

Ecological Impact Assessment



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

Instructed by: Mrs Eleanor Jarrold

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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.

An initial preliminary ecological assessment of the development site was undertaken by Ecological Services Ltd on the 15th March 2021. Given the passage of time since the previous ecological survey work completed at site, an updated site visit and preliminary ecological assessment of the site has been instructed.

In order to undertake a full appraisal of the proposed development and the potential impacts and significance of impacts upon the habitats and species within the development site and adjacent habitats, an Ecological Impact Assessment (EclA) has been undertaken. An EclA helps provide a clear and methodical way to identify, quantify and evaluate the potential significant effects of a proposed plan or project.

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 Surveyor Experience

Aislinn Harris is a full member of Chartered Institute of Ecology and Environmental Management (CIEEM). Aislinn is an ecologist with 14 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). Aislinn is a NRW licenced bat, Great crested newt and dormouse ecologist with a wide variety of experience undertaking ecological surveys.

Beth Lewis is an associate member of Chartered Institute of Ecology and Environmental Management (CIEEM). Beth is an ecologist with 6 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. Legislation & Planning Policy

2.1 Habitat Legislation

The **Habitats Directive (Directive 92/43/EEC)** aims to '*contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States*'. The Directive requires the establishment and conservation of a network of sites within each member state which protect the rarest flora and fauna found across Europe. A number of species and habitats are listed in Annex 2 of the directive for which areas can be designated as a SAC. The aims of the Habitats Directive are transposed into British Law through the **Conservation of Habitats and Species Regulations 2017**.

The **Wildlife and Countryside Act (1981)** as amended provide the legislation framework and protection for SSSI. A SSSI is designated by a statutory nature conservation body such as Natural Resources Wales (NRW) for its make up of flora, fauna, geological and / or physiographical features. Each SSSI should have a citation which describes the site and its special features.

The **Environment (Wales) Act 2016** is a wide reaching piece of legislation which seeks help to improve the management of Wales' natural resources into the future. The Act sets out a Wales wide approach to planning and managing its natural resources at a national and local level in a sustainable manner. One main requirement for all public bodies, such as local councils, is to maintain and enhance biodiversity where possible within their duties.

2.2 Species Legislation

Great Crested Newt

Great crested newts (*Triturus cristatus*) are a European protected species and are protected under the Conservation of Habitats and Species Regulation 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 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.

Bats

All British bats are a European protected species and are protected under the Conservation of Habitats and Species Regulation 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, beechstein, 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.

Otter

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.

Nesting 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.

Reptiles

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. In Wales sand lizard, smooth snake, adder, grass snake, slow worm and common lizard are listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

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.

Badger

Badgers (*Meles meles*) 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.

2.3 Planning Policy

Planning Policy Wales (PPW), Edition 12 published February 2024 provides national policy relating to Sustainability and Ecology. PPW sets out the land use planning policies of the Welsh Government and is supplemented by a series of Technical Advice Notes (TANs).

Chapter 6 of PPW contains the following policies relating to ecology and biodiversity:

- 6.2 Green Infrastructure;
- 6.4 Biodiversity and Ecological Networks.

Technical Advice Note (TAN) 5

TAN 5 (Welsh Government, 2009) specifically provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. The TