Tholera decimalis</i>	1	S7
Galium carpet	<i>Epirrhoe galiata</i>	1	S7

Garden tiger	<i>Arctia caja</i>	2	S7
Ghost moth	<i>Hepialus humuli</i>	1	S7
Minor shoulder-knot	<i>Brachylomia viminalis</i>	1	S7
Oblique carpet	<i>Orthonama vittata</i>	1	S7
Shaded broad-bar	<i>Scotopteryx chenopodiata</i>	1	S7
Small heath	<i>Coenonympha pamphilus</i>	4	S7
Small pearl-bordered fritillary	<i>Boloria selene</i>	4	S7, LBAP
Wall	<i>Lasiommata megera</i>	1	S7

Table B-6 – Records of notable plant species within 2km of the Combined Site

Common name	Latin name	Number of records within 2km	Conservation Status
Bluebell	<i>Hyacinthoides non-scripta</i>	7	WCA8
Lamium galeobdolon subsp. montanum	<i>Lamium galeobdolon subsp. montanum</i>	1	WCA9, INNS



Annex 3



wsp

PLANT SPECIES RECORDED

Common name	Latin name	Frequency (DAFOR)
A1.1.1 – Broadleaved semi-natural woodland		
Ash	<i>Fraxinus excelsior</i>	A
Bramble	<i>Rubus fruticosus agg.</i>	A
Common nettle	<i>Urtica dioica</i>	A
Gorse species	<i>Ulex sp.</i>	F
Grey willow	<i>Salix cinerea</i>	A
Hawthorn	<i>Crataegus monogyna</i>	A
Hazel	<i>Corylus avellana</i>	A
Holly	<i>Ilex aquifolium</i>	A
Ivy	<i>Hedera helix</i>	F
Pedunculate oak	<i>Quercus robur</i>	A
Silver birch	<i>Betula pendula</i>	A
Wood sorrel	<i>Oxalis acetosella</i>	R
A2.1 – Dense scrub		
Bramble	<i>Rubus fruticosus agg.</i>	D
Common nettle	<i>Urtica dioica</i>	D
Blackthorn	<i>Prunus spinosa</i>	A
Hawthorn	<i>Crataegus monogyna</i>	A
Ash	<i>Fraxinus excelsior</i>	A
Dog rose	<i>Rosa canina agg.</i>	A
Grey willow	<i>Salix cinerea</i>	A
Creeping thistle	<i>Cirsium arvense</i>	O
A3.1 – Broadleaved scattered trees		
Ash	<i>Fraxinus excelsior</i>	A
Blackthorn	<i>Prunus spinosa</i>	F
Crab apple	<i>Malus sylvestris sens.str.</i>	O
Dog rose	<i>Rosa canina agg.</i>	F

Elder	<i>Sambucus nigra</i>	F
Gorse	<i>Ulex sp.</i>	O
Grey willow	<i>Salix cinerea</i>	F
Hawthorn	<i>Crataegus monogyna</i>	A
Hazel	<i>Corylus avellana</i>	A
Holly	<i>Ilex aquifolium</i>	F
Oak	<i>Quercus sp.</i>	F
Poplar species*	<i>Populus sp. (Populus nigra ssp. betulifolia)</i>	LD
Rowan	<i>Sorbus aucuparia</i>	A
Silver birch	<i>Betula pendula</i>	F
A3.3 – Mixed scattered trees		
Ash	<i>Fraxinus excelsior</i>	A
Cherry plum	<i>Prunus cerasifera</i>	F
Cypress	<i>Cupressus sp.</i>	LD
Goat willow	<i>Salix caprea</i>	A
Juniper	<i>Juniperus communis</i>	A
Oak	<i>Quercus sp.</i>	A
Rowan	<i>Sorbus aucuparia</i>	A
Spruce	<i>Picea sp.</i>	A
Sycamore	<i>Acer pseudoplatanus</i>	A
Willow species	<i>Salix sp.</i>	A
B2.2 – Semi-improved neutral grassland		
Bracken	<i>Pteridium aquilinum</i>	O
Cock's-foot	<i>Dactylis glomerata</i>	LD
Common bent	<i>Agrostis capillaris</i>	A
Creeping buttercup	<i>Ranunculus repens</i>	F
Creeping thistle	<i>Cirsium arvense</i>	O

