



STEPHEN CUTMORE BSc(Hons), MICFor, MArborA
Arboricultural & Ecological Services
SURVEYS, INSPECTIONS, REPORTS



**SITE NEAR DRIVEWAY ENTRANCE AT BRONYDD
QUARRY ROAD
GLYN CEIRIOG
LLANGOLLEN
LL20 7DA**

BUILDING DEVELOPMENT

PRELIMINARY ECOLOGICAL APPRAISAL

Report by:

Stephen Cutmore BSc (Hons), MICFor

Client	Caroline Covington
Planning Authority	Wrexham County Borough Council
Grid Reference	SJ2025138056
Dates of Surveys	2 June 2021
Reference	072021/PEA/CC



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1.0 SUMMARY

The site is located at Grid Reference SJ2025138056. The site is located in the village of Glyn Ceiriog, which is located approx. 4km to the South of the town of Llangollen and approx. 8km to the West of the town of Chirk.

It is proposed to erect a detached residential dwelling and detached double garage on the site, with associated car parking spaces and landscaping.

The Cofnod Data Request (E09130) provided information regarding Priority Species within a 1km radius of the site. Due to the sensitivity of the data, specific records for protected species cannot be disclosed, but there are records of Priority Species mammals (badgers, bats, hare, hedgehog, otter), amphibians (common frog, common toad), reptiles (adder, common lizard, grass snake, slow worm) within 1km radius of the site. There are records of non-native invasive plant species (japanese knotweed) within 1km radius.

The site has relatively high ecological value for several species and mitigation will be required to compensate for any lost habitat.

The narrow grassy verge [B], tall ruderal herb and fern [C3], intact species-poor hedge [J2.1] provide potential for foraging and emigration corridors for amphibians/reptiles and mammals (badgers, hedgehogs). These areas support a range of invertebrates, which provides a good food-source for birds and for foraging bats. The fallen trunks, stumps and brash piles provide potential as resting places/hibernacula for amphibians/reptiles and hedgehogs and basking sites for reptiles. The hedges [J2.1], scattered trees and adjacent woodland [A1] provide potential for nesting birds, provide a food-source for bats and birds and provide foraging, emigration corridors and resting places/hibernacula for amphibians/reptiles and hedgehogs and basking sites for reptiles.

None of the hedges on site qualify as 'important' with regards to the Hedgerow Regulations 1997, made under Section 97 of the Environment Act 1995 which came into effect 1 June 1997.

New hedges, trees and shrubs will be planted as compensation around the boundaries, to provide wildlife corridors to maintain connectivity on the site and to improve connectivity with the surrounding landscape. Artificial hibernacula and basking areas (piles of logs/rocks) and hedgehog houses will be provided as compensation for the loss of the habitat features. Bat and bird boxes will be provided as wildlife enhancement.

By using mitigation and Reasonable Avoidance Methods (RAM), the proposed development should have no detrimental effect on the favourable conservation status of bats, great crested newts and other amphibians, reptiles, badgers or other mammal species. RAM statements will be provided in separate documents.



2.0 INTRODUCTION

Stephen Cutmore, a licensed bat worker (NRW[S087991/1], NE[2015-16936-CLS-CLS]), and licenced Amphibian Worker (NRW[S088921-1], NE[2016-19908-CLS-CLS]) was instructed by Caroline Covington, to carry out a Preliminary Ecological Appraisal of the site near the driveway entrance to Bronydd, Quarry Road, Glyn Ceiriog, Llangollen, LL20 7DA. The purpose of the survey was to identify habitats present, assess the conservation value of the survey area, the likely presence of rare or protected species, to identify any features, habitats or species which would constitute potential constraints to any development which might take place and to make recommendations for mitigation and/or further survey work as appropriate.

2.1 Site Location

The site is located at Grid Reference SJ2025138056. The site is located in the village of Glyn Ceiriog, which is located approx. 4km to the South of the town of Llangollen and approx. 8km to the West of the town of Chirk.

2.2 Site Description

The site was previously wooded, but storm-damage has resulted in the majority of the trees on site being cleared in the recent past. The site is now predominantly scrub and tall grassy vegetation, with a number of stumps, fallen trunks and brash piles. A concrete track forms the driveway access to Bronydd, which curves around the East and North boundaries of the site. Woodland is located to the North of the driveway track, a pasture field to the East and residential gardens to the Southeast and Southwest.

2.3 Proposed development

It is proposed to erect a detached residential dwelling and detached double garage on the site, with associated car parking spaces and landscaping. New landscape planting will be provided as mitigation around the boundaries, to create wildlife corridors. Artificial hibernacula will be provided for amphibians/reptiles and piles of logs/rocks as basking sites for reptiles.

3.0 METHODOLOGY

3.1 Preliminary Ecological Appraisal

The site was surveyed on the morning of 2 June 2021, in accordance with the JNCC methodology (2010) in order to produce a Phase 1 habitat map. Target notes with supplementary information or identifying the potential for protected species are also given.

The value of the site for foraging bats, great crested newts, reptiles and other protected species and habitat features was also assessed. A search was made for signs of badgers and badger setts. A search was also made for signs of invasive non-native plant species such as Japanese Knotweed.

Any hedgerows present were surveyed to determine if any of the hedges meet the requirements of important hedgerows under the 1997 Hedgerows Regulations.



3.0 METHODOLOGY (continued)

3.2 Desk study

The 1: 25000 Ordnance Survey map covering the site and aerial photos accessed from the internet, were scrutinised to initially assess the wildlife value of the proposed development site and surrounding habitat at a basic level. This involved looking for any semi-natural habitat that may be of value to wildlife (e.g. woodland, parkland, hedges, ponds, rivers, wetland, with interconnecting habitat links. A data search request for Priority Species and designated wildlife sites within a 1km radius of the site request was made to Cofnod (Local Records Centre) (www.cofnod.org.uk).

4.0 SURVEY LIMITATIONS

This is solely an ecological survey report and cannot comment on topics outside this discipline. If additional advice is required, it is strongly recommended that other professionals are consulted.

- 1) information contained in this report covers only the site that was examined:
- 2) the inspection is limited to visual examination of the site.
- 3) there is no warranty or guarantee, expressed or implied, that Protected Species may not utilise the site after the survey has been completed, that are not discovered utilising the site during the inspection. This report gives an assessment of the suitability of the habitats on the site to support Protected Species, to determine if there is a the need for further surveys.
- 4) this report has been prepared for the sole use and benefit of the client. Any liability of Stephen Cutmore Arboricultural & Ecological Services shall not be extended to any third party.



5.0 SURVEY RESULTS

5.1 Desk Study

The Cofnod Data Request (E09130) provided information regarding Priority Species within a 1km radius of the site. Due to the sensitivity of the data, specific records for protected species cannot be disclosed, but there are records of Priority Species mammals (badgers, bats, hare, hedgehog, otter), amphibians (common frog, common toad), reptiles (adder, common lizard, grass snake, slow worm) within 1km radius of the site. There are records of non-native invasive plant species (japanese knotweed) within 1km radius.

Designated sites within 1km radius of the site include:

- River Dee [SSSI].
- River Dee and Bala Lake [SAC].
- Cefn Uchaf [Wildlife Site].
- Coed Nant Lafar [Wildlife Site].
- Coed Hafod-gynfawr [Wildlife Site].
- Glyn Ceiriog Slate Mine [Wildlife Site].
- Coed Pistyll-y-garth [Wildlife Site].
- Ancient Semi Natural Woodland Sites.

