

Preliminary Ecological Assessment



Project: Land at Springfield Rise, Treharris

Instructed by: Holbrook Homes

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1. Introduction

The applicant is seeking permission to create a residential development within a parcel of land to the north of Springfield Rise, Treharris. The proposed development site is centred at ST 09560 97306. The land within the proposed development boundary consists of scrub, semi improved grassland, open mosaic habitat and bare earth.

This report will assess the potential of the land within the site boundary to support habitats and species and the implications that any future development proposals could have on them.

1.1 Site Description

The proposed development site is triangular in shape and flat to the west but rises steeply to the east. It appears that a large amount of engineering work has been completed on site previously as footings have been dug into the ground towards the west of the site. Springfield Rise is located to the south of the site and a small tarmac access track along the north west boundary. An open field is present along the eastern boundary.

The site is considered to be in a semi rural location on the northern outskirts of the town of Treharris. In the wider landscape areas of woodland lie to the north east and north west with fields and tree lines to the north.

1.2 Survey Constraints

The site visit was undertaken during September which is within the optimum time to undertake phase 1 habitat surveys. Access across some areas of the site was difficult due to the dense bramble scrub and height of vegetation. However a good visual inspection of all areas within the site was possible.

1.3 Surveyor Experience

Aislinn Harris is a full member of Chartered Institute of Ecology and Environmental Management (CIEEM). Aislinn is an ecologist with 12 years experience undertaking a wide range of flora and fauna surveys. All survey work is undertaken following JNCC Phase 1 Survey Guidelines and CIEEM Guidelines for Preliminary Ecological Appraisal (2nd Ed 2017).

2. Desktop Study

A data search undertaken with Aderyn to ensure all relevant ecological information for the local area is available. A 2km buffer zone was searched and records returned within 500m of site are noted below:

- Records for the presence of Cinnabar moth - closest approximately 30m away,
- Records for the presence of hedgehog - approximately 200m away,
- Records for the presence of commuting / foraging common pipistrelle bats - approximately 250m away,
- Records for the presence of a brown long eared bat roost in a property - approximately 400m away,
- Numerous bird records - house sparrow, hawfinch, bullfinch, brambling, tree pipit, starling, song thrush, redwing and wood warbler. Records for the presence of schedule 1 protected species include Osprey as well.

Records of note returned for the rest of the buffer zone are detailed below:

- Commuting / foraging noctule, daubentons, a myotis species and soprano pipistrelle bats,
- Otter,
- Slow worm,
- Barn Owl,
- Common frog,

2.1 Protected Sites

A data search for species records was undertaken for the proposed development site and surrounding area. The search also considered statutory and non-statutory protected sites.

Statutory Protected Sites

There are no statutory protected sites within 2km of the proposed development site.

Non-Statutory Protected Sites

The proposed development does not sit within or lie directly adjacent to any non statutory protected sites. There are a number of Sites of Importance for Nature Conservation (SINC) within 2km. The closest such site is Coed Cefn-fforest & Cwm Cothi which lies approximately 140m to the east of site. The remaining SINC sites within the search area are listed below with an approximate distance from site provided within brackets:

- [Cwm Afon Railway Line, West of Nelson](#) (1976m)
- [Cwm Afon, West of Nelson](#) (1859m)
- [Brooklands Marsh, North of Nelson](#) (1612m)
- [Llancaiach-Fawr Meadows, Llancaiach](#) (1808m)
- [Nant Caeach, North of Llancaiach](#) (1729m)
- Afon Taf (1197m)
- Afon Bargod Taf (578m)
- Mynydd y Capel Common (1925m)
- Gelligaer Common (1174m)
- Craig-yr-Efail (1478m)
- Cwm Mafon (1555m)
- Craig Berthlwyd (1086m)
- Goetre-coed Wood (1227m)
- Treharris Park & Cardiff Road Woodlands (174m)
- Lower Taf & Edwardsville Woods (448m)
- Mynydd Goetre-coed (1661m)
- Whitehall Golf Course (1635m)
- Lower Cwm Bargod (848m)
- Trelewis Wood (1292m)
- Nant Caeach (777m)
- Berthlwyd (667m)

There are a number of areas of Ancient Semi Natural Woodland within 2km of the proposed development site. The closest such site lies approximately 180 to the south west.

The proposed development site contains a mixture of habitat considered to qualify as Open Mosaic Habitat (OMH). OMH is a section 7 habitat and considered a priority for protection under the Environment (Wales) Act 2016. Any loss of such habitat require compensation.

2.2 Potential Impacts to Protected Sites

The proposed development site would result in the loss of OMH which is a section 7 habitat under the Environment (Wales) Act 2016. This habitat type is of principle importance to help maintain and enhance biodiversity in Wales. Any loss of such a habitat type requires compensation usually in the form of replacement habitat creation or management.

3. Phase 1 Survey

3.1 Habitats

A walkover survey of the site was completed **18th September 2020**. The survey included all areas of land within the proposed development site boundary. A full list of species recorded can be found in Appendix 1. A habitat map is provided within Appendix 3 of this report to illustrate the approximate location and extent of habitat types within the site boundary.

The development site is split into roughly two halves as the western side of the site has been seemingly subject to engineering works which has created a flat plateau. A large amount of **bare earth** is present to the west of the site where footings appear to have been dug into the ground. The ground appears to rise sharply to the east of the bare earth areas with steep earth banks.

There are areas of **semi improved grassland** across the proposed development site. Species noted include meadow vetchling, common century, red clover, birds foot trefoil, sweet vernal grass, curled dock, creeping cinquefoil, crested dogs tail, hairy tare, common knapweed, yorkshire fog and a species of bent. Given the species noted the grassland is thought to be **neutral grassland**.

A **tree line** is present along the north western boundary of the site. All trees along this boundary are mature but younger specimens and include hawthorn and hazel trees. **Scattered trees** are present to the south east of the site and include a species of willow, hawthorn and birch. **Scrub** habitat is present along the tree line and scattered across the eastern areas of the site. The **scrub** is mainly woody with young bramble, buddleja and birch saplings noted. However species including ragwort, creeping thistle and bracken were noted. A **tarmac access road** and turning head are present to the south of the site. Piles of old tyres are present to the south west of the site by the tarmac turning area.

There are areas of disturbed ground to the east of the site where **rubble piles** and bare ground are visible. Coloniser species are starting to grow in these areas and include dandelion, rosebay willow herb, red clover, birds foot trefoil, weld and rough hawkbit were noted. These habitats are considered to be **short perennial**.

The mixture of bare earth, rubble piles, short perennial grassland and neutral grassland are thought to create **open mosaic habitat**.

3.2 Great Crested Newts

Great crested newts (*Triturus cristatus*) are a European protected species and are protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Deliberate taking or destroying of eggs,
- Damage or destruction of a breeding site or resting place.

Great crested newts (GCN) are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale a great crested newt. Great crested newt and common toad are listed in section 7 of the Environment (Wales) Act 2016 which makes them key species to sustain and improve biodiversity.

There are no records for the presence of Great Crested Newt (GCN) returned via the data search. There are no suitable waterbodies for use by GCN within the site boundary and surrounding area.

The land within the proposed development site is a mixture of habitat types considered to constitute open mosaic habitat. The site could possibly be suitable for use by GCN during their terrestrial life stages however there are no suitable waterbodies within 500m of the site. Given the lack of local waterbodies and records for GCN it is thought highly unlikely they are present within the site boundary. Therefore no further recommendations are made for this species.

3.3 Dormice

The dormouse (*Muscardinus avellanarius*) is a European protected species and is protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Dormouse are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale a native dormouse. Dormouse is listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

The closest record for dormouse is approximately 2.1km away and is for a possible dormouse nest found near Nelson. There are no other records of dormouse returned via the data search.

The presence of dormouse within the proposed development site is thought to be highly unlikely. The site has been subject to large levels of disturbance in the past and vegetation is only recently starting to recolonise the site. The tree line, scrub and small area of scattered trees within the site boundary are not considered dense enough to support a population of dormouse. These habitat types also have very limited connectivity to areas of adjacent habitat such as wood land which are suitable for use by dormouse.

Given the lack of local records and poor habitat connectivity into the wider landscape, it is thought highly unlikely that dormouse are present within the site boundary. No further survey work for dormouse is recommended.

3.4 Bats

All British bats are a European protected species and are protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Schedule 5 of The Wildlife and Countryside Act (1981) also protects all species of British bat and their roosting locations. British bats are protected from intentional or reckless disturbance and or obstruction of their roosting places. Barbastelle, bechstein, noctule, brown long eared, common pipistrelle, soprano pipistrelle, greater horseshoe and lesser horseshoe bats are also listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

There are limited records for the presence of bats within 500m of the site, however in the wider area species such as noctule, an unidentified pipistrelle species, daubentons and whiskered bats have been recorded.

There are no buildings within the proposed development site. All trees within the site boundary are considered to have negligible potential for roosting use by bats. All trees were subject to a ground level visual assessment for bats during the site visit. No gaps or cracks suitable for use by bats were noted in any specimen on or directly adjacent to site.

The majority of the habitats on site are bare earth, short perennial vegetation and neutral grassland. A narrow tree line, small areas of scrub and scattered trees are present on site and its these habitats that have the potential to be used by bats for foraging or commuting purposes. The site is also in an upland setting with limited shelter making it less suitable for use by bats unless during calm weather when it's unlikely to be windy. The tree line along the north western boundary of the site which runs along a single lane access track is thought to have the most potential for use by bats.

The proposed development site is considered likely to be used by very limited numbers of common bat species for foraging on an occasional basis. The tree line / road along the north western boundary has more potential to be used by bats on a more frequent basis and could provide a commuting route bat bats across the site. It is considered highly likely that the tree line can be retained as part of the development proposals. A wedge of land along the eastern edge of the site is also proposed for retention. Providing these habitat corridors across the site can be retained as dark vegetated corridors no further survey work for bats is recommended.

3.5 Otters

The common otter (*Lutra lutra*) is a European protected species and is protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Otter are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale an otter. Otter is listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

The closest record for the presence of otter is approximately 560m to the south away from the site and along the River Taff. Otters tend to prefer secluded locations for their holts to help prevent them being disturbed by other animals. It is accepted that otters can travel long distances from river corridors to find acceptable holt sites.

No evidence of mammal movement, such as footpaths or paw prints, through the site was noted. The site also has no connectivity to any river or stream in the local area which otter could use to access the site. The proposed development site is considered to have negligible potential for use by otter. No further surveys or recommendations are made for otter.

3.6 Badger

Badgers are protected under the Protection of Badgers Act 1992. In summary they are protected from:

- Taking, killing or injuring;
- Cruelty;
- Interfering with a badger sett;
- The selling and possession of badgers;
- Marking or ringing.

Badgers are also listed on schedule 6 of the Wildlife and Countryside Act 1981 as amended.

Badgers tend to have a variety of setts with different uses and functions within the territory for the family unit. In general there is usually a main sett which the family will use the most. There are then annex, subsidiary and or outlier setts which depending on family structures and environmental pressures may be used at different times of the year. As female badgers tend to have their cubs over winter the disturbance and damage of badger setts is prohibited between December and June inclusive. NRW are the licensing body for any actions which may contravene the above legislation.

The closest record for the presence of badger is approximately 1km away to the east of site and is for a live sighting. There are a few other records further away in the wider landscape.

Badgers favour a dry sloping site for digging their setts preferably within woodland or even under a large hedgerow bank. Badgers are creatures of habit and tend to follow regular pathways between their setts and foraging grounds. No evidence of the presence of badger, such as sett, latrine or digging or evidence of regular pathways in and out of dense vegetation was found during the site survey.