Dandelion	<i>Taraxacum officinale</i> agg.	O
Dove's-foot cranesbill	<i>Geranium molle</i>	O
False oat-grass	<i>Arrhenatherum elatius</i>	F
Foxglove	<i>Digitalis purpurea</i>	O
Knapweed	<i>Centaurea nigra</i>	O
Marsh thistle	<i>Cirsium palustre</i>	O
Perennial rye grass	<i>Lolium perenne</i>	A
Ragwort	<i>Jacobaea vulgaris</i>	O
Rush species	<i>Juncus</i> sp.	O
Sweet vernal grass	<i>Anthoxanthum odoratum</i>	F
Yorkshire fog	<i>Holcus lanatus</i>	A
B4 – Improved grassland		
Annual meadow grass	<i>Poa annua</i>	F
Broadleaved dock	<i>Rumex obtusifolius</i>	O
Common bent	<i>Agrostis capillaris</i>	F
Common nettle	<i>Urtica dioica</i>	A
Creeping thistle	<i>Cirsium arvense</i>	A
Cuckoo flower	<i>Cardamine pratensis</i>	R
Dandelion	<i>Taraxacum officinale</i> agg.	R
Dock species	<i>Rumex</i> sp.	O
Fescue species	<i>Festuca</i> sp.	F
Foxglove	<i>Digitalis purpurea</i>	O
Harebell	<i>Campanula rotundifolia</i>	R
Heath bedstraw	<i>Galium saxatile</i>	O
Marsh thistle	<i>Cirsium palustre</i>	O
Meadow buttercup	<i>Ranunculus acris</i>	F
Mouse-ear chickweed	<i>Cerastium fontanum</i>	F
Perennial rye-grass	<i>Lolium perenne</i>	D

Rush species	<i>Juncus sp.</i>	R
Selfheal	<i>Prunella vulgaris</i>	O
Sorrel	<i>Rumex acetosa</i>	O
Spear thistle	<i>Cirsium vulgare</i>	O
Timothy	<i>Phleum pratense sens.lat.</i>	F
Tormentil	<i>Potentilla erecta</i>	O
Tufted hair-grass	<i>Deschampsia caespitosa</i>	F
White clover	<i>Trifolium repens</i>	O
Yarrow	<i>Achillea millefolium</i>	O
Yorkshire fog	<i>Holcus lanatus</i>	F
B5 – Marshy grassland		
Rush species	<i>Juncus sp.</i>	D
C1.1 - Bracken		
Bracken	<i>Pteridium aquilinum</i>	D
D5 – Dry heath/acid grassland mosaic		
Bell heather	<i>Erica cinerea</i>	R
Bilberry	<i>Vaccinium myrtillus</i>	D
Bracken	<i>Pteridium aquifolium</i>	O
Deergrass	<i>Trichophorum germanicum</i>	O
Dwarf gorse	<i>Ulex minor</i>	D
Foxglove	<i>Digitalis purpurea</i>	R
Gorse	<i>Ulex sp.</i>	D
Hard fern	<i>Blechnum spicant</i>	R
Heath bedstraw	<i>Galium saxatile</i>	O
Heather	<i>Calluna vulgaris</i>	R
Rowan	<i>Sorbus aucuparia</i>	D
Sharp-flowered rush	<i>Juncus acutiflorus</i>	R
Sheep's fescue	<i>Festuca ovina agg.</i>	O

