

Preliminary Ecological Assessment



Project: Walnut Way, Merthyr Tydfil

Instructed by: Merthyr Valley Homes

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1. Introduction

The applicant is seeking permission to develop a parcel of land adjacent to Walnut Way, Merthyr Tydfil. The site is located in the north of the town of Merthyr Tydfil on the eastern edge of the Gurnos Estate. It is proposed to build 4 bungalows on the site although the exact details of the development have not yet been agreed.

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 comprises a parcel of land dissected by Walnut Way. The northern half of the plot measures approximately 0.06ha, the southern half of the site measures approximately 0.07ha. The site is centred at NGR SO 05008 07661, roughly rectangular in shape and flat. To the north, south and west of the site there is residential housing with its associated infrastructure. To the east of the site lies Galon Uchaf Park, an area of woodland and grassland. Approximately 450m away to the west of the site is an area of woodland and grassland and includes Cyfarthfa Castle and its grounds.

The nearest major watercourse is the Taf Fechan which lies approximately 1.37km away to the west of the site at its nearest point. There is a lesser un-named watercourse approximately 400m away to the west.

The wider landscape comprises further residential housing and associated infrastructure. Habitats within the site include semi improved grassland, tarmac pathways and scattered ruderal habitat.

1.2 Survey Constraints

The site visit was undertaken in July which is within the optimum time to undertake phase 1 habitat surveys. All areas of the site were accessible.

1.3 Surveyor Experience

Vicky Hannaford completed the phase 1 survey of the site. Vicky is an ecologist with at least eight years experience. She has worked in larger consultancies previously completing a wide range of flora and fauna surveys, completed professional training courses and attended informal botanical meetings to gain valuable knowledge. This experience allows Vicky to assess and identify common habitats as per the JNCC Phase 1 Survey Guidelines. Vicky is

also a licenced dormouse and great crested newt worker and holds licences from Natural Resources Wales for both species.

2. Desktop Study

A data search was undertaken via Aderyn (Reference DERF 0212-252) for the proposed development site and surrounding area. A 2km buffer zone was searched and records returned within 500m of site are noted below:

- Hedgehog - approximately 266m away to the east, recorded at Galon Uchaf Park
- Shimmering ruby tail, wasp - approximately 315m away to the south west
- Cinnabar moth - approximately 318m away to the south west
- Bats (commuting/foraging), common pipistrelle, soprano pipistrelle and serotine - between approximately 342 and 427m away
- Birds including song thrush, house sparrow, bullfinch and dunnock all recorded at Cyfartha Park
- Bluebell - approximately 472m away to the west at Cyfartha Park

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

- Bat roosts - unidentified bat species, common pipistrelle and brown long eared bat
- Bats commuting and foraging - noctule, daubenton's lesser horse shoe and Natterer's bat
- Otter
- Great crested newt
- Badger
- Numerous bird records - house sparrow, bullfinch, yellowhammer, curlew and Schedule 1 species fieldfare, kingfisher and red kite.
- Common lizard, slow worm,
- Common frog, common toad, palmate newt
- Weasel
- There are a number of records of insects

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 three statutory protected sites within 2km of the site, two are Sites of Special Scientific Interest: -

- Cwm Taf Fechan Woodlands is located approximately 1264m away to the north west. The site is designated for its mixed deciduous woodlands that cover steep slopes and quarry spoils providing one of the few Glamorgan stations for limestone fern (*Gymnocarpium robertianum*). There are also plant communities in flushes around tufa springs and luxuriant growths of bryophytes in the splash zone of the river.
- Cwm Glo A Glyndyrys is located 1923m away to the south west. The site is designated for its extensive areas of marshy grassland, species rich neutral grassland and acid grassland and for the association of these habitats with others including woodland and heath. It is also of special interest for its outstandingly diverse assemblage of grassland fungi, including 32 species of waxcap *Hygrocybe* spp, making it one of the best sites in Britain.

Cwm Taf Fechan Woodlands is also designated as a Local Nature Reserve.

Non-Statutory Protected Sites

There are 14 non-statutory protected sites within 2km of the site.

12 are Sites of Importance for Nature Conservation (SINCs), the nearest Cyfarthfa Park lies approximately 510m away to the west of the site. Details of other SINC sites within 2km are listed below:

- Bryniau (905m)
- Afon Taf (1042m)
- Gyrnos Wood (1052m)
- Y Graig (1142m)
- Cwm Taf Fechan (1156m)
- Cwm Taf Fields & Cefn Coed Tip (1301m)
- Morlais Hill (1358m)
- Cwm Taf Fawr (1375m)
- Gellideg North Fields (1792m)
- Cwm Glo (1810m)

- Cilsanws Common South (1831m)

There is one Wildlife Trust Reserve, Taf Fechan located 1291m away.

In addition approximately 85.76% of the land within the 2km buffer zone is defined as a B-Line, including the proposed development site. B-Lines are non-statutory protected sites which aim to restore and create wildflower habitats forming stepping stones that link existing wildlife areas together creating a network of habitats across the landscape benefiting not only pollinators but a host of other wildlife.

There are several areas of Ancient Semi Natural Woodland within 2km of the site. These woodlands have been identified as Priority Areas by Natural Resources Wales (NRW) as they comprise mostly broadleaved native trees and shrubs believed to have been in existence for over 400 years. The nearest Ancient Semi Natural Woodland lies approximately 500m away to the west of the site.

NRW have also highlighted a number of other Priority Areas within 2km of the site and include:

- Restored Ancient woodland
- Plantation on Ancient Woodland
- NRW Priority Areas (Woodland-PAWS), these areas are targeted for conservation work.

2.2 Potential Impacts to Protected Sites

Given the localised nature of the works, it is unlikely there will be any impacts to any protected sites within the wider area.

3. Phase 1 Survey

3.1 Habitats

A walkover survey of the site was completed on the **14th July 2021**. All areas of the site were accessible.

A species list can be found in Appendix 1, photographs of the site can be found in Appendix 2 and a map of the habitats found within the site is provided in Appendix 3.

Notable Plant Species

There are numerous records of bluebell (*Hyacinthoides non-scripta*) within 2km of the site, the nearest approximately 472m away at Cyfartha Park. Bluebell is a Schedule 8 species under the amended Wildlife & Countryside Act 1981 and is protected from picking, uprooting or destruction and selling. Bluebell is not present within the site.

The site is dominated by **semi improved grassland**; grass species present include false oat-grass with cock's foot, Yorkshire fog, common bent, and perennial rye grass. There are a variety of herbs present including creeping buttercup, white and red clover, common cat's-ear, ribwort and greater plantain, selfheal dandelion, daisy and common vetch. The sward at the time of the survey was approximately 20cm high, but it is thought likely the grass is mown on a fairly regular basis.

Along the south eastern boundary there is a scattering of the **tall ruderal vegetation** dominated by common nettle.

The south eastern boundary lies adjacent to a small wooded area, trees present include sycamore, blackthorn and hazel with some bramble. The trees are outside the proposed development site boundary and are to remain in situ, however they must be taken into consideration during site clearance works.

There are two **tarmac pathways**, one dissecting the southern section of the site and one along the northern boundary of the north section of the site.

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 of Great Crested Newt (GCN) within 2km of the site.

No ponds are present within the proposed development site; the nearest waterbody lies approximately 750m away to the west of the site. The tall ruderal habitat and adjacent wooded area in the south east of the site are considered suitable for use by GCN during the terrestrial phase of their life cycle. However due to the distance between the nearest waterbody and the site, along with the physical barrier of a road between the nearest waterbody and the site and the lack of records it is considered unlikely GCN are present within the site. No further recommendations will be required for this species.

3.3 Dormouse

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 is 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.

There are no records for dormouse within 2km of the site.

The majority of the land within the site boundary is semi-improved grassland which is unsuitable for use by dormouse as it provides no cover for commuting, foraging or nesting. The woodland adjacent to the south east of the site has some potential for use by dormouse. The woodland area measures approximately 3ha but is poorly connected to the wider landscape as such it is considered too small to support a viable population.

It is considered unlikely dormouse is present within the site itself. No further recommendations will be made for this species.

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 no trees or buildings within the site boundary. Trees adjacent to the south eastern boundary were subject to a simple ground based visual assessment from within the proposed development site. From the vantage points available to the surveyor they are considered unsuitable for use by bats for roosting purposes. No gaps or cracks were visible and they were considered to be not of an age where these features are likely to be present.

It is considered likely the site is used by bats for foraging and commuting purposes as it lies adjacent to woodland which extends north and southwards. With a sensitive layout and lighting strategy it is unlikely that the development will affect bat use adjacent to the development site. Recommendations will be made in regard to external lighting used within the proposed development site.

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.

There are numerous records for otter within 2km of the site mostly linked to the Taf Fechan and River Taff, the nearest record is for approximately 1km away and is of field signs. Records include field signs, live sightings and road kill. 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.

The habitats within the site boundary are considered to be unsuitable for use by otter. The grassland is open and exposed and provides no shelter suitable for use by otter. The adjacent woodland has potential to be used by otter however it does have a public footpath running through it making it susceptible to disturbance by the general public including dog walkers. It is considered that with numerous physical barriers between the Taf Fechan and the woodland and the amount of potential disturbance it is unlikely otters are present within the adjacent woodland.

No further recommendations will be made for this species.

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.

There are a few records for the presence of badger within 2km of the proposed development site. The nearest approximately 1km away and is of a road kill on the A465. 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,

The site is flat and considered unsuitable for use by badger for sett digging. No evidence of the presence of badger such as hairs snagged on fencing, latrine, digging or evidence of regular pathways was found within the proposed development site. The adjacent woodland slopes steeply downwards away from the site, the vegetation is dense with trees and bramble making access difficult. A steep pathway off Walnut Way, down through the woodland was searched for signs of badger but none were found.

It is thought highly unlikely badger is present within the site boundary; however their presence in the adjacent woodland cannot be ruled out entirely. The proposed development should not affect any badger use of the wider woodland adjacent to site.

No further recommendations are made for this species.

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.

Nesting opportunities occur in the trees adjacent to the south east section of the site. It is understood the trees adjacent to the site are to be retained. If the trees are to be removed or pruned precautionary measures for nesting birds will need to be put in place and are included in the recommendation section of the report.

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 42 of the Natural Environment and Rural Communities Act (NERC) 2006.

The four widespread species of amphibian i.e. the smooth and palmate newts, common frog and common toad, are protected under the Wildlife and Countryside Act 1981(as amended) by Section 9(5) of the Wildlife and Countryside Act 1981. This section prohibits sale of these species. Our common native amphibians are only protected from sale.

There are numerous records for slow worm and common lizard, approximately 974m and 1390m away respectively.

Reptiles prefer a mosaic of habitats with diverse vegetation structure creating open areas and nearby cover to provide protection from predators and the elements. The grassland and adjacent woodland in the south east of the site provides suitable habitats for use by reptiles. The interface between the two habitats provides basking opportunities; the woodland also provides cover for commuting and foraging and has potential for use for hibernation purposes. The site is considered to have low potential to support reptiles.

Consideration has been given to the need to undertake reptile surveys within the site. Any refugia laid as part of survey effort are highly likely to be disturbed or moved which may skew any survey results. The site measures approximately 0.13ha in total and is dominated by regularly mown grassland with just a small area of tall ruderal vegetation along the south east boundary suitable for reptiles. Any reptiles using the site are likely to be present in low numbers due to the small size of the site, particularly the small area of tall ruderal vegetation considered suitable for reptiles.

