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Cefn Dryscoed DAF

Preliminary Ecological Appraisal Report

January 2026

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Cover Photo Source: Mott MacDonald Bentley, 2025

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Executive summary

Mott MacDonald Bentley has been commissioned by Dŵr Cymru Welsh Water (DCWW, the Applicant) to undertake a Preliminary Ecological Appraisal (PEA) to identify any ecological constraints to the proposed improvement works at Cefn Dryscoed Water Treatment Works (WTW) (the 'Proposed Development').

The Proposed Development is located in a rural setting in the Bannau Brycheiniog National Park (Brecon Beacons), to the north of Pontneddfechan, Neath (National Grid Reference SN 9089 0943). The site is immediately surrounded by pasture fields and hedgerows, with a parcel of ancient woodland to the north and moorland to the north east.

A desk-based assessment identified four Sites of Special Scientific Interest (SSSIs) and one Special Area of Conservation (SAC) within 2.0km.

A UK Habitat Classification survey was undertaken on 22 May and 27 September 2024, with an additional botanical survey carried out on 6 June and 14 July 2025. Five Section 7 Priority Habitats were identified within the survey area, namely: Hedgerows, Lowland dry acid grassland, Lowland mixed deciduous woodland, Purple moor-grass and rush pastures and Upland heathland, alongside two Annex I Habitat types: 'H91A0 Old sessile oak woods with *Ilex and* Blechnum in the British Isles' and 'H4010 Northern Atlantic wet heaths with *Erica tetralix* (Upland)'. Additionally, habitat suitable for a range of protected and/or notable species was identified.

On the basis of the current proposals and the habitats present, the following surveys or assessments have been recommended to inform additional or tailored species-specific survey, assessment, and mitigation design:

- **Habitats Regulations Assessment:** Initial screening is recommended to confirm whether the Proposed Development is likely to negatively impact Coedydd Nedd a Mellte SAC.
- **Hedgerow assessments:** an assessment of all hedgerows likely to be to impacted by the Proposed Development.
- **Barn owl surveys**: assessment and further survey of all trees and nest boxes within proximity to the proposed works.
- **Bat Roost surveys**: Preliminary Roost Assessments of all buildings and Ground Level Tree Assessments of all trees within 30m of the Proposed Development to identify any Potential Roost Features (PRFs); and Presence/likely absence surveys of all PRFs identified (night-time emergence surveys using night-vision aids).
- **Bat Activity surveys**: Monthly automated and manual bat activity surveys to determine the importance of the hedgerows likely to be impacted by the Proposed Development (April to October inclusive).
- **Badger surveys**: Presence/likely absence surveys of all areas of suitable habitat.
- **Hazel dormouse surveys**: Presence/likely absence surveys of all hedgerows habitat likely to be impacted by the Proposed Development (consisting of the deployment of nest tubes and monthly surveys April to September inclusive).

Opportunities for ecological enhancements are included within this report, in line with policy requirements for developments to achieve a Net Benefit for Biodiversity, along with initial recommendations for high-level avoidance and mitigation (such as construction safeguards, retention of habitats of ecological value and sensitive design measures).

1 Introduction

1.1 Background

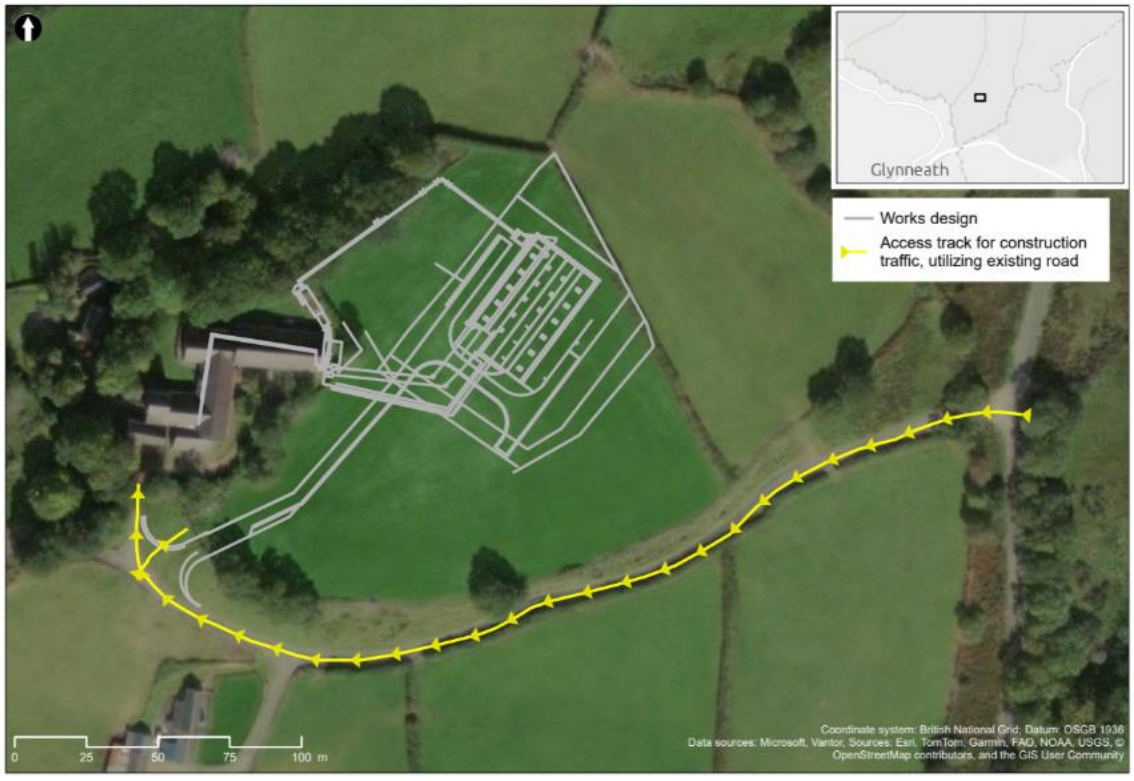
Mott MacDonald Bentley has been commissioned by Dŵr Cymru Welsh Water (DCWW, the Applicant) to undertake a Preliminary Ecological Appraisal (PEA) to identify any ecological constraints to the proposed improvement works at Cefn Dryscoed Water Treatment Works (WTW) (the 'Proposed Development').

The proposed works consist of the construction of a new Dissolved Air Floatation (DAF) building to reduce manganese levels and increase water quality at the site. The existing WTW site is located within the Bannau Brycheiniog National Park (Brecon Beacons) and consists of a collection of stone buildings built to resemble a farmstead.

A high-level optioneering workshop, including site visit, was undertaken to review a number of potential locations shortlisted by the design team in May 2024. The optioneering workshop included specialists from a number of disciplines, including ecology. As part of this process, a PEA and habitat mapping was undertaken of a wider area in order to identify areas of high ecological value. As a result of this process, areas of irreplaceable peat forming habitat were scoped out of consideration. The works have been designed to reduce ecological impacts as far as possible and are mainly confined to an improved pasture field.

The Proposed Development is shown within Figure 1.1 below.

Figure 1.1: Site Location Plan



Source: Mott MacDonald Bentley, 2026

1.2 Site Context and Proposed Development

Cefn Dryscoed WTW is located in a rural setting in the Bannau Brycheiniog National Park, to the north of Pontneddfechan, Neath (National Grid Reference SN 9089 0943). The site is immediately surrounded by pasture fields and hedgerows, with a parcel of ancient woodland to the north and moorland to the north east.

The Proposed Development comprises of the following:

- The construction of a new DAF building, including the installation of three new DAF tanks and flocculators, and other processing and ancillary equipment within the new DAF building.
- Installation of pipelines to connect the new DAF building to the existing WTW and to connect the existing raw water main to the DAF plant. The pipelines will be installed by open-cut trenching with habitat mainly restored once complete, with the exception of re-planting mature tree species directly above the pipeline routes.
- Installation of a new access track to facilitate operational activities of the new DAF building.
- Replacement of existing and installation of new pumping equipment within Cefn Dryscoed WTW.
- Fencing and other soft-landscaping.
- Installation of new electrical cabling, distribution boards, PLC and instrumentation (e.g. water quality and turbidity monitors).
- Installation of a new DAF Motor Control Centre (MCC) within the new building.

1.3 Objectives

This Preliminary Ecological Appraisal Report (PEAR) has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) 'Guidelines for Preliminary Ecological Appraisal' 2nd edition (2017). The purpose of this report is to provide an assessment of the protected and/or notable habitats and species which occur or have the potential to occur within or near to the Proposed Development, which could be impacted by the proposed works. The aims of this assessment are to:

- Undertake a desktop review to identify any existing information regarding protected and/or notable species and sites with a nature conservation designation, within the defined zone of influence (ZoI).
- Carry out a UK Habitat Classification survey (UKHab Ltd, 2023) to provide a description of the existing habitat types both within and immediately adjacent to the Proposed Development.
- To record the presence or potential presence of any protected and/or notable species of flora or fauna.
- Outline any ecological constraints to the Proposed Development in terms of designated sites, habitats and/or protected or notable species.
- Provide recommendations for further ecological survey work or assessment, if considered necessary to provide an ecological baseline for the Proposed Development.
- Identify any high-level mitigation or compensation measures that may be required to offset potential development impacts.
- Identify opportunities for enhancement in line with national and local planning policy.

1.4 Quality Insurance and Validity of Report

All ecologists involved in the production of this report are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and are bound by its code of conduct (CIEEM, 2025). Additionally, this report has been subject to Mott MacDonald Bentley's internal quality assurance checks in line with ISO9001:2015.

All surveys and assessments were undertaken by suitably qualified and experienced ecologists as per CIEEMs competency framework (CIEEM, 2024) and have been undertaken with reference to the recommendations given in *BS 42020:2013 Biodiversity: Code of practice for planning and development* (British Standards Institute, 2013).

In line with CIEEM (2019) guidance on the lifespan of ecological surveys, taking into account the habitats present within the survey area, the UK Habitat Classification survey results are considered valid for up to 12 months. Following this, the survey data should be reviewed and, if appropriate, updated to ensure any assessment and mitigation approach remains valid.

2 Legislation and Policy

2.1 Overview

Developers must ensure that construction and operational activities for the Proposed Development comply with national nature conservation legislation and with national and local biodiversity planning policies.

The following legislative and planning policy context has been used to inform the assessment of the relative ecological value of the site, potential constraints to the Proposed Development and recommendations for enhancements.

2.2 Legislation

The main pieces of legislation regarding the protection of species and habitats in Wales are the Conservation of Habitats and Species Regulations 2017 (as amended) (henceforth referred to as the '2017 Regulations') and the Wildlife and Countryside Act 1981 (as amended) ('the 1981 Act'). Species-specific legislation for certain groups (i.e. badger (*Meles meles)*) is also in place and is highlighted within this report were relevant.

These pieces of legislation provide a range of protection for many species, and also create protected sites (including Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs) and Special Areas of Conservation (SACs)). Activities which have the potential to harm protected species must be appropriately considered and mitigated, as must those with the potential to impact protected sites. In some instances, activities occurring some distance from a designated site have the potential to cause adverse effects and must be considered within an impact assessment (e.g. dust deposition or light pollution).

In order to guide the appropriate authority in designating SACs, lists of habitats and species for which SACs can be designated are included within Annex I and II of the Habitats Directive (henceforth referred to as 'Annex I Habitats' or 'Annex II Species'). These habitats and species are typically considered to be declining throughout Europe. Whilst the presence of an Annex I habitat or Annex II species does not automatically qualify an area for designation as a SAC, it does indicate an elevated ecological importance at an international level.

Invasive non-native species are regulated via a combination of the Invasive Alien Species (Enforcement and Permitting) Order 2019 (as amended) (henceforth referred to as 'the 2019 Order') and Section 14/Schedule 9 of the 1981 Act.

Under the Environment (Wales) Act 2016 ('the 2016 Act'), Local Authorities and public bodies have a statutory duty 'to seek to maintain and enhance biodiversity in Wales' when carrying out their normal functions. Section 7 of the 2016 Act contains a list of species and habitats of 'principal importance to the conservation of biodiversity in Wales' (also referred to as 'Priority Habitats or Species'), to act as an aid to guide public bodies in implementing their duty. In order to do this, the Local Authority must consider the impact of the proposed works on protected habitats and species and must regard Priority Habitats and/or Species as a material consideration throughout the planning process.

2.3 Planning Policy

In terms of planning policy, under Chapter 6 of Planning Policy Wales (PPW) 2024, planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions, meaning that development proposals must provide a net benefit for biodiversity and should not

cause significant loss of habitats and/or species. Therefore, development proposals must employ a step-wise approach in decision making (avoid, minimise, mitigate/restore, compensate on-site and then compensate off-site, as well as providing enhancements at every step). This places a requirement on a development to evidence consideration of biodiversity and the step-wise approach in decision making, which will need to:

- Support the conservation of native habitats and species, thus conserving biodiversity at a landscape scale and contributing to international responsibilities and obligations.
- Ensure that statutory and non-statutory designated sites are properly protected and managed.
- Safeguard protected and/or priority habitats and species from impacts which directly affect their nature conservation interests, compromise the resilience of ecological networks or the components which underpin them, such as water and soil, including peat deposits.
- Secure enhancement of, and improvements to, ecosystem resilience by improving diversity, extent, condition, connectivity and adaptability of ecological networks (otherwise known as the DECCA framework).

A particular weight is placed on the importance of safeguarding hedgerows, woodland and trees under PPW. Loss of these features is only permitted where the development would achieve significant and clearly defined public benefits, in which circumstance compensatory planting is required at a ratio of 3:1 for trees lost or, for woodland planting, at a density of 1600 trees per hectare for broadleaves and 2500 trees per hectare for conifers. Additionally, any development within the boundary of a designated site is considered unacceptable and will only be granted planning permission in exceptional circumstances.

At a local level, planning policies are set out within ‘Brecon Beacons National Park Local Development Plan’ (Adopted 2013), whilst supplementary information is set out within ‘Brecon Beacons National Park Authorities – Supplementary Planning Guidance Biodiversity and Development’ (2016). The policies relevant to ecology (policies 3 to 9) are described in full within Appendix A, but can be broadly summarised as follows:

Development proposals will be required to promote the resilience of ecosystems. In particular, proposals will be required to maintain and enhance biodiversity interests. Proposals for development likely to have an adverse effect either directly and indirectly on the conservation value of internationally, nationally, or locally designated sites, Priority Habitats or protected species will only be permitted where it is demonstrated that:

- There is no suitable alternative to the proposed development.
- The need for the development clearly outweighs the conservation value of the site.
- The development maintains and where possible enhances biodiversity interests.
- The impacts of the development can be satisfactorily mitigated, appropriate compensatory measures are put in place and the area is acceptably managed through future management regimes.
- Adverse impacts on nature conservation features can be avoided.

3 Methodology

3.1 Zone of Influence

The current guidance on ecological impact assessments (CIEEM, 2018) recommends that all ecological features that occur within a 'Zone of Influence' (ZoI) for a proposed development are investigated.

The ZoI includes:

- Areas directly within the land take for the proposed development and any associated access routes.
- Areas which will be temporarily affected during construction.
- Areas likely to be impacted by hydrological disruption.
- Areas where there is a risk of pollution (including areas linked hydrologically) and noise disturbance during construction and/or operation.

The ZoI is variable depending on the nature of the construction activities and the ecological receptors affected. For this assessment the zones used have been defined in Table 3.1.

Table 3.1: Zone of Influence for this Assessment

Ecological Feature	Zone of Influence
Internationally designated sites (for bats, birds, marsh fritillary, otter and fish[1])	Within 10.0km of the Proposed Development.
Locally, Nationally and Internationally designated sites for any species/habitats	Within 2.0km of the Proposed Development.
Protected Species records	Existing records within 2.0km of the Proposed Development[2].
Habitats and Protected species evidence	Habitats and protected species field evidence within the survey buffer shown in Figure 1.1 to account for potential design options. At least 30m around the Proposed Development has been considered.

Source: Mott MacDonald Bentley, 2026

3.2 Desk Study

A desk study was undertaken, as recommended in the CIEEM 'Guidelines for Preliminary Ecological Appraisal' – 2nd edition (2017), to determine the presence of any designated nature conservation sites and protected or notable species within the ZoI of the Proposed Development. To ensure the validity of the data, only records collected within the last 10 years (2014-2024) were considered. Where relevant, a search of historic records was undertaken and is stated within the relevant results sections (*i.e.* where no records of a particular species were returned within the last 10 years, and it is considered likely due to a lack of survey effort within the area). Raw data is available on request.

Information to inform the desk study was obtained from the following sources:

[1] In the case of otter and fish, where a hydrological connection exists.

[2] For certain species/species groups consideration of areas outside of the footprint of the Proposed Development is required, in line with the relevant best practice guidelines (*i.e.* badger). Where this is the case, the need for further survey and assessment has been outlined in Section 5.

- Bat survey reports produced by Arcadis and Apem of previous survey work undertaken (Arcadis, 2021 and Apem Limited 2018).
- Biodiversity Information Service for Powys & Brecon Beacons National Park (BIS)[3].
- Multi Agency Geographical Information for the Countryside (MAGIC) (https://magic.defra.gov.uk).
- Natural Resources Wales (NRW) (https://naturalresources.wales).
- Joint Nature Conservation Committee (JNCC) (https://jncc.gov.uk/).
- Botanical Society of Britain and Ireland (BSBI) (http://bsbi.org).
- Brecknockshire Rare Plant Register (BRPR) (Crellin, 2020).

3.3 Field Survey

A field survey was undertaken by an experienced Field Identification Skills Certificate (FISC) Level 4 surveyor on 22 May and 27 September 2024. All habitats within the defined ZoI were mapped in accordance with the UK Habitat Classification User Manual (Version 2) (UKHab Ltd, 2023), using the UKHab-Professional Edition and a standard minimum mapping unit. The habitats were classified to Level 5 of the hierarchy where possible and were assigned the associated Primary Habitat Codes. Additionally, all 'essential' secondary codes and a selection of grassland and heathland secondary codes were recorded where relevant.

One grassland road verge and two hedgerows (grassland 7, hedgerow 5 and hedgerow 6) were surveyed outside of the optimal botanical survey season in September 2024. A second botanical survey was undertaken on 6 June and 14 July 2025. During this survey visit quadrats were recorded for all grasslands anticipated to be impacted by the Proposed Development and the UK Habitat Classification mapping was updated accordingly.

Species lists were recorded with the abundance of each species described in line with the DAFOR scale (Dominant, Abundant, Frequent, Occasional and Rare) (BSBI, 2011). The nomenclature for vascular plants follows Stace (2019) for both scientific and English names.

Invasive species listed on Schedule 9 of the 1981 Act or Schedule 2 of the 2019 Order and any protected or uncommon species were noted, and their locations were recorded in target note form.

An assessment was also undertaken of the likely presence or absence of protected and/or notable species within the defined ZoI. This was based on the known distribution of species, habitats and/or direct evidence such as field signs or observations. Any evidence of protected and/or notable species or any features with potential to support such species were recorded by placing numbered target notes on an aerial map. The methodologies and assessment criteria used were based on current published guidance.