Other designated sites within 10km radius of the site include:

Berwyn [SPA, SSSI], Berwyn and South Clwyd Mountains [SAC], Caeau Pen y Coed [SSSI], Chirk Castle and Parkland [SSSI], Chwarel Pant Glas [SSSI], Clogau Quarry [SSSI], Clwydian Range & Dee Valley [AONB], Cynwyd Forest Quarry [SSSI], Dinas Bran [SSSI], Nant y Belan and Prynella Woods [SSSI], Pandry Quarries [SSSI], Penarth Quarry [SSSI], Pontcysyllte Aqueduct and Canal [WHS], River Dee [SSSI], River Dee and Bala Lake (Wales) [SAC],

5.2 Habitats

For the purposes of accurate habitat survey, the site can be divided into five distinct areas (marked and target noted A1, A2 etc. on the plans).

Target Notes

A1: Scattered trees and Plantation on Semi-Natural Woodland. Provides potential habitat for nesting birds. Provides potential for badgers, bats, amphibians/reptiles and hedgehogs for foraging and emigration corridors.

B: Narrow Grassy Verge. The vegetation either side of the track supports a good invertebrate population which provides a food source for foraging bats/birds. The verge vegetation provides some potential for foraging and emigration corridors for amphibians/reptiles.

C3: Tall ruderal herb and fern. Provides potential for nesting birds and provides a food source for foraging bats/birds. Provides valuable foraging areas and emigration corridors for amphibians/reptiles and hedgehogs. The fallen trunks, stumps, brash and scrub provide potential as resting places/hibernacula for amphibians/reptiles and hedgehogs and basking sites for reptiles. Provides some potential for foraging badgers.



5.0 SURVEY RESULTS (continued)

5.2 Habitats

Target Notes

J2.1 Intact species-poor hedge. Provides potential for nesting birds and provides a food source for foraging bats/birds. Provides foraging areas and emigration corridors for amphibians/reptiles and hedgehogs.

J5: Hardstanding track. The track has little potential for wildlife, except as a possible basking site for reptiles, adjacent to the verge vegetation.

The wild plant list comprises:

A1: Scattered trees and Plantation on Semi-Natural Woodland:

Ash (*Fraxinus excelsior*), Bracken (*Pteridium aquilinum*), Bramble (*Rubus fruticosus*), Common Oak (*Quercus robur*), Couch-grass (*Agropyron repens*), Creeping Buttercup (*Ranunculus repens*), Dandelion (*Taraxacum officinale*), Foxglove (*Digitalis purpurea*), Hazel (*Corylus avellana*), Ivy (*Hedera helix*), Rosebay Willowherb (*Chamaenerion angustifolium*), Silver Birch (*Betula pendula*), Stinging Nettle (*Urtica dioica*), Sycamore (*Acer pseudoplatanus*), Wild Cherry (*Prunus avium*), Wych Elm (*Ulmus glabra*).

B: Narrow Grassy Verge:

Ash, Blackthorn (*Prunus spinosa*), Bramble, Broadleaved Dock (*Rumex obtusifolius*), Common Forget-me-not (*Myosotis arvensis*), Couch-grass, Cow Parsley (*Anthriscus sylvestris*), Ground Elder (*Aegopodium podagraria*), Harts-tongue fern (*Asplenium scolopendrium*), Herb Robert (*Geranium robertianum*), Holly (*Ilex aquifolium*), Ivy, Ramsons (*Allium ursinum*) Red Campion (*Silene dioica*), Red Clover (*Trifolium pratense*), Red Dead Nettle (*Lamium purpureum*), Stinging Nettle, Sycamore.

C3: Tall ruderal herb and fern:

Ash, Bracken, Bramble, Buddleia (*Buddleia davidii*), Chickweed (*Stellaria media*), Cleavers (*Galium aparine*), Couch-grass, Cow Parsley, Creeping Buttercup, Dandelion, Dogs Mercury (*Mercurialis perennis*), Ground Elder, Forget-me-not, Goat Willow (*Salix caprea*), Hazel, Hedge Bindweed (*Calystegia sepium*), Honeysuckle (*Lonicera periclymenum*), Ivy, Lungwort (*Pulmonaria officinalis*), Ramsons, Red Dead Nettle, Rosebay Willowherb, Stinging Nettle, Sycamore, Welsh Poppy (*Meconopsis cambrica*), Wild Cherry, Wild Gooseberry (*Ribes uva-crispa*), Wild Strawberry (*Fragaria vesca*).

J2.1: Intact species-poor hedge:

Hawthorn (*Crataegus monogyna*).

See maps in Appendix 1 and photographs in Appendix 2. For ranking of abundance (DAFOR scale) of the habitats, please see Appendix 3.



6.0 SPECIES

6.1 Bats

Bats often roost in trees in holes/cavities in the trunk, cracks/splits in branches, beneath dead loose bark and behind dense Ivy growth. Some of the mature trees in the adjacent woodland area have potential roosting features (PRF) for roosting bats, but these are outside the proposed development area and will not be affected. Linear features such as tree lines on the boundaries of the site, hedgerows and the woodland area, provide valuable flight-lines used by bats whilst foraging and commuting. The hedges and trees provide good foraging habitats for bat species due to the invertebrate species associated with them.

There are records of Unknown bat, Brown Long-eared, Common Pipistrelle, Daubenton's, Lesser Horseshoe, Natterers, Soprano Pipistrelle and Whiskered/Brandt's bats within 1km radius of the survey site according to the data search.

6.2 Great Crested Newts and other amphibians

No signs of great crested newts (GCN) or other amphibians were observed during the survey. There are no records of Great Crested Newts within 1km radius of the survey site, according to the data search. There are records of other amphibian species (common frog, common toad) within 1km radius of the survey site, according to the data search. The nearest pond is some 875m to the Southwest. The site has some potential for foraging and migrating amphibians in the verges and the tall ruderal herb and fern area and adjacent scattered tree/woodland area. The stumps/brush piles on the site and the adjacent woodland area provide potential for hibernating amphibians.

6.3 Reptiles

No reptiles were observed during the initial survey. There are records of reptiles (adder, common lizard, grass snake, slow worm) within 1km radius of the survey site, according to the data search [nearest record >300m from the site]. The site has potential for foraging and migrating reptiles in the verges and the tall ruderal herb and fern area and adjacent scattered tree/woodland area. The stumps/brush piles on the site and the adjacent woodland area provide potential for hibernating reptiles. The compost heap provides potential for egg incubation for reptiles.

6.4 Badgers

No evidence of badger activity was observed on site, in the form of tunnel entrances, snuffle holes or tracks. There are records of badgers within 1km radius of the survey site, according to the data search.

6.5 Hazel Dormice

No signs of hazel dormice were noted during the survey. There are no records of hazel dormice within 1km radius of the survey site, according to the data search. The site has no potential habitat for this species.

6.6 Otters

No signs of otters were observed during the survey and there is no potential habitat for this species on site. There are records of otters within 1km of the site, according to the data search.



6.0 SPECIES

6.7 Other mammal species

There are records of other Priority Species mammals (hedgehog and hare) within 1km radius of the site according to the data search. The site provides potential habitat for hedgehogs, but no potential for the other mammal species.

6.8 Nesting birds

There are numerous records of birds within 1km radius of the site according to the data search. The trees, Ivy, hedges and scrub all have potential for nesting birds.

6.9 EPS Plant species

No EPS plant species were observed on site. There are no records of European Protected Species plants within 1km radius of the site according to the data search.

6.10 Invasive non-native species

No Invasive non-native species were observed on the site. There are records of Japanese Knotweed within 1km of the site, according to the data search.

6.11 Survey Constraints

There were no particular constraints to surveys, apart, perhaps from the time of year making it difficult to account for the full range of some species of flowering plants.

6.12 Data Search Results

A summary of the data search results are included in Appendix 3. Designated sites within 1km radius of the site include River Dee [SSSI], River Dee and Bala Lake [SAC], Cefn Uchaf [Wildlife Site], Coed Nant Lafar [Wildlife Site], Coed Hafod-gynfawr [Wildlife Site], Glyn Ceiriog Slate Mine [Wildlife Site], Coed Pistyll-y-garth [Wildlife Site] and a number of Ancient Semi Natural Woodland Sites.

