

Preliminary Ecological Assessment



Project: Land at Ty Llwyd Farm, Quakers Yard, Treharris

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1. Introduction

The applicant is seeking permission to develop a parcel of land originally part of Ty Llwyd Farm, Quakers Yard, Treharris, Merthyr Tydfil. The parcel of land lies on the eastern edge of a large housing development, access is via Harris Court. It is proposed to create a residential housing development within the site boundary.

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, rectangular in shape, flat and measuring approximately 0.2ha. The site is centred at NGR ST 10317 96483 and is located on the eastern edge of an urban environment with the housing to the north, south and west with open fields to the east.

Habitats within the site include bramble scrub, grassland and scattered trees. The site is bounded to the north, south and east by dry stone walling while to the west the boundary is mainly wooden fencing with one small section being breeze block. A public footpath runs diagonally across the site from the bottom south west across to the top north east corner. There is a telephone mast near the western boundary.

Immediately to the east of the site the landscape comprises stone wall/tree bounded fields with small areas of woodland. The wider landscape is a mixture of urban developments, small areas of woodland and open countryside.

There are three watercourses within the vicinity of the site. The River Taff lies approximately 650m away to the west; the Afon Taff Bargoed lies approximately 430m away to the north-west and flows into the River Taff. The Nant Caeach, a tributary of the Afon Taff Bargoed lies approximately 360m to the east.

1.2 Survey Constraints

The site visit was undertaken during mid March which is outside of the optimum time to undertake phase 1 habitat surveys making it difficult to provide a detailed floral species list. However, it is still possible to assess and categorize broad habitat types during this time of year. All parts of 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.

2. Desktop Study

A data search was undertaken via South East Wales Biological Records Centre (SEWBRc) for the proposed development site and surrounding area. A 2km buffer zone was searched and records returned within 500m of site are noted below:

- Bat roosts - the nearest record of a roost is of an unknown bat approximately 230m away to the west in a house. Other records of roosts include that of a common pipistrelle bat
- Records of commuting foraging bats include those of common and soprano pipistrelle
- Slow worm, approximately 470m away
- Palmate newt, approximately 400m away
- Several bird records - dunnoek, bullfinch, house sparrow, starling and Schedule 1 species fieldfare, red kite and peregrine.
- Hedgehog, approximately 50m away
- Bluebell, approximately 300m away

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

- Records of commuting and foraging bats - noctule, soprano pipistrelle, brown long-eared, myotis species, Nathusius's pipistrelle, Serotine and daubentons's. There is no differentiation between records of roosts and commuting/foraging bats.
- Otter
- Badger
- Dormouse
- Numerous bird records - reed bunting, hawfinch, linnet, spotted flycatcher cuckoo, wood warbler and grasshopper warbler. Schedule 1 species include kingfisher, brambling, barn owl and redwing.
- Adder, common lizard
- Common frog and common toad
- Polecat

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.

The 2km buffer zone includes protected sites within Merthyr Tydfil County Borough Council (MTCBC) and Rhondda Cynon Taff County Borough Council (RCT).

Statutory Protected Sites

There is one statutory protected site within 2km of the site, Nelson Bog Special Site of Scientific Interest (SSSI) which lies approximately 1440m away to the south east. The site is designated for the range and diversity of mire communities from poor fen, through mesotrophic grasslands to areas of alder carr and upland hazel/sessile oak woodland.

Non-Statutory Protected Sites

There are 24 non-statutory protected sites within 2km of the site. All are Sites of Importance for Nature Conservation (SINCs), 22 are within MTCBC and 2 within RCT. The nearest being Berthlwyd (within MTCBC), which is located approximately 335m away to the west at its nearest point. Details of the remaining SINC sites within MTCBC are listed below:

- Craig Berthlwyd
- Lower Taf & Edwardsville Woods
- Nant Caeach
- Afon Bargoed Taf
- Brooklands Marsh, North of Nelson
- Cwm Mafon
- Cwm Afon, West of Nelson
- Whitehall Golf Course
- Cwm Afon Railway Line, West of Nelson
- Treharris Park & Cardiff Road Woodlands
- Llancaiach-Fawr Meadows, Llancaiach
- Wern Woodland Nelson
- Goetre-coed Wood
- Coed Cefn-fforest & Cwm Cothi
- Trelewis Wood
- Lower Cwm Bargoed
- Mynydd Goetre-coed

- Nant Caeach, North of Llancaiach
- Coed Gelliau'r-Gwellt, East of Llancaiach
- Gelligaer Common
- Afon Taf

SINC sites within the 2km buffer zone within the boundary of RCT include

- AW 8.70 Darren y Celyn
- AW 878 Craig-Evan Leyshon Common

There are numerous 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 450 m 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
- Ancient Woodland Site of Unknown Category
- NRW Priority Areas (Woodland-PAWS), these areas are targeted for conservation work.