The locations of any protected and/or notable vascular plant species were also recorded in target note form. For the purposes of this report, notable vascular plant species are considered as those meeting the below criteria:

- Species listed on Schedule 8 of the 1981 Act.
- Priority Species listed on Section 7 of the 2016 Act.
- Species included within the red lists for Great Britain and Wales (BSBI, 2021, Plantlife, 2008 and 2012).
- Species listed on the Brecknockshire Rare Plant Register (Crellin, 2020).
- Nationally rare/scarce species.

[3] Biological records were obtained in February 2025. The reference numbers are included within Section 6.

- Species at the edge of their range.
- Invasive species listed on Schedule 9 of the 1981 Act or Schedule 2 of the 2019 Order.

No attempt was made to identify cryptic species across the genus *Rubus, Taraxacum* or *Hieracium*.

3.4 Geographic Frame of Reference

Where important habitats and/or vascular plant species have been identified, a Geographic Frame of Reference was adopted to characterise their conservation importance at a geographic scale, from international to local, in line with CIEEM's guidance on the identification of important ecological features (CIEEM, 2018). A distinction in level of importance has been made between UK and Wales level, to better represent the range in habitat and species present across the survey area, whilst an additional level of conservation importance was also added for features considered to be of below local level, these were referred to in this report as being of less than local conservation importance. Examples of features classified at this level are common, ubiquitous and easily re-creatable habitats such as improved grasslands, certain open vegetation habitats and stands of species-poor bracken (*Pteridium aquilinum*) dominated vegetation.

The Geographic Frame of Reference used within this report is defined within Table 3.2 below.

Table 3.2: Geographic Frame of Reference

Scale	Description
International	Designated sites, habitats or species that are of conservation importance at an international level. Considered to be habitats or species that are rare within Europe and/or endemic to Great Britain (*i.e.* Annex 1 Habitats), or sites designated at an international level (SACs).
Multinational (UK)	Designated sites, habitats or species that are of conservation importance within Great Britain. Considered to be habitats or species that are rare or declining across Great Britain as a whole, and/or are at the edge of their range (*i.e.* species listed on the red list for Great Britain). Or, sites designated at a UK level (SSSIs).
National (Wales)	Habitats or species that are of conservation importance within Wales (*i.e.* species listed on the red list for Wales or Priority Habitats or Species listed on Section 7, that are rare within Wales).
County	Designated sites, habitats or species that are of conservation importance at a county level, *i.e.* Bannau Brycheiniog National Park, including SINCs.
Local	Habitats or species that are considered of conservation importance at a local level based on their status, distribution and/or population size.
Less than Local	Ubiquitous/ widespread habitats or species that are easily re-creatable and are considered of negligible botanical importance.

Source: Mott MacDonald Bentley, 2026, with reference to CIEEM, 2018

3.5 Irreplaceable Habitats

Technical note T3 of the biodiversity net gain good-practice principles for development practical guide (CIEEM *et al*, 2019) provides a definition for an irreplaceable habitat as a habitat that, once lost, cannot be recreated elsewhere. Furthermore, this technical note provides parameters for the characterisation of irreplaceable habitats, which define important characteristics including:

- **Age**: The habitat must have existed for a considerable period of time.
- **Environmental context**: The habitat must exist because of exceptional or rare combinations of circumstances that cannot be recreated elsewhere.

- **Evidence**: Research, where available, may also go to substantiate unsuccessful recreation of a given habitat.

Whilst this technical note is relevant to BNG assessments and therefore intended for England, this definition is consistent with the definition of an irreplaceable habitat under Chapter 6 of Planning Policy Wales (2024) which states:

"Habitats, including the natural resources which underpin them, which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. Examples include, ancient woodland and veteran trees, ancient hedgerows, wet woodlands, sand dunes, peatland, species rich grassland, long undisturbed soils, blanket bog, salt marsh and lowland fen."

An assessment of whether the habitats present at each site meet the criteria above and subsequently fulfil 'irreplaceable habitat status' was made and is included within Section 5.1.3.

3.6 Limitations

Biological records obtained from third parties and presented in the desk study do not represent a full and complete species list for the area. The records are mostly provided by individuals on an *ad-hoc* basis, often meaning there are areas of deficiency in the data. If records of a particular species are not returned it may be as a result of the area being under surveyed opposed to an indication of the absence of that species. Therefore, a species should not be disregarded on this basis alone.

Ecological surveys are limited to factors which affect the presence of plants and animals, such as, time of year, migration patterns and behaviour. With a single survey visit it is possible that certain species may have been overlooked or under-recorded during the assessment as optimal survey periods vary between species.

4 Results

4.1 Overview

A desk study was undertaken to identify key species and habitats both within the footprint of and immediately adjacent to the Proposed Development, whilst a site visit was completed on 22 May and 27 September 2024, including a UK Habitat Classification survey. An additional botanical survey was carried out on 6 June and 14 July 2027 which included quadrat mapping of all grasslands anticipated to be impacted by the Proposed Development. The results of both the desk study and the site visit are presented within the following sections. A map of the habitats identified during the site visit is provided within Appendix B. Additional desk study information is provided within Appendix C and a map of the designated sites is provided within Appendix D.

4.2 Desk Study

4.2.1 Designated Sites

Five statutory designated sites were identified within 2.0km of the Proposed Development, consisting of: one Special Area of Conservation (SAC), Coedydd Nedd a Mellte; and four Sites of Special Scientific Interest (SSSI). In addition, one SAC designated for the presence of the butterfly species; Marsh fritillary (*Euphydryas aurinia*) (listed on Schedule 5 of the 1981 Act), was returned within 10km of the Proposed Development. A description of each statutory designated site is provided within Table 4.1 below.

No non-statutory designated sites were identified within 2.0km of the Proposed Development.

Table 4.1: Statutory Designated Sites within 2.0km

Name	Status	Description	Approximate Distance and Direction
Coedydd Nedd a Mellte	SAC	The Annex I habitat 'H91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles' is the primary reason for the selection of this site. Coedydd Nedd a Mellte is a very large and diverse example of old sessile oak (*Quercus petraea*) wood in south Wales. The woods extend along a series of deeply incised valleys and ravines and contain complex mosaics of sessile oak woodland, ash (*Fraxinus excelsior)* woodland (some of which is comparable to the Annex I habitat type 'H9180 *Tilio-Acerion* forests of slopes, screes and ravines'), and transitions to lowland woodland types. The whole site is biologically rich, with many woodland plant communities represented and rich bryophyte and lichen assemblages. Notable higher plant species include wood fescue (*Festuca altissima*) and the ferns hay-scented buckler-fern (*Dryopteris aemula)*, Tunbridge filmy-fern (*Hymenophyllum tunbrigense*) and green spleenwort *(Asplenium viride)*.	0.47km to the west and 0.83km to the east
Dyffrynoedd Nedd a Mellte a Moel Penderyn	SSSI	Dyffrynnoedd Nedd a Mellte, a Moel Penderyn is of special interest for its extensive and diverse semi-natural woodland, important populations of several flowering plants and outstanding assemblages of mosses, liverworts and lichens. This site supports one of the most extensive and diverse areas of semi-natural woodland in Wales. The overall botanical diversity is outstanding, with more than 600 species of plant recorded at the site. This includes a very large proportion of the bryophyte flora of	0.26km to the north west

Name	Status	Description	Approximate Distance and Direction
		mid and south Wales. The high humidity of much of the woodland has a strong influence on its botanical diversity. The fauna of the valleys is well developed and includes birds such as breeding dipper (*Cinclus cinclus*), grey wagtail (*Motacilla cinerea*), goosander (*Mergus merganser*), pied flycatcher (*Ficedula hypoleuca*), redstart (*Phoenicurus phoenicurus*), wood warbler (*Phylloscopus sibilatrix*), woodcock (*Scolopax rusticola*), buzzard (*Buteo buteo*) and sparrowhawk (*Accipiter nisus*).	
Caeau Nant y Llechau	SSSI	This is the largest area of traditional unimproved hay meadow known in Brecknock. The collection of gently sloping south-east facing fields on the upper valley side of the Nedd support a wealth of plant species. Developed on boulder clay overlying millstone grit, flushed in part by springs and drained by a number of well wooded streams, the varying topography is reflected in the diverse flora, with over 110 species of higher plants recorded from the grassland areas.	0.74 to the north west
Bryn-bwch	SSSI	Bryn-bwch is of special interest for its extensive area of fen-meadow, with associated mire, wet heath and wet woodland communities. The fen-meadow community, which is characterised by the presence of meadow thistle (*Cirsium dissectum*), is a scarce and localised vegetation type in England and Wales. The areas of fen-meadow range from short, well grazed and sedgy swards to tall purple moor-grass (*Molinia caerulea*) tussocky swards. Scattered common butterwort (*Pinguicula vulgaris*) and abundant flea sedge (*Carex pulicari*) are present. Within the mire vegetation there are patches of wet heath dominated by deergrass (*Muhlenbergia rigens*) and the bog moss *Sphagnum papillosum*. The site has several well-defined flushes where bog mosses (*Sphagnum* sp.) are dominant. The mire grades into grassland dominated by sheep's-fescue (*Festuca ovina*) and common bent (*Agrostis capillaris*) on the drier ground. Stands of wet alder (*Alnus glutinosa*) and alder/ash woodland are present along with dry woodland containing old sessile oaks close to Clyn-gwyn farmhouse.	1.1km to the north east
Gweunydd Dyffryn Nedd	SSSI	Gweunydd Dyffryn Nedd is of special interest for its extensive areas of damp pasture and wet heath, including a type of fen meadow vegetation that has a restricted distribution in England and Wales. The local geology supports seasonally waterlogged soils, with extensive accumulations of surface peat in places. The resultant variation in soil condition has allowed a variety of plant communities to develop. Fen meadow is widely distributed throughout the site. It is characterised by purple moor-grass and meadow thistle, supporting one of the largest populations of meadow thistle in Brecknock. Further types of purple moor-grass dominated vegetation occur throughout the site, supporting such species as tormentil (*Potentilla erecta*), sweet vernal-grass (*Anthoxanthum odoratum)*, bent sp. (*Agrostis* sp.) and mat-grass (*Nardus stricta*). Around the margins of the site, the pasture grades into woodland dominated by either sessile oak or alder, over a grassy field layer. Additional interest is provided by small neutral flushes and patches of scrub.	1.2km to the north
Blaen Cynon	SAC	Blaen Cynon contains an extensive complex of damp pastures and heaths supporting the largest metapopulation of marsh fritillary on the southern edge of the Bannau Brycheiniog National Park.	3.64km to the south west

Source: BIS, 2025; Mott MacDonald Bentley, 2026

4.2.2 Ancient Woodland

A total of 108 parcels of ancient woodland were identified from within 2.0km of the Proposed Development, consisting of:

- 57 parcels of Ancient Semi-natural Woodland.
- 17 Restored Ancient Woodland Sites (RAWS).
- 16 Plantations on Ancient Woodland Sites (PAWS).
- 18 Ancient Woodland Sites of an Unknown Category.

The closest site is an area of Ancient Semi-natural Woodland located within the survey area, to the north of the existing WTW site.

4.2.3 Protected/Notable Species Records

Records of a number of protected and/or notable species were returned within 2.0km of the Proposed Development. A summary of the records returned has been provided in Table 4.2, further information is provided within Appendix C.

Table 4.2: Summary of Known Biological Records for Protected / Notable Species

Species/ Species Group		Summary of Records within 2.0km
Birds		Records of 71 species of bird were returned within 2.0km of the Proposed Development. Of these nine species are listed on Schedule 1 of the 1981 Act, whilst 21 of the species returned are listed under Section 7 of the 2016 Act. A full species list is provided within Appendix C. The closest record of a Schedule 1 species was of Red Kite (*Milvus milvus*) 0.40km to the east.
Fish		No records of fish were returned within 2.0km of the Proposed Development, within the last 10 years. Subsequently, a search of historic records was undertaken, resulting in 15 records of Atlantic salmon (*Salmo salar*), 18 records of brown trout (*Salmo trutta*), 14 records of bullhead (*Cottus gobio*) and 11 records of European eel (*Anguilla anguilla*). The closest record returned was of brown trout 0.73km to the northwest.
Mammals	Bats	In total, 76 records of 15 species/species groups of bats were returned within 2.0km of the Proposed Development. Including 37 records of roosting bats of 10 species/species groups (including 21 hibernation roosts and two maternity roosts); soprano pipistrelle *(Pipistrellus pygmaeus*), *Pipistrellus* sp., brown long-eared bat (*Plecotus auritus*), Daubenton's bat (*Myotis daubentonii*), *Myotis* sp., Brandt's bat (*Myotis brandtii*), Natterer's bat (*Myotis nattereri*), whiskered.brandt's bat (*Myotis mystacinus/brandtii*), lesser horseshoe bat (*Rhinolophus hipposideros*) and greater horseshoe bat (*Rhinolophus ferrumequinum*). A review of previous survey work undertaken identified records of a common pipistrelle maternity roost; a brown long-eared day roost and a soprano pipistrelle day roost, within the existing WTW buildings (Arcadis, 2021 and Apem Limited 2018). In addition to the species listed above, field records of bat activity of the following species were also returned; common pipistrelle (*Pipistrellus pipistrellus*), barbastelle bat (*Barbastella barbastellus*), whiskered bat (*Myotis mystacinus*), noctule bat (*Nyctalus noctula*) and Nathusius' pipistrelle (*Pipistrellus nathusii*). The closest record of a bat roost is of brown long-eared roost, within the footprint of the Proposed Development.
	Badger	One record of badger was returned within 2.0km of the Proposed Development, consisting of a road casualty along the A465 to the south of the Proposed Development. The closest record was returned 1.9km to the south.
	Hazel dormouse	No records of hazel dormouse (*Muscardinus avellanarius*) were returned within 2.0km of the Proposed Development, within the last 10 years. Subsequently, a search of historic records was undertaken, with no records returned.
	European hedgehog	Two records of European hedgehog (*Erinaceus europaeus*) were returned within 2.0km of the Proposed Development, consisting of two live sightings. The closest record was returned 1.8km to the south west.
	Otter	Four records of otter (*Lutra lutra*) were returned within 2.0km of the Proposed Development, consisting of a field sign along the Afon Hepste 1.6km to the east;

Species/ Species Group		Summary of Records within 2.0km
		and a live sighting of two adults along the Afon Melte, 1.4km to the south; live sighting at Sgwd y Pannwr 1.4km north east of the Proposed Development.
	Water vole	No records of water vole (*Arvicola amphibius*) were returned within 2.0km of the Proposed Development, within the last 10 years. Subsequently, a search of historic records was undertaken, with no records returned.
	Other mammals	One record of stoat (*Mustela erminea*), a live sighting, was returned 1.3km to the south west; and one record of weasel (*Mustela nivalis*), a live sighting, was returned 1.9km to the south of the Proposed Development.
Herpetofauna	Amphibians	Four records of common frog (*Rana temporaria*), eight records of common toad (*Bufo bufo*) and two records of palmate newt (*Lissotriton helveticus*), were returned within 2.0km of the Proposed Development. The closest record returned was of common toad 1.3km to the north east. No records of great crest newt (*Triturus cristatus*) were returned within 2.0m of the Proposed Development. Subsequently, a search of historic records was undertaken, with no records returned.
	Reptiles	Three records of common lizard (*Zootoca vivipara*) and one record of slow-worm (*Anguis fragilis*) were returned within 2.0km of the Proposed Development. The closest record returned was of slow-worm 1.4km to the south east.
Invertebrates		Records of 67 species of invertebrates were returned within 2.0km of the Proposed Development, including 31 species listed under Section 7 of the 2016 Act. A full species list is provided within Appendix C. The closest record returned was of small phoenix (*Ecliptopera silaceata*), 1.0km to the north west. No records of the protected butterfly species marsh fritillary were returned within the last 10 years. Subsequently, a search of historic records was undertaken which returned 30 records.
Vascular plants		Records of 17 species of vascular plants were returned within 2.0km of the Proposed Development. Of these two species are listed on Schedule 8 of the 1981 Act, bluebell (*Hyacinthoides non-scripta*) and Killarney fern (*Trichomanes speciosum*). One species is listed on Section 7 of the 2016 Act, lobed maidenhair spleenwort (*Asplenium trichomanes* subsp. *pachyrachis*) which is also listed as Red-List Near Threatened in Great Britain and Red-List Endangered in Wales. The closest record returned was of bluebell 0.79km to the north. A full list of protected and/or notable vascular plant records returned within 2.0km of the Proposed Development is provided within Appendix C.
Bryophytes		Records of 54 bryophyte species were returned within 2.0km of the Proposed Development, including Irish daltonia (*Daltonia splachnoides*) and scarce turf-moss (*Rhytidiadelphus subpinnatus*) which are listed on Section 7 of the 2016 Act and is listed as Vulnerable and Near Threatened on the Red-List for Great Britain. The nearest record of Irish daltonia was returned 1.29km to the north east; whilst the closest record for scarce turf-moss was 0.82km to the north. A full list of the notable species returned is provided within Appendix C.
Fungi		Two records of fungi were returned within 2.0km of the Proposed Development, within the last 10 years. Meadow waxcap (*Cuphophyllus pratensis*) and *Entoloma conferendum*, both were recorded 0.52km from the proposed development. Subsequently, a search of historic records was undertaken, resulting in historic records for three species of fungi; *Arthopyrenia desistens*, wrinkled peach (*Rhodotus palmatus*) and *Stenocybe septate.* The closest record returned was of *Stenocybe septate* 1.0km to the north.
Lichens		Records of three species of lichen were returned within 2.0km of the Proposed Development, consisting of *Sticta limbata, Peltigera horizontalis,* and the Section 7 species *Usnea articulata.* The closest record was returned for *Usnea articulata* 1.3km to the north east. A full list of the notable species returned is provided within Appendix C.

Source: BIS, 2025; Mott MacDonald Bentley, 2026

4.3 Field Survey Results

The results of the field survey work are present within the following sections.

4.3.1 UK Habitat Classification Survey Results

The habitats recorded within the survey area have been described below, whilst a map of the habitats present has been provided within Appendix B. This includes habitats recorded within the wider area to inform the design of the works, which have been included for completeness only.

Habitats are listed within Table 4.3 below in order of their Primary Habitat Codes rather than their abundance or assessed importance. Full species lists, secondary codes and their associated abundance are given within Appendix E. A selection of photographs of each habitat type are included within Appendix F.