The Cofnod Data Request (E09130) provided information regarding Priority Species within a 1km radius of the site. Due to the sensitivity of the data, specific records for protected species cannot be disclosed, but there are records of Priority Species mammals (badgers, bats, hare, hedgehog, otter), amphibians (common frog, common toad), reptiles (adder, common lizard, grass snake, slow worm) within 1km radius of the site. There are records of non-native invasive plant species (japanese knotweed) within 1km radius.

The absence of recent records for certain species in this area is in part likely due to a lack of survey effort or the non-submission of records, rather than the absence of these species.



7.0 EVALUATION

Please note that all conclusions and recommendations are based upon the current survey findings and on the proposal outlined in 2.0 above. If the site management changes then the potential for protected species to use the site may change accordingly. Many protected species are highly mobile and re-survey of the site may be necessary in the future.

7.1 Conclusions

7.1.1 Habitats

The site has relatively high ecological value for several species and mitigation will be required to compensate for any lost habitat.

The narrow grassy verge [B], tall ruderal herb and fern [C3], intact species-poor hedge [J2.1] provide potential for foraging and emigration corridors for amphibians/reptiles and mammals (badgers, hedgehogs). These areas support a range of invertebrates, which provides a good food-source for birds and for foraging bats. The fallen trunks, stumps and brash piles provide potential as resting places/hibernacula for amphibians/reptiles and hedgehogs and basking sites for reptiles. The hedges [J2.1], scattered trees and adjacent woodland [A1] provide potential for nesting birds, provide a food-source for bats and birds and provide foraging, emigration corridors and resting places/hibernacula for amphibians/reptiles and hedgehogs and basking sites for reptiles.

None of the hedges on site qualify as 'important' with regards to the Hedgerow Regulations 1997, made under Section 97 of the Environment Act 1995 which came into effect 1 June 1997.

By using mitigation to compensate for loss of habitat, implementing Reasonable Avoidance Methods (RAM) and providing biodiversity enhancements, the proposed development should have no detrimental effect on the favourable conservation status of bats, great crested newts and other amphibians, reptiles, badgers or other mammal species. RAM statements will be provided in separate documents.



7.0 EVALUATION (continued)

7.1.2 Bats

Bats often roost in trees in holes/cavities in the trunk, cracks/splits in branches, beneath dead loose bark and behind dense Ivy growth. Some of the mature trees in the adjacent woodland area have potential roosting features (PRF) for roosting bats, but these are outside the proposed development area and will not be affected. Linear features such as tree lines on the boundaries of the site, hedgerows and the woodland area, provide valuable flight-lines used by bats whilst foraging and commuting. The hedges and trees provide good foraging habitats for bat species due to the invertebrate species associated with them.

There are records of Unknown bat, Brown Long-eared, Common Pipistrelle, Daubenton's, Lesser Horseshoe, Natterers, Soprano Pipistrelle and Whiskered/Brandt's bats within 1km radius of the survey site according to the data search. If bat boxes are to be installed in some of the mature trees in the woodland area, or on the external walls of the proposed dwelling, as wildlife enhancement, it is important that the bat boxes and flightlines are not directly illuminated.

7.1.3 Great Crested Newts and other amphibians

No signs of great crested newts (GCN) or other amphibians were observed during the survey. There are no records of Great Crested Newts within 1km radius of the survey site, according to the data search. There are records of other amphibian species (common frog, common toad) within 1km radius of the survey site, according to the data search. The nearest pond is some 875m to the Southwest. The site has some potential for foraging and migrating amphibians in the verges and the tall ruderal herb and fern area and adjacent scattered tree/woodland area. The stumps/brash piles on the site and the adjacent woodland area provide potential for hibernating amphibians.

The tall ruderal herb and fern and habitat features (fallen trunks/stumps/brash piles) will need to be removed to facilitate the proposed development. New hedges, trees and shrubs will be planted as compensation around the boundaries, to provide wildlife corridors to maintain connectivity on the site and to improve connectivity with the surrounding landscape. Artificial hibernacula will be provided as compensation for the loss of the habitat features.

If mitigation and Reasonable Avoidance Measures are implemented, the proposed development should have no detrimental effect on the favourable conservation status of GCN or other amphibians.



7.0 EVALUATION (continued)

7.1.4 Reptiles

No reptiles were observed during the initial survey. There are records of reptiles (adder, common lizard, grass snake, slow worm) within 1km radius of the survey site, according to the data search [nearest record >300m from the site]. The site has potential for foraging and migrating reptiles in the verges and the tall ruderal herb and fern area and adjacent scattered tree/woodland area. The stumps/brash piles on the site and the adjacent woodland area provide potential for hibernating reptiles. The compost heap provides potential for egg incubation for reptiles.

The tall ruderal herb and fern and habitat features (fallen trunks/stumps/brash piles) will need to be removed to facilitate the proposed development. New hedges, trees and shrubs will be planted as compensation around the boundaries, to provide wildlife corridors to maintain connectivity on the site and to improve connectivity with the surrounding landscape. Artificial hibernacula and basking areas (piles of logs/rocks) will be provided as compensation for the loss of the habitat features.

If mitigation and Reasonable Avoidance Measures are implemented, the proposed development should have no detrimental effect on the favourable conservation status of reptiles.

7.1.5 Badgers

No evidence of badger activity was observed on site, in the form of tunnel entrances, snuffle holes or tracks. There are records of badgers within 1km radius of the survey site, according to the data search.

If mitigation and Reasonable Avoidance Measures are implemented, the proposed development should have no detrimental effect on the favourable conservation status of locally recorded badgers.

7.1.6 Hazel Dormice

No signs of hazel dormice were noted during the survey. There are no records of hazel dormice within 1km radius of the survey site, according to the data search. The site has no potential habitat for this species. The proposed development will have no detrimental effect on this species.

7.1.7 Otters

No signs of otters were observed during the survey and there is no potential habitat for this species on site. There are records of otters within 1km of the site, according to the data search. The proposed development will have no detrimental effect on this species.



7.0 EVALUATION (continued)

7.1.8 Other mammal species

There are records of other Priority Species mammals (hedgehog and hare) within 1km radius of the site according to the data search. The site provides potential habitat for hedgehogs, but no potential for the other mammal species.

The tall ruderal herb and fern and habitat features (fallen trunks/stumps/brush piles) will need to be removed to facilitate the proposed development. New hedges, trees and shrubs will be planted as compensation around the boundaries, to provide wildlife corridors to maintain connectivity on the site and to improve connectivity with the surrounding landscape. Hedgehog houses will be provided as compensation for the loss of the habitat features.

7.1.9 Nesting Birds

Trees and scrub have potential to be used by a variety of bird species for nesting. Under the Wildlife and Countryside Act, 1981 (as amended), it is illegal to take, damage or destroy the nests of wild birds whilst being built or in use (with exceptions). However it is not an offence to carry out works in areas that they use, outside of the nesting period. Therefore it is recommended that works, particularly clearance of vegetation, are carried out between the period between 1st October and end of February to avoid the breeding season.

If works to clear potential nesting habitat need to be carried out during the nesting period (1st March – 30th September) a check should be made by an ecologist for nesting birds, the day before the works are due to commence. Any birds nesting should be left to complete their breeding (i.e. until the young have fully fledged) before any works that will disturb the birds can take place. New tree and hedge planting will compensate for any loss of habitat.

7.1.10 EPS plant species

No EPS plant species were observed on site. There are no records of European Protected Species plants within 1km radius of the site according to the data search. The proposed development will have no detrimental effect on EPS plant species.

