

2024

Preliminary Ecological Appraisal

Park View Cottage



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1. Introduction

1.1 Project Background

EcoVigour was instructed to undertake a Preliminary Ecological Appraisal (PEA) of a site called Park View Cottage, in Troedyrhiw, Merthyr. The study was required to inform the owner of the ecological constraints present, ahead of the proposed development works at the property. This report documents the findings of the PEA.

1.1.1 The Preliminary Ecological Appraisal was undertaken by Ecologist Kate Davies, with the associated report also written by Kate Davies.

1.1.2 The objectives for the survey were:

- To undertake an ecological assessment of the site;
- To identify ecological features within the site that could pose a constraint to the proposed development;
- To identify opportunities for incorporating biodiversity enhancements into the development proposals;
- To assess the site's potential to support protected species and make recommendations for further survey, where required to clarify potential ecological constraints;
- To make recommendations for any valuable habitats to be considered, through retention or enhancement, or if this is not possible, by habitat mitigation or compensation;
- To identify the presence of any invasive non-native species on site.

1.1.3 The ecological report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) guidance document 'Guidelines for Preliminary Ecological Appraisal - Second Edition' (CIEEM, 2017). The objective of the report is to provide a preliminary ecological assessment of the site based on the current design. An initial ecological overview of the site is provided and potential ecological constraints and impacts of the current proposals are assessed. Recommendations for further surveys are provided where necessary.



1.2 Survey Area Description

- 1.2.1 The site is located off Merthyr Road, in Troedyrhiw, Merthyr. The site was accessed via a shared private driveway into the property from the main road. The survey area comprises of a vacant single-story house, with two of the outside walls and ceilings removed. The site location and survey area are shown in Figure 1 below.



Figure 1: Survey Area

1.3 Works Required

- 1.3.1 These works will include but are not limited to:

- Removing and replacing the Roof
- Construction of a new garage
- An extension to the current residential property
- Complete renovation inside the property.



2 Methodology

2.1 Desk Study

- 2.1.1 A desk study was conducted to assist with the overall site assessment. The local biological records centre, Southeast Wales Biodiversity Records Centre (SEWBRc), and web-based data sources were contacted and searched respectively to provide background information on ecological features in the vicinity of the site. This included a data search request to SEWBRc for protected and priority species and statutory and non- statutory designated sites and invasive species within 1km of the site boundary. Broad habitat boundaries and types were identified from online aerial imagery.
- 2.1.2 The search buffers are considered sufficient to cover the potential Zone of Influence of the proposed compound. The relevance of the reasons for designation of the protected sites within 1km of the site boundary has been considered during subsequent assessment of whether the proposed development will have any impact upon the biological integrity of such sites.

The desk study also included the following sources:

- SEWBRc LERC Biological Records Search – Ref: 0245-471
- Online aerial imagery resources;
- Ancient Woodland Inventory 2011;
- Natural Resources Wales (NRW);
- Joint Nature Conservation Committee (JNCC) and
- A review of OS mapping for waterbodies within 500 metres of the site.

2.2 Walkover Survey

- 2.2.1 An extended Phase 1 Habitat survey of the site and adjacent habitats, hereafter referred to as the 'site', was conducted on 29th August 2024. The Phase 1 survey was conducted in accordance with the methods outlined in the Joint Nature Conservation Committee (JNCC)'s 'Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit' (JNCC, 2010). The survey consisted of a thorough walkover of the site, identifying the broad habitat types present, identifying the suitability of the site to support protected and priority species.
- 2.2.2 Incidental observations of protected and/or priority species and the potential for such species to occur on site (and in the surrounding landscape where relevant) were also noted, however no specific protected/priority species surveys were undertaken as part of this preliminary ecological assessment.
- 2.2.3 A search for plant species as included in Schedule 9 of the Wildlife and Countryside Act (1981) as amended, was made during the survey. Under the Act it is an offence to spread, or cause the spread of, these species.

2.3 Limitations

- 2.3.1 Third party biological records do not represent a full species list for the area. The absence of records does not necessarily indicate absence of a species or habitat but rather that these have not been recorded or are perhaps under-recorded within the search area.
- 2.3.2 The results of the survey and assessment undertaken by EcoVigour Ltd are representative at the time of survey.



- 2.3.3 This document does not contain a comprehensive list of botanical species on site with only plant species characteristic of each habitat and any incidental observations of notable plant species recorded. In addition, many plant species are only evident at certain times of the year; therefore, some plant species may have been undetected.
- 2.3.4 No targeted ecological surveys were undertaken as part of this assessment to determine the presence of specific species.
- 2.3.5 A lot of the demolition work had already taken place prior to the survey, and so the majority of the ground surrounding the building was covered in rubble and building materials, making it impossible to see any plant species on the ground.