Cynon Valley River Park lies on the western edge of the 2km buffer zone and is included in RCT Local Development Plan (LDP) and covered under Policy NSA-26 which states:

Policy NSA 26 - Cynon Valley River Park

Development that will contribute to the achievement of the Cynon Valley Park Strategy will be supported. This includes:

- 1. Proposals for the protection, enhancement, enlargement, connectivity and management of important wildlife sites, species and features of nature conservation value and water quality.*
- 2. Proposals to promote public access on foot and by cycle, mitigate and adapt to climate change, encourage health and well-being and support heritage and tourism*

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 15th March 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. Bluebell is a Schedule 8 species under the amended Wildlife & Countryside Act 1981. No evidence of this species was recorded on the site itself.

The site is enclosed by a stone wall along the northern, southern and eastern boundaries; in places along the eastern boundary the wall has collapsed leaving small piles of stones. The western boundary is mainly wooden fencing. Access to the site is off Harris Court, in the south west of the site and is via a five bar gate with pedestrian access by means of an adjoining metal kissing gate. A public footpath runs along the southern end of the site and exits the site to the adjacent field again via a metal and stone kissing gate.

A **telephone mast** is sited close the western boundary and is enclosed in chain link fencing.

The site is dominated by **semi-improved grassland** with grass species such as meadow grass, fescue and cock's-foot. Other herbs present include clover, ribwort plantain, greater plantain, creeping buttercup and dock. There is evidence of poaching by cattle in the northern half of the site. The grassland area is used by locals for dog walking and to gain access to the field in the east.

There are several patches of dense **bramble scrub** with common nettle and ivy present as ground flora. There are large patches along the eastern boundary and around the telephone mast enclosure, with smaller patches in the south east corner and along the northern boundary. There is some scattered scrub along the western boundary behind the telephone mast.

There are several **scattered trees** within the site. Along the eastern boundary there is a mature oak with a smaller oak adjacent and hazel and holly near the north east corner.

There is a bird box in the mature oak. Along the northern boundary there are a number of hazel trees. A young hawthorn was also recorded near the telephone mast.

Along the western boundary there is a small non native **hedgerow**, approximately 1-1.5m high, comprising a spiny evergreen shrub, thought to be a species of pyracantha, a garden shrub. Along the western boundary, behind the telephone mast enclosure, some decking boards have been **fly-tipped**.

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 is one record of Great Crested Newt (GCN) approximately 2km away dating from 1984.

No ponds are present within the proposed development site; the nearest waterbody is located approximately 1.5 km away. However garden ponds may not be visible from aerial imagery. The scrub habitat within the site has potential to provide suitable cover for GCN during the terrestrial phase of their life-cycle. However, due to the lack of records, distance and poor connectivity between the site and the nearest waterbody it is considered unlikely GCN are present within the site. No further recommendations will be required 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 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 is one record for dormouse approximately 1.1km away to the south dated 2019, the record is of a nest but is unconfirmed.

Habitat within the site is considered sub-optimal habitat for use by dormouse. There is some bramble scrub and hazel present, known to be the preferred food resource for dormouse. However species diversity is low amongst the scattered trees and it considered the site is too small to support a population of dormouse. Connectivity to suitable habitat within the wider landscape is poor. Field boundaries appear to be dominated by stone walls with scattered trees. It is considered unlikely dormouse is present within the site and as such no further surveys in respect of this species are 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.

Tree Assessment

Trees within the site boundary were subject to ground level assessment for the likely potential presence for bats during the phase 1 survey. Any trees felt to have potential for roosting bats would be subject to a further detailed survey following current BCT Guidelines (2016).

There is one mature oak along the eastern boundary which was assessed as being in good condition, due to the time of year visibility was good all around the tree and up into the canopy. No visible gaps and cracks suitable for roosting use were recorded.

There is one building within the telephone mast enclosure. The building is made of metal and considered unsuitable for use by bats.

There is a record of a bat roost within a house approximately 230m from the site, other roosts within houses in the vicinity cannot be ruled out. As such it is likely the site is used by bats for foraging purposes. Recommendations will be made in regard to external lighting used within the proposed development site. Given the small size of the development site and low suitability of the habitats within the site boundary for use by bats, no further survey work 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.

There are a number of records for otter, the nearest approximately 600m away to the east on the Nant Caeach. Records are of live sightings and field signs and are associated with the River Taff, Afon Taf Bargoed and Nant Caeach. Records date from 1992 up to 2020.

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. It is considered that the areas of scrub habitat within the site are not large enough to provide adequate cover for a holt and/or resting place. In addition the site is subject to disturbance from local dog walkers, as such it is considered unlikely otter are present within the site. 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 several records for the presence of badger within 2km of the proposed development site, the nearest being approximately 900m away, records are of field signs and live sightings.