Sweet vernal grass	<i>Anthoxanthum odoratum</i>	R
Tormentil	<i>Potentilla erecta</i>	R
Western gorse	<i>Ulex gallii</i>	O
Willow	<i>Salix sp.</i>	D
H2 – Hedgerow (species poor intact)		
Blackthorn	<i>Prunus spinosa</i>	A
Dog rose	<i>Rosa canina agg.</i>	A
Hawthorn	<i>Crataegus monogyna</i>	A
Hazel	<i>Corylus avellana</i>	A
Holly	<i>Ilex aquifolium</i>	A
Honeysuckle	<i>Lonicera periclymenum</i>	A
H2 – Hedgerow (species rich intact)		
Bilberry	<i>Vaccinium myrtillus</i>	O
Blackthorn	<i>Prunus spinosa</i>	A
Bramble	<i>Rubus fruticosus agg.</i>	F
Common nettle	<i>Urtica dioica</i>	F
Dog rose	<i>Rosa canina agg.</i>	A
Elder	<i>Sambucus nigra</i>	A
Field maple	<i>Acer campestre</i>	A
Hawthorn	<i>Crataegus monogyna</i>	A
Hazel	<i>Corylus avellana</i>	A
Honeysuckle	<i>Lonicera sp.</i>	A
Oak	<i>Quercus sp.</i>	A
Sycamore	<i>Acer pseudoplatanus</i>	A
H2 – Hedgerow (species poor defunct)		
Blackthorn	<i>Prunus spinosa</i>	A
Hawthorn	<i>Crataegus monogyna</i>	A
Hazel	<i>Corylus avellana</i>	A

Meadowsweet	<i>Filipendula ulmaria</i>	F
* These were possibly black poplar <i>Populus nigra ssp. betulifolia</i> which is a rare and declining species of tree in the United Kingdom. This could not be confirmed as these trees can easily be confused with hybrid varieties at this time of year.		

Annex 4

TARGET NOTES **wsp**

Target Note (TN)	Description
TN1	Mammal holes within broadleaved woodland parcel
TN2	Black poplar tree line
TN3	Suitable reptile hibernacula, e.g., sheets of corrugated metal, stone, brick wood and log piles etc...
TN4	Scattered trees
TN5	Scattered scrub
TN6	Gorse scrub

Annex 5

PHOTOGRAPHS **wsp**

Photograph 1 – Broadleaved semi-natural woodland (1)



Photograph 2 – Broadleaved semi-natural woodland (2)



Photograph 3 – Mammal holes within broadleaved semi-natural woodland parcel (TN1)



Photograph 4 – Dense scrub (1)



Photograph 5 – Dense scrub (2)



Photograph 6 – Line of native broadleaved trees



Photograph 7 – Line of poplar (TN2)



Photograph 8 – Line of mixed trees



Photograph 9 – Heavily grazed semi-improved neutral grassland



Photograph 10 – Sheets of corrugated metal and wood piles providing suitable reptile hibernacula (TN3)



Photograph 11 – Scattered ash, rowan and birch along field boundary (TN4)



Photograph 12 – Less intensively grazed semi-improved neutral grassland



Photograph 13 – Southern parcel of semi-improved neutral grassland (1)



Photograph 14 – Southern parcel of semi-improved neutral grassland (2)



Photograph 15 – Improved grassland



Photograph 16 – Scattered gorse scrub



Photograph 17 – Piles of bricks providing suitable reptile hibernacula (TN3)



Photograph 18 – Piles of logs providing suitable reptile hibernacula (TN3)



Photograph 19 – An old, crumbling stone wall providing suitable reptile hibernacula (TN3)