7.1.11 Invasive non-native plant species

No Invasive non-native species were observed on the site. There are records of Japanese Knotweed within 1km of the site. The site entrances will be locked at night, so there is no foreseen potential of access by fly-tippers dumping material containing invasive non-native plants. Biosecurity control measures will be implemented, to minimise risk of spreading invasive non-native plant species (e.g. NRW 'Keep It Clean' guidelines).



7.0 EVALUATION (continued)

7.1.12 Summary of further survey

Survey type	Timing	Where	Notes
Nesting birds	March - September	[A1, C3, J2.1].	Only if scrub/trees/hedges are being removed in these months.
Reptiles	April – September	[C3]	Presence/absence surveys to determine if reptiles are present.

8.0 IMPACT ASSESSMENT

8.1 Short-term impact

Disturbance through increased human presence, noise and changes in site layout may have a detrimental effect on amphibians, bats, nesting birds and reptiles.

Nesting birds

Nesting birds would be affected if hedgerows/scrub/trees were removed during March-September in the nesting season. Timing of operation will minimise disturbance. New tree/hedge/shrub planting, and/or provision of nesting boxes will be required to mitigate for any loss of habitat, to minimise the impact on nesting birds.

Amphibians/reptiles

Amphibians/reptiles would be affected if vegetation was removed between March-September when they were dispersing. Timing of operations will minimise disturbance.

8.2 Long-term impact – roost losses

Nesting birds

Loss of habitat (hedges/scrub/trees) will have an impact on nesting birds. New tree/hedge/shrub planting, and provision of nesting boxes will be required to mitigate for any loss of habitat, to minimise the impact on nesting birds.

GCN/Reptiles

The fallen trunks, stumps and brash piles provide potential for hibernating amphibians/reptiles. The removal of these features will likely have an impact on these species. New hedges, trees and shrubs will be planted as compensation around the boundaries, to provide wildlife corridors to maintain connectivity on the site and to improve connectivity with the surrounding landscape. Artificial hibernacula and basking areas (piles of logs/rocks) will be provided as compensation for the loss of the habitat features.

Hedgehogs

The hedges, fallen trunks, stumps and brash piles provide potential for hedgehogs. The removal of these features could have an impact on hedgehogs. Hedgehog houses will be provided as compensation for the loss of the habitat features.



8.0 IMPACT ASSESSMENT (continued)

8.3 Long-term impact – fragmentation and isolation

Bats

Any loss of linear features (treelines/hedges), which provide important bat flightlines would be negative and have an impact on locally recorded bats.

Amphibians/reptiles

Loss of terrestrial habitat (hedges, tall grassy vegetation) could impact on GCN/reptile foraging and emigration. New hedges, trees and shrubs will be planted as compensation around the boundaries, to provide wildlife corridors to maintain connectivity on the site and to improve connectivity with the surrounding landscape, to minimise the impact on GCN and reptiles.

Other fauna species

Loss of terrestrial habitat (hedges, tall grassy vegetation) could impact on hedgehog foraging and emigration. New hedges, trees and shrubs will be planted as compensation around the boundaries, to provide wildlife corridors to maintain connectivity on the site and to improve connectivity with the surrounding landscape, to minimise the impact on hedgehogs.

8.4 Post-development interference impacts

Bats and other species can be disturbed by bright, artificial lighting. Where lighting is essential in the vicinity of the proposed development, subdued lighting should be used and the illumination should be directed downwards (upward light ratio 0%). LED luminaires should be used where possible, with a warm white spectrum (<2700Kelvin) to minimise blue light component. Luminaires should have peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats. The use of motion sensor-triggered security lighting with short (1 min) timers, is preferable to permanent lighting. It is essential that bat flightlines used for foraging/commuting (e.g. hedgerows, lines of trees) are not illuminated. The use of soft landscaping and fencing [supported by concrete posts to ensure long-term contribution] can be used to screen light spill. The latest Guide Note 08/18 can be downloaded at www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

If bat boxes are to be installed in some of the trees to be retained and if roosting opportunities are to be incorporated in the new dwelling, as part of wildlife enhancement for the proposed development, it is important that the bat boxes, roost entry points and flightlines are not directly illuminated.

8.5 Predicted scale of impact

The tall ruderal herb and fern and habitat features (fallen trunks/stumps/brush piles) will need to be removed to facilitate the proposed development, which will result in some loss of habitat. New hedges, trees and shrubs will be planted as compensation around the boundaries, to provide wildlife corridors to maintain connectivity on the site and to improve connectivity with the surrounding landscape. Artificial hibernacula and basking areas (piles of logs/rocks) will be provided as compensation for the loss of the habitat features.

By providing mitigation and implementing Reasonable Avoidance Methods (RAM), the proposed development should have no detrimental effect on the favourable conservation status of bats, great crested newts and other amphibians, reptiles, badgers or other mammal species. RAM statements will be provided in separate documents.

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9.0 MITIGATION

9.1 Habitat creation and biodiversity

The site has relatively high ecological value for several species and mitigation will be required to compensate for any lost habitat.

New hedges, trees and shrubs will be planted as compensation around the boundaries, to provide wildlife corridors to maintain connectivity on the site and to improve connectivity with the surrounding landscape. Artificial hibernacula and basking areas (piles of logs/rocks) will be provided for amphibians/reptiles, as compensation for the loss of the habitat features.

Provision of bird nesting opportunities will be made through planting new hedgerows and by installing bird nesting boxes around the site. Provision of bat roosting opportunities will be made through installing bat boxes around the site and integrating bat-friendly features into the proposed development. Deadwood will be retained, (where safety considerations allow), to provide habitat for wildlife.

Reasonable Avoidance Measures (RAM) should be used to protect protected species (see separate documents).

9.2 Ongoing management/maintenance

Newly planted trees/hedges will require regular maintenance to ensure successful establishment. This involves watering, weeding, formative pruning, checking tree ties etc. The wildlife pond and habitat area for amphibians/reptiles will also require on-going management. A long-term management plan should be prepared with SMART targets which are specific, measurable, achievable, realistic and within a specified timeframe. A mechanism should be provided to ensure that the Management Plan is implemented and able to be audited. If the landowner is unable to carry out the ongoing maintenance tasks, it is strongly recommended that a suitably qualified, experienced and insured arboricultural/horticultural contractor, or a recognised wildlife body (e.g. ARC Trust, NWWT), be instructed to carry out the various tasks, so that the work can be carried out to comply with Industry Best Practice and relevant British Standards to ensure a consistency in standards of work and health and safety issues.



10.0 WILDLIFE AND THE LAW

10.1 European Protected Species

The Bern Convention (The convention on the conservation of European Wildlife and Natural Habitats) was adopted in 1979 and came into force in 1982. To implement this agreement, the European Community adopted the EC Habitats Directive. The EC Habitats Directive has been transposed into UK legislation by the Wildlife and Countryside Act, 1981 (as amended) and the Conservation of Habitats and Species Regulations, 2010. The Countryside and Rights of Way Act (CroW), 2000 strengthened the existing wildlife legislation in the UK. The UK has also signed the Bonn Convention (The Convention on the Conservation of Migratory Species of Wild Animals) and is therefore party to various agreements.

10.1.1 Bats

All 17 bat species found in the UK and their roosts are protected in the UK under Schedules 5 and 6 of the Wildlife & Countryside Act 1981 (as amended) and are therefore afforded protection under Section 9 of this Act. The Countryside Rights of Way Act (CroW) 2000 strengthened the existing wildlife legislation in the UK. In addition, five British bat species are also listed on Annex II [and all bats are listed on Annex IV] of the EC Habitats Directive, which is transposed into national law by means of The Conservation of Habitats and Species Regulations (2017).

These are:

- Greater horseshoe bat (*Rhinolophus ferrumequinum*);
- Lesser horseshoe bat (*Rhinolophus hipposideros*);
- Bechstein's bat (*Myotis bechsteinii*);
- Barbastelle (*Barbastella barbastellus*) and
- Greater mouse-eared bat (*Myotis myotis*).

Bats are listed under Appendix III of the Bern Convention. Bats and their habitats are also listed under Appendix II of the Bonn Convention and therefore the UK has an obligation to protect their habitat, including links to important feeding areas. The UK had designated maternity and hibernacula areas as Special Areas of Conservation (SACs) under the Habitats Directive. Implementation of the UK Biodiversity Action Plan also includes action for a number bat species and the habitats which support them.

10.1.2 Amphibians

Great crested newts, natterjack toads and pool frogs are protected under Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended). Great crested newts, natterjack toads and pool frogs are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations, 2010 and listed under Annex II and Annex IV of the EC Habitats Directive.

10.1.3 Reptiles

Sand lizard and smooth snake are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations, 2010 and listed under Annex II and Annex IV of the EC Habitats Directive.



10.0 WILDLIFE AND THE LAW (continued)

10.1.4 Hazel Dormice

Hazel Dormice are protected under Schedules 5 and 6 of the Wildlife and Countryside Act, 1981 (as amended) and they are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations, 2010.

10.1.5 Otters

Otters are protected under Schedules 5 and 6 of the Wildlife and Countryside Act, 1981 (as amended) and they are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations, 2010 and listed under Annex II and Annex IV of the EC Habitats Directive.

10.1.6 Legislation relating to European Protected Species

In relation to a development a person commits an offence if they –

- Deliberately captures, injures or kills a European Protected Species
- Deliberately or recklessly disturbs wild animals of any such species in such a way as to be likely significant to affect:
 - (i) the ability of any significant group of animals to survive, breed, or rear or nurture their young; or
 - (ii) the local distribution or abundance of that species;
- Damages or destroys a breeding site or resting place (even if unintentional or when the animal is not present)
- Intentionally or recklessly obstructs access to a structure or place used for protection or shelter
- This legislation applies, regardless of the life stage (including eggs).

A European Protected Species Licence is required to carry out any activity that would otherwise involve committing an offence.

To avoid disturbance during habitat management, a written strategy is required following guidance provided by Natural Resources Wales and the Forestry Commission. If the guidance is followed and major disturbance can be avoided, then a licence is not required.



10.0 WILDLIFE AND THE LAW (continued)

10.1.7 European Protected Species Licences

At the present time, Natural Resources Wales requires the following three ‘tests’ to be met, in order that a licence may be granted.

Test 1. Regulation 53 (2) (e) states that licences granted to ‘preserve public health, or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment’.

Test 2. Regulation 53 (9) (a) states that a licence may not be granted unless the licensing authority is satisfied ‘that there is no reasonable alternative’.

Test 3. Regulation 53 (9) (b) states that a licence cannot be issued unless the licensing authority is satisfied that the action proposed ‘will not be detrimental to the maintenance of the species concerned at a favourable conservation status in its natural range’.

10.1.8 Recent changes in Licences

Following a recent intervention from the European Court, there have been significant changes in the interpretation of the way licences are issued. In considering a licence request, Natural Resources Wales will seek information relating to the size and importance of the population/colony and will require evidence to demonstrate that the species will be maintained ‘at a favourable conservation status in their natural range’. In effect, this means that to obtain a licence, Natural Resources Wales must be satisfied that the applicant will implement mitigation to safeguard (and ideally enhance) the population concerned. Natural Resources Wales will need to see evidence that the development work which will disturb/destroy a roost/resting site will be undertaken using current best practice, also that the species can be provided with an alternative roost/resting site on or in the immediate area.

10.1.9 Important EPSL Information

Please note that a European Protected Species Licence can only be obtained once planning permission has been granted. When assessing planning applications where a European Protected Species could be affected by proposed works, the local Planning Authority must take into account the potential impacts on the species concerned. In practice this could make further survey work (such as emergence surveys in the case of bats) essential prior to planning permission being granted. The local Planning Authority must also have regard for the three ‘tests’ as outlined above – Regulations 53 (2) (e), 53 (9) (a) and 53 (9) (b).

Once planning permission has been granted a European Protected Species Licence application can be submitted to Natural Resources Wales. The application requires detailed Method Statements to be produced by a qualified bat ecologist to demonstrate how Regulation 53 (9) (b) can be satisfied.

The applicant will also need to complete a Reasoned Statement form demonstrating (with evidence) that Regulations 53 (2) (e) and 53 (9) (a) are satisfied. This involves producing evidence to show that no reasonable alternative to the proposed action is available and that the action must take place to either ‘preserve public health, or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.



10.0 WILDLIFE AND THE LAW (continued)

10.2 Other Protected Species

10.2.1 Nesting Birds

All wild birds are protected under Part 1 of the Wildlife and Countryside Act, 1981 (as amended). Therefore in the UK it is an offence to:

- Take, damage or destroy the nest of any wild bird whilst it is being built or in use.
- Kill, injure or take any wild bird.
- Take or destroy the eggs of any wild bird.

To avoid committing an offence no works should be carried out on a structure/feature that is being used by nesting birds. Nesting is deemed to be over when the young have fully fledged.

Certain species which are listed in Schedule 1 of the Wildlife and Countryside Act receive special protection. In these cases any form of intentional or reckless disturbance when they are nesting or rearing dependent young, constitutes an offence.

10.2.2 Reptiles

Common lizard, slow worm, adder and grass snake are all protected under Schedule 5 of the Wildlife and Countryside Act, 1981 against intentional injuring, killing or selling.

For development sites in **England, Wales or Scotland**, to avoid prosecution under the ***Wildlife and Countryside Act 1981 (as amended)***, wherever works will impact on slow worms, common lizards, adders and/or grass snakes there must be evidence that every reasonable effort was made to avoid breaking the law – including proof of adequate surveys and mitigation plans. Mitigation measures should, ideally, be agreed with the relevant SNCO (in this case Natural Resources Wales).

Only the sand lizard and smooth snake are fully protected under the Wildlife and Countryside Act, 1981 (Section 9) and Regulation 9 of the Conservation of Habitats and Species Regulations 2010 against killing, injuring, capture, damaging or destroying a breeding or resting site, intentionally obstructing access to a place used for shelter, keeping, transporting or selling. This means that not only are the animals themselves protected but so are their habitats.

10.2.3 Badgers

Badgers are protected under Schedule 6 of the Wildlife and Countryside Act, 1981 (as amended). They are also protected in the UK by the Protection of Badgers Act, 1992. Under this legislation it is an offence to:

- Wilfully kill, injure or take a badger (or attempt to do so).
- Cruelly ill-treat a badger.
- Dig for a badger.
- Intentionally or recklessly damage or destroy a badger sett, or obstruct access to it.
- Cause a dog to enter a badger sett.
- Disturb a badger when it is occupying a sett.



10.3 Environment (Wales) Act 2016

This Act sets out Wales' approach to planning and managing natural resources at a national and local level with a general purpose linked to statutory 'principles of sustainable management of natural resources' defined within the Act.

The Environment (Wales) Act introduces a new, enhanced Biodiversity and Resilience of Ecosystem Duty on public bodies to ensure that biodiversity is an integral part of decision making. The Duty will replace the existing Natural Environment and Rural Communities (NERC) Act 2006 Duty. Public authorities will be required to report on the actions they are taking to improve biodiversity and promote ecosystem resilience. Section 6 of the Act places a duty on public authorities to seek to maintain and enhance biological diversity (referred to as biodiversity). All public bodies, statutory undertakers, Ministers of the Crown and other public office holders are required to apply the duty when they are carrying on any functions in Wales, or in relation to Wales. Section 7 of the Act is similar to the duty in *section 42 of the NERC Act 2006* which it replaces. It places a duty on the Welsh Ministers to publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales.

10.4 Planning Policy Wales Framework

Planning Policy Wales (Edition 10, Dec 2018) sets out the Welsh Government's planning policies and how these are expected to be applied. The planning system manages the development and use of land in the public interest, contributing to improving the economic, social, environmental and cultural well-being of Wales, as required by the Well-being of Future Generations (Wales) Act 2015. It should reconcile the needs of development and conservation, securing economy, efficiency and amenity in the use of land, and protecting natural resources and the historic environment. A well-functioning planning system is fundamental for sustainable development.

10.5 Key Principles of PWW (2018)

Chapter 6 'Distinct and Natural Places' provides policies for protection of biodiversity and geological conservation.

Para.6.4.3 Development proposals must consider the needs to:

- support the conservation of biodiversity, in particular the conservation of wildlife and habitats;
- ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;
- ensure statutorily and non-statutorily designated sites are properly protected and managed;
- safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and
- secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.



10.0 WILDLIFE AND THE LAW (continued)

10.5 Key Principles of PWW (2018)

Para 6.4.22 The presence of a species protected under European or UK legislation is a material consideration when a local planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat. Local planning authorities should advise anyone submitting a planning application that they must conform with any statutory species protection provisions affecting the site concerned, and should consult Natural Resources Wales before granting permission. An ecological survey to confirm whether a protected species is present and an assessment of the likely impact of the development on a protected species may be required in order to inform the planning decision.

Para 6.4.23 Developments are always subject to the legislation covering European protected species regardless of whether or not they are within a designated site. New developments for which development works would contravene the protection afforded to European protected species require derogations from the provisions of the Habitats Directive. A derogation may only be authorised if there is no satisfactory alternative and if the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in its natural range. The development works to be authorised must be for the purposes of preserving 'public health or safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment'. Derogations are granted by a licence issued by Natural Resources Wales. Local planning authorities are under a duty to have regard to the requirements of the Habitats Directive in exercising their functions. To avoid developments with planning permission subsequently not being granted derogations in relation to European protected species, planning authorities should take the above three requirements for derogation into account when considering development proposals where a European protected species is present.

Report written and compiled by



Stephen Cutmore BSc (Hons), MICFor



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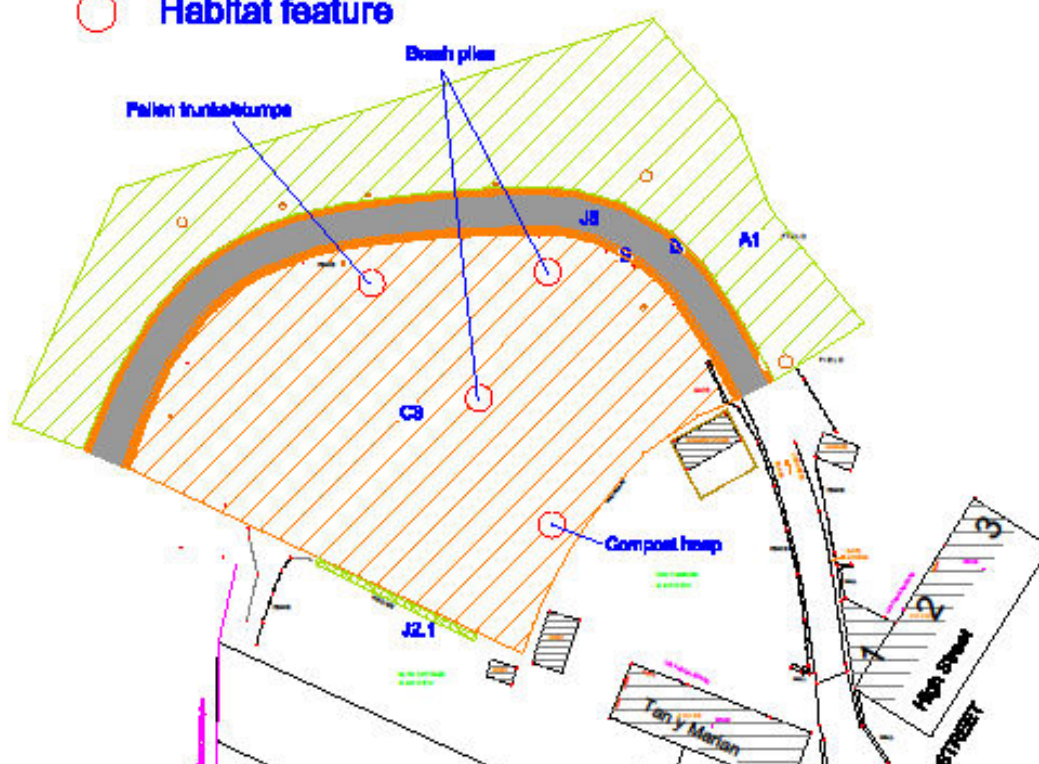
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Please see accompanying pdf file 'Bronydd, Glyn Ceiriog PEA Habitat Plan' if you need to see detail more clearly.

 A1 Scattered trees and plantation on Semi-Natural Woodland
 B Vegetation on verge
 C3 Tall redural herb & fern
 J2.1 Intact species-poor hedge
 J5 Hardstanding track
 Habitat feature



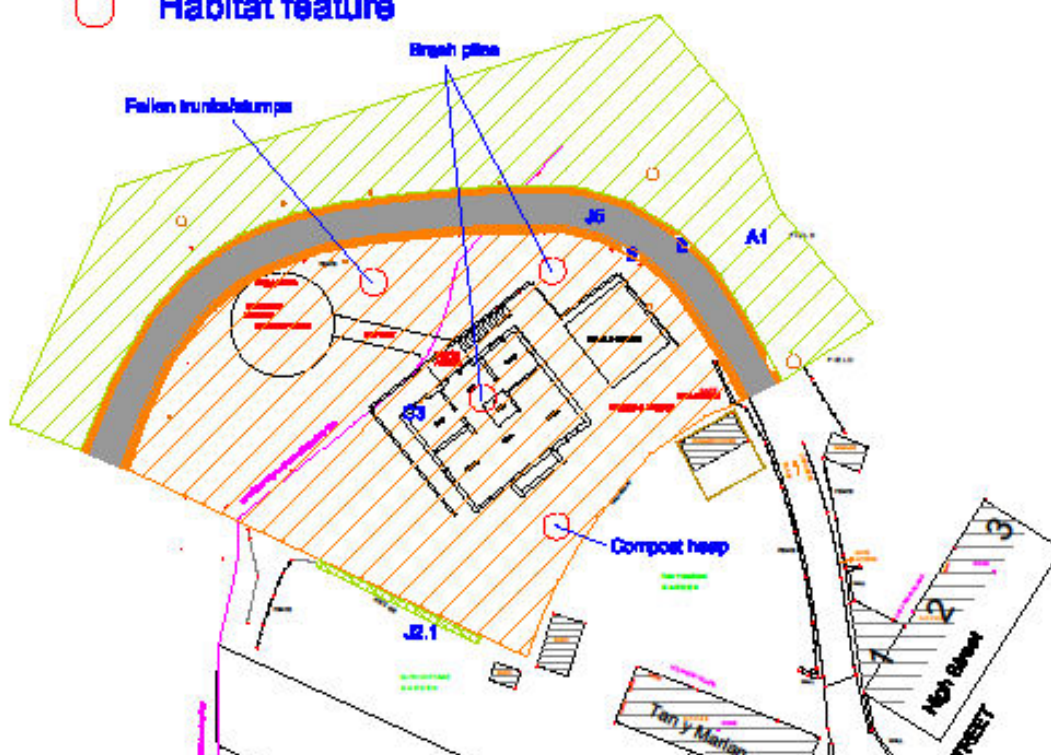
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APPENDIX 1 – Site maps

Please see accompanying pdf file 'Bronydd, Glyn Ceiriog PEA Habitat Plan with layout' if you need to see detail more clearly.