No evidence of the presence of badger, such as sett, latrine or digging, was noted within the proposed development site or adjacent habitats. 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 sett digging, along with the lack of records and lack of field signs it is considered unlikely badger are present within the site. No further surveys for this species are recommended.

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.

House sparrow and blackbird were recorded on the site during the site visit. Nesting opportunities occur in the trees and scrub within the site. Precautionary measures for nesting birds are detailed in the recommendation section of this report. Compensation for the loss of nesting and foraging habitat within the site boundary 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 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 several records for slow worm with 2km of the site, the nearest being approximately 470m away. Adder and common lizard have also been recorded approximately 1.17 km and 1.3 km 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 land within the proposed development site does offer some potential habitat for use by small numbers of reptiles, particularly along the interface between the scrub and grassland. The grassland appears to be grazed by cattle from time to time and used by local residents for dog walking

reducing the potential for use by reptiles. The dry stone wall and pile of stone provide potential for hibernation purposes. The fly tipped decking boards may provide some shelter.

Consideration has been given to the need to undertake reptile surveys within the site. The site measures approximately 0.2ha and is a mixture of grazed grassland and small areas of scrub habitat. Reptiles using the site for hibernation purposes within the dry stone wall and pile of stone would not be found during a reptile survey of the site. Any reptiles using the site are likely to be present in small numbers due to the size of the site and habitats present. The site is open and easily accessed by local people and any reptile refugia are highly likely to be disturbed or moved which may skew any survey results.

It is recommended that the presence of a small 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 by grazing and members of the public. Instead a series of species deterrence measures will be adequate 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 50m away to the north-west. 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.

4. Recommendations and Mitigation

It is proposed to develop the site to provide a small residential housing scheme. The proposed development work is likely to result in the loss of the majority of the habitats currently found within the site boundary.

The proposed development has the potential to negatively impact on nesting birds, common reptiles and hedgehog. The below mitigation measures are recommended to help avoid negative impacts to any habitats and species which may be affected as part of the development proposal:

- The scattered trees and bramble scrub within the site boundary have potential for use by nesting birds. Any vegetation 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.
- 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 will include but not be limited to:
 - Habitat clearance measures such as sensitive timing of works and a two stage vegetation cut and destructive searching of tree roosts if required.
 - Any stone should be lifted and removed by hand
 - Timing of works to avoid the reptile hibernation period November to March inclusive.
 - Provision of features suitable for reptile use within the site layout such as suitable habitat, dry stone walling or reptile hibernacula
- The trees present within the site must be retained where possible as they provide shelter and food for birds and small mammals. Any tree loss must be compensated for as part of the soft landscaping proposals for the development site.
- A root protection zone (RPZ) must be implemented around any retained trees within close proximity of the proposed development, 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.

- 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 brook and hedgerows must be avoided and brightness kept to the lowest permissible level in the areas adjacent to such habitats.
- The presence of hedgehog on the site is likely; it is therefore recommended that all fencing around the site will be hedgehog friendly in design. A friendly design is considered to allow the passage of small animals across the site. It should provide either a continuous gap between the bottom of the fence and ground of approximately 13cm or 13cm by 13cm gaps cut a set distance along fencing.

The Environment Act (Wales) 2016 places a duty on competent authorities such as Merthyr Tydfil 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 bat boxes in suitable locations within the development site, particularly on the mature trees retained during works. The use of integrated bat boxes, built into the walls of a portion of the new buildings on site would be welcomed.
- The provision of bird boxes of varying design in suitable locations within the development site. These could include integrated sparrow boxes as well as small and large holed boxes on any mature trees retained during works.
- The provision of native wildflower planting to be included in any landscaping scheme proposed for the site. Plants to be used would be those beneficial for local wildlife.
- The retention of at least a portion of the dry stone walling around the boundary of the site would be beneficial for a range of small animals and invertebrates. Alternatively a small section of dry stone walling could be built, using reclaimed materials from the site, as a new boundary features to enhance the site for biodiversity post development.