Photograph 20 – Bracken



Photograph 21 – Dry heath/acid grassland mosaic



Photograph 22 – Shallow stream



Photograph 23 – Wet ditch choked with rushes



Photograph 24 – Scree



Photograph 25 – A ploughed field in the south of the Survey Area



Photograph 26 – Intact species-rich hedge



Photograph 27 – Intact species-poor hedge



Photograph 28 –Stone wall field boundary



Photograph 29 – B1



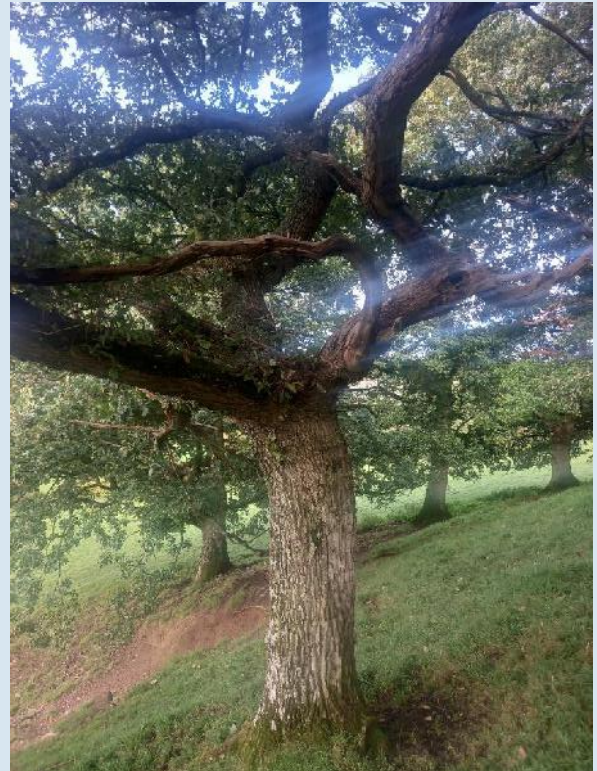
Photograph 30 – B2



Photograph 31 – T2



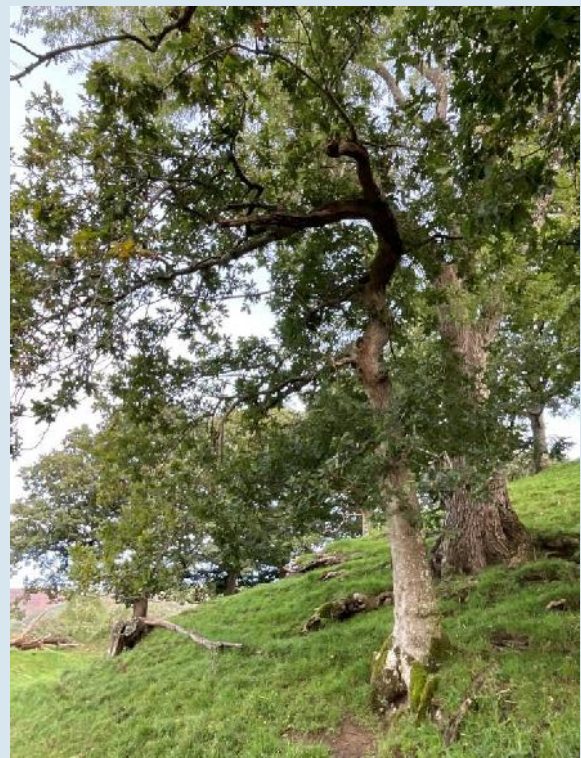
Photograph 32 – T3



Photograph 33 – T4



Photograph 34 – T5



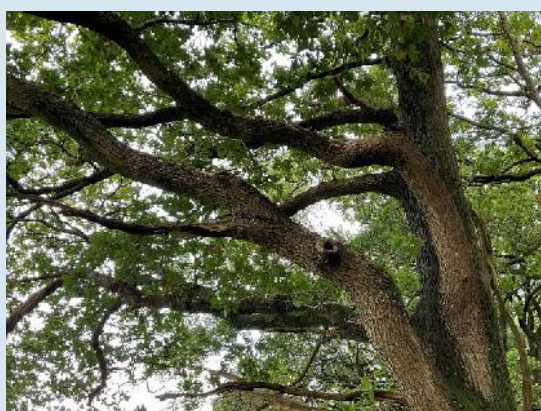
Photograph 35 – T6



Photograph 36 – T7



Photograph 37 – T8



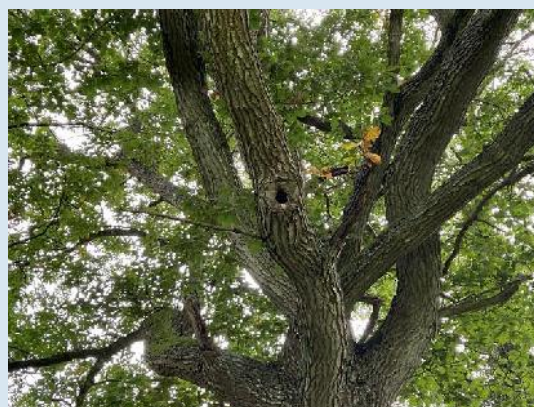
Photograph 38 – T9



Photograph 39 – T10



Photograph 40 – T11



Photograph 41 – T12



Photograph 42 – T13



Photograph 43 – T14



Photograph 44 – T15

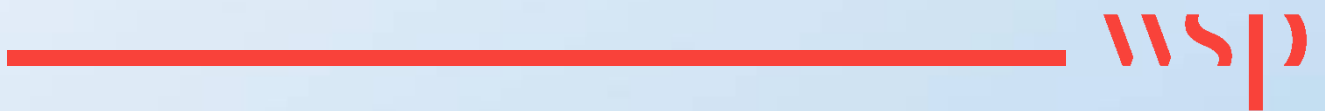


Photograph 45 – T16



Annex 6

UKHAB MAP





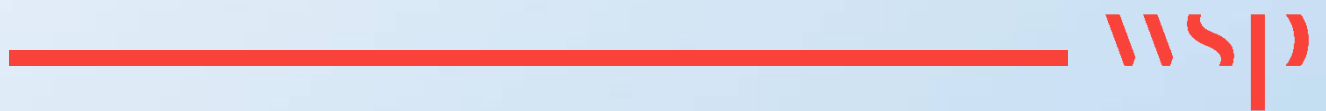


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Annex 5A.2

LEGISLATION AND NATIONAL POLICY CONTEXT



LEGISLATION AND NATIONAL POLICY CONTEXT

This appendix provides an overview and context of the below legislation and national policy and guidance, as applies in Wales. Further information regarding the legislation and national policy and guidance listed below can be found on the UK government website.

Legislation:

- The Wildlife and Countryside Act 1981 (as amended) (the “WCA”);
- The Invasive Alien Species (Enforcement and Permitting) Order 2019;
- Countryside and Rights of Way Act 2000 (the “CRoW Act”);
- The Conservation of Habitats and Species Regulations 2017 (as amended) (the “Habitats Regulations”);
- Environment Act 2021;
- The Natural Environment and Rural Communities (NERC) Act 2006 (as amended);
- The National Parks and Access to the Countryside Act 1949;
- The Protection of Badgers Act 1992;
- The Hedgerows Regulations 1997;
- The Wild Mammals (Protection) Act 1996;

National policy and guidance:

- The National Planning Policy Framework (NPPF) 2023;
- National planning policy guidance;
- Environmental Improvement Plan 2023;
- UK Post-2010 Biodiversity Framework (2011-2020); and
- UK Biodiversity Action Plans.