Table 4.3: Description of Habitats

UKHab Code	Habitat Type	Description
g1a6	Other lowland dry acid grassland	An acid grassland road verge alongside the existing access track to Cefn Dryscoed WTW. Ant hills and pignut (*Conopodium majus*) were present, both of which can be indicators of ancient grassland. A number of grass species were present, dominated by sweet vernal-grass with frequent red fescue (*Festuca rubra*). Other less frequent grass species included crested dog's-tail (*Cynosurus cristatus*), sheep's fescue (*Festuca ovina*) and Yorkshire-fog (*Holcus lanatus*). Five acid indicator species were recorded: tormentil, sheep's sorrel (*Rumex acetosella*), heath bedstraw (*Galium saxatile*), pignut and heath speedwell (*Veronica officinalis*). Springy turf-moss (*Rhytidiadelphus squarrosus*) was also frequent. Herbs and sedges accounted for more than 30% cover, with less than 10% cover of white clover (*Trifolium repens*). An average of 10 species per m^2 were recorded, although species diversity varied throughout the patchy sward with up to 13 species recorded (see Appendix E for quadrat data). Species typical of nutrient enrichment are encroaching into the sward, likely due to nutrient run-off from the adjacent pasture field and farm track (*i.e.* white clover and creeping buttercup (*Ranunculus repens*)).
g3c	Other neutral grassland	Areas of regularly mown, short-sword grassland are present within Cefn Dryscoed WTW. An average of 11 species were recorded per m^2 with more than 20% cover of herbs and less than 30% cover of white clover and/or perennial rye-grass (*Lolium perenne*) (see Appendix E for quadrat data). Yorkshire-fog and bent sp. (*Agrostis* sp.) were frequent alongside springy turf-moss. Herbs included common bird's-foot-trefoil (*Lotus corniculatus*), common mouse-ear (*Cerastium fontanum*), ribwort plantain (*Plantago lanceolata*), red clover (*Trifolium pratense*), selfheal (*Prunella vulgaris*) and daisy (*Bellis perennis*).
g3c6	*Lolium-Cynosurus* neutral grassland	An area of semi-improved grassland is present along the verge of the existing access track to the WTW site. The grassland is also located around an existing field gate to a pasture field. Grass species included Yorkshire-fog, common bent, sweet vernal-grass and red fescue. Herbs and sedges accounted for over 20% of the total cover, consisting of species such as creeping buttercup, common mouse-ear and white clover. Species typical of enriched areas were present, such as creeping thistle (*Cirsium arvense*), likely due to run-off from the adjacent access track and pasture field. Species diversity varied from 9 species per m2 to 14 species squared across two quadrats (see Appendix E for quadrat data).
g3c8	*Holcus-Juncus* neutral grassland	A poorly-drained pasture field was present within the survey area, with frequent soft-rush (*Juncus effusus*) and Yorkshire-fog. Other grasses included frequent sweet vernal-grass and rare creeping bent (*Argrostis stolonifera*), whilst forbs indicative of enriched soils were also present with occasional creeping buttercup, white clover and common sorrel (*Rumex acetosa*). Species associated with wet conditions were localised around a shallow ditch forming the northern boundary of the field, including marsh-bedstraw (*Galium palustre*), meadow foxtail (*Alopecurus pratensis*) and bog stitchwort (*Stellaria alsine*).

UKHab Code	Habitat Type	Description
g4	Modified grassland	A number of improved, sheep grazed, pasture fields were present within the survey area. The grasslands were dominated by palatable grass species such as Timothy (*Phleum pratense*), perennial rye-grass, Yorkshire-fog and annual meadow-grass (*Poa annua*) and were species-poor with less than nine species recorded within 1m^2. Forbs included broad-leaved dock (*Rumex obtusifolius*), common mouse-ear, common sorrel, creeping buttercup and white clover.
w1	Broadleaved and mixed woodland	Lines of broadleaved trees were present forming the boundaries of pasture fields, with species such as oak sp. (*Quercus* sp.), rowan (*Sorbus aucuparia*), willow sp. (*Salix* sp.) and birch sp. (*Betula* sp.).
w1a5	Western acidic oak woodland	A parcel of ancient oak woodland was present to the north of the survey area. The canopy was dominated by oak sp. with occasional birch sp. A sparse understorey was present consisting of hazel (*Corylus avellana*) and rowan. The ground flora consisted of abundant bluebell, with occasional enchanter's-nightshade (*Circaea lutetiana*), lady-fern (*Athyrium filix-femina*), male-fern (*Dryopteris filix-mas*), scaly male-fern (*Dryopteris affinis*) and wood-sorrel (*Oxalis acetosella*). Access to the woodland was limited at the time of survey, however, it is considered likely that the woodland fulfils the criteria for this Annex I habitat type.
w1f7	Other lowland mixed deciduous woodland	A parcel of semi-natural oak sp. woodland was present adjacent to the existing WTW. The canopy was dominated by oak sp. with rare sycamore (*Acer pseudoplatanus*) and downy birch (*Betula pubescens*). A sparse understorey was present with occasional hazel. The ground flora was dominated by grass species in the north of the parcel, with frequent cock's-foot (*Dactylis glomerata*) and bluebell, whilst enchanter's-nightshade, lady-fern and common nettle (*Urtica dioica*) were occasional to the south.
h1b6	Wet heathland with cross-leaved heath – upland (H4010)	A large area of heathland was present to the east of the survey area, across common land (above the line of agricultural improvement, approximately 250m above sea-level). The area has likely been subject to grazing in the past with frequent low-growing heather (*Calluna vulgaris*) and abundant purple moor-grass. Peatland indicator species were present in the form of *Sphagnum* mosses, including cow-horn bog-moss (*Sphagnum auriculatum*), acute-leaved bog-moss (*Sphagnum capillifolium*) and fringed bog-moss (*Sphagnum fimbriatum*). Other heathland species recorded include heath-grass (*Danthonia decumbens*), heath rush (*Juncus squarrosus*) and heath wood-rush (*Luzula multiflora*), whilst species indicative of wet conditions included marsh thistle (*Cirsium palustre*) and cross-leaved heath (*Erica tetralix*). This habitat type typically occurs where peat layers are less than 50cm deep, however an assessment of the depth of the peat layers are considered outside of the scope of this report. Species indicative of deep peat such as bog asphodel (*Narthecium ossifragum*) were noticeably absent, whilst *Sphagnum* spp. were occasional throughout and as such, this habitat type is considered to fulfil the criteria for wet heathland as opposed to blanket bog.
h2a5	Species-rich native hedgerow	A number of native, species-rich hedgerows were present within the survey area, forming the boundaries of pasture fields. All of which consisted of at least 80% native species with over 4 woody species recorded within a 30m section. Woody species included blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*), hazel, ash, field maple (*Acer campestre*) and elder (*Sambucus nigra*). Ground flora species included herb-Robert (*Geranium robertianum*), male-fern, foxglove (*Digitalis purpurea*), bluebell and common ivy (*Hedera helix*).
h3	Dense scrub	A small area of planted, dense, scrub is present within the existing WTW site, dominated by red-osier dogwood (*Cornus sericea*) with a single ash tree. Common nettle, hazel, dandelion sp. (*Taraxacum* sp.) and broad-leaved dock were also present.
f2b	Purple moor-grass and rush pastures	An area of rush pasture is present on common land, dominated by soft-rush, with occasional sharp-flowered rush (*Juncus acutiflorus*), marsh thistle and creeping bent. Lesser spearwort (*Ranunculus flammula*) and purple moor-grass were rare. The habitat grades into heathland to the north and was surveyed outside of the optimal botanical survey season. Although the sward

UKHab Code	Habitat Type	Description
		appeared species-poor at the time of survey, the habitat may support additional species not recorded at the time of survey and may fulfil the criteria for this Priority Habitat type.
u1	Built up areas and gardens	A filter bed was present within the boundary of the existing WTW.
u1b5	Buildings	A number of stone buildings with slate tiled roofs are present within the existing WTW. Historically the buildings were used as a farm house and were modified and extended to accommodate a WTW.

Source: Mott MacDonald Bentley, 2026

4.3.2 Protected and/or Notable Fauna Species Evidence

Evidence of a range of protected and/or notable species was recorded during the field survey on 15 and 22 May 2024. The locations of which are provided in target note form within Appendix G, raw data is presented within Appendix H. Evidence recorded included:

- Nesting house martins (*Delichon urbicum*).
- Mole (*Talpa europaea*) hills.
- A common frog (*Rana temporaria*) sighting.
- A stonechat (*Saxicola rubicola*) sighting.
- A small copper butterfly (*Lycaena phlaeas*) sighting.
- A barn owl (*Tyto alba*) box with evidence of use.
- Cuckoo (*Cuculus canorus*), heard from an adjacent field, not seen.

4.3.3 Protected and/or Notable Flora

Two notable vascular plant species were recorded, corn-spurrey (*Spergula arvensis*) and climbing corydalis (*Ceratocapnos claviculata*), both were located immediately adjacent to the Proposed Development. The species are considered to be notable based on the following:

- **Corn-spurrey:** listed as Near Threatened on the Welsh Red-List, Vulnerable on the Red-List for the UK and is listed as Near Locally Scarce on the BRPR (Target note TN21).
- **Climbing corydalis:** included on the list of rare, scarce and declining species in south Wales. The plants identified are also the first record of this species within the 10km square, the next nearest record is located near Hirwaun, Merthyr Tydfil (Target note TN22).

One protected vascular plant species was recorded within woodland and hedgerows, bluebell, which is listed on Schedule 8 of the 1981 Act. The species is protected against sale only, but has been included for completeness.

4.3.4 Invasive Species

In total, two invasive species listed on either Schedule 9 of the 1981 Act or Schedule 2 of the 2019 Order were recorded within the survey area, the locations of which are provided in target note form within Appendix G. A list of the species recorded is provided within Table 4.4, with the raw data provided within Appendix E and H.

Table 4.4: Invasive Species

Common Name	Scientific Name	Legislation
Himalayan balsam	*Impatiens glandulifera*	Schedule 2 of the 2019 Order
Canada goose	*Branta canadensis*	Schedule 9 of the 1981 Act

Source: Mott MacDonald Bentley, 2026

5 Interpretation and Assessment

5.1 Interpretation and Importance of Ecological Receptors

The ecological importance of each of the designated sites and habitat types identified within Section 4 have been assessed on a geographic scale throughout the following sections. It is not possible at this stage to assess the importance of fauna without further survey. As such, no assessment of the ecological importance of faunal species has been provided.

5.1.1 Designated Sites

The internationally designated sites, Coedydd Nedd a Mellte and Blaen Cynon SACs are considered to be of importance at an international level due to their legal and policy protection. As such, these sites are considered to be of International importance.

Statutory designated sites are considered to be of importance at a UK level due to their legal protection. As such, Dyffrynoedd Nedd a Mellte a Moel Penderyn, Caeau Nant y Llechau, Bryn-bwch and Gweunydd Dyffryn Nedd SSSIs are considered to be of Multinational level (UK) importance.

5.1.2 Habitats

Of the habitats identified within the survey area, a number are considered to meet the criteria for a Section 7 Priority Habitat type and as such, are considered to be of elevated ecological importance. A description of each habitat type is provided below:

- **g1a6 Other lowland dry acid grassland – County Importance**

The acid grassland road verge is considered to fulfil the criteria for the Section 7 Priority Habitat 'Lowland dry acid grassland' (approximately 227m in altitude). However, species typically associated with high nutrient levels are encroaching into the sward, likely due to run off from the adjacent pasture field and farm track. As such, the grassland is considered to be a poor example of this Priority Habitat type. Based on the condition of the grassland and abundance of this grassland type in the area, the habitat is considered to be of importance at a County level.

- **h2a5 Native Hedgerow – County Importance**

Native hedgerows are included under boundary and linear features (hedgerows) as a Section 7 Priority Habitat. The majority of the hedgerows within the survey area all comprised of more than 80% native woody species and as such, are considered to fulfil the criteria for this Priority Habitat type (primary habitat code h2a5R). The habitat is considered to be of importance at a County level.

- **w1f7 Lowland mixed deciduous woodland – National (Wales) Importance**

The parcel of oak woodland immediately adjacent to the existing WTW is considered to meet the criteria for the Section 7 Priority Habitat type 'Lowland mixed deciduous woodland' (primary habitat code w1f7) and is therefore considered to be of importance at a National (Wales) level.

- **f2b Purple moor grass and rush pastures – National (Wales) Importance**

The areas of rush pasture (primary habitat code f2b) were surveyed outside of the optimal botanical survey season and may fulfil the criteria for the Section 7 Priority Habitat type 'Purple moor grass and rush pastures'. For the purposes of this report, this habitat type is precautionarily considered to fulfil the criteria for this Priority Habitat type and as such, is

considered to be of importance at a National (Wales) level. No direct impacts are anticipated to this habitat type, and as such, no further botanical survey work has been undertaken.

In addition to the habitats listed above, two habitats are considered to fulfil the criteria for both Section 7 Priority Habitat status and for an Annex I habitat type, as follows:

- **w1a5 Western acidic oak woodland H91A0 – International Importance**

The parcel of oak woodland to the north of the survey area is considered to fulfil the criteria for the Section 7 Priority Habitat type 'Lowland mixed deciduous woodland' and is considered likely to fulfil the criteria for the Annex I Habitat type 'H91A0 Old sessile oak woods with *Ilex and* Blechnum in the British Isles'. This habitat type is therefore considered to be of International importance for the purpose of this report.

- **h1b6 wet heathland with cross-leaved heath, upland (H4010) – International Importance**

The areas of wet heathland (primary habitat code h1b6) are considered to fulfil the criteria for the Section 7 Priority Habitat type 'Upland heathland' and are considered likely to fulfil the criteria for the Annex I Habitat type 'H4010 Northern Atlantic wet heaths with *Erica tetralix* (Upland)'. This habitat type is therefore considered to be of International importance for the purpose of this report.

5.1.3 Irreplaceable Habitat

Parcels of ancient woodland are considered to fulfil the criteria for 'Irreplaceable Habitat Status' on the basis of their age, and that they are unlikely to be successfully re-created elsewhere.

An area of wet heathland with the peatland indicator species *Sphagnum* sp. was recorded within the wider survey area (primary habitat code h1b6). This peat-forming habitat type is considered likely to fulfil the criteria for 'Irreplaceable Habitat Status' on the basis that, once lost, it is unlikely to be successfully recreated.

Following an initial site walkover and identification of these Irreplaceable habitat types, it was recommended that the design of the works seeks to avoid impacts in these areas. As a result, the design options that would result in impacts to Irreplaceable habitat were removed from contention.

5.2 Assessment of Suitability Fauna

On the basis of the habitats present, an assessment was made of the suitability of the survey area to support a range of protected and/or notable species. These are detailed by species/species group within Table 5.1.

Table 5.1: Protected and/or Notable Species

Feature	Location	Interpretation
Birds	Hedgerow, woodland, heathland and rush pasture, scattered trees and buildings	The woodland, hedgerows, scattered trees and buildings all provide suitable nesting and/or foraging opportunities for breeding birds, with 23 records of Schedule 1 species returned during the desk study. The heathland and rush pasture provide opportunities for ground nesting species, with records of skylark (*Alauda arvensis*) and nightjar (*Caprimulgus europaeus*) returned within 2.0km. Evidence of breeding birds was recorded within the existing WTW in the form of house martin nests and an active barn owl nest box attached to the Lime Silo building (target notes 2 and 5). Adjacent to the WTW, mature trees along woodland edge habitats and along field boundaries may provide suitable roosting opportunities for barn owl.

Feature	Location	Interpretation
Fish	None identified	No waterbodies with the potential to support fish were identified within the survey area. Waterbodies within 250m of the survey area consist of small linear streams and ditches unlikely to support substantial fish populations.
Bats	Hedgerow, woodland, woodland edge, scattered trees, tree lines and buildings	At least three existing buildings within the survey area provide suitable roosting opportunities for bats, with records of brown long-eared, common pipistrelle and soprano pipistrelle roosts within the existing buildings returned during the desk study (target note TN13). Additionally, mature trees within woodland habitats and tree lines may provide suitable roosting opportunities for bats. An old stone barn was noted as having the potential to support free-flight species such as horseshoe sp. bats, immediately adjacent to the survey area (Target note TN14). In addition to the roosting opportunities, the woodland, pasture fields, tree lines and hedgerows all provide commuting and/or foraging opportunities for bats, with excellent connectivity to the wider landscape.
Badger	Woodland, woodland edge, pasture fields, hedgerow	The hedgerow and woodland habitats within the survey area may provide suitable habitat for sett creation, with three records of badger returned within 2.0km during the desk study. The pasture fields also provide habitat suitable for foraging and/or commuting, with excellent connectivity to the wider landscape.
Hazel dormouse	Hedgerow, woodland, woodland edge	The woodland and hedgerow habitats within the survey area may provide suitable habitat for hazel dormouse. The woodland and hedgerows are well connected to the wider landscape providing opportunities for commuting and a suitable food resource. No records of the species were returned during the desk study, likely due to a lack of recording within the area, apposed to an indication of the absence of this species.
European hedgehog	Hedgerow, woodland, woodland edge, pasture fields	The woodland, hedgerow and grassland habitats provide suitable habitat for European hedgehogs. A log pile and two brash piles (suitable hibernacula features), were also identified within the survey area (target notes 9, 10 and 16).
Otter	Woodland	Two waterbodies were recorded within the survey area, both are shallow ditches with no connectivity to areas of suitable habitat and are considered unlikely to support otter. However, the River Neath is located 0.32km to the west, with woodland habitat connecting to a parcel of ancient woodland within the survey area, which could provide suitable habitat for holt creation. Three records of otter were returned during the desk study.
Water vole	Ditches	Two waterbodies were recorded within the survey area, both are linear ditches. One of the ditches runs along the edge of rush pasture and heathland, with tussocky vegetation including rushes, herbs and sedges that could provide a suitable food resource for water vole. The second is an extremely shallow ditch running along the base of a tree line between pasture fields which is subject to grazing by sheep and is considered unlikely to provide suitable habitat for water vole. No records of the species were returned during the desk study, likely due to a lack of recording within the area, as opposed to an indication of the absence of this species.
Other mammals	Hedgerow, woodland, woodland edge, pasture fields	The woodland, hedgerow and grassland habitats all provide suitable habitat for burrow/den creation for a wide range of mammal species. Mammal evidence has been identified in the form of mole hills (target note 3), whilst records of stoat and weasel were returned during the desk study.
Amphibians	Hedgerow, woodland, heathland, rush pasture and grassland	The woodland, hedgerows, heathland, rush pasture and grassland all provide suitable terrestrial habitat for amphibians, including opportunities for hibernation within hedgerows and log/brash piles (target notes 9, 10 and 16).

Feature	Location	Interpretation
		Two waterbodies were recorded within the survey area, both are shallow ditches that likely dry out seasonally and are considered unlikely to support substantial breeding populations. No ponds were identified within 250m of the survey area, with no records of great crested newt returned from within 2.0km during the desk study.
Reptiles	Hedgerow, woodland, heathland, rush pasture and grassland	The woodland, hedgerows, heathland, rush pasture and grassland all provide suitable habitat for reptiles. The hedgerows and log/brash piles (target notes 9, 10 and 16) also provide suitable opportunities for hibernation. Records of common lizard and slow worm were returned within 2.0km during the desk study.
Terrestrial invertebrates	Hedgerow, woodland, heathland, rush pasture	The woodland, hedgerows, heathland, rush pasture and grassland all provide suitable habitat for terrestrial invertebrates. In particular, the heathland and rush pasture provides habitat for specialist species. Whilst no Devil's-bit scabious (the food plant of the protected marsh fritillary butterfly) was recorded incidentally during the survey work, the plant species is known to inhabit damp heathland and mire habitats and as such, could be present within the survey area providing habitat for marsh fritillary.
Aquatic invertebrates	Ditches and streams	The slow flowing ditches to the north west and south east of the survey area could provide suitable habitat for aquatic invertebrates.
Bryophytes	Woodland, heathland	The woodland and heathland habitats could support notable bryophyte species. In particular, the woodland parcel to the north west of the survey area which is directly connected to Coedydd Need a Melte SAC, a site that is known to support a number of notable bryophyte species. These include the Section 7 species Irish daltonia and scarce turf-moss. The closest record of these species was returned 0.64km to the south west.
Fungi	Woodland	The woodland habitats may support common and widespread species of fungi. The improved grassland habitats are considered unlikely to support important assemblages of grassland fungi.
Lichens	Woodland	The woodland habitats could support notable lichen species. In particular, the woodland parcel to the north west of the survey area which is directly connected to Coedydd Need a Melte SAC, a site that is known to support a number of notable lichen species. In total, seven records of the Section 7 species *Usnea articulata*, were returned within 2.0km.