It is thought highly unlikely that badger are present within the site boundary however they could use the site for foraging purposes. No further survey work or recommendations are proposed for badger.

3.7 Birds

All breeding birds are protected under schedule 1 of the Wildlife and Countryside Act (1981) as amended. Under this Act it is an offence to:

- 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.

Enhanced protection is afforded to species listed on Schedule 1 of the Act, this additional protection makes it an offence to:

- 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.

No birds' nests were directly noted during the walkover survey. However the trees and bramble scrub are considered suitable for use by nesting birds. The open mosaic habitats on site could also be used by ground nesting birds. However the site appears subject to frequent disturbance by locals, in particular children who use the site for playing. Mitigation for the loss of nesting opportunities in the trees and scrub will be required.

3.8 Reptiles and Amphibians

Reptile such as the slow worm, common lizard, adder and grass snake are protected under the Wildlife and Countryside Act 1981(as amended). They are protected from killing, injuring and sale. They are also listed in section 7 of the Environment Act (2016) as priority species for protection. Our common native amphibians are only protected from sale.

The closest reptile record to site is for slow worm approximately 640m away from site. The closest amphibian record is for common frog approximately 800m away from site.

The proposed development site is thought to have at least medium potential for use by reptiles. The mosaic of different habitats within the site create suitable basking, foraging and overwintering site. The areas of longer and shorter vegetation and the south facing aspects of the site are all suitable for use by reptiles.

The site is also considered to be isolated from suitable adjacent habitat for use by reptiles. A road is present along the north western boundary, a road and houses are present to the south and a horse grazed field in separate ownership is present to the east. A small portion of the site along the eastern boundary will be left undeveloped during the development works but this would be too small to sustain a population of reptiles for a large period of time. There are

no adjacent habitats suitable for use by reptiles in which to naturally encourage any resident reptiles into to relocate during development works.

Refugia surveys are recommended and have been completed during the spring of 2021. The survey methodology and results of the reptile survey are reported separately.

4. Recommendations and Mitigation

It is proposed to create a residential development within the site boundary. The development proposals are to create a block of flats and a small number of detached and semi detached houses within the site. The development proposals have the potential to negatively impact on reptiles, nesting birds and the loss of Open Mosaic Habitat (OMH) within the site boundary.

A number of recommendations are made below to help inform and guide the development proposals.

- The development proposals will result in the loss of OMH which is a section 7 habitat under the Environment (Wales) Act 2016. OMH is a priority habitat to help maintain and enhance biodiversity within Wales. The loss of such habitat requires mitigation or compensatory habitat creation. Based on the current development proposals it would seem unlikely this can be achieved within the site boundary. Discussion on off site compensation should be undertaken with the Local Planning Authority Ecologist.
- Refugia surveys to establish the presence or likely absence of reptiles within the proposed development site are required. Refugia surveys can be completed between the months of April and September inclusive and require a number of artificial refugia to be set out across the site. Refugia need to be left to bed in for around 2 weeks and then checked during suitable weather and temperature conditions at least 7 times. The results of the refugia survey can be used to inform any reptile mitigation strategy for the site which may be required.
- The tree line along the north western boundary must be retained during the development works. It provides a dark commuting corridor and sheltered foraging area for bats across the development site. A suitable Root Protection Zone (RPZ) will need to be erected around the tree line and securely fenced off during construction to ensure the feature is retained.
- The scrub and trees within the proposed development site has the potential to be used by nesting birds. Any vegetation removal will be undertaken outside of the bird nesting season of March to August inclusive. If this is not achievable an ecologist must inspect any trees or ground vegetation with the potential for birds to be present for active birds' nests prior to removal works beginning. If an active nest is identified a buffer one of 5m around the nest must be observed until the chicks have fledged. Only then can the vegetation be removed.

- The location of artificial lighting within the site boundary will need to avoid illuminating any retained vegetation, soft landscaping or bat boxes incorporated into the development. Any lighting must ensure that dark commuting corridors across the site are provided or created. This will help provide commuting and foraging habitat for a wide variety of local species. No external lighting will be placed at the site access or the eastern and southern edge of the development site.