Annex 5A.3

UPDATED DESK STUDY RESULTS

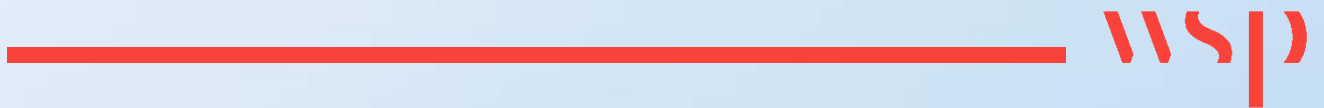


Table B-1 – Records of mammal species within 1 km of the Combined Site

Common name	Latin name	Number of records within 1 km	Conservation Status ¹⁷	S7 Priority Species Status
Brown hare	<i>Lepus europaeus</i>	9	S.7, LBAP	No change
Eurasian badger	<i>Meles meles</i>	1	BA, LBAP	No change
Eurasian otter	<i>Lutra lutra</i>	1	EPS, WCA5, S.7	No change
Eurasian water-shrew	<i>Neomys fodiens</i>	1	LBAP	No change
Weasel	<i>Mustela nivalis</i>	1	LBAP	No change
Hedgehog	<i>Erinaceus europaeus</i>	1	S.7, LBAP	No change

Table B-2 – Records of bat species within 10 km of the Combined Site

Common name	Latin name	Number of records within 10 km	Conservation Status	S7 Priority Species Status
Brown long-eared bat	<i>Plecotus auritus</i>	12	EPS, WCA5, S.7, LBAP	No change
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	35	EPS, WCA5, S.7, LBAP	No change

¹⁷ Listed on the Local Biodiversity Action Plan (LBAP), Protected by the Badger Protection Act 1992 (BA), A European Protected Species (EPS), Protected under Schedule 1.1/1.2/5/8 of the Wildlife and Countryside Act 1981 (WCA1.1/1.2/5/8), controlled under Schedule 9 of the WCA (WCA9).

Daubenton's bat	<i>Myotis daubentonii</i>	5	EPS, WCA5, LBAP	No change
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	1	EPS, WCA5, S.7, LBAP	No change
Myotis bat species	<i>Myotis sp.</i>	6	EPS, WCA5	No change
Natterer's bat	<i>Myotis nattereri</i>	5	EPS, WCA5, LBAP	No change
Noctule bat	<i>Nyctalus noctula</i>	7	EPS, WCA5, S.7, LBAP	No change
Pipistrelle bat species	<i>Pipistrellus</i>	1	EPS, WCA5	No change
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	22	EPS, WCA5, S.7, LBAP	No change

Table B-3 – Records of reptile and amphibian species within 1 km of the Combined Site

Common name	Latin name	Number of records within 1 km	Conservation Status	S7 Priority Species Status
Common frog	<i>Rana temporaria</i>	2	WCA5, LBAP	No change
Common lizard	<i>Zootoca vivipara</i>	2	WCA5, S.7, LBAP	No change
Common toad	<i>Bufo bufo</i>	2	WCA5, S.7, LBAP	No change

Table B-4 – Records of bird species within 1 km of the Combined Site

Common name	Latin name	Number of records within 1 km	Conservation Status	S7 Priority Species Status
-------------	------------	-------------------------------	---------------------	----------------------------

Barn owl	<i>Tyto alba</i>	6	WCA1.1, WCA9, LBAP	No change
Black-headed gull	<i>Chroicocephalus ridibundus</i>	4	S.7	No change
Blue tit	<i>Cyanistes caeruleus</i>	2	LBAP	No change
Buzzard	<i>Buteo buteo</i>	3	LBAP	No change
Cormorant	<i>Phalacrocorax carbo</i>	1	LBAP	No change
Cuckoo	<i>Cuculus canorus</i>	4	S.7	No change
Curlew	<i>Numenius arquata</i>	3	S.7, LBAP	No change
Dunnoek	<i>Prunella modularis</i>	2	S.7, LBAP	No change
Fieldfare	<i>Turdus pilaris</i>	1	S.7, WCA1.1, LBAP	Added
Garden warbler	<i>Sylvia borin</i>	2	S.7, LBAP	Added
Goldeneye	<i>Bucephala clangula</i>	3	S.7, WCA1.2, LBAP	Added
Goldfinch	<i>Carduelis carduelis</i>	1	LBAP	No change
Goosander	<i>Mergus merganser</i>	3	LBAP	No change
Grasshopper warbler	<i>Locustella naevia</i>	1	S.7, LBAP	No change
Great spotted woodpecker	<i>Dendrocopos major</i>	1	LBAP	No change
Great tit	<i>Parus major</i>	2	LBAP	No change