Source: Mott MacDonald Bentley, 2025

5.3 Assessment of Impact Pathways and Summary of Constraints

It is anticipated that an assessment of effects would be undertaken as part of an Ecological Impact Assessment (EcIA). However, an initial assessment of the potential impact pathways is provided within Table 5.2 to identify potential constraints to the Proposed Development. This has been based upon the works design shown within Figure 1.1. As such, any receptors identified within the wider survey area have been excluded from this assessment and are no longer considered within this report.

Table 5.2: Assessment of the Potential Impact Pathways from the Proposed Development

Feature	Interpretation	Scope In/Out
Designated Sites		
Coedydd Nedd a Mellte SAC	No direct impacts to this designated site are anticipated. However, the Proposed Development may indirectly affect this site through run-off and dust deposition. It is anticipated that these impacts would be controlled by measures set out in Construction Environmental Management Plan (CEMP).	In

Feature	Interpretation	Scope In/Out
SAC: Blaen Cynon SSSIs: Dyffrynoedd Nedd a Mellte a Moel Penderyn; Caeau Nant y Llechau; Bryn-bwch; and Gweunydd Dyffryn Need	These statutory designated sites are considered sufficiently separated from the Proposed Development that adverse effects are not anticipated. Therefore, they are unlikely to form a constraint upon the proposed works and are no longer considered within this report. No impacts to habitat suitable for marsh fritillary are anticipated as a result of the Proposed Development and as such, no adverse effects to Blaen Cynon SAC are anticipated.	Out
Habitats		
Irreplaceable habitats (Ancient woodland and heathland)	No loss of these habitat types is anticipated as a result of the proposed works. However, indirect impacts such as run-off or dust deposition may adversely impact these habitat types during construction.	In
Annex 1 Habitat types	No loss of these habitat types is anticipated as a result of the proposed works. However, indirect impacts such as run-off or dust deposition may adversely impact these habitat types during construction.	In
Priority Habitats	Partial loss of the Section 7 Priority Habitat type, hedgerows, is anticipated as a result of the proposed works, whilst in-direct impacts such as run-off or dust deposition may also adversely impact retained hedgerows.	In
Protected and/or Notable Species		
Birds	The proposed works will result in the minor loss of scrub and hedgerow habitat suitable for breeding bird species. The proposed works have the potential to disturb, damage or destroy birds and their nesting sites and could result in a minor reduction in habitat availability for this species group. The works could result in the disturbance to Schedule 1 species, barn owl, as an active nesting site is known to be present within the existing WTW site.	In
Fish	No loss of habitat suitable to support fish is anticipated as a result of the proposed works, with no in-direct impacts to this species group anticipated.	Out
Bats	The proposed works may result in the minor loss of habitat suitable for roosting, foraging or commuting bat species, and has the potential to kill, injure or disturb roosting bats, if present. Any works undertaken at night, or the introduction of artificial lighting/increased noise pollution has the potential to adversely affect this species group.	In
Badger	The proposed works could result in the minor loss of habitat suitable for this species and could kill, injure or disturb individuals, if present. Any works undertaken at night, or the introduction of artificial lighting/increased noise pollution has the potential to adversely affect this species group.	In
Hazel dormouse	The proposed works could result in the minor loss of habitat suitable for this species and could kill, injure or disturb individuals, if present.	In
European hedgehog	The proposed works could result in the minor loss of habitat suitable for this species and could kill, injure or disturb individuals, if present.	In
Otter	No loss of habitat suitable for otter or in-direct impacts (such as noise and vibration disturbance) to areas of suitable habitat are anticipated as a result of the proposed works.	Out
Water vole	No loss of habitat suitable for water vole are anticipated as a result of the proposed works.	Out
Other mammals	The proposed works would result in a minor loss of suitable habitat for this species group and as such, has the potential to kill or injure individuals.	In

Feature	Interpretation	Scope In/Out
	Mammals such as foxes receive protection from certain construction activities under the Wild Mammals Protection Act 1996.	
Amphibians	The proposed works would result in a minor loss of suitable habitat for this species group and as such, has the potential to kill or injure individuals. Indirect effects such as dust deposition may impact upon any retained habitat during construction activities. It is anticipated that these impacts would be controlled by measures set out in CEMP.	In
Reptiles	The proposed works would result in a minor loss of suitable habitat for this species group and as such, has the potential to kill or injure individuals. Indirect effects such as dust deposition may impact upon any retained habitat during construction activities. It is anticipated that these impacts would be controlled by measures set out in CEMP.	In
Invertebrates	The proposed works would result in the minor loss of habitat suitable for terrestrial invertebrates. Indirect effects during the construction phase such as dust-deposition or run-off may also adversely affect this species group.	In
Bryophytes	No loss of habitat suitable to support rare and/or protected bryophyte species is anticipated as a result of the proposed works.	Out
Fungi	No loss of habitat suitable to support important/notable assemblages of fungi is anticipated as a result of the proposed works.	Out
Lichens	No loss of habitat suitable to support rare and/or protected lichen species is anticipated as a result of the proposed works.	Out
Invasive species	The proposed may directly impact the stands of Himalayan balsam (*Impatiens glandulifera*). Suitable methods for controlling the spread of this species should be outlined within a biodiversity risk assessment.	In

Source: Mott MacDonald Bentley, 2026

6 Recommendations for Further Surveys, Mitigation and Enhancement

On the basis of the survey work undertaken to date, the current scope of works (shown within Figure 1.1) and consideration of ecological constraints, recommendations are made below for further survey and assessment along with mitigation and enhancement measures that are likely to be appropriate for the Proposed Development. It is anticipated that further survey work would inform the need for additional or tailored species-specific survey, mitigation and enhancement.

6.1 Avoidance

Planning Policy Wales Chapter 6 (2024) emphasises the importance of applying and evidencing the application of the mitigation hierarchy. In line with the mitigation hierarchy, is it recommended that the design of the works seeks to avoid any impact on habitats and species of ecological value. In particular, any impacts on habitats considered likely to qualify as irreplaceable (including peat-forming habitats) would need to be justified as 'wholly exceptional'.

To avoid impacts to parcels of retained woodland it is recommended that an appropriate buffer is maintained around the habitat to form a root protection zone (root protection zones are specific to the particular tree species present). It is also recommended that hedgerows are retained to provide foraging and commuting opportunities for a range of species including bats and birds, where possible.

An ecologist should be consulted to review the lighting design for the Proposed Development to ensure no adverse long-term impacts to nocturnal species occur as a result of the works. The installation of artificial lighting should be avoided where possible. Where unavoidable, lighting hoods, cowls and shields should be used to focus light into the site and away from the surrounding environment.

6.2 Further Survey and Assessment

Based on the survey work and assessment undertaken to date, recommendations for further survey are given within Table 6.1, by species/species group.

Table 6.1: Further Survey Recommendations

Receptor	Survey Type	Rationale
Designated Sites		
Coedydd Nedd a Mellte SAC	Habitat Regulations Assessment	Initial screening should be undertaken to confirm whether the Proposed Development is likely to negatively impact this designated site.
Habitats		
Hedgerows	Hedgerow assessments	Hedgerow assessments in line with the wildlife and landscape criteria are recommended to fulfil DCWWs duty under the Hedgerows Regulations 1997.
Irreplaceable, Annex I and Priority Habitats	None	It is anticipated that indirect impacts to these habitat types will be mitigated throughout the construction phase with control measures laid out within a CEMP (i.e. pollution prevention measures). Subsequently, no further survey for these habitat types are recommended.
Protected and/or Notable Species		

Receptor	Survey Type	Rationale
Birds	Barn owl surveys (tree assessments and presence/likely absence surveys, where required)	Minor loss of habitat suitable for common bird species is anticipated as a result of the proposed works (with no impacts to ground nesting bird species anticipated). As such, it is anticipated that the impacts to this species group will be mitigated throughout the construction phase by consideration of the timing of the works, ecological supervision of vegetation clearance (including toolbox talks) and phased vegetation clearance. Subsequently, no further surveys for common bird species are recommended. However, the proposed works have the potential to impact barn owl. Subsequently, assessments of all trees and nest boxes within proximity to the proposed works are recommended, alongside further survey of any identified as having the potential to support nesting barn owl.
Bats - Roosting	Preliminary Roost Assessments (PRA) of buildings, Ground Level Tree Assessments (GLTA); and Presence/likely absence surveys of Potential Roost Features (PRFs)	Further surveys are recommended for all buildings and trees likely to be impacted by the Proposed Development. These should include: ● PRAs of all buildings and GLTA of all trees within 30m of the Proposed Development to identify any PRFs. ● Presence/likely absence surveys of all PRFs identified (night-time emergence surveys using night vision aids (NVAs)). Surveys should be undertaken between May and August/September, with multiple visits spread throughout the breeding season.
Bats – Activity	Automated bat detector and manual activity surveys	Bat activity surveys are recommended to determine the importance of the hedgerows likely to be impacted by the Proposed Development. These should include the deployment of automated bat detectors monthly, between April and October alongside manual bat activity surveys (night-time surveys). The surveys should identify whether the hedgerows are being used by the maternity colony within the existing WTW.
Badger	Presence/likely absence surveys	A presence/likely absence survey should be undertaken of all areas of suitable habitat within proximity to the Proposed Development. Surveys can be undertaken at any time of year; however, Spring or Autumn is preferable.
Hazel dormouse	Presence/likely absence surveys	Presence/likely absence surveys are recommended of all hedgerows habitat likely to be impacted by the Proposed Development. These should include the deployment of nest boxes in March, with monthly survey visits to check the boxes carried out between April and September.
European hedgehog, other mammals, amphibians, reptiles and invertebrates	None required	Minor loss of habitat suitable for these species/species groups is anticipated as a result of the proposed works. As such, it is anticipated that the impacts to these species/species groups will be mitigated throughout the construction phase by consideration of the timing of the works, ecological supervision of vegetation clearance (including toolbox talks) and phased vegetation clearance. Subsequently, no further surveys for these species/species groups are recommended.

Source: Mott MacDonald Bentley, 2026

6.3 Mitigation

As with the assessment of effects, it is anticipated that mitigation and enhancement measures would be included as part of an impact assessment report (EcIA). However, based on the assessment of effects and current proposals, it is anticipated that any mitigation strategy would include the measures below, to comply with legislative and planning requirements:

- A CEMP should be produced prior to the commencement of the works in order to minimise any impacts to areas of retained habitat and to safeguard protected and/or notable species throughout the works. This should include measures to reduce dust deposition and pollution.
- All construction works should be restricted, where possible, to daylight hours to prevent any adverse impacts on nocturnal species such as roosting bats, barn owl and badgers. If night works are essential, they should avoid unnecessary disturbance by ensuring that the heights of lighting columns are as low as possible; and that lighting hoods, cowls and shields are used to focus light into the working areas and away from the surrounding environment. An ecologist should be consulted prior to installing artificial lighting, with a compliance check carried out during the works (BCT, 2023).
- Where vegetation loss or management is required, this should be undertaken outside of the breeding bird season (typically March to August inclusive) or following the negative result of a nesting bird check by a suitably qualified ecologist.
- Vegetation clearance should be carried out under a method statement including toolbox talks for all site personnel, phase vegetation clearance and with ecological supervision to minimise risk to reptiles, amphibians, birds, European hedgehogs and other common mammals.
- A biodiversity risk assessment should be undertaken and robust control measures put in place to ensure non-native species are not spread into neighbouring habitats and all waste material is disposed of appropriately.

Specific mitigation requirements for barn owl, bats, badger and hazel dormouse will be identified following the completion of further surveys and will be included within species-specific survey reports, if required.

6.4 Enhancements

Section 6 of the Environment (Wales) Act 2016 requires new development to maintain and enhance biodiversity and promote resilience of ecosystems. On this basis, and in line with national and local planning policy objectives, development in Wales should deliver net benefits for biodiversity in ways that enhance ecosystem resilience, both in the short and long-term.

A particular weight is placed on the importance of safeguarding hedgerows, woodland and trees under PPW. Loss of these features is only permitted where the development would achieve significant and clearly defined public benefits, in which circumstance compensatory planting is required at a ratio of 3:1 for trees lost or, for woodland planting, at a density of 1600 trees per hectare for broadleaves and 2500 trees per hectare for conifers.

At the earliest stage and then throughout the scheme design, an ecologist should be consulted to provide strategic and technical advice on the delivery of net benefits for biodiversity including, if appropriate, off-site opportunities to deliver net benefits for biodiversity.

The following opportunities have been identified to date, which could be incorporated into the scope of works. Additional opportunities for enhancement will be identified following the completion of species-specific survey work and finalisation of works design:

- Removal of the small stand of the invasive non-native species, Himalayan balsam, under an invasive non-native species management plan.
- Inclusion of native species within landscape planting in order to diversify the habitats present.
- Provision of bat boxes (or the creation of natural tree features) and nest boxes for birds.
- Retention and/or improvements to existing buildings to provide roosting opportunities for bats.

- Planting of native wildflowers to increase diversity of the grasslands and provide suitable habitat for invertebrates.
- Supplementary planting within existing hedgerows to reduce gaps and improve connectivity.
- Planting of additional native, species-rich hedgerows to provide habitat for a wide range of protected and/or notable species.
- Provision of a pond to provide habitat for amphibians and reptiles.
- Planting native tree species, either as woodland blocks within areas of low-value habitat or within existing tree lines to improve connectivity of habitats.
- Creation of additional hibernacula such as log piles or brash, located within areas of retained habitat for reptiles, common amphibians, European hedgehogs and other small mammals.

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Appendices

A. Brecon Beacons National Park Local Development Plan – Planning Policies

At a local level, planning policies are set out within 'Brecon Beacons National Park Local Development Plan' (Adopted 2013), whilst supplementary information is set out within 'Brecon Beacons National Park Authorities – Supplementary Planning Guidance Biodiversity and Development' (2016). The policies relevant to ecology are described below:

- **Policy 3: Sites of European Importance** - *Proposals for development which may have significant effects on a European Site or potential European Site, when considered alone or in combination with other plans or projects, will not be permitted unless*:
  - the proposed development is directly connected with or necessary for the protection, enhancement and positive management of the site for conservation purposes.
  - the proposed development will not adversely affect the conservation objectives associated with the site or the integrity of the site.
  - where the site supports interests not identified as a priority habitat or species, there are imperative reasons of overriding public interest why the development should proceed.
  - where the site supports priority habitats and/or species, there are reasons of human health, public safety, beneficial consequences of primary importance to the environment or other grounds for overriding public interest that can satisfy the requirements as to why the development should proceed.
  - with respect to points three and four above there is no alternative solution, and compensatory measures are secured to ensure that the overall coherence of the Natura 2000 network is protected.
- **Policy 4: Sites of National Importance** - *Proposals for development which may affect a National Nature Reserve or proposed or notified Site of Special Scientific Interest will only be permitted where:*
  - the proposal contributes to the protection, enhancement or positive management of the site; or
  - the developer proves to the satisfaction of the National Park Authority (NPA) that the proposal has no unacceptable impacts which would directly or indirectly damage the site, detrimentally affect its conservation interest or its value in terms of its designation; or
  - the need and reasons for the proposed development outweigh the value of the site itself; and there are no alternative means of meeting the need for the development.

  Where appropriate the NPA will consider the use of Planning Conditions and/or Planning Obligations to provide appropriate mitigation and / or compensatory measures.
- **Policy 5: Sites of Importance for Nature Conservation** – *Development on non-statutory sites of wildlife will only be permitted where:*
  - the need for the development outweighs the nature conservation importance of the site.
  - the proposals comply with Policy 6 and/or, where protected and important wild species are concerned, with Policy 7.

  Where appropriate the NPA will consider the use of Planning Conditions and/or Planning Obligations to provide appropriate mitigation and/or compensatory measures.
- **Policy 6: Biodiversity and Development** – *Development will only be permitted where*:

  - the developer proves to the satisfaction of the NPA that there is no unacceptable loss or fragmentation or other impact of a habitat or landscape feature and/or increased isolation on important species as listed under Section 7 (Priority Habitats and Species), OR
  - A - the developer identifies habitats and landscape features of importance for wildlife within the site and provides for the further creation, positive management, restoration, enhancement or compensation for these habitats and features to ensure that the site maintains its nature conservation importance.
  - B - full provision is made for the future management of the site's habitats and features of nature conservation value. This will be secured either through Planning Obligations or the imposition of Planning Conditions.
  - C - there is no unacceptable loss/breaching of linear features (e.g. hedgerows, woodland belts). Development should seek to enhance linear habitat features (e.g. hedgerow, woodland belts) 'dark corridors' and roosts used by bats.