3 Results

3.1 Designated sites

3.1.1 There are 0 statutory designated sites within 1km of the site boundary.

3.1.2 There are 8 non-statutory designated sites within 1km of the site boundary, details are provided in Table 1 below.

Table 1: Non-designated sites within 1km

Site Name	Designation	Reason for Designation	Distance from Site (m)
Afon Taf (River Taf)	SINC	Wildlife Site	194m
Troed-Y-Rhiw	SINC	Wildlife Site	274m
Merthyr Common South	SINC	Wildlife Site	441m
Buarth-waunydd	SINC	Wildlife Site	525m
Pentrebach Fields	SINC	Wildlife Site	532m
Graig Gethin	SINC	Wildlife Site	553m
Pentrebach Tip	SINC	Wildlife Site	672m
Cnwc	SINC	Wildlife Site	987m

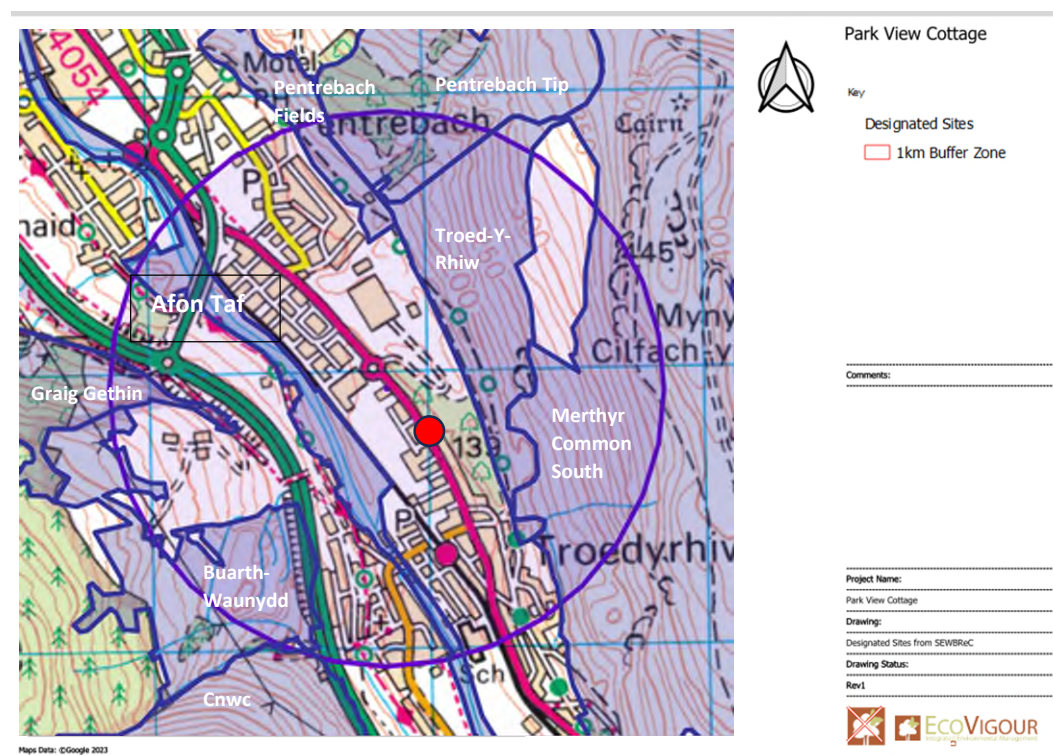


Figure 2: Non-designated sites within 1km



3.2 Ancient Woodland Sites

- 3.2.1 There are 17 ancient woodland sites situated within 1km of the development site, including Ancient Semi Natural Woodland (ASNW), Restored Ancient Woodland Sites (RAWS), and Ancient Woodland Site of Unknown Category (AWSUC). However, none are within an impact radius of the works and as such do not require further assessment at this time.



Figure 3: Ancient Woodland Sites within 1km

3.3 Waterbodies

- 3.3.1 The River Taff runs approximately 242m away from site. The work area is within the rain catchment area of the River Taff and its tributaries meaning that any pollution will be washed into them by the rain. For this reason, it should be ensured that plant nappies are always used for fuel storage and refuelling operations, placement of debris mats / siltfence to capture and filter runoff from the work if needed, and general care taken to avoid spillages and other accidents. The limits of the field study and desktop study cannot account for potential ephemeral ponds within a 500m proximity of the works.



Figure 4: Watercourses within 1km

3.4 Survey Figures

- 3.4.1 The figures below provide a visual summary of the walkover. This is not an extensive collection of the images collected from the survey. Additional images are available upon request.



Figure 5: The building from the South side.



Figure 6: A view of the South side of the building with the piles of stone



Figure 7: Inside the building



Figure 8: The roof and attic space



Figure 9: The view from inside the building showing some of the surrounding vegetation and stone piles

3.5 Combined Field Survey and Data Summary

The protected and priority species information obtained from SEWBRc for the site is summarised below. Records of species such as badger and bat roosts are sensitive and should be treated as confidential. Full records are available on request.

- 3.5.1 **Habitat:** the site is dominated by the existing property and driveway, with areas of patio hard standing. There are two areas of lawn along the eastern and western sides of the property.



Figure 10: UK Hab Plan, illustrating habitats at the property.

3.5.2 Bird Species:

119 records of birds listed as “Priority Species” were returned by SEWBRc within 1km of the development site, along with 120 records of “Species of Conservation Concern”, and 28 records of “Locally Important Species”.

The field survey was undertaken within the traditional bird breeding season (end of Feb –beginning of Sep). The habitat surrounding the development site predominantly comprises dense areas of butterfly bush (*Buddleja davidii*), bramble (*Rubus fruticosus agg.*), common nettle (*Urtica dioica*) and multiple grass and tree species. However, no nests were recorded during the survey. Due to the location of the site and its proximity to multiple SINC wildlife sites, it is likely there are nesting birds close by.

If the building is left open to the elements during the bird breeding season, there is potential that it could be utilised by nesting birds.

If vegetation clearance is required, this should be undertaken outside the bird breeding season (Late Feb to Sept). If this is not possible, a check for nesting birds should be undertaken by an ecologist prior to the clearance of vegetation. Should a nest be found, a 5m buffer must be provided with the nest being left undisturbed until the young have fledged according to the Wildlife and Countryside Act 1981.

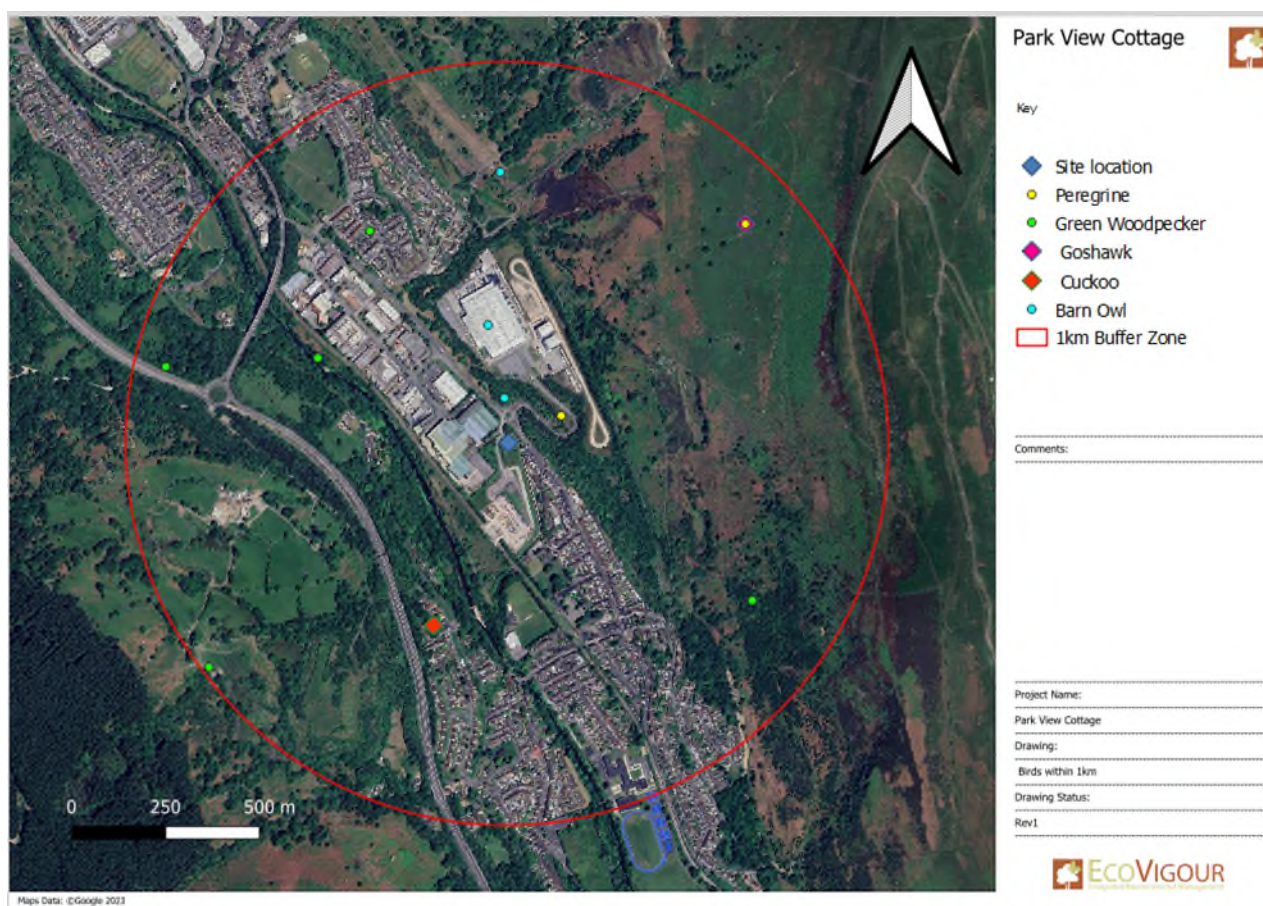


Figure 11: Bird species within 1km

It is worth noting that Birds of Prey require a 25m buffer around any nesting sites.

3.5.3 Priority Mammals Species:

75 “Priority” mammal species records were returned by SEWBRc within 1km of the development site, including hedgehog (*Erinaceus europaeus*), Eurasian otter (*Lutra lutra*), Eurasian badger (*Meles meles*), polecat (*Mustela putorius*), American mink (*Neovison vison*) and eastern grey squirrel (*Sciurus carolinensis*). The closest recorded priority mammal was Eurasian Otter at 256m, within the River Taff. No signs of otter were found during the survey. Hedgehogs may travel through the area, and so care should be taken when moving materials throughout the site.

No signs of any mammal species were found during the site survey.

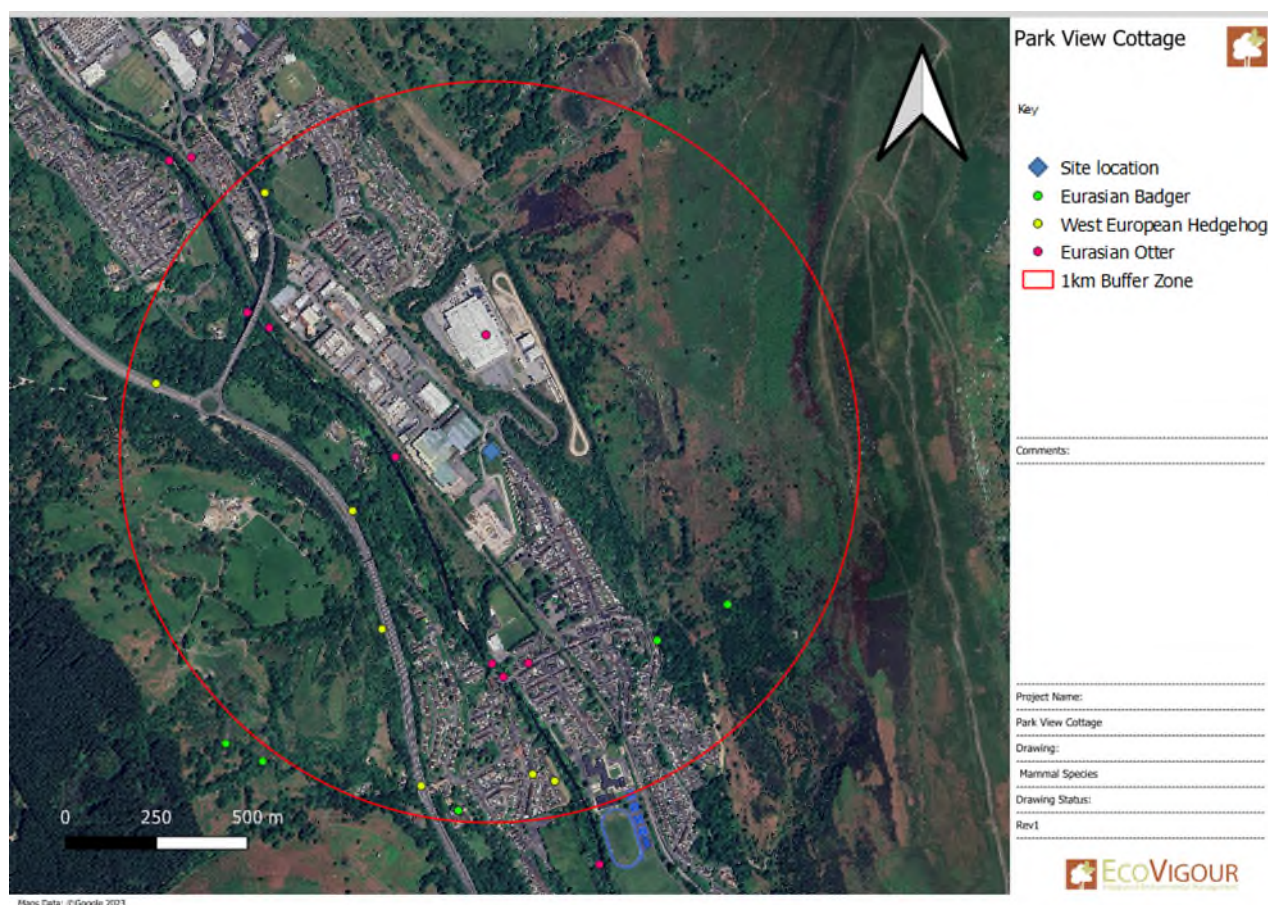


Figure 12: Mammal Species within 1km

3.5.4 Common Amphibian and Reptile Species:

Five “Priority” reptile and amphibian species were identified within 1km of the development site, namely slow-worm (*Anguis fragilis*) and common lizard (*Zootoca vivipara*).