Grey wagtail	<i>Motacilla cinerea</i>	1	LBAP	Added
Herring gull	<i>Larus argentatus</i>	2	S.7, LBAP	No change
Hoopoe	<i>Upupa epops</i>	1	WCA1.1	No change
House martin	<i>Delichon urbicum</i>	2	LBAP	Added
House sparrow	<i>Passer domesticus</i>	2	S.7, LBAP	No change
Kestrel	<i>Falco tinnunculus</i>	5	S.7, LBAP	No change
Lesser black-backed gull	<i>Larus fuscus</i>	1	LBAP	No change
Linnet	<i>Linaria cannabina</i>	4	S.7, LBAP	No change
Pied wagtail	<i>Motacilla alba</i>	5	LBAP	No change
Red kite	<i>Milvus milvus</i>	5	WCA1.1, WCA9, LBAP	No change
Redstart	<i>Phoenicurus phoenicurus</i>	1	LBAP	No change
Reed Bunting	<i>Emberiza schoeniclus</i>	3	LBAP	Removed
Reed warbler	<i>Acrocephalus scirpaceus</i>	1	LBAP	No change
Short-eared owl	<i>Asio flammeus</i>	2	S.7, LBAP	Added
Skylark	<i>Alauda arvensis</i>	3	S.7, LBAP	No change
Snipe	<i>Gallinago gallinago</i>	1	S.7, LBAP	Added
Song thrush	<i>Turdus philomelos</i>	1	S.7, LBAP	No change
Stonechat	<i>Saxicola rubicola</i>	3	LBAP	No change

Swallow	<i>Hirundo rustica</i>	2	LBAP	No change
Tree sparrow	<i>Passer montanus</i>	1	S.7, LBAP	No change
Tufted duck	<i>Aythya fuligula</i>	5	LBAP	No change
Wheatear	<i>Oenanthe oenanthe</i>	2	S.7, LBAP	Added
Whinchat	<i>Saxicola rubetra</i>	3	S.7, LBAP	Added
Whitethroat	<i>Curruca communis</i>	1	S.7, LBAP	Added
Yellowhammer	<i>Emberiza citrinella</i>	1	S.7, LBAP	No change

Table B-5 – Records of invertebrate species within 1 km of the Combined Site

Common name	Latin name	Number of records within 1 km	Conservation Status	S7 Priority Species Status
Autumnal rustic	<i>Eugnorisma glareosa</i>	1	-	Removed
Broom moth	<i>Ceramica pisi</i>	1	-	Removed
Dusky brocade	<i>Apamea remissa</i>	1	-	Removed
Feathered gothic	<i>Tholera decimalis</i>	1	-	Removed
Galium carpet	<i>Epirrhoe galiata</i>	1	-	Removed
Garden tiger	<i>Arctia caja</i>	2	-	Removed
Ghost moth	<i>Hepialus humuli</i>	1	-	Removed
Minor shoulder-knot	<i>Brachylomia viminalis</i>	1	-	Removed
Oblique carpet	<i>Orthonama vittata</i>	1	-	Removed

Shaded broad-bar	<i>Scotopteryx chenopodiata</i>	1	-	Removed
Small heath	<i>Coenonympha pamphilus</i>	4	S.7	No change
Small pearl-bordered fritillary	<i>Boloria selene</i>	4	S.7, LBAP	No change
Wall	<i>Lasiommata megera</i>	1	S.7	No change

Table B-6 – Records of notable plant species within 1 km of the Combined Site

Common name	Latin name	Number of records within 1 km	Conservation Status	S7 Priority Species Status
Bluebell	<i>Hyacinthoides non-scripta</i>	7	WCA8	No change
Variegated yellow archangel	<i>Lamium galeobdolon subsp. montanum</i>	1	WCA9, INNS	-



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