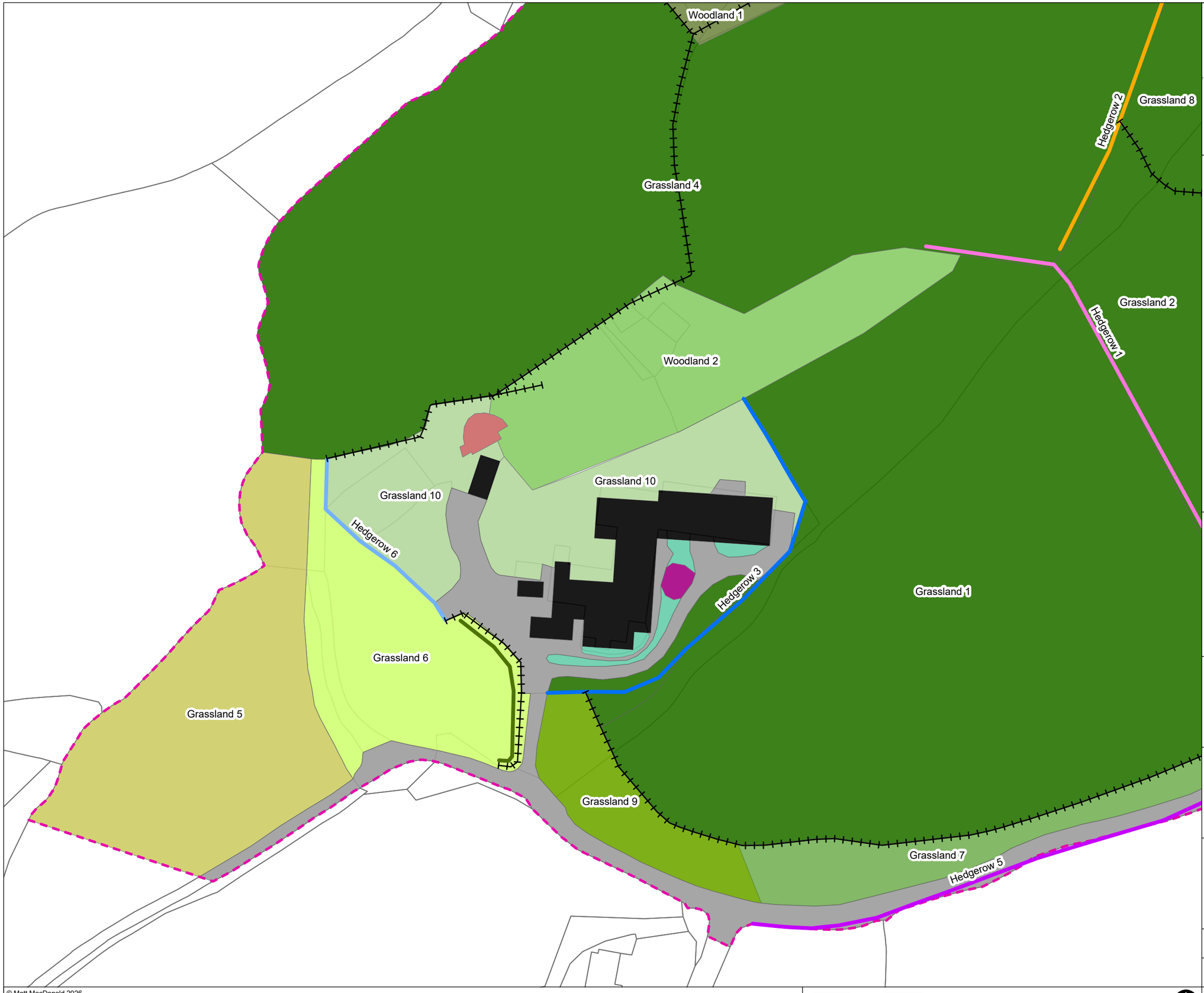
  The NPA will require all development being judged against this policy to provide biodiversity enhancement through the scheme in accordance with the direction of the Planning Obligation Strategy.
- **Policy 7: Protected and Important Wild Species** – *Proposals on land or buildings that support protected or important species will only be permitted where*:
  - the need for the development outweighs the nature conservation importance of the site, and in the case of European protected species, the criteria for derogation under the Habitats Regulations are met.
  - positive measures are provided to contribute to species and habitat conservation targets.
  - the developer proves to the satisfaction of the NPA that:
    - a) the disturbance of the species and habitat in terms of the effect on species survival and reproductive potential or habitat function will be kept to a minimum; or
    - b) alternative areas are provided to sustain at least the current levels of populations or size of habitat affected by the proposal.
- **Policy 8: Trees and Development** - *Proposals for development on sites containing trees will be required to provide a Tree Survey and a Tree Protection Plan in support of the proposal. Permission will be granted where the NPA is satisfied that*:
  - Trees and their root systems (including associated soil) are retained and adequately protected prior to, during and after development; and/or
  - Where the NPA agrees to the removal of trees as part of the development scheme, appropriate replacement must be provided on site utilising native trees of local provenance. A scheme for tree replacement, including details of planting and aftercare, shall be agreed with the NPA prior to the commencement of development.

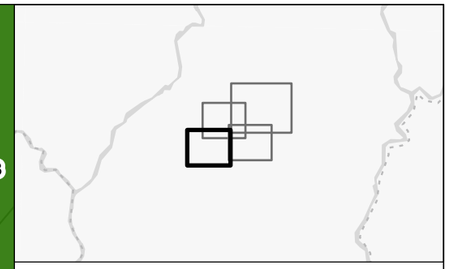
  The NPA will use Planning Conditions and/or Planning Obligations to secure any necessary mitigation / compensation / enhancement measures in relation to trees and development proposals.
- **Policy 9: Ancient Woodland and Veteran Trees** – *Proposal for development which would result in any of the following:*
  - the fragmentation or loss of ancient woodland; and/ or
  - the loss of an ancient or veteran tree; and/ or
  - ground damage, loss of understorey, or ground disturbance to an area of woodland or veteran tree's root protection area; and/ or
  - a reduction in the area of other semi-natural habitats adjoining ancient woodland; and/ or
  - significant alteration of the land use adjacent to ancient woodland; and/ or

- an increase in the likely exposure of ancient woodland or veteran tree to air, water or light pollution from the surrounding area; and/ or
- alter the hydrology in a way that might impact on ancient woodland, Ancient, or Veteran Trees; and/ or
- destroy important connecting habitats related to ancient woodlands; and/or
- degrade known archaeological or historical features within ancient woodlands or associated with veteran trees; and/or
- an area of high public use being placed near an ancient or veteran tree will only be granted planning permission where it can be demonstrated to the satisfaction of the NPA that the need for, and benefits of the development in that location, outweigh the loss or deterioration of the woodland habitat.

The NPA will use Planning Conditions and/or Planning Obligations to secure any necessary mitigation / compensation / enhancement measures required of any proposal which will impact on a Veteran Tree or Ancient Woodland. This may include the requirement for an Arboriculturist to supervise any construction work which is likely to impact on trees of significance.

B. Site Habitat Plan





- Survey area
- h2a5, 612 - species rich native hedgerow, fence
- h2a5, 11, 114 - species-rich native hedgerow with trees, dry stone wall
- h2a5, 111 612 - speicies rich native hedgerow, hedgebank, fence
- h2a5, 111, 116, 612 - species-rich native hedgerow, hedgebank, fence
- h2a5, 113, 116, 612 - species-rich native hedgerow, stone-faced bank, fence
- u1e, 114 - built linear features, dry stone wall
- u1e, 612 - built linear features, fence
- w, 33 - line of trees
- g1a6 Other lowland dry acid grassland
- g3c 108 Other neutral grassland, frequently mown
- g3c 32 108, Other neutral grassland, scattered trees and frequently mown
- g3c6 Lolium-Cynosurus neutral grassland
- g4 10 16 32 - modified grassland, scattered scrub, tall, forbs, scattered trees
- g4 102 - modified grassland, sheep grazed
- g4 32 102 - modified grassland, scattered trees, sheep grazed
- g4 - modified grassland
- h3 - dense scrub
- u1 852 - built-up areas and gardens, water treatment filter bed
- u1b5 - buildings
- u1b6 - other developed land
- w1a5 28 - western acidic oak woodland (H91A0), ancient woodland site
- w1f7 30 - other lowland mixed deciduous woodland, semi-natural woodland

Coordinate system: British National Grid; Datum: OSGB 1936

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Welsh Water

Cefn Drysgoed WTW
UK Habitat Classification Plan
Page 1 of 4

Drawn	GIS Checked	Checked	Approved
K Toth	S Baldwin	A Davies	S Allen
Scale at A3	Status	Revision	Security
1:1,000	INF	01	STD

B17545-123532-14ZZ-DR-NA-EI0004

0 10 20 30 40 Metres

Survey area
h2a5, 113, 116, 612 - species-rich native hedgerow, stone-faced bank, fence
u1e, 612 - built linear features, fence
w1, 33 - line of trees
w1, 33, 50 - line of trees, ditch
w1, 33, 612 - line of trees, ditch, fence
g3c8 15 32 102 - Holcus-Juncus neutral grassland, rushes dominant, scattered trees, sheep grazed
g4 102 - modified grassland, sheep grazed
w1a5 28 - western acidic oak woodland (H91A0), ancient woodland site

Coordinate system: British National Grid; Datum: OSGB 1936

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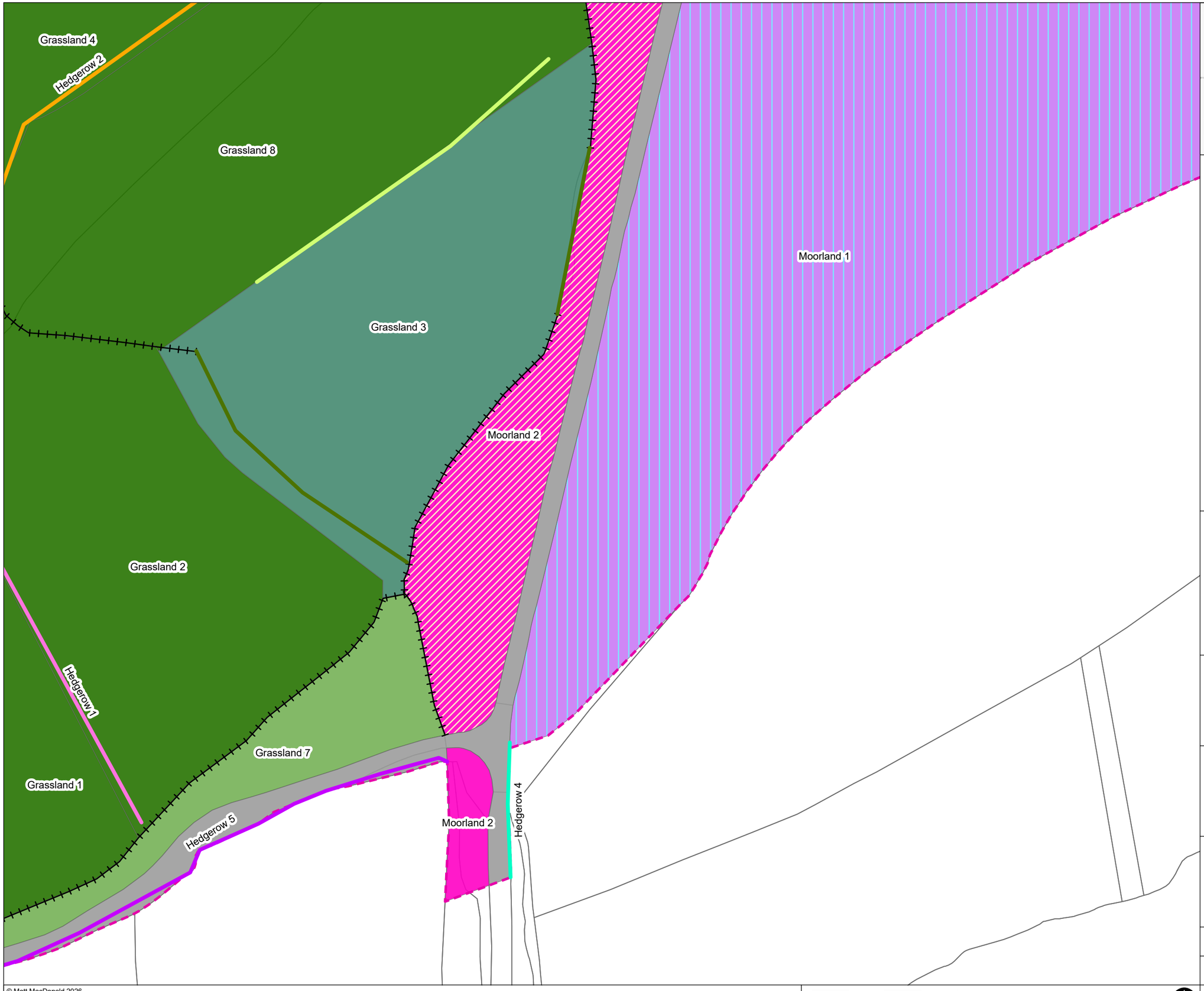

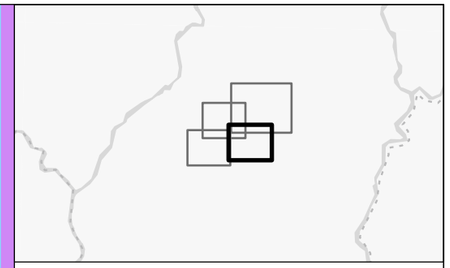

- Survey area
- h2a5, 111 612 - speicies rich native hedgerow, hedgebank, fence
- h2a5, 111, 116, 612 - species-rich native hedgerow, hedgebank, fence
- h2a5, 113, 116, 612 - species-rich native hedgerow, stone-faced bank, fence
- h2a5, 50, 612 - species-rich native hedgerow, ditch, fence
- u1e, 612 - built linear features, fence
- u1e, 114, 612 - built linear features, dry stone wall, fence
- w1, 33 - line of trees
- w1, 33, 50 - line of trees, ditch
- f2b 50 - purple moor grass and rush pastures, ditch
- f2b - purple moor grass and rush pastures
- g1a6 Other lowland dry acid grassland
- g3c8 15 32 102 - Holcus-Juncus neutral grassland, rushes dominant, scattered trees, sheep grazed
- g4 102 - modified grassland, sheep grazed
- h1b6 50 - wet heathland with cross-leaved heath, upland (H4010), ditch
- u1b6 - other developed land

Coordinate system: British National Grid; Datum: OSGB 1936

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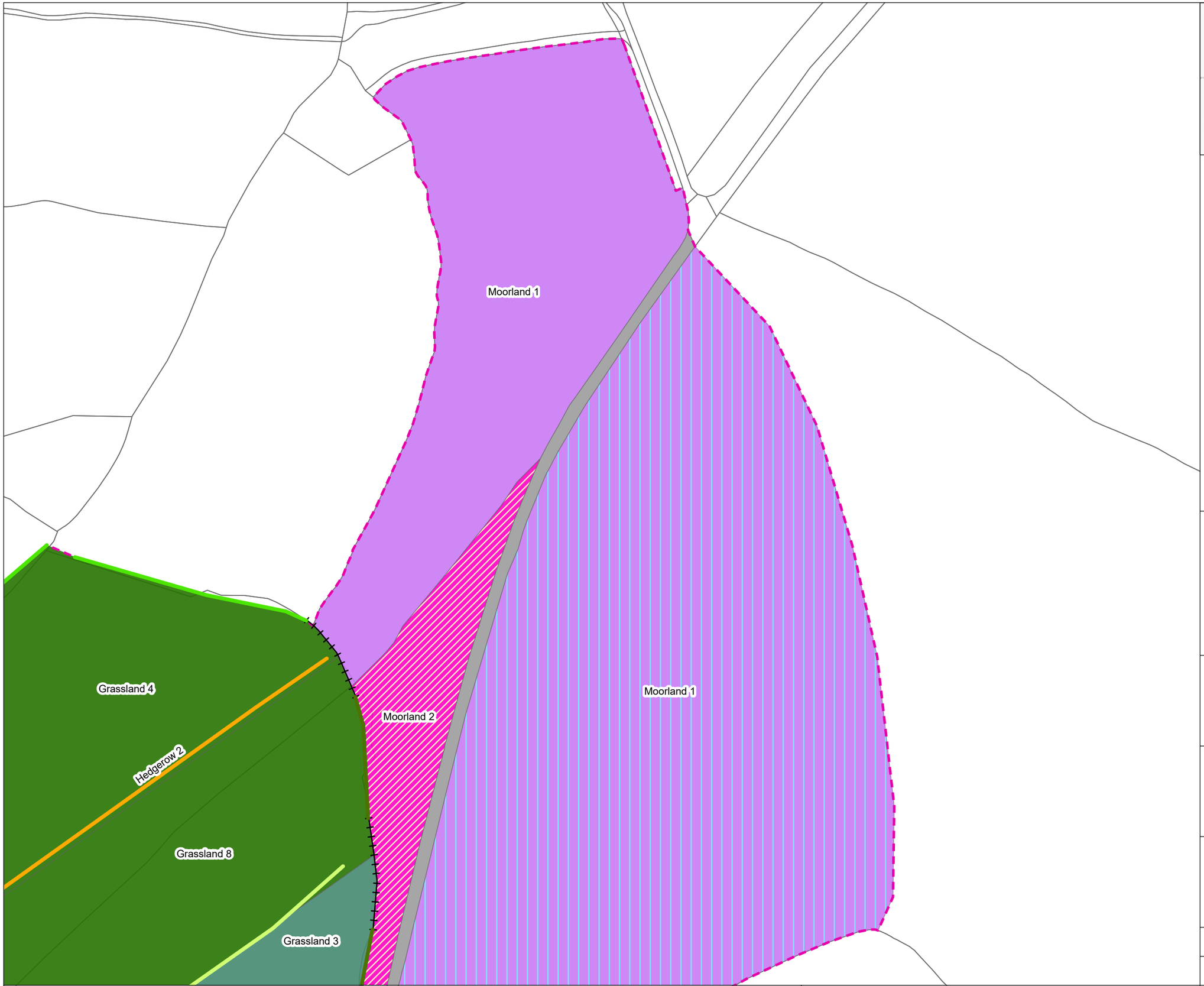
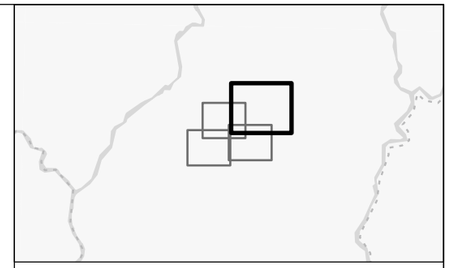
B17545-123532-14ZZ-DR-NA-EI0004





- Survey area
- h2a5, 113, 116, 612 - species-rich native hedgerow, stone-faced bank, fence
- u1e, 612 - built linear features, fence
- w1, 33 - line of trees
- w1, 33, 50 - line of trees, ditch
- w1, 33, 612 - line of trees, ditch, fence
- f2b 50 - purple moor grass and rush pastures, ditch
- g3c8 15 32 102 - Holcus-Juncus neutral grassland, rushes dominant, scattered trees, sheep grazed
- g4 102 - modified grassland, sheep grazed
- h1b6 50 - wet heathland with cross-leaved heath, upland (H4010), ditch
- h1b6 - wet heathland with cross-leaved heath, upland (H4010)
- u1b6 - other developed land

Coordinate system: British National Grid; Datum: OSGB 1936

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Dŵr Cymru
Welsh Water

Cefn Drysgoed WTW
UK Habitat Classification Plan
Page 4 of 4

Drawn	GIS Checked	Checked	Approved
K Toth	**S Baldwin**	**A Davies**	**S Allen**
Scale at A3	Status	Revision	Security
1:1,400	**INF**	**01**	**STD**

0 20 40 60 80 Metres

B17545-123532-14ZZ-DR-NA-EI0004

C. Desk Study – Additional Information

C.1 Protected and/or Notable Bird Species Records

Table C.1: Protected and/or Notable Bird Species within 2.0km of the Proposed Development