No evidence of reptiles was found during the survey. However, due to the nature of the vegetation surrounding the site, the presence of reptiles cannot be ruled out. There is a large stockpile of rubble along the northern boundary and whilst this contains a significant amount of fine material, reducing its suitability for use by reptiles, it does have some hibernation potential for common reptile species. A targeted presence/absence survey was not undertaken, as this was beyond the scope of the assessment.

The presence of reptiles should be assumed and mitigation implemented accordingly. Care should be taken when removing the stone and rubble stockpiles to prevent any injury to any reptiles that could be using them to bask or shelter within. Any features which could support hibernating or sheltering reptiles, should be carefully dismantled, during the reptile active season (March to October). Any reptiles found should be allowed to move into suitable cover surrounding the site. If reptiles are found during the hibernation season (when daytime temperatures are below 10°C, the project ecologist should be contacted for advice.

No amphibian species were returned with the data search. Due to the nature of the site, and there being no large bodies of water close by, any amphibians being discovered is unlikely.



3.5.5 Invasive Non-Native Plant Species:

41 records of invasive non-native plant species were returned within the data search. These species were mainly Japanese Knotweed (*Fallopia japonica*) and Himalayan Balsam (*Impatiens glandulifera*). The closest record was Himalayan Balsam at 284m from site. No invasive plant species were identified during the time of the survey, however as the majority of the ground surrounding the building had construction materials and rubble covering it, this cannot be ruled out.

Due to the localised nature of the works, any contact with any invasive species would be negligible.

3.5.6 Bat Species:

Five bat species have been recorded within 1km of the development site, namely Noctule (*Nyctalus noctule*), Common pipistrelle (*Pipistrellus pipistrellus*), Soprano pipistrelle (*Pipistrellus pygmaeus*), and Brown long-eared bat (*Plecotus auratus*), as well as unidentified pipistrelle and myotis species. With 50 records being returned with the data search.

Features with potential to be utilised by roosting bats were identified during the survey, in the form of exposed rafters and exposed end to cavity walls, where sections of walls had been removed. The property had been empty for a year prior to works commencing. There were no ceilings within the property and two sections of outside wall had been removed, at the time of the survey. There was no evidence of bats currently utilising the property and due to its current condition, i.e. open to the elements, the property was assessed as offering low potential for use by bats. Further information pertaining to the status of the site, with regard to bats can be found within the Preliminary Roost Assessment Report EV002056/PRA.

The site has potential to be utilised by foraging and commuting bats. The large areas of scrub and continuous vegetation South of the site provide suitable habitat corridors for both foraging and commuting activity; therefore, the presence of bats within the development site cannot be ruled out.

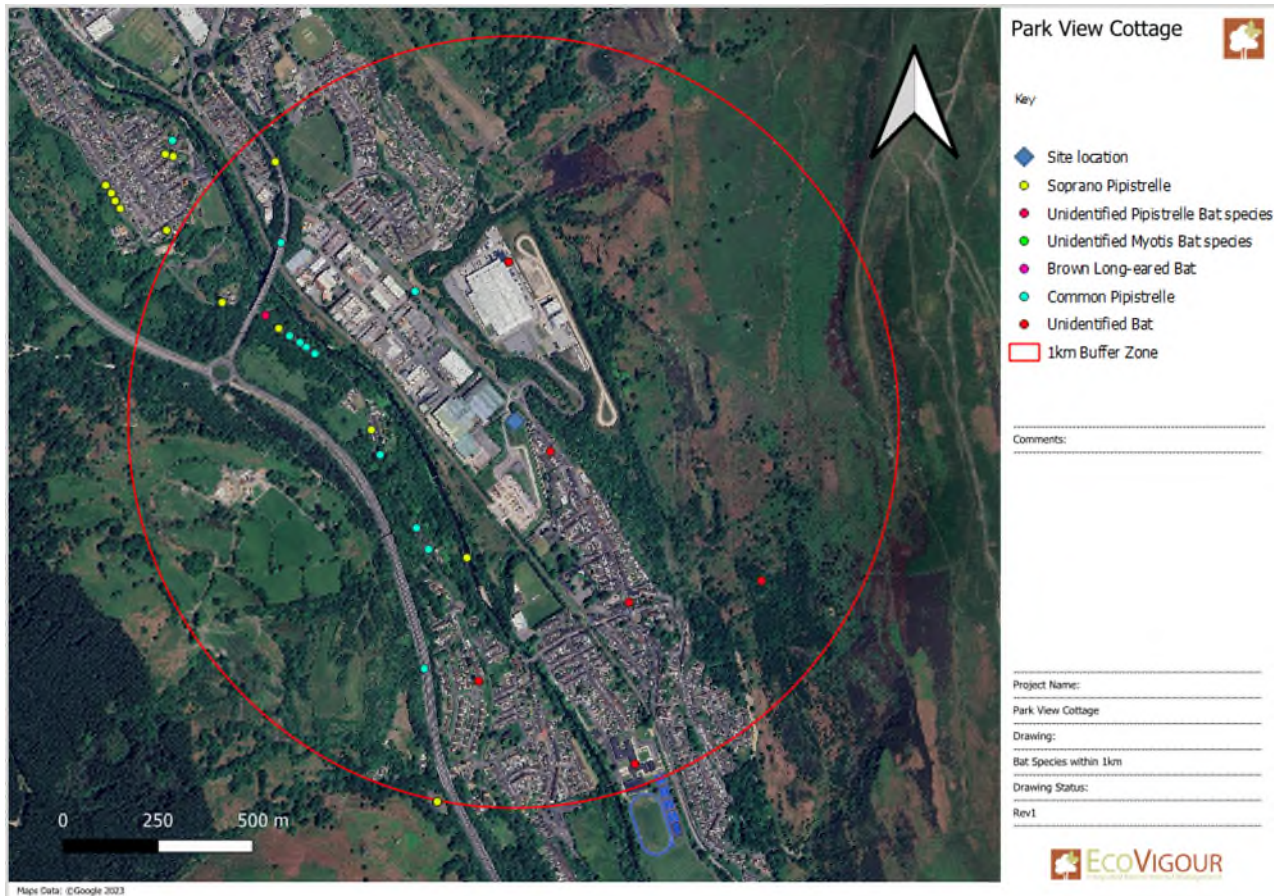


Figure 13: Bat Species within 1km of site



4 Assessment and Recommendations

This section provides a broad assessment of the information gathered and scopes out potential ecological vectors before remaining considerations and actions are proposed in the following recommendations and opportunities sections below

4.1 Designated Sites

4.1.1 There are no designated sites within the 1km buffer zone surrounding the site. The proximity of the designated ancient woodland sites and SINCE wildlife sites are far enough away to be at negligible risk from the works. The River Taff may be affected by pollution events. Ensure all relevant GPP's are followed. See pollution control section below.

4.2 Habitats

4.2.1 No vegetation removal will be required for the remainder of the works.

4.3 Protected Species - Bats

4.3.1 All British bats and any place used for shelter or protection, or breeding site or resting place (their roosts) are fully protected by law under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended).

4.3.2 Together these protect bats from:

- Selling, offering for sale, possessing or transporting for the purpose of the sale or publishing advertisements to buy or sell a protected species.
- Deliberate, intentional or reckless killing, injury or taking of bats.
- Damage to or destruction of or, obstruction of access to any place of shelter, breeding (roost) or rest.
- Disturbance of an animal occupying a structure or place.
- The deliberate disturbance of any bat species in such a way as to be significantly likely to affect;
 - their ability to survive, hibernate, migrate, breed, or rear or nurture their young; or
 - the local distribution or abundance of that species.

4.3.3 Due to their being multiple features and possible evidence of bats present, Isabella Stephens an NE level 2 and NRW bat licensed EcoVigour ecologist inspected the site on 03/09/2024. Signs of bats historically using the building were found i.e. a single historic dropping on a wall, however this was so degraded it could not be determined when it was used and by which species. It was concluded that there were no bats using the building at the present time and due to the current condition the building offers negligible potential for use by bats.

4.3.4 Multiple bat records were returned with the data search, and it is likely they are using the area to forage and commute.

4.4 Badgers

4.4.1 The Protection of Badgers Act 1992 (as amended) is the main legislation protecting badgers and their habitat in the United Kingdom. Under the Act it is illegal to:-

- Wilfully kill, injure or take a badger or attempt to do so.



- Cruelly ill-treat a badger.
- Interfere with a sett by doing any of the following:
 - (i) damage a badger sett or any part of it
 - (ii) destroy a badger sett
 - (iii) obstruct access to a badger sett
 - (iv) cause a dog to enter a sett
 - (v) disturb a badger while it is occupying a sett.