Appendix 1 – Plant Species Recorded

Species	Common Name
Trees & Scrub	
<i>Corylus avellana</i>	hazel
<i>Crataegus monogyna</i>	hawthorn
<i>Ilex aquifolium</i>	holly
<i>Pyracantha sp</i>	pyracantha
<i>Quercus sp.</i>	oak
<i>Rubus fruticosus</i> agg	bramble
Herbaceous Plants	
<i>Festuca sp</i>	fescue
<i>Plantago lanceolata</i>	ribwort plantain
<i>Plantago major</i>	greater plantain
<i>Poa sp</i>	meadow grass
<i>Ranunculus repens</i>	creeping buttercup
<i>Rumex sp</i>	dock
<i>Trifolium sp</i>	clover
<i>Urtica dioica</i>	common nettle

Appendix 2 – Site Photographs



Access to the site via Harris Court



Dry stone wall along southern boundary



Access to field in south east corner



Scrub adjacent to eastern boundary



Dry stone wall along eastern boundary, stone pile



Mature oak on eastern boundary



Pile of stones where dry stone wall has collapsed, eastern boundary



Scrub in north east corner
tree



Dry stone wall along northern boundary with hazel



Wooden fencing along western boundary, rubbish



Hedge along western boundary



The telephone mast



Section of western boundary of breeze block



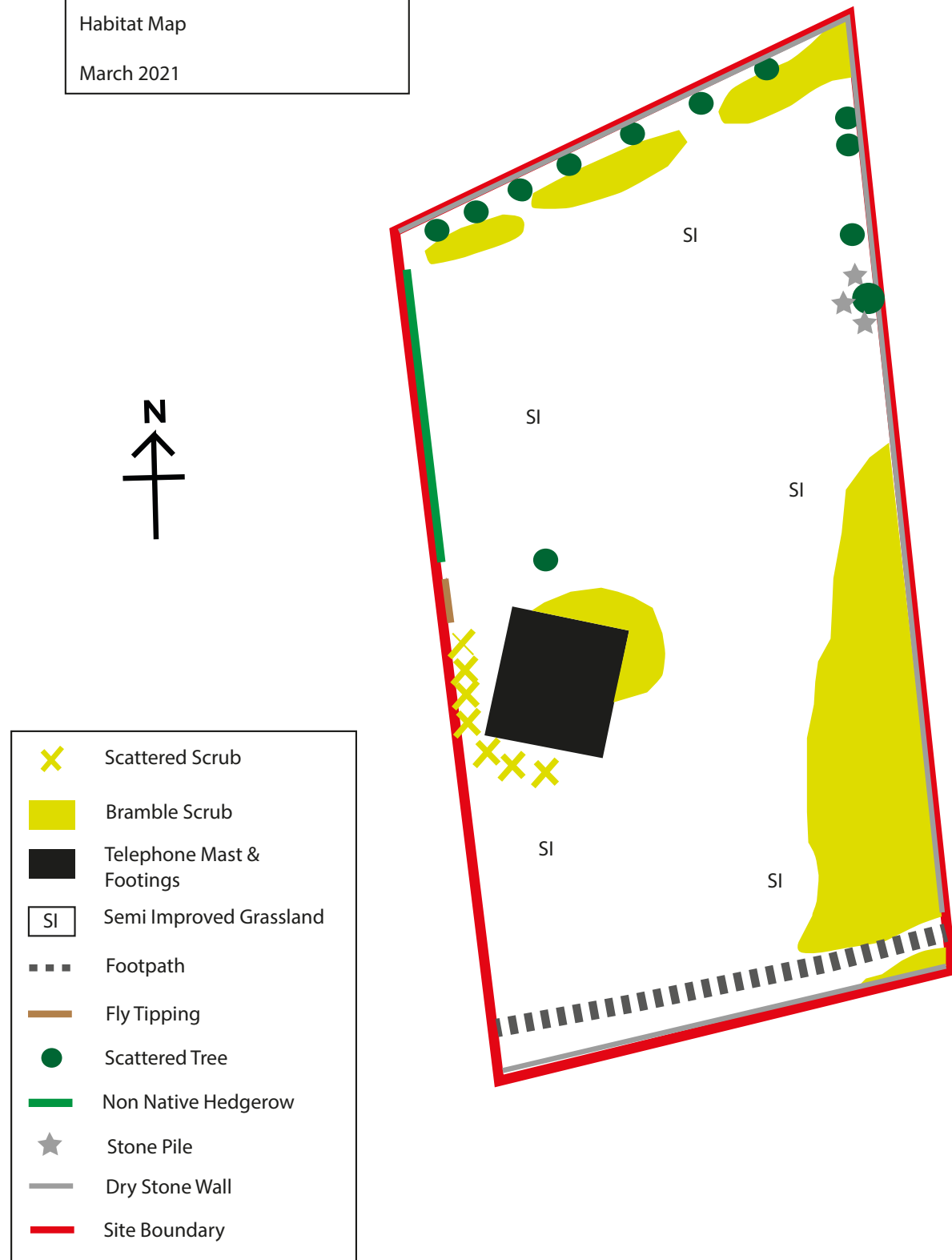
Bird box in mature oak

Appendix 3– Site Habitat Map

LAND AT TY LLWYD FARM, TY LLWYD
PARC, QUAKERS YARD

Habitat Map

March 2021



Appendix 4 - Aerial View of Site Location