Common Name	Scientific Name	Schedule 1	Section 7	IUCN Regional Red List (GB - breeding)
In total records of 71 species were returned within 2.0km of the Proposed Development, including nine Schedule 1 species and 21 Section 7 species, listed below.				
Blackcap	*Sylvia atricapilla*	-	-	-
Black-headed gull	larus ridibundus	-	✓	LC
Blue tit	*Cyanistes caeruleus*	-	-	-
Bullfinch	*Pyrrhula pyrrhula*	-	✓	LC
Buzzard	*Buteo buteo*	-	-	-
Chiffchaff	*Phylloscopus collybita*	-	-	LC
Coal tit	*Periparus ater*	-	-	-
Coot	*Fulica atra*	-	-	LC
Cormorant	*Phalacrocorax carbo*	-	-	NT
Crossbill	*Loxia curvirostra*	✓	-	LC
Cuckoo	*Cuculus canorus*	-	✓	LC
Dipper	*Cinclus cinclus*	-	-	LC
Dunnock	*Prunella modularis*	-	✓	LC
Fieldfare	*Turdus pilaris*	✓	-	CR
Garden warbler	*Sylvia borin*	-	-	LC
Goldcrest	*Regulus regulus*	-	-	LC
Goldfinch	*Carduelis carduelis*	-	-	LC
Goosander	*Mergus merganser*	-	-	-
Goshawk*	*Accipiter gentilis*	✓	-	NT
Great spotted woodpecker	*Dendrocopos major*	-	-	-
Great tit	*Parus major*	-	-	-
Green woodpecker	*Picus viridis*	-	-	NT
Grey heron	*Ardea cinerea*	-	-	VU
Grey wagtail	*Motacilla cinerea*	-	-	NT
Hen harrier	*Circus cyaneus*	✓	✓	EN
Herring Gull	*Larus argentatus*	-	✓	LC
House martin	*Delichon urbicum*	-	-	NT
House sparrow	*Passer domesticus*	-	✓	LC
Kingfisher	*Alcedo atthis*	✓	-	VU
Lesser Black-backed gull	*Larus fuscus*	-	-	DD
Lesser redpoll	*Acanthis cabaret*	-	✓	-
Linnet	*Linaria cannabina*	-	✓	LC

Common Name	Scientific Name	Schedule 1	Section 7	IUCN Regional Red List (GB - breeding)
Long-eared owl	*Asio otus*	-	-	-
Long-tailed tit	*Aegithalos caudatus*	-	-	LC
Mallard	*Anas platyrhynchos*	-	-	LC
Marsh tit	*Poecile palustris*	-	✓	-
Meadow pipit	*Anthus pratensis*	-	-	LC
Mistle thrush	*Turdus viscivorus*	-	-	NT
Nightjar	*Caprimulgus europaeus*	-	✓	LC
Nuthatch	*Sitta europaea*	-	-	-
Peregrine	*Falco peregrinus*	✓	-	LC
Pied flycatcher	*Ficedula hypoleuca*	-	✓	-
Pied wagtail	*Motacilla alba*	-	-	-
Pintail	*Anas acuta*	✓ Part 2 only	-	-
Raven	*Corvus corax*	-	-	LC
Red kite*	*Milvus milvus*	✓	-	LC
Redstart	*Phoenicurus phoenicurus*	-	-	LC
Redwing	*Turdus iliacus*	✓	-	CR
Reed bunting	*Emberiza schoeniclus*	-	✓	LC
Ring ouzel	*Turdus torquatus*	-	✓	LC
Sand martin	*Riparia riparia*	-	-	-
Short-eared Owl	*Asio flammeus*	-	-	LC
Siskin	*Spinus spinus*	-	-	LC
Skylark	*Alauda arvensis*	-	✓	LC
Song thrush	*Turdus philomelos*	-	✓	LC
Sparrowhawk	*Accipiter nisus*	-	-	-
Spotted flycatcher	*Muscicapa striata*	-	✓	-
Starling	*Sturnus vulgaris*	-	✓	VU
Stonechat	*Saxicola rubicola*	-	-	-
Swallow	*Hirundo rustica*	-	-	VU
Swift	*Apus apus*	-	-	EN
Tawny owl	*Strix aluco*	-	-	-
Tree pipit	*Anthus trivialis*	-	✓	LC
Treecreeper	*Certhia familiaris*	-	-	-
Wheatear	*Oenanthe oenanthe*	-	-	EN
Whinchat	*Saxicola rubetra*	-	-	LC
Whitethroat	*Curruca communis*	-	-	LC
Willow warbler	*Phylloscopus trochilus*	-	-	LC
Wood warbler	*Phylloscopus sibilatrix*	-	✓	VU
Woodcock	*Scolopax rusticola*	-	-	VU
Yellow wagtail	*Motacilla flava*	-	✓	NT
Key: CR – Critically Endangered, EN – Endangered, VU – Vulnerable, NT – Near Threatened, LC – Least concern, DD – Data				

Common Name	Scientific Name	Schedule 1	Section 7	IUCN Regional Red List (GB - breeding)
Deficient				

Source: BIS, 2025 * Schedule 1 and Schedule 9 Species

C.2 Bat Records

Table C.2: Bat Records within 2.0km of the Proposed Development

Common Name	Scientific Name	Bat Activity (commuting/foraging)	Bat Roost
Barbastelle bat	*Barbastella barbastellus*	✓	-
Brandt's bat	*Myotis brandtii*	-	✓
Brown long-eared bat	*Plecotus auritus*	✓	✓
Common pipistrelle	*Pipistrellus pipistrellus*	✓	-
Daubenton's bat	*Myotis daubentonii*	✓	✓ (hibernation)
Greater horseshoe bat	*Rhinolophus ferrumequinum*	✓	✓ (hibernation)
Lesser horseshoe bat	*Rhinolophus hipposideros*	✓	✓ (including hibernation)
Myotis bat species	*Myotis* sp.	✓	✓
Nathusius' pipistrelle	*Pipistrellus nathusii*	✓	-
Natterer's bat	*Myotis nattereri*	✓	✓ (including hibernation)
Noctule bat	*Nyctalus noctula*	✓	-
Pipistrellus species	*Pipistrellus* sp.	✓	✓ (including maternity)
Soprano pipistrelle	*Pipistrellus pygmaeus*	✓	✓
Whiskered bat	*Myotis mystacinus*	✓	-
Whiskered/Brandt's bat	*Myotis mystacinus/brandtii*	✓	✓ (hibernation)

Source: BIS, 2025

C.3 Invertebrates Records

Table C.3: Section 7 Invertebrates Species Records within 2.0km of the Proposed Development

Common Name	Scientific Name
Anomalous	*Stilbia anomala*
Autumnal rustic	*Eugnorisma glareosa*
Beaded chestnut	*Agrochola lychnidis*
Blood-vein	*Timandra comae*
Brindled beauty	*Lycia hirtaria*
Broom moth	*Ceramica pisi*
Buff ermine	*Spilosoma lutea*
Centre-barred sallow	*Atethmia centrago*
Dark-barred twin-spot carpet	*Xanthorhoe ferrugata*
Double dart	*Graphiphora augur*
Dusky brocade	*Apamea remissa*
Ear moth	*Amphipoea oculea*
Feathered gothic	*Tholera decimalis*

Common Name	Scientific Name
Flounced chestnut	*Anchoscelis helvola*
Galium carpet	*Epirrhoe galiata*
Garden tiger	*Arctia caja*
Green-brindled crescent	*Allophyes oxyacanthae*
Hedge rustic	*Tholera cespitis*
Knot grass	*Acronicta rumicis*
Mottled rustic	*Caradrina morpheus*
Neglected rustic	*Xestia castanea*
Oak hook-tip	*Watsonalla binaria*
Oblique carpet	*Orthonama vittata*
Powdered quaker	*Orthosia gracilis*
Rosy rustic	*Hydraecia micacea*
Rustic	*Hoplodrina blanda*
Sallow	*Cirrhia icteritia*
Small Heath	*Coenonympha pamphilus*
Small phoenix	*Ecliptopera silaceata*
Small square-spot	*Diarsia rubi*
White ermine	*Spilosoma lubricipeda*

Source: BIS, 2025

C.4 Protected and/or Notable Plant Species Records

Table C.4: Protected and/or Notable Plant Species Records within 2.0km of the Proposed Development

Common Name	Scientific Name	Schedule 8	Section 7	Brecknockshire Rare Plant Register	Welsh Red List	UK Red List
Alder buckthorn	*Frangula alnus*	-	-	LS	-	LC
Bluebell	*Hyacinthoides non-scripta*	✓	-	-	-	-
Greater butterfly-orchid	*Platanthera chlorantha*	-	-	LS	-	NT
Hay-scented buckler-fern	*Dryopteris aemula*	-	-	LS	-	LC
Killarney fern	*Trichomanes speciosum*	✓	-	LR	-	-
Lobed maidenhair spleenwort	*Asplenium trichomanes* subsp. *pachyrachis*	-	✓	LR	EN	NT
Tunbridge filmy-fern	*Hymenophyllum tunbrigense*	-	-	LR	-	LC

Key: LC – Least Concern; LS – Locally Scarce; NT – Near Threatened; EN – Endangered.

Source: BIS, 2025

C.5 Protected and/or Notable Lichen and Bryophytes Species Records

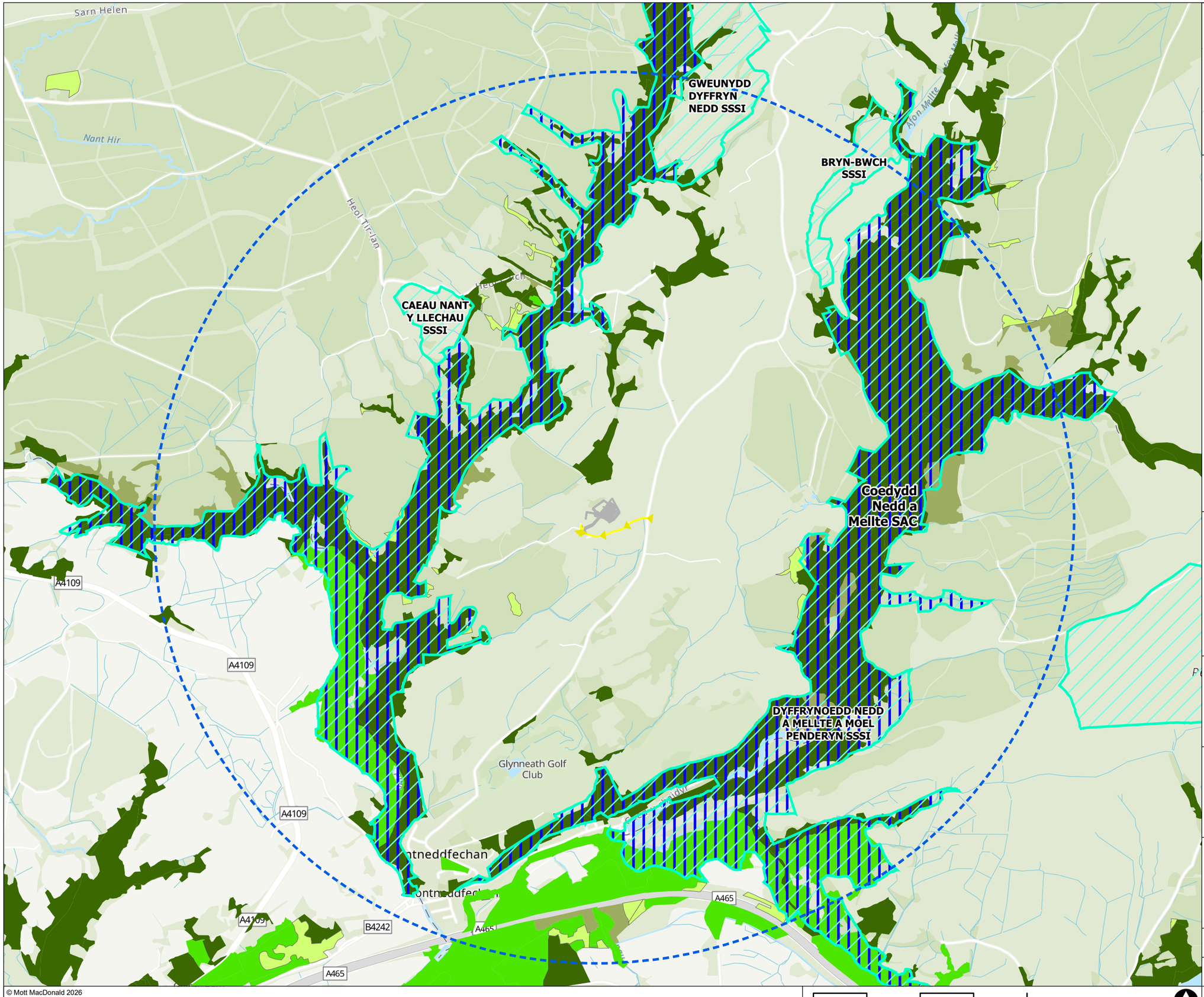
Table C.5: Protected and/or Notable Lichens and Bryophytes Species within 2.0km of the Proposed Development

Common Name	Scientific Name	Section 7	Welsh Red List	UK Red List
Lichens				
-	*Peltigera horizontalis*	-	-	-
-	*Sticta limbata*	-	-	-
-	*Usnea articulata*	✓	-	-
Bryophytes				
Irish daltonia	*Daltonia splachnoides*	✓	DD	VU
Scarce turf-moss	*Rhytidiadelphus subpinnatus*	✓	-	NT

Key: NT – Near Threatened; VU – Vulnerable; DD – Data Deficient.

Source: BIS, 2025

D. Designated Sites Plan



Works design
Access track for construction traffic, utilizing existing road
Desk study boundary - 2km

Designated sites

Sites of special scientific interest (SSSI)
Special areas of conservation (SAC)
Ancient semi natural woodland
Ancient woodland site of unknown category
Plantation on ancient woodland site
Restored ancient woodland site

Coordinate system: British National Grid; Datum: OSGB 1936

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
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Dŵr Cymru Welsh Water

Cefn Drysgoed WTW

Designated Sites Map

Drawn	GIS Checked	Checked	Approved
S Baldwin	H Clough	L Jepson	S Allen
Scale at A3	Status	Revision	Security
1:17,000	INF	01	STD

B17545-123532-14-ZZ-DR-NA-EI0003

0 250 500 750 1000 Metres

E. Species Lists

E.1 g1 - Acid Grassland

Table E.1: g1a6 – Other Lowland Dry Acid Grassland

Common Name	Scientific Name	DAFOR
Habitat ID		**Grassland 7**
Survey Date		04/06/2025
UK Habitat Code:		g1a6 32 124
Bank haircap moss	*Polytrichastrum formosum*	R
Barren strawberry	*Potentilla sterilis*	O
Bitter-cress sp.	*Cardamine* sp.	R
Bluebell	*Hyacinthoides non-scripta*	R
Bracken	*Pteridium aquilinum*	R
Broad-leaved dock	*Rumex obtusifolius*	R
Bulbous buttercup	*Ranunculus bulbosus*	R
Cock's-foot	*Dactylis glomerata*	R
Common bird's-foot-trefoil	*Lotus corniculatus*	R
Common gorse	*Ulex europaeus*	R
Common mouse-ear	*Cerastium fontanum*	R
Common nettle	*Urtica dioica*	R
Common Sedge	*Carex nigra*	O
Common sorrel	*Rumex acetosa*	R
Compact Rush	*Juncus conglomeratus*	R
Creeping Buttercup	*Ranunculus repens*	R
Creeping thistle	*Cirsium arvense*	R
Crested dog's-tail	*Cynosurus cristatus*	O
Dandelion sp.	*Taraxacum* sp.	O
Foxglove	*Digitalis purpurea*	O
Germander speedwell	*Veronica chamaedrys*	O
Greater stitchwort	*Stellaria holostea*	O
Green ribbed sedge	*Carex binervis*	R
Hard rush	*Juncus inflexus*	R
Hawkweed sp.	*Hieracium* sp.	O
Hawthorn (sapling)	*Crataegus monogyna*	R
Heath bedstraw	*Galium saxatile*	O
Heath Rush	*Juncus squarrosus*	R
Heath speedwell	*Veronica officinalis*	O
Heath wood-rush	*Juncus multiflora spp. multiflora*	O
Heath wood-rush	*Juncus multiflora spp. congesta*	R
Lesser trefoil	*Trifolium dubium*	R
Meadow buttercup	*Ranunculus acris*	R

Common Name	Scientific Name	DAFOR
Neat Feather Moss	*Pseudoscleropodium purum*	O
Oval sedge	*Carex leporina*	R
Perennial rye-grass	*Lolium perenne*	R
Pignut	*Conopodium majus*	O
Ragwort	*Jacobaea vulgaris*	R
Red Clover	*Trifolium pratense*	R
Red fescue	*Festuca rubra*	F
Red-stemmed feather-moss	*Pleurozium schreberi*	R
Ribwort Plantain	*Plantago lanceolata*	R
Rough meadow grass	*Poa trivialis*	R
Sheep's fescue	*Festuca ovina*	R
Sheep's sorrel	*Rumex acetosella*	R
Smooth meadow grass	*Poa pratensis*	R
Soft brome	*Bromus hordeaceus*	R
Soft rush	*Juncus effusus*	O
Springy turf-moss	*Rhytidiadelphus squarrosus*	F
Sweet vernal-grass	*Anthoxanthum odoratum*	A
Tormentil	*Potentilla erecta*	R
Violet sp.	*Viola* sp.	O
White clover	*Trifolium repens*	R
Yarrow	*Achillea millefolium*	R
Yorkshire-fog	*Holcus lanatus*	O
Secondary code 32 – Scattered trees		
Holly	*Ilex aquifolium*	R
Oak sp.	*Quercus* sp.	O

Source: Mott MacDonald Bentley, 2024

Table E.2: Grassland 7 - Quadrat 1

Common Name	Scientific Name	DAFOR
Quadrat ID		Quadrat 1
Survey Date		04/06/2025
Vegetation Height		15-30cm
Sweet vernal-grass	*Anthoxanthum odoratum*	A
Red fescue	*Festuca rubra*	F
Common sorrel	*Rumex acetosa*	O
Creeping buttercup	*Ranunculus repens*	R
Heath woodrush	*Luzula multiflora*	R
Pignut	*Conopodium majus*	R
Sheep's sorrel	*Rumex acetosella*	R
Smooth meadow-grass	*Poa pratensis*	R
Yorkshire-fog	*Holcus lanatus*	R

Source: Mott MacDonald Bentley, 2025

Table E.3: Grassland 7 - Quadrat 2

Common Name	Scientific Name	DAFOR
Quadrat ID		Quadrat 2
Survey Date		04/06/2025
Vegetation Height		5-50cm
Sweet vernal-grass	*Anthoxanthum odoratum*	D
Neat feathermoss	*Pseudoscleropodium purum*	F
Greater stitchwort	*Stellaria holostea*	O
Heath bedstraw	*Galium saxatile*	O
Red fescue	*Festuca rubra*	O
Soft rush	*Juncus effusus*	O
Bluebell	*Hyacinthoides non-scripta*	R
Common sorrel	*Rumex acetosa*	R
Heath woodrush	*Luzula multiflora*	R
Pignut	*Conopodium majus*	R
Red-stemmed feathermoss	*Pleurozium schreberi*	R
Rough meadow-grass	*Poa trivialis*	R
Tormentil	*Potentilla erecta*	R

Source: Mott MacDonald Bentley, 2025

Table E.4: Grassland 7 - Quadrat 3

Common Name	Scientific Name	DAFOR
Quadrat ID		Quadrat 3
Survey Date		04/06/2025
Vegetation Height		2-30cm
Sweet vernal-grass	*Anthoxanthum odoratum*	D
Springy turf-moss	*Rhytidiadelphus squarrosus*	F
Yorkshire-fog	*Holcus lanatus*	O
Bluebell	*Hyacinthoides non-scripta*	R
Bulbous buttercup	*Ranunculus bulbosus*	R
Common sorrel	*Rumex acetosa*	R
Creeping buttercup	*Ranunculus repens*	R
Heath woodrush	*Luzula multiflora*	R
Meadow buttercup	*Ranunculus acris*	R
Pignut	*Conopodium majus*	R