PEA HABITAT PLAN WITH LAYOUT

-  **A1 Scattered trees and plantation on Semi-Natural Woodland**
-  **B Vegetation on verge**
-  **C3 Tall redural herb & fern**
-  **J2.1 Intact species-poor hedge**
-  **J5 Hardstanding track**
-  **Habitat feature**



APPENDIX 2 – Photographs



Photo 1: Scattered trees and adjacent woodland [A1], Tall herb & fern [C3] on main plot.



Photo 2: Verge [B] and driveway track [J5].



Photo 3: Compost heap near South boundary of site.

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APPENDIX 2 – Photographs



Photo 4: Fallen branch with shorter vegetation provides basking sites for reptiles.



Photo 5: Fallen trunks, stumps and brash piles provide resting places/hibernacula and basking sites.



APPENDIX 3 – Plant species abundance rating (DAFOR)

A1 – Scattered trees and Plantation on Semi-Natural Woodland

Species	Dominant	Abundant	Frequent	Occasional	Rare
Ash			✓		
Bracken				✓	
Bramble			✓		
Common Oak			✓		
Couch-grass				✓	
Creeping Buttercup				✓	
Dandelion				✓	
Foxglove				✓	
Hazel				✓	
Ivy			✓		
Rosebay Willowherb				✓	
Silver Birch				✓	
Stinging Nettle				✓	
Sycamore			✓		
Wild Cherry				✓	
Wych Elm				✓	

B – Narrow grassy verge

Species	Dominant	Abundant	Frequent	Occasional	Rare
Ash				✓	
Blackthorn					✓
Bramble				✓	
Broadleaved Dock					✓
Common Forget-me-not				✓	
Couch-grass				✓	
Cow Parsley			✓		
Ground Elder				✓	
Harts-tongue fern					✓
Herb Robert				✓	
Holly					✓
Ivy				✓	
Ramsons			✓		
Red Campion				✓	
Red Clover					✓
Red Dead Nettle					✓
Stinging Nettle				✓	
Sycamore					✓



APPENDIX 3 – Plant species abundance rating (DAFOR)

C3 – Tall ruderal herb and fern

Species	Dominant	Abundant	Frequent	Occasional	Rare
Ash				✓	
Bracken				✓	
Bramble				✓	
Buddleia					✓
Chickweed					✓
Cleavers				✓	
Couch-grass				✓	
Cow Parsley			✓		
Creeping Buttercup			✓		
Dandelion				✓	
Dogs Mercury				✓	
Ground Elder				✓	
Forget-me-not				✓	
Goat Willow					✓
Hazel					✓
Hedge Bindweed				✓	
Honeysuckle				✓	
Ivy				✓	
Lungwort				✓	
Ramsons			✓		
Red Dead Nettle					✓
Rosebay Willowherb					✓
Stinging Nettle			✓		
Sycamore					✓
Welsh Poppy					✓
Wild Cherry					✓
Wild Gooseberry					✓
Wild Strawberry					✓

J2.1 – Intact species-poor hedge

Species	Dominant	Abundant	Frequent	Occasional	Rare
Hawthorn	✓				

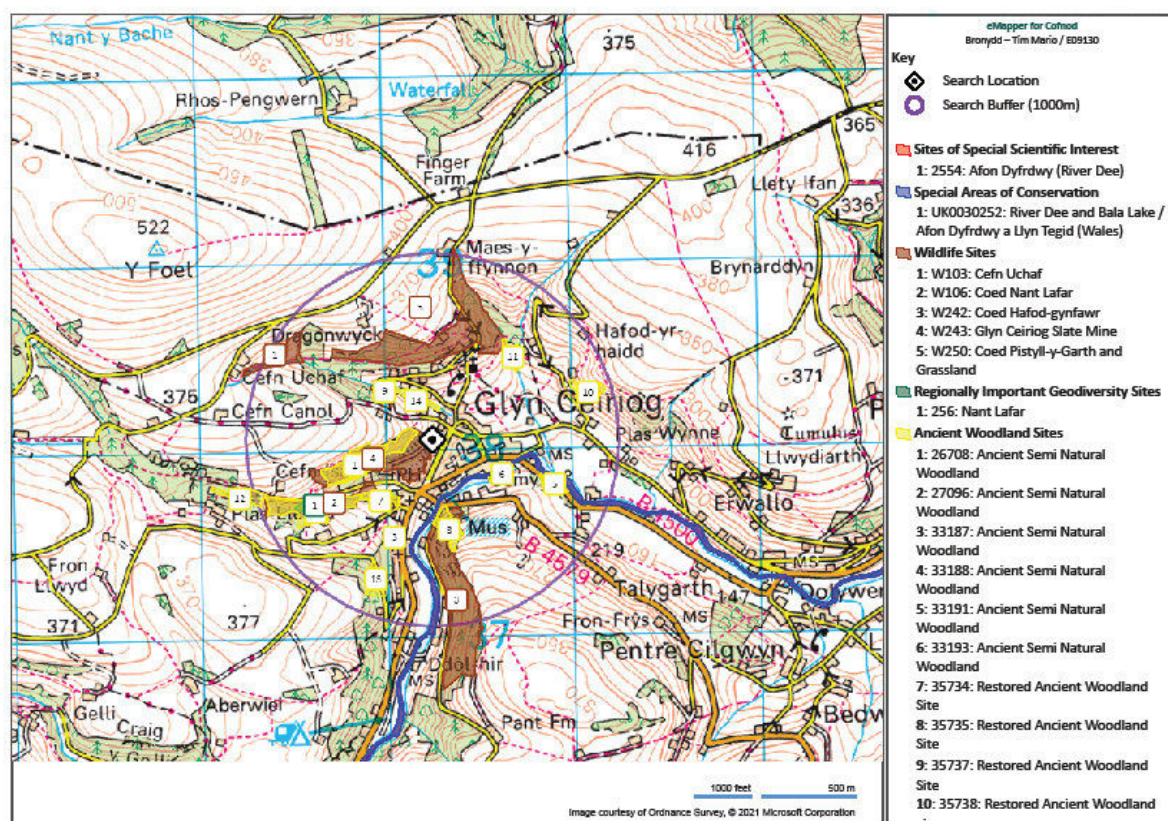


APPENDIX 4 – Data search results

Summary

Statutory and non-statutory sites within 1km of SJ2025138056

Site Name	Status
River Dee	SSSI
River Dee and Bala Lake	SAC
Cefn Uchaf	Wildlife Site
Coed Nant Lafar	Wildlife Site
Coed Hafod-gynfawr	Wildlife Site
Glyn Ceiriog Slate Mine	Wildlife Site
Coed Pistyll-y-garth	Wildlife Site
Various sites	Ancient Semi Natural Woodland