4.4.2 No evidence of badger activity was found during the site visit. There were records within 1km of the work area and the surrounding habitats are suitable. It is likely that there are badgers in the wider area, who could possibly enter the site at night. Best practice to be employed during works, particularly night works.

4.5 Bird Species

4.5.2 The Wildlife and Countryside Act 1981 (as amended) is the principal legislation affording protection to UK wild birds. All birds, their nest and eggs are protected by law under this legislation, it is an offence (with certain exceptions), to recklessly or intentionally:

- ◆ Intentionally kill, injure or take any wild bird.
- ◆ Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.
- ◆ Intentionally take or destroy the egg of any wild bird.
- ◆ Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

4.5.3 **Note:** Nesting birds found outside of nesting season are protected by the same level of protection as that within the standard nesting period.

4.5.4 It is not currently envisaged that further vegetation removal will be required, but if this is the case, this should be undertaken outside the bird breeding season (Late Feb to Sept). If this is not possible, a check for nesting birds should be undertaken by an ecologist prior to the clearance of vegetation.

4.5.5 If nests are present, then a minimum 5m exclusion zone should be established around the nest(s) and no de-vegetation or other heavy machinery work should be carried out within the exclusion zone(s) until it is confirmed that the nest(s) is completed and that the young have fledged.

4.6 Common Reptiles & Amphibians

4.6.1 The presence of reptiles and amphibians was not visually confirmed during the ecological assessment (presence or absence surveys have not been undertaken). However, records of species within 1km were returned within the data search, and care should be taken when removing any stone and soil piles from the site.

4.6.2 All commonly occurring reptile species (common lizard, slow worm, grass snake and adder) are protected by UK law, making it an offence to injure or kill them. Care must be taken to avoid killing or injuring reptiles & amphibians. All commonly occurring reptile species (common lizard, slow worm, grass snake and adder) are protected by UK law, making it an offence to injure or kill them. Care must be taken to avoid killing or injuring reptiles & amphibians. All reptile species are partially protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This legislation protects reptiles from:

- Reckless or intentional killing and injury.
- Selling, offering for sale, possessing or transporting for the purpose of the sale or publishing



advertisements to buy or sell a protected species.

Where these animals are confirmed as present on land that is to be affected by development, guidance recommends that:

- The animals should be protected from injury or killing during construction operations;
- Mitigation should be provided to maintain the conservation status of the species locally.

4.6.3 Precautionary methods to avoid injury or death of reptiles potentially present on site may include:

- ◆ Staged cutting of vegetation. Any vegetation being removed will be trimmed using hand tools to a **height of no less than 150mm and left for 48 hours** so that any animals within can disperse, with no vegetation will be removed below 150mm;
- ◆ Vegetation removal must be undertaken in a **slow, systematic manner** to allow any animals present to disperse safely away from the site and adjacent suitable habitat;
- ◆ Dismantling of refugia/hibernacula by hand or carefully by machine and scraping through ballast with a toothed bucket, during the reptile active season;
- ◆ If, during the works, a reptile is found, **works will stop (this is a legal requirement)** and the project ecologist will be contacted. To aid accurate species identification, a photograph of the animal should be taken and sent to the project ecologist. The animal (if unharmed) should be allowed to disperse of its own accord;
- ◆ Works should be undertaken within the reptile active period (March to early October), on warm days, when reptile species are more active and can readily escape any disturbance. If this is not possible due to construction timescales, an ecologist on site will dismantle by hand any hibernation features. Any reptiles discovered in this period should be covered over and remain in situ where possible or moved to a safe place outside of the works area with hibernacula used to shelter them.
- ◆ If any injured reptiles are found during the works on site, these will be carefully placed into a clean bucket containing some vegetation and covered over in a quiet place away from the works and an ecologist or local wildlife hospital must be contacted immediately.

4.6.4 If any non-protected amphibian species are found during the works, then these will be moved to safety by the supervising ecologist.

4.7 Other protected species

4.7.1 Hedgehogs are protected in England under Schedule 6 of the Wildlife and Countryside Act (1981) and are also listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). Wales under the Environment (Wales) Act 2016.

4.7.2 The Wild Mammals Protection Act (1996) makes it an offence to crush or asphyxiate any wild mammal. This may apply during site clearance works, particularly where burrowing mammals such as rabbit and fox are present, as such animals could be crushed or asphyxiated in their burrows by heavy machinery.

4.7.3 Vegetation clearance will be undertaken as described in 4.6.3 above and this process will be used to prevent injury / mortality to hedgehog and other small mammals.

4.8 Invasive Species

4.8.1 Schedule 9 invasive species were recorded within the 1km buffer within the data search. However, none of the species were found within the work site at the time of the survey.