It is recommended that the presence of a low number of common reptile species is assumed within the site boundary. Reptile surveys are not recommended in this instance due to the likelihood of disturbance of refugia by members of the public. Instead a series of species deterrence measures will be implemented in respect of reptiles as part of any future

development works. The provision of enhancement measures suitable for reptiles within any future development designs will also be required. Further details can be found in Section 4 of this report.

3.9 Other Mammals

There are numerous records of hedgehog within 2km of the site, the nearest approximately 266m away to the south east in Galon Uchaf. It is considered the presence of hedgehog within the site is likely. Hedgehog is listed in Section 7 of the Environment (Wales) Act 2016 as a living organism of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. As such consideration must be given to this species in any plans proposed for the site.

3.10 Invertebrates

Invertebrate records in the local area include section 7 species:

- Shimmering Ruby-tail approximately 315 away to the south west,
- Cinnabar Moth approximately 318m away to the south west,
- Dusky Brocade, Dot Moth, Small Square spot, White Ermine, Shoulder-striped Wainscot, Buff Ermine and Broom Moth approximately 534m away at Cyfartha Park,

The proposed development site comprises a parcel of semi improved grassland and tarmac pathways measuring approximately 0.06ha in size. The site is bounded by roads and housing to the north, south and west. Galon Uchaf Park lies adjacent to the east of the survey site boundary.

During the walkover survey consideration to the potential presence of invertebrate species was given. The grassland contains a small number of species known to be used by invertebrates for feeding, however it was not overly diverse and not considered to be species rich. Grassland considered to be species rich would have a number of indicator species present for neutral, calcareous or acid grassland and or meet the SINC quality criteria for such habitats. No waterbodies, dead wood or standing trees are present within the site boundary to create diversity which a range of invertebrates would enjoy. The proximity of the Galon Uchaf Park does offer habitat connectivity to and from the site that a wide range of invertebrates may use, increasing potential for presence.

The proposed development site is considered likely to support a range of common invertebrate species. It may also on occasion be used by section 7 species within the local area. No further surveys for invertebrates are recommended.

4. Recommendations and Mitigation

It is proposed to develop the site although exact details of the proposals are not available at the present time. It is understood that the site will be developed into residential housing.

The direct impacts of the proposed development have been reduced to the land to the south of Walnut Way only. Only two houses are proposed for creation within the site boundary with the majority of the grassland areas retained. Broad recommendations are made below to help inform the design process. **Once the development proposals are progressed and the considerations to development within the site are addressed, further ecological input will be required.** Our general recommendations are:

- The site is considered suitable for a small number of common reptile species to be present throughout the year. A reptile mitigation strategy, which is agreed with the LPA ecologist, will be required to support the proposed development. Measures suitable for reptiles should be included within the design to allow movement across the site post development. A reptile mitigation strategy should include, but not be limited to:
 - Habitat clearance measures such as sensitive timings of works and a two stage vegetation cut and destructive searching of roots if required.
 - Timings of works to avoid reptile hibernation period, November to March inclusive.
- A root protection zone (RPZ) must be implemented around any retained trees which lie adjacent to the south eastern boundary of the proposed development site, British Standard BS 5837, *Trees in relation to design, demolition and construction - Recommendations* will be followed. Measures will include clear marking of the RPZ to guarantee no machinery is used or digging carried out in that area. This will ensure that there is no detrimental impact to the trees and the flora or fauna it supports.
- The trees adjacent to the site must be retained where possible as they provide shelter and food for birds and small mammals.
- The trees adjacent to the south eastern boundary of the site boundary have potential for use by nesting birds. Any tree removal must be completed 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 zone of at least 5m around the nest must be observed until the chicks have fledged. Only then can the vegetation be removed. Greater buffer zones around nests may be required depending on the species and habitat the nest is within.