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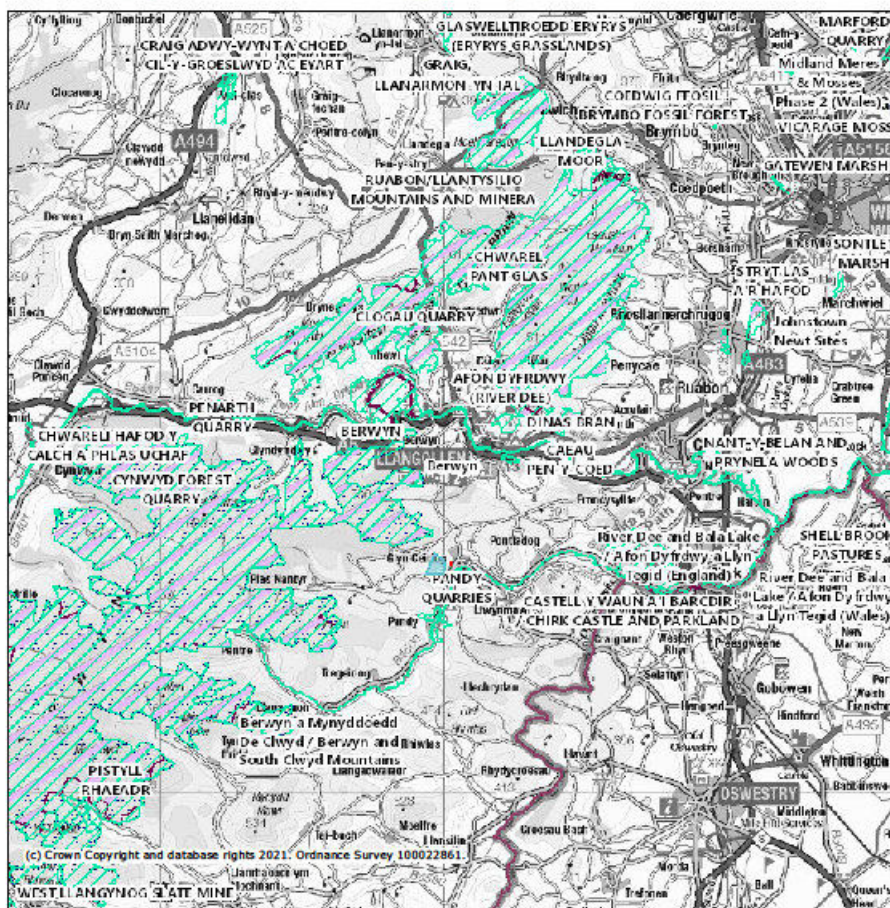


APPENDIX 4 – Data search results

Statutory Designated sites within 10km radius of site

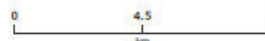
MAGiC

Magic Map



Legend

- National Nature Reserves (Wales) - points
- Ramsar Sites (Wales)
- Sites of Special Scientific Interest (Wales)
- Special Areas of Conservation (Wales)
- Special Protection Areas (Wales)
- Biosphere Reserves (Wales)



Projection = OSGB36

xmin = 288200

ymin = 325700

xmax = 352500

ymax = 357600

Map produced by MAGIC on 20 July, 2021.

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21 Maes-y-Dre, Ruthin, Denbighshire. LL15 1DB
Email: treevival@gmail.com
Mobile: 07877120981 Tel: 01824 709650



APPENDIX 4 – Data search results

Records of Priority Species within 1km of survey site.

Mammals

Species	Earliest Year	Latest Year	Records
Badger	2000	2013	3
Bats:			
Unknown bat	1998	2001	8
Brown Long-eared	2009	2009	1
Daubenton's	2012	2020	3
Lesser Horseshoe	2012	2020	3
Common Pipistrelle	1986	2009	2
Soprano Pipistrelle	2009	2009	2
Natterers	2012	2020	2
Whiskered/Brandt's	2020	2020	1
Hedgehog	1968	2019	10
Otter	2000	2014	14
Hare	1975	2015	6

Reptiles and amphibians

Species	Earliest Year	Latest Year	Records
Adder	2004	2004	1
Common Frog	2008	2017	6
Common Lizard	2008	2019	2
Common Toad	2008	2017	6
Grass snake	2008	2008	1
Slow worm	1999	2019	15

Invasive non-native species (plants)

Species	Earliest Year	Latest Year	Records
Japanese Knotweed	2002	2015	4



APPENDIX 5 – Hedgerow Regulations 1997

The Hedgerow Regulations 1997 were made under Section 97 of the Environment Act 1995 and came into effect 1 June 1997.

It is against the law to remove most hedges without permission. Removal is uprooting or otherwise destroying a hedgerow. Serious damage to the root system or over-maintenance resulting in the death of the hedgerow counts as removal. The regulations only cover hedgerows that are at least 20m long or, if shorter, connected to other hedgerows at both ends, or part of a longer hedgerow. They must be in or adjacent to common land, village greens, SSSIs, LNRs, or land used for agriculture, forestry or breeding or keeping of horses, ponies or donkeys. Garden hedges and former hedgerows that have grown to a line of trees are not covered by the regulations. Trees within a hedgerow are considered to be a part of the hedge.

What is an important hedgerow?

To qualify as ‘important’, a hedgerow must be at least 30 years old and meet at least one of the following eight criteria, which identify hedgerows of particular archaeological, historical, wildlife and landscape value.

- The hedgerow marks the boundary of a historic parish or township existing before 1850.
- The hedgerow incorporates an archaeological feature.
- The hedgerow is a part of or associated with an archaeological site.
- The hedgerow marks the boundary of or is associated with a pre-1600 AD estate or manor.
- The hedgerow forms an integral part of or is associated with a field system pre-dating the Enclosures Act.
- The hedgerow contains a listed species. These have to be listed the Wildlife and Countryside Act 1981 either in Part I of Schedule 1 (birds protected by special penalties), or Schedule 5 (other animals) or Schedule 8 (plants). In addition, species listed in certain red data books qualify. Unfortunately, the list of birds was published in 1990, and does not include species such as song thrush and linnet, whose numbers have declined more recently.
- The hedgerow includes, on average, in a 30 metre length one of:
 - a) at least 7 woody shrub and tree species listed in the regulations (see the list below).
 - b) at least 6 woody species and has at least 3 associated features.
 - c) at least 6 woody species including a black-poplar tree, large-leaved lime, small-leaved lime or wild service tree.In northern England, the number of woody species is reduced by one.
- The hedgerow runs alongside a bridleway, footpath, road used as a public path or a byway open to all traffic, and includes at least four woody species, on average, in a 30 metre length and has at least two associated features.



APPENDIX 5 – Hedgerow Regulations 1997 (continued)

The associated features are:

1. A bank or wall supporting the hedgerow along at least half of its length.
2. Less than 10% gaps.
3. On average, at least one tree per 50 metres of hedge
4. At least three species from a list of 57 herbaceous woodland plants, including bluebell, primrose, wild strawberry and assorted ferns and violets (see list below).
5. A ditch along at least a half of the length of the hedge.
6. A number of connections with other hedgerows, ponds or woodland.
7. A parallel hedge within 15 metres of the hedgerow.

Schedule 2 Woodland plant species

Barren strawberry, bluebell, broad buckler fern, broad-leaved helleborine, bugle, common cow-wheat, common dog violet, common polypody, dog's mercury, early dog violet, early purple orchid, enchanter's nightshade, giant fescue, goldilocks buttercup, great bell-flower, greater wood-rush, hairy brome, hairy woodrush, hard fern, hard shield fern, hart's tongue, heath bedstraw, herb paris, herb-robert, lady fern, lords-and-ladies, male fern, moschatel, narrow buckler-fern, nettle-leaved bell-flower, oxslip, pignut, primrose, ramsons, sanicle, scaly male-fern, small cow-wheat, soft shield fern, sweet violet, toothwort, tormentil, wild strawberry, wood anemone, wood avens/herb bennet, wood false-brome, wood horsetail, wood meadow-grass, wood melick, wood millet, wood sage, wood sedge, wood sorrel, wood speedwell, wood spurge, woodruff, yellow archangel, yellow pimpernel.

Schedule 3 Woody shrub and trees species

Alder, crab apple, ash, aspen, beech, downy birch, silver birch, black-poplar, blackthorn, box, broom, buckthorn, alder buckthorn, butcher's broom, bird cherry, wild cherry, wild cotoneaster, downy currant, mountain currant, dogwood, elder, elm, gooseberry, gorse, dwarf gorse, western gorse, guelder rose, hawthorn, midland hawthorn, hazel, holly, hornbeam, common juniper, large-leaved lime, small-leaved lime, field maple, mezereon, pedunculate oak, sessile oak, osier, Plymouth pear, wild pear, grey poplar, white poplar, wild privet, rose, rowan, sea-buckthorn, wild service-tree, spindle, spurge-laurel, walnut, wayfaring-tree, whitebeam, willow, yew.