4.9 Net Benefit for Biodiversity

Planning Policy Wales (PPW 12), Chapter 6 sets objectives for maintaining and enhancing biodiversity, through the planning process, including

- ◆ **GREEN INFRASTRUCTURE:** stronger emphasis on taking a proactive approach to green infrastructure, the submission of a proportionate green infrastructure statement with planning applications and signposting Building with Nature standards.
- ◆ **NET BENEFIT FOR BIODIVERSITY AND THE STEP-WISE APPROACH:** further clarity is provided on securing net benefit for biodiversity through the application of the step-wise approach, including the acknowledgement of off-site compensation measures as a last resort, and, the need to consider enhancement and long-term management at each step. The use of the green infrastructure statement as a means of demonstrating the stepwise approach is made explicit. A simplified diagram of the policy approach has been developed (included within PPW12). The importance of strategic collaboration to identify and capture larger scale opportunities for securing a net benefit for biodiversity is recognised.

4.9.1 For this assessment we have applied the DECCA Framework:

- ◆ **Diversity:** maintaining and enhancing diversity at every scale, including genetic, structural, habitat and between-habitat levels. This supports the complexity of ecosystem functions and interactions that deliver services and benefits.
- ◆ **Extent:** incorporating measures which maintain and increase the area of semi-natural habitat/features and linkages between habitats. In general, smaller ecosystems have reduced capacity to adapt, recover or resist disturbance.
- ◆ **Condition:** The condition of an ecosystem is affected by multiple and complex pressures acting both as short term and longer term types of disturbance. Both direct and wider impacts should be considered, for example avoiding or mitigating pressures such as climate change, pollution, invasive species, land management neglect etc.
- ◆ **Connectivity:** This refers to the links between and within habitats, which may take the form of physical corridors, stepping stones in the landscape, or patches of the same or related vegetation types that together create a network that enables the flow or movement of genes, species and natural resources. Developments should take opportunities to develop functional habitat and ecological networks within and between ecosystems, building on existing connectivity.
- ◆ **Aspects of ecosystem resilience** (adaptability, recovery and resistance): ecosystem resilience is a product of the above four attributes. Adaptability, recovery and resistance to/from a disturbance are defining features of ecosystem resilience.

This NBB assessment uses the following industry recognised best practice methodologies:

- ◆ CIEEM Briefing Paper – Welsh Government's Approach to Net Benefits for Biodiversity and the DECCA Framework in the Terrestrial Planning System – September 2022;
- ◆ Natural England (2019). Biodiversity Metric 2.0 – Auditing and Accounting for Biodiversity;

The scale of the development is small and due to the managed nature of the site, the habitat value of the site is currently low. The advanced works which have been undertaken at the property have further reduced this, with the exception of the rubble piles, which offer some habitat value for reptiles.

The following ecological enhancements should be considered as part of the development:

- ◆ Planting of mixed native species flowering plants and shrubs, for the benefit of pollinator species. Species such as primrose, forget-me-not, bugle, stinking hellebore, honeysuckle, foxglove, vipers bugloss, heathers, aster, snowdrop and campion. These will provide a variety of flowers, throughout the year.
- ◆ The creation of a compost heap in an area of the garden for the benefit of invertebrates and in turn reptiles, amphibians and small mammals.
- ◆ If new fences are erected, holes should be left in gravel boards to allow small mammals to pass through.
- ◆ Log piles should be constructed within the base of hedgerows.
- ◆ AS part of the development - 2no bird boxes should be erected in trees or hedgerows surrounding the site. A hedgehog box should be placed in the base of hedgerow adjacent to the compost heap.



- ◆ The addition of bird feeders to the property. This will be dependent on the resident and hence cannot be guaranteed.

In consideration of the DECCA Framework:

- ◆ **Diversity:** The size of the areas within the plot are limited, with the majority likely to be laid to patio or lawn for amenity use. However, this should be supplemented with the planting of native species flowering shrubs to provide benefit for pollinators.
- ◆ **Extent:** The green areas of the plot had been previously laid to lawn. Within the proposed development, the hedgerows around the periphery of the plot will be maintained. The footprint of the proposed building is similar to the existing. The majority of the green estate within the plot will be amenity lawn but provision will be made for the planting of native flowering plants within the area on the southern side of the driveway and in the NW corner of the garden.
- ◆ **Condition:** The condition of the habitat will be moderately improved, through planting of native species flowering plants, the addition of habitat piles in the bases of hedgerows, the addition of a compost heap and 2 no bird boxes.
- ◆ **Connectivity:** will be unchanged by the project, with connectivity into the surrounding landscape being retained.
- ◆ **Aspects of ecosystem resilience** (adaptability, recovery and resistance): It is anticipated that the ecosystem of the area surrounding the site will be unaffected. Gravel boards with cut outs for small mammals will be incorporated into any sections of new fencing to ensure ecological permeability of the site.

5 References



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