- Careful consideration must be given to the use of lighting within the developed site, as this can adversely affect activity by a variety of fauna, particularly foraging bats, nesting birds and invertebrates. Light spillage into adjacent semi-natural habitats including the small woodland to the east must be avoided and brightness kept to the lowest permissible level in the areas adjacent to such habitats.
- All lighting must meet recommendations in the BCT Guidance Note 08/18 Bats and artificial lighting in the UK document <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>

The Environment Act (Wales) 2016 places a duty on competent authorities such as Merthyr County Borough Council to conserve and enhance biodiversity. The below bullet points are some simple measures that could be achieved to enhance the biodiversity of the site:

- The provision of bird boxes of varying design in suitable locations within the development site. These could include integrated boxes built into buildings as well as small and large holed boxes on the mature trees retained during works.
- The provision of bat boxes in suitable locations within the development site. These could include integrated boxes built into buildings as well as small and large holed boxes on the mature trees retained during works.
- The use of native species within the soft landscaping works on the site. Suitable long term management of soft landscaping also helps ensure spaces are useful to wildlife. Hedgerow and tree planting in public spaces create habitat for wildlife and an attractive space for people.
- All fencing around the site will be hedgehog friendly in design. A friendly design is considered to allow passage of small animals across the site. Close board or mesh fencing should provide either a continuous gap between the bottom of the fence and ground of approximately 13cm or 13cm by 13cm gaps cut every 3m along fencing.
- The creation of green corridors around the periphery of the development site must be considered. A sensitive site design which ensures plot boundaries are off set from the adjacent retained and natural vegetation would be beneficial to a range of wildlife and create a greener setting for the development. The sensitive management of buffer zones to ensure wilder, longer areas of habitat are created would benefit wildlife including local invertebrate species.

Appendix 1 – Plant Species Recorded

Species	Common Name
Trees & Scrub	
<i>Acer pseudoplatanus</i>	sycamore
<i>Corylus avellana</i>	hazel
<i>Prunus spinosa</i>	blackthorn
<i>Rubus fruticosus</i> agg	bramble
Herbaceous Plants	
<i>Agrostis capillaris</i>	common bent
<i>Anthoxanthum odoratum</i>	sweet vernal-grass
<i>Arrhenatherum elatius</i>	false oat-grass
<i>Bellis perennis</i>	daisy
<i>Centaurea nigra</i>	common knapweed
<i>Cerastium fontanum</i>	common mouse-ear
<i>Dactylis glomerata</i>	cock's-foot
<i>Holcus lanatus</i>	yorkshire fog
<i>Hypochaeris radicata</i>	common cat's-ear
<i>Lolium multiflorum</i>	Italian rye-grass
<i>Lolium perenne</i>	perennial rye-grass
<i>Matricaria discoidea</i>	pineapple-weed
<i>Phleum pratense</i>	timothy grass
<i>Plantago lanceolata</i>	ribwort plantain
<i>Plantago major</i>	greater plantain
<i>Poa trivialis</i>	rough meadow-grass
<i>Prunella vulgaris</i>	self heal
<i>Ranunculus repens</i>	creeping buttercup
<i>Rumex sp</i>	dock
<i>Senecio jacobaea</i>	common ragwort
<i>Taraxacum officinalis</i> agg	dandelion
<i>Trifolium pratense</i>	red clover
<i>Trifolium repens</i>	white clover
<i>Urtica dioica</i>	common nettle