The Environment Act (Wales) 2016 places a duty on competent authorities such as Merthyr Tydfil County Borough Council to conserve and enhance biodiversity. Enhancement measures which improve the current biodiversity levels of the site will be required within any future development proposals. In order to demonstrate biodiversity enhancements for the development site the below measures will be implemented:

- 1 x Integrated bat box will be provided on the north elevation of unit 22 and 15, north east elevation of unit 21 and south west elevation of unit 20. The bat box will be provided as high as possible within the wall, no lower than eaves level, and will be fitted into the block work of the wall. A Vivara Pro Build-in Woodstone Bat Tube (or an integrated bat box of a similar design) will be used.
- A total of four bat boxes will be provided within the site boundary.
- 1 x Integrated bird box will be provided on north eastern elevation of unit 1-4, south west elevation of unit 12-14 and the east elevation of units 17 and 19. The bird box will be provided as high as possible within the wall, no lower than eaves level, and will be fitted into the block work of the wall. Two Vivara Pro Woodstone House Sparrow Nest Boxes and two WoodStone Build-in Open Nest Boxes will be used.
- A total of four bird boxes will be provided within the site boundary.

Appendix 1 – Plant Species Recorded

Species	Common Name
Trees & Scrub	
<i>Crataegus monogyna</i>	Hawthorn
<i>Rubus fruticosus</i>	Bramble
<i>Corylus avellana</i>	Hazel
<i>Betula sp</i>	Birch sp
<i>Ulex europaeus</i>	Western Gorse
<i>Salix sp</i>	Willow sp
<i>Buddleja davidii</i>	Buddleja
Herbaceous Plants	
<i>Rumex crispus</i>	Curled Dock
<i>Taraxacum egg</i>	Dandelion
<i>Eupatorium cannabinum</i>	Hemp agrimony
<i>Pteridium aquilinum</i>	Bracken
<i>Lotus corniculatus</i>	Birds foot trefoil
<i>Trifolium pratense</i>	Red Clover
<i>Ranunculus repens</i>	Creeping buttercup
<i>Urtica dioica</i>	Nettle
<i>Centaurea nigra</i>	Knapweed
<i>Juncus conglomeratus</i>	Compact rush
<i>Plantago major</i>	Broadleaved plantain
<i>Geranium robertianum</i>	Herb Robert
<i>Heracleum sphondylium</i>	Hogweed
<i>Matricaria chamomilla</i>	Scented mayweed
<i>Holcus lanatus</i>	Yorkshire fog
<i>Vicia hirsuta</i>	Hairy tare
<i>Trifolium campestre</i>	Hop trefoil
<i>Vicia cracca</i>	Tufted Vetch
<i>Jacobaea vulgaris</i>	Ragwort
<i>Potentilla anserina</i>	Silverweed
<i>Hypochaeris radicata</i>	Common Cats ear
<i>Reseda luteola</i>	Weld
<i>Potentilla reptans</i>	Creeping Cinquefoil

<i>Cirsium arvense</i>	Creeping thistle
<i>Plantago lanceolate</i>	Ribwort plantain
<i>Lathyrus pratensis</i>	Meadow vetchling
<i>Anthoxanthum odoratum</i>	Sweet vernal grass
<i>Dactylis glomerata</i>	Cocksfoot
<i>Agrostis capillaris</i>	Common bent
<i>Cynosurus cristatus</i>	Crested Dogs tail
<i>Chamerion angustifolium</i>	Rosebay willow herb

Appendix 2 - Site Photographs



Scattered trees to south of site



Tarmac turning area



View of previous excavations to west



Tree line along the north west boundary



Scrub along southern boundary between trees



Short perennial vegetation



North east corner of site



Short perennial / grassland interface



Scrub along eastern boundary

Appendix 3– Habitat Map of Site

LAND AT SPRINGFIELD RISE,
TREHARRIS

Habitat Map

September 2020



Appendix 4 - Aerial View of Site Location