Source: Mott MacDonald Bentley, 2025

Table E.5: Grassland 7 - Quadrat 4

Common Name	Scientific Name	DAFOR
Quadrat ID		Quadrat 4
Survey Date		04/06/2025
Vegetation Height		15-50cm
Sweet vernal-grass	*Anthoxanthum odoratum*	D
Springy turf-moss	*Rhytidiadelphus squarrosus*	F
Yorkshire-fog	*Holcus lanatus*	F
Creeping buttercup	*Ranunculus repens*	O

Common Name	Scientific Name	DAFOR
Dandelion sp.	*Taraxacum* sp.	O
Meadow buttercup	*Ranunculus acris*	O
Bitter-cress sp.	*Cardamine* sp.	R
Creeping thistle	*Cirsium arvense*	R
Heath woodrush	*Luzula multiflora*	R
White clover	*Trifolium repens*	R

Source: Mott MacDonald Bentley, 2025

E.2 g3 – Neutral Grassland

Table E.6: g3c – Other neutral grassland

Common Name	Scientific Name	DAFOR
Habitat ID		Grassland 10
Survey Date		14/07/2025
UK Habitat Code:		g3c
Bedstraw sp.	*Galium* sp.	R
Bent sp.	*Agrostis* sp.	F
Bittercress sp.	*Cardamine* sp.	R
Broad-leaved dock	*Rumex obtusifolius*	R
Colt's-foot	*Tussilago farfara*	R
Common bent	*Agrostis capillaris*	F
Common bird's-foot-trefoil	*Lotus corniculatus*	R
Common mouse-ear	*Cerastium fontanum*	R
Common sorrel	*Rumex acetosa*	R
Creeping buttercup	*Ranunculus repens*	R
Creeping cinquefoil	*Potentilla reptans*	R
Daisy	*Bellis perennis*	R
Dandelion sp.	*Taraxacum* sp.	R
Germander speedwell	*Veronica chamaedrys*	R
Greater plantain	*Plantago major*	R
Hawkweed sp.	*Hieracium* sp.	R
Herb Robert	*Geranium robertianum*	R
Lesser trefoil	*Trifolium dubium*	O
Red clover	*Trifolium pratense*	O
Ribwort plantain	*Plantago lanceolata*	O
Selfheal	*Prunella vulgaris*	R
Speedwell sp.	*Veronica* sp.	R
Springy turf-moss	*Rhytidiadelphus squarrosus*	F
White clover	*Trifolium repens*	R
Yarrow	*Achillea millefolium*	R
Yorkshire-fog	*Holcus lanatus*	F

Source: Mott MacDonald Bentley, 2025

Table E.7: Quadrat 1 – Grassland 10 – Quadrat 1

Common Name	Scientific Name	DAFOR
Quadrat ID		Quadrat 1
Survey Date		14/07/2025
Vegetation Height		5-15cm
Bent sp.	*Agrostis* sp.	F
Yorkshire-fog	*Holcus lanatus*	F
Red clover	*Trifolium pratense*	O
Ribwort plantain	*Plantago lanceolata*	O
Springy turf-moss	*Rhytidiadelphus squarrosus*	O
Broad-leaved dock	*Rumex obtusifolius*	R
Common mouse-ear	*Cerastium fontanum*	R
Common sorrel	*Rumex acetosa*	R
Creeping buttercup	*Ranunculus repens*	R
Creeping cinquefoil	*Potentilla reptans*	R
Dandelion sp.	*Taraxacum* sp.	R
Hawkweed sp.	*Hieracium* sp.	R
Common bird's-foot-trefoil	*Lotus corniculatus*	R
Speedwell sp.	*Veronica* sp.	R
White clover	*Trifolium repens*	R
Grid reference: SN 90924 09459		

Source: Mott MacDonald Bentley, 2025

Table E.8: Grassland 10 – Quadrat 2

Common Name	Scientific Name	DAFOR
Quadrat ID		Quadrat 2
Survey Date		14/07/2025
Vegetation Height		5-15cm
Yorkshire-fog	*Holcus lanatus*	A
Bent sp.	*Agrostis* sp.	F
Creeping buttercup	*Ranunculus repens*	O
Bedstraw sp.	*Galium* sp.	R
Bittercress sp.	*Cardamine* sp.	R
Daisy	*Bellis perennis*	R
Dandelion sp.	*Taraxacum* sp.	R
Common bird's-foot-trefoil	*Lotus corniculatus*	R
Lesser trefoil	*Trifolium dubium*	R
Selfheal	*Prunella vulgaris*	R
Grid reference: SN 90895 09413		

Source: Mott MacDonald Bentley, 2025

Table E.9: g3c6 - *Lolium-Cynosurus* neutral grassland

Common Name	Scientific Name	DAFOR
Habitat ID		Grassland 9
Survey Date		14/07/2025
UK Habitat Code:		g3c6

Common Name	Scientific Name	DAFOR
Bittercress sp.	*Cardamine* sp.	R
Common bent	*Agrostis capillaris*	F
Common mouse-ear	*Cerastium fontanum*	R
Common sorrel	*Rumex acetosa*	R
Creeping buttercup	*Ranunculus repens*	O
Creeping thistle	*Cirsium arvense*	O
Crested dog's-tail	*Cynosurus cristatus*	R
Dandelion sp.	*Taraxacum* sp.	R
Hawkweed sp.	*Hieracium* sp.	R
Meadow buttercup	*Ranunculus acris*	R
Red fescue	*Festuca rubra*	O
Ribwort plantain	*Plantago lanceolata*	R
Sweet vernal-grass	*Anthoxanthum odoratum*	O
White clover	*Trifolium repens*	R
Yorkshire-fog	*Holcus lanatus*	O
Notes: Rough grassland road verge, some leaching evident from neighbouring pasture field		

Source: Mott MacDonald Bentley, 2025

Table E.10: Grassland 9 – Quadrat 1

Common Name	Scientific Name	DAFOR
Quadrat ID		Quadrat 1
Survey Date		14/07/2025
Vegetation Height		20-60cm
Common bent	*Agrostis capillaris*	F
Creeping buttercup	*Ranunculus repens*	O
Creeping thistle	*Cirsium arvense*	O
Sweet vernal-grass	*Anthoxanthum odoratum*	O
Yorkshire-fog	*Holcus lanatus*	O
Bitter-cress sp.	*Cardamine* sp.	R
Common mouse-ear	*Cerastium fontanum*	R
Dandelion sp.	*OTaraxacum* sp.	R
Meadow buttercup	*Ranunculus acris*	R
Grid reference: SN 90879 09383		

Source: Mott MacDonald Bentley, 2025

Table E.11: Grassland 9 – Quadrat 2

Common Name	Scientific Name	DAFOR
Quadrat ID		Quadrat 2
Survey Date		14/07/2025
Vegetation Height		5-40cm
Common bent	*Agrostis capillaris*	O
Red fescue	*Festuca rubra*	O
Sweet vernal-grass	*Anthoxanthum odoratum*	O
Bitter-cress sp.	*Cardamine* sp.	R
Common mouse-ear	*Cerastium fontanum*	R

Common Name	Scientific Name	DAFOR
Common sorrel	*Rumex acetosa*	R
Creeping thistle	*Cirsium arvense*	R
Crested dog's-tail	*Cynosurus cristatus*	R
Dandelion sp.	*Taraxacum* sp.	R
Hawkweed sp.	*Hieracium* sp.	R
Meadow buttercup	*Ranunculus acris*	R
Ribwort plantain	*Plantago lanceolata*	R
White clover	*Trifolium repens*	R
Yorkshire-fog	*Holcus lanatus*	R
Grid reference: SN 90890 09367		

Source: Mott MacDonald Bentley, 2025

Table E.12: Grassland 9 – Quadrat 3

Common Name	Scientific Name	DAFOR
Quadrat ID		Quadrat 5
Survey Date		04/06/2025
Vegetation Height		10-30cm
Cock's-foot		F
Germander speedwell	*Veronica chamaedrys*	F
Springy turf-moss	*Rhytidiadelphus squarrosus*	F
Sweet vernal-grass	*Anthoxanthum odoratum*	F
Yorkshire-fog	*Holcus lanatus*	F
Common sorrel	*Rumex acetosa*	R
Creeping buttercup	*Ranunculus repens*	R
Crested dog's-tail	*Cynosurus cristatus*	R
Dandelion sp.	*Taraxacum* sp.	R
Meadow buttercup	*Ranunculus acris*	R
Oak sp.	*Quercus* sp.	R
Oval sedge	*Carex leporina*	R

Source: Mott MacDonald Bentley, 2025

Table E.13: g3c8 – *Holcus-Juncus* neutral grassland

Common Name	Scientific Name	DAFOR
Habitat ID		**Grassland 3**
Survey Date		21/05/2024
UK Habitat Code:		g3c8 15 32 102
Bitter-cress sp.	*Cardamine* sp.	R
Bog stitchwort	*Stellaria alsine*	R
Broad-leaved dock	*Rumex obtusifolius*	R
Common nettle	*Urtica dioica*	R
Common sedge	*Carex nigra*	O
Common sorrel	*Rumex acetosa*	O
Creeping bent	*Argrostis stolonifera*	R
Creeping buttercup	*Ranunculus repens*	O
Cuckooflower	*Cardamine pratensis*	O

Common Name	Scientific Name	DAFOR
Habitat ID		**Grassland 3**
Survey Date		21/05/2024
Daisy	*Bellis perennis*	R
Marsh-bedstraw	*Galium palustre*	O
Meadow buttercup	*Ranunculus acris*	R
Meadow foxtail	*Alopecurus pratensis*	R
Meadow-grass sp.	*Poa* sp.	R
Perennial rye-grass	*Lolium perenne*	O
Soft-rush	*Juncus effusus*	F
Starwort sp.	*Callitriche* sp.	R
Sweet vernal-grass	*Anthoxanthum odoratum*	F
White clover	*Trifolium repens*	O
Yorkshire-fog	*Holcus lanatus*	F
Secondary code 32 – Scattered trees		
Willow sp.	*Salix* sp.	R
Notes:	5 species recorded within a 1m^2 quadrat.	

Source: Mott MacDonald Bentley, 2024

E.3 g4 – Modified Grassland

Table E.14: g4 – Modified grassland

Common Name	Scientific Name	DAFOR					
Habitat ID		**Grassland 1**	**Grassland 2**	**Grassland 4**	**Grassland 5**	**Grassland 6**	**Grassland 8**
Survey Date		21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024
UK Habitat Code:		g4 102	g4 102	g4 102	g4 32 102	g4 10 16 32	g4 102
Annual meadow-grass	*Poa annua*				F		F
Bracken	*Pteridium aquilinum*			R			
Broad-leaved dock	*Rumex obtusifolius*	O	O	O	O	O	O
Broad-leaved willowherb	*Epilobium montanum*				R		
Brooklime	*Veronica beccabunga*				R		
Bulbous buttercup	*Ranunculus bulbosus*	O		F			
Chickweed sp.	*Stellaria* sp.	R				R	
Cock's-foot	*Dactylis glomerata*			R		A	
Common bird's-foot-trefoil	*Lotus corniculatus*				R		
Common mouse-ear	*Cerastium fontanum*	R	R	R			
Common nettle	*Urtica dioica*	R	R	R	R	O	
Common sedge	*Carex nigra*		R				
Common sorrel	*Rumex acetosa*	A	O	O	F	O	O
Compact rush	*Juncus conglomeratus*				R		
Creeping buttercup	*Ranunculus repens*	O	A	O	A	F	O
Crested dog's-tail	*Cynosurus cristatus*		O	A	F		
Cuckooflower	*Cardamine pratensis*	R	R	R	O	R	

Common Name	**Scientific Name**	**DAFOR**					
Habitat ID		**Grassland 1**	**Grassland 2**	**Grassland 4**	**Grassland 5**	**Grassland 6**	**Grassland 8**
Daisy	*Bellis perennis*	O	R	R	O		R
Dandelion sp.	*Taraxacum* sp.	R		R			
Field horsetail	*Equisetum arvense*				R		
Forget-me-not sp.	*Myosotis* sp.			R	R		
Greater bird's-foot-trefoil	*Lotus pedunculatus*			R			
Greater plantain	*Plantago major*		R				
Hawkbit sp.	*Scorzoneroides* sp.		R				
Hawkweed sp.	*Hieracium* sp.	R	R				
Hogweed	*Heracleum sphondylium*		R				
Lesser stitchwort	*Stellaria graminea*				R		
Marsh-bedstraw	*Galium palustre*				R		
Meadow buttercup	*Ranunculus acris*	R	F	O			R
Meadow foxtail	*Alopecurus pratensis*				R		
Meadow-grass sp.	*Poa* sp.	F	F	O		O	
Moss sp.	*Bryophyta* sp.		R				
Perennial rye-grass	*Lolium perenne*	O	A				O
Pignut	*Conopodium majus*	R					
Red clover	*Trifolium pratense*	O	R	R			
Ribwort plantain	*Plantago lanceolata*	O		O			
Sedge sp.	*Carex* sp.				R		
Silverweed	*Potentilla anserina*				R		
Soft-rush	*Juncus effusus*		O	R	R		O
Speedwell sp.	*Veronica* sp.				R		
Spike-rush sp.	*Eleocharis* sp.				R		
Sweet vernal-grass	*Anthoxanthum odoratum*	F	F	A	O	O	O
Thistle sp.	*Cirsium* sp.					O	
Thyme-leaved speedwell	*Veronica serpyllifolia*		R	R			
Timothy	*Phleum pratense*	F	O	O	O		
White clover	*Trifolium repens*	O	F	F	O	O	F
Willowherb sp.	*Epilobium* sp.				R		
Yarrow	*Achillea millefolium*	A					
Yorkshire-fog	*Holcus lanatus*	O	O	O	F	A	O
Secondary code 10 – Scattered scrub							
Bluebell	*Hyacinthoides non-scripta*					O	
Bracken	*Pteridium aquilinum*					O	
Bramble agg.	*Rubus fruticosus* agg.					F	
Broad-leaved willowherb	*Epilobium montanum*					R	
Cleavers	*Galium aparine*					O	
Common nettle	*Urtica dioica*					F	

Common Name	Scientific Name	DAFOR					
Habitat ID		**Grassland 1**	**Grassland 2**	**Grassland 4**	**Grassland 5**	**Grassland 6**	**Grassland 8**
Foxglove	*Digitalis purpurea*					R	
Hawthorn	*Crataegus monogyna*					R	
Lesser burdock	*Lesser burdock*					R	
Pignut	*Conopodium majus*					O	
Scaly male-fern	*Dryopteris affinis*					R	
Sycamore (sapling)	*Acer pseudoplatanus*					R	
Tormentil	*Potentilla erecta*					R	
Wood speedwell	*Veronica montana*					O	
Secondary code 16 – Tall forbs							
Common nettle	*Urtica dioica*					O	
Hoary willowherb	*Epilobium parviflorum*					F	
Secondary code 32 – Scattered trees							
Ash	*Fraxinus excelsior*					R	
Scots pine	*Pinus sylvestris*					O	
Sycamore	*Acer pseudoplatanus*				R	O	

Source: Mott MacDonald Bentley, 2024

Table E.15: Grassland 1 – Quadrat 1

Common Name	Scientific Name	DAFOR
Quadrat ID		Quadrat 1
Survey Date		14/07/2025
Vegetation Height		5-10cm
Yorkshire-fog	*Holcus lanatus*	F
Common sorrel	*Rumex acetosa*	O
Creeping buttercup	*Ranunculus repens*	O
Perennial rye-grass	*Lolium perenne*	O
Broad-leaved dock	*Rumex obtusifolius*	R
Dandelion sp.	*Taraxacum* sp.	R
White clover	*Trifolium repens*	R
Grid reference: SN 90995 09417		

Source: Mott MacDonald Bentley, 2025

Table E.16: Grassland 1 – Quadrat 2

Common Name	Scientific Name	DAFOR
Quadrat ID		Quadrat 2
Survey Date		14/07/2025
Vegetation Height		5-8cm
Perennial rye-grass	*Lolium perenne*	F
Common sorrel	*Rumex acetosa*	O
Creeping buttercup	*Ranunculus repens*	O
White clover	*Trifolium repens*	O
Yorkshire-fog	*Holcus lanatus*	O
Dandelion sp.	*Taraxacum* sp.	R
Hawkweed sp.	*Hieracium* sp.	R

Common Name	Scientific Name	DAFOR
Yarrow	*Achillea millefolium*	R
Grid reference: SN 91011 09480		

Source: Mott MacDonald Bentley, 2025

E.4 w1 – Broadleaved and Mixed Woodland

Ancient woodland indicators (AWI) are shown by the abbreviation 'AWI' throughout the following tables. No AWI list specific to Brecon could be obtained. An AWI list specific to Carmarthen has been used, taken from Rose, 2006.

Table E.17: w1 – Broadleaved and mixed woodland

Common Name	Scientific Name	DAFOR
Survey Date:		21/05/2024
UK Habitat Code:		w1 33 50
Secondary code 33 – Line of Trees		
Birch sp.	*Betula* sp.	O
Bluebell	*Hyacinthoides non-scripta*	R
Common polypody	*Polypodium vulgare*	R
Gorse sp.	*Ulex* sp.	R
Hawthorn	*Crataegus monogyna*	R
Hazel	*Corylus avellana*	R
Oak sp.	*Quercus* sp.	O
Rowan	*Sorbus aucuparia*	R
Scots pine	*Pinus sylvestris*	O
Sycamore	*Acer pseudoplatanus*	F
Willow sp.	*Salix* sp.	A
Secondary code 50 - Ditch		
Bluebell	*Hyacinthoides non-scripta*	R
Bracken	*Pteridium aquilinum*	R
Bramble agg.	*Rubus fruticosus* agg.	R
Common nettle	*Urtica dioica*	O
Foxglove	*Digitalis purpurea*	O
Hawthorn	*Crataegus monogyna*	O
Lady-fern	*Athyrium filix-femina*	R
Meadow buttercup	*Ranunculus acris*	O
Oak sp.	*Quercus sp.*	O
Rowan	*Sorbus aucuparia*	R
Soft shield fern	*Polystichum setiferum*	O
Soft-rush	*Juncus effusus*	O
Notes:	Ditch is approximately 1m wide, with 15cm of water.	