Appendix 2 – Site Photographs

Southern Section of the Site



Looking west



Looking east



Looking south, with pathway



Looking south, trees adjacent to eastern boundary



Nettle along south eastern boundary



Looking north

Northern Section of Site



Looking west



Looking south



Looking east



Looking north



Top of pathway down into woodland



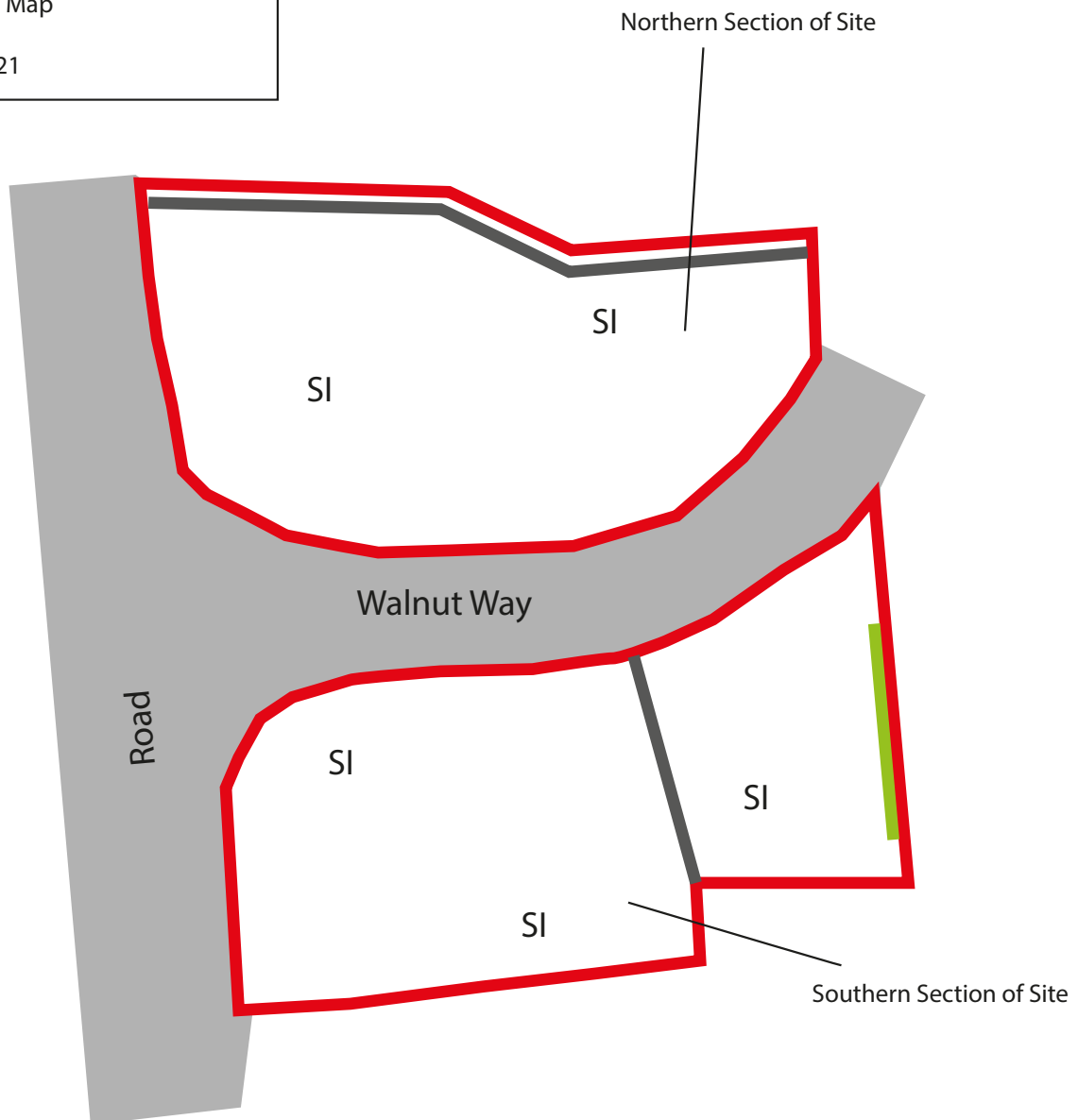
Steep side woodland/bramble adjacent to east of site

Appendix 3– Site Habitat Map

LAND AT WALNUT WAY,
MERTHYR TYDFIL

Habitat Map

July 2021



- | | |
|----|-------------------------|
| SI | Semi Improved Grassland |
| | Tall Ruderal Vegetation |
| | Tarmac Footpath |
| | Site Boundary |



Appendix 4 - Aerial View of Site Location