Source: Mott MacDonald Bentley, 2024

Table E.18: w1a5 – Western acidic oak woodland (H91A0)

Common Name	Scientific Name	DAFOR
Habitat ID		**Woodland 1**
Survey Date		21/05/2024

Common Name	Scientific Name	DAFOR
UK Habitat Code:		w1a5 28
Canopy		
Alder	*Alnus glutinosa*	R
Birch sp.	*Betula* sp.	O
Common ivy	*Hedera helix*	R
Oak sp.	*Quercus* sp.	D
Understorey		
Hazel	*Corylus avellana*	O
Rowan	*Sorbus aucuparia*	R
Ground flora		
Alder (sapling)	*Alnus glutinosa*	R
Bluebell	*Hyacinthoides non-scripta*	A
Bracken	*Pteridium aquilinum*	O
Bramble agg.	*Rubus fruticosus* agg.	R
Broad-leaved willowherb	*Epilobium montanum*	R
Common mouse-ear	*Cerastium fontanum*	R
Dandelion sp.	*Taraxacum* sp.	R
Enchanter's-nightshade	*Circaea lutetiana*	O
Greater stitchwort	*Stellaria holostea*	R
Herb-Robert	*Geranium robertianum*	R
Holly (sapling)	*Ilex aquifolium*	R
Lady-fern	*Athyrium filix-femina*	O
Lesser celandine	*Ficaria verna*	O
Male-fern	*Dryopteris filix-mas*	O
Marsh thistle	*Cirsium palustre*	R
Pignut	*Conopodium majus*	O
Remote sedge (AWI)	*Carex remota*	R
Rowan (sapling)	*Sorbus aucuparia*	R
Scaly male-fern	*Dryopteris affinis*	O
Soft-rush	*Juncus effusus*	R
Thistle sp.	*Cirsium* sp.	R
Wood-sorrel	*Oxalis acetosella*	O
Yellow pimpernel	*Lysimachia nemorum*	O

Source: Mott MacDonald Bentley, 2024

Table E.19: w1f7 - Other lowland mixed deciduous woodland

Common Name	Scientific Name	DAFOR
Habitat ID		**Woodland 2**
Survey Date		21/05/2024
UK Habitat Code:		w1f7 30
Canopy		
Downy birch	*Betula pubescens*	R
Oak sp.	*Quercus* sp.	D
Sycamore	*Acer pseudoplatanus*	R
Understorey		

Common Name	Scientific Name	DAFOR
Habitat ID		**Woodland 2**
Hazel	*Corylus avellana*	O
Ground Flora		
Bluebell	*Hyacinthoides non-scripta*	O
Chickweed sp.	*Stellaria* sp.	R
Cleavers	*Galium aparine*	R
Cock's-foot	*Dactylis glomerata*	F
Common nettle	*Urtica dioica*	O
Creeping buttercup	*Ranunculus repens*	O
Enchanter's-nightshade	*Circaea lutetiana*	O
Greater stitchwort	*Stellaria holostea*	R
Herb-Robert	*Geranium robertianum*	R
Hogweed	*Heracleum sphondylium*	R
Lady-fern	*Athyrium filix-femina*	O
Lesser celandine	*Ficaria verna*	R
Oak sp. (sapling)	*Quercus* sp.	R
Pignut	*Conopodium majus*	R
Sycamore (sapling)	*Acer pseudoplatanus*	R
Wood speedwell (AWI)	*Veronica montana*	R
Wood-sorrel	*Oxalis acetosella*	R

Source: Mott MacDonald Bentley, 2024

E.5 h1 – Dwarf Shrub Heath

Table E.20: h1b6 – Wet heathland with cross-leaved heath – upland (H4010)

Common Name	Scientific Name	DAFOR
Habitat ID		**Moorland 1**
Survey Date		27/09/2024
UK Habitat Code:		h1b6 50
Acute-leaved bog-moss	*Sphagnum capillifolium*	R
Bog-moss sp.	*Sphagnum* sp.	O
Cow-horn bog-moss	*Sphagnum auriculatum*	F
Creeping bent	*Argrostis stolonifera*	O
Crested dog's-tail	*Cynosurus cristatus*	R
Cross-leaved heath	*Erica tetralix*	O
Fescue sp.	*Schedonorus* sp.	R
Fringed bog-moss	*Sphagnum fimbriatum*	O
Gorse sp.	*Ulex* sp.	R
Haircap moss sp.	*Polytrichum* sp.	O
Heath bedstraw	*Galium saxatile*	R
Heath rush	*Juncus squarrosus*	O
Heath wood-rush	*Luzula multiflora*	O
Heather	*Calluna vulgaris*	F
Heath-grass	*Danthonia decumbens*	R
Marsh thistle	*Cirsium palustre*	R

Common Name	Scientific Name	DAFOR
Habitat ID		**Moorland 1**
Mat-grass	*Nardus stricta*	R
Milkwort sp.	*Polygala* sp.	R
Purple moor-grass	*Molinia caerulea*	A
Sharp-flowered rush	*Juncus acutiflorus*	O
Soft-rush	*Juncus effusus*	O
Springy turf-moss	*Rhytidiadelphus squarrosus*	O
Wavy hair-grass	*Avenella flexuosa*	R
Secondary code 50 – Ditch		
Bitter-cress sp.	*Cardamine* sp.	O
Crowfoot sp.	*Ranunculus* sp.	O
Marsh-bedstraw	*Galium palustre*	O

Source: Mott MacDonald Bentley, 2024

E.6 h2 – Hedgerows

Table E.21: h2a5 – Species-rich native hedgerow

Common Name	Scientific Name	DAFOR			
Habitat ID		**Hedgerow 1**	**Hedgerow 2**	**Hedgerow 3**	**Hedgerow 4**
Survey Date		21/05/2024	21/05/2024	21/05/2024	21/05/2024
UK Habitat Code:		h2a5 111 116 612	h2a5 113 116 612	h2a5 11 114	h2a5 50 612
Alder	*Alnus glutinosa*			O	
Ash	*Fraxinus excelsior*		R	F	R
Ash (sapling)	*Fraxinus excelsior*			R	
Birch sp.	*Betula sp.*			R	
Blackthorn	*Prunus spinosa*		F		
Bluebell	*Hyacinthoides non-scripta*	R	F		
Bracken	*Pteridium aquilinum*		O		
Bramble agg.	*Rubus fruticosus* agg.	F	O	F	
Broad buckler-fern	*Dryopteris dilatata*	O	O		
Broad-leaved willowherb	*Epilobium montanum*		O	O	
Cherry sp.	*Prunus* sp.		R	O	
Cleavers	*Galium aparine*	O	O	O	
Common ivy	*Hedera helix*		R	A	
Common nettle	*Urtica dioica*	O	O	O	F
Common polypody	*Polypodium vulgare*		R		
Common sorrel	*Rumex acetosa*		R		
Creeping buttercup	*Ranunculus repens*		O		
Dogwood	*Cornus sanguinea*			R	
Elder	*Sambucus nigra*	R			
Field maple	*Acer campestre*			R	
Foxglove	*Digitalis purpurea*	O	O		R
Greater bird's-foot-trefoil	*Lotus pedunculatus*		R		
Hawthorn	*Crataegus monogyna*		A	F	O

Common Name	Scientific Name	DAFOR			
Habitat ID		**Hedgerow 1**	**Hedgerow 2**	**Hedgerow 3**	**Hedgerow 4**
Hazel	*Corylus avellana*		A	R	R
Hazel sp. (Ornamental red variety)	*Corylus* sp.		R		
Hemp-nettle sp.	*Galeopsis* sp.	R			
Herb-Robert	*Geranium robertianum*	O	O	O	
Hogweed	*Heracleum sphondylium*		R		
Holly	*Ilex aquifolium*		R		
Male-fern	*Dryopteris filix-mas*	O			
Marsh thistle	*Cirsium palustre*		R		
Moss sp.	*Bryophyta* sp.	F			
Oak sp.	*Quercus* sp.			F	F
Oak sp. (sapling)	*Quercus* sp.	R	O		
Pignut	*Conopodium majus*		R		
Rose sp.	*Rosa* sp.		R	F	
Rosebay willowherb	*Chamerion angustifolium*	R	O		
Rowan	*Sorbus aucuparia*		R		O
Scaly male-fern	*Dryopteris affinis*	R	O		
Scots pine	*Pinus sylvestris*			R	
Sheep's sorrel	*Rumex acetosella*		R		
Soft-rush	*Juncus effusus*				O
Sweet vernal-grass	*Anthoxanthum odoratum*		R		
Sycamore	*Acer pseudoplatanus*			R	
Sycamore (sapling)	*Acer pseudoplatanus*			R	
Willow sp.	*Salix* sp.		R		
Yorkshire-fog	*Holcus lanatus*	F	O		
Notes:		5 woody species within 30m	6 woody species within 30m	5 woody species within 30m	5 woody species within 30m

Source: Mott MacDonald Bentley, 2024

Table E.22: h2a5 – Species-rich native hedgerow

Common Name	Scientific Name	DAFOR	
Habitat ID		**Hedgerow 5**	**Hedgerow 6**
Survey Date		14/07/2025	14/07/2025
UK Habitat Code:		h2a 114 612	h2a 612
Ash	*Fraxinus excelsior*	R	R
Barren strawberry	*Potentilla sterilis*	R	
Blackthorn	*Prunus spinosa*	O	
Bluebell	*Hyacinthoides non-scripta*	O	O
Bramble agg.	*Rubus fruticosus* agg.		O
Broad buckler-fern	*Dryopteris dilatata*	R	
Climbing corydalis	*Ceratocapnos claviculata*	O	
Common nettle	*Urtica dioica*		O
Common polypody	*Polypodium vulgare*	O	
Dog's mercury	*Mercurialis perennis*		O

Common Name	Scientific Name	DAFOR	
Habitat ID		**Hedgerow 5**	**Hedgerow 6**
Downy birch	*Betula pubescens*	R	
Foxglove	*Digitalis purpurea*		R
Hard shield-fern	*Polystichum aculeatum*	O	
Hawthorn	*Crataegus monogyna*	F	R
Hazel	*Corylus avellana*	F	A
Herb-Robert	*Geranium robertianum*	O	R
Holly	*Ilex aquifolium*	R	
Male-fern	*Dryopteris filix-mas*	O	O
Rose sp.	*Rosa* sp.	R	R
Rowan	*Sorbus aucuparia*	R	
Sycamore	*Acer pseudoplatanus*		R
Willow sp.	*Salix* sp.	R	R
Notes:		6 woody species within 30m	5 woody species within 30m

Source: Mott MacDonald Bentley, 2025

E.7 h3 – Dense Scrub

Table E.23: h3 – Dense scrub

Common Name	Scientific Name	DAFOR
Survey Date		21/05/2024
UK Habitat Code:		h3
Ash	*Fraxinus excelsior*	R
Ash sapling	*Fraxinus excelsior*	O
Bittercress sp.	*Cardamine* sp.	O
Bramble	*Rubus fruticosus* agg.	R
Broad-leaved dock	*Rumex obtusifolius*	R
Cleavers	*Galium aparine*	R
Colt's-foot	*Tussilago farfara*	R
Common ivy	*Hedera helix*	F
Common nettle	*Urtica dioica*	R
Dandelion sp.	*Taraxacum* sp.	O
Goat willow	*Salix caprea*	O
Hazel	*Corylus avellana*	O
Moss sp.	*Bryophyta* sp.	A
Red-osier dogwood	*Cornus sericea*	D
Sycamore sapling	*Acer pseudoplatanus*	O

Source: Mott MacDonald Bentley, 2024

E.8 f2 – Fen and Marsh

Table E.24: f2b – Purple moor-grass and rush pastures

Common Name	Scientific Name	DAFOR
Habitat ID		**Moorland 2**
Survey Date		27/09/2024
UK Habitat Code:		f2b 50
Common nettle	*Urtica dioica*	R
Creeping bent	*Argrostis stolonifera*	O
Foxglove	*Digitalis purpurea*	O
Lesser spearwort	*Ranunculus flammula*	R
Marsh thistle	*Cirsium palustre*	O
Purple moor-grass	*Molinia caerulea*	R
Soft-rush	*Juncus effusus*	D
Spear thistle	*Cirsium vulgare*	R
White clover	*Trifolium repens*	R

Source: Mott MacDonald Bentley, 2024

E.9 u1 – Built-up areas and gardens

Table E.25: u1b5 - Buildings

Common Name	Scientific Name
Common polypody	*Polypodium vulgare*
Ivy-leaved toadflax	*Cymbalaria muralis*
Maidenhair spleenwort	*Asplenium trichomanes*
Rustyback	*Asplenium ceterach*

Source: Mott MacDonald Bentley, 2024

F. Habitat Photographs

A selection of photographs of the habitat types recorded within the survey area have been included below for reference.

Figure F.1: g3c8 *Holcus-Juncus* neutral grassland

Source: Mott MacDonald Bentley, 2024

Figure F.2: g4 modified grassland

Source: Mott MacDonald Bentley, 2024

Figure F.3: g4 modified grassland

Source: Mott MacDonald Bentley, 2024

Figure F.4: w1a5 Western acidic oak woodland (H91A0)

Source: Mott MacDonald Bentley, 2024

Figure F.5: w1f7 Other lowland mixed deciduous woodland

Source: Mott MacDonald Bentley, 2024

Figure F.6: w1f7 Other lowland mixed deciduous woodland

Source: Mott MacDonald Bentley, 2024

Figure F.7: h1b6 Wet heathland with cross-leaved heath – upland (H4010)

Source: Mott MacDonald Bentley, 2024

Figure F.8: h1b6 Wet heathland with cross-leaved heath – upland (H4010)

Source: Mott MacDonald Bentley, 2024

Figure F.9: h1b6 Wet heathland with cross-leaved heath – upland (H4010)

Source: Mott MacDonald Bentley, 2024

Figure F.10: h2a Native hedgerow

Source: Mott MacDonald Bentley, 2024

Figure F.11: h2a5 Species-rich native hedgerow

Source: Mott MacDonald Bentley, 2024

Figure F.12: h3 Dense scrub

Source: Mott MacDonald Bentley, 2024

Figure F.13: f2b Purple moor-grass and rush pastures

Source: Mott MacDonald Bentley, 2024

Figure F.14: u1b5 Buildings

Source: Mott MacDonald Bentley, 2024

Figure F.15: u1b5 Buildings

Source: Mott MacDonald Bentley, 2024

Figure F.16: u1b5 Buildings

Source: Mott MacDonald Bentley, 2024

Figure F.17: 15 – Rushes dominant

Source: Mott MacDonald Bentley, 2024

Figure F.18: 16 – Tall forbs

Source: Mott MacDonald Bentley, 2024

Figure F.19: 32 – Scattered trees

Source: Mott MacDonald Bentley, 2024

Figure F.20: 33 – Line of trees

Source: Mott MacDonald Bentley, 2024

Figure F.21: 102 – Sheep grazed

Source: Mott MacDonald Bentley, 2024

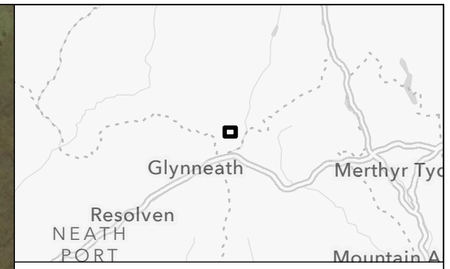
Figure F.22: 114 – Dry stone wall

Source: Mott MacDonald Bentley, 2024

Figure F.23: 612 - Fence

Source: Mott MacDonald Bentley, 2024

G. Target Note Locations



Survey area

Target note

Coordinate system: British National Grid; Datum: OSGB 1936

Microsoft, Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
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Dŵr Cymru Welsh Water

Cefn Drysgoed WTW Target Note Plan

Drawn	GIS Checked	Checked	Approved
K Toth	**S Baldwin**	**A Davies**	**S Allen**
Scale at A3	Status	Revision	Security
1:2,700	**INF**	**01**	**STD**

B17545-123532-14ZZ-DR-NA-EI0005

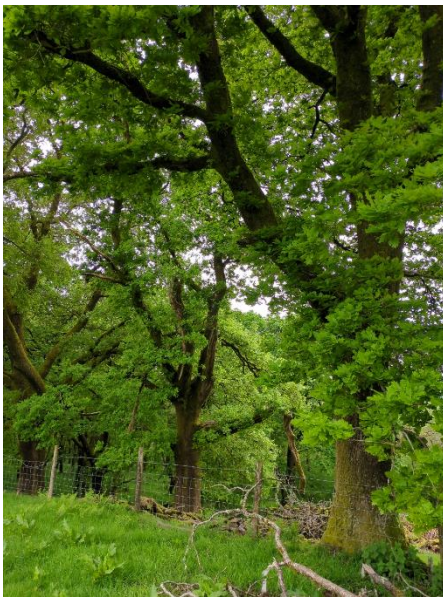
0 40 80 120 160 Metres

H. Target Notes

Table H.1: Target Note Descriptions

Target Note	Description	Date	Photograph
TN1	Pignut and ant hills within grassland along a road verge, which can be indicators of ancient grassland.	15/05/2024	N/A
TN2	Nesting house martins within the eaves of a building.	15/05/2024	
TN3	Mole hills. All wild mammals are protected under the Wild Mammals (Protection) Act 1996, under which it is an offence to crush or asphyxiate any wild mammal with the intent to inflict unnecessary suffering.	15/05/2024	
TN4	Common frog sighting.	15/05/2024	N/A
TN5	Barn owl box with evidence of use.	15/05/2024	
TN6	Stonechat sighting.	15/05/2024	N/A

Target Note	Description	Date	Photograph
TN7	Canada goose sighting, a Schedule 9 invasive species.	22/05/2024	
TN8	Cuckoo, heard from adjacent field, not seen.	22/05/2024	N/A
TN9	Log pile, suitable for use as hibernacula.	22/05/2024	
TN10	Brash pile, suitable for use as hibernacula.	22/05/2024	

Target Note	Description	Date	Photograph
TN11	Trees with PRFs for bats.	22/05/2024	
TN12	Trees with PRFs for bats.	22/05/2024	
TN13	Three buildings with the potential to support roosting bats, within the existing WTW site.	15/05/2024	N/A
TN14	Old stone barn, likely suitable for roosting bats, with the potential to support free-flight species (horseshoe sp.).	15/05/2024	N/A

Target Note	Description	Date	Photograph
TN15	Peatland indicator species throughout, including a number of *Sphagnum* sp.	27/09/2024	
TN16	Brash pile, suitable for use as hibernacula.	15/05/2024	
TN17	Small copper butterfly sighting.	15/05/2024	N/A
TN18	Bird's nest.	15/05/2024	N/A
TN19	Himalayan balsam, Schedule 2 of the 2019 Order, Invasive Species.	27/09/2024	

Target Note	Description	Date	Photograph
TN20	Himalayan balsam, Schedule 2 of the 2019 Order, Invasive Species.	17/07/2025	
TN21	Corn spurrey, notable plant species.	21/05/2025	
TN22	Climbing corydalis, notable plant species.	21/05/2025	

Source: Mott MacDonald Bentley, 2025

I. Quadrat Photos

Figure I.1: Grassland 1 - Quadrat 1

Source: Mott MacDonald Bentley, 2025

Figure I.2: Grassland 1 - Quadrat 2

Source: Mott MacDonald Bentley, 2025

Figure I.3: Grassland 1 - Quadrat 2a

Source: Mott MacDonald Bentley, 2025

Figure I.4: Grassland 1 - Quadrat 2b

Source: Mott MacDonald Bentley, 2025

Figure I.5: Grassland 1 - Quadrat 3

Source: Mott MacDonald Bentley, 2025

Figure I.6: Grassland 1 - Quadrat 3a

Source: Mott MacDonald Bentley, 2025

Figure I.7: Grassland 1 - Quadrat 4

Source: Mott MacDonald Bentley, 2025

Figure I.8: Grassland 1 - Quadrat 5

Source: Mott MacDonald Bentley, 2025

Figure I.9: Grassland 1 - Quadrat 6

Source: Mott MacDonald Bentley, 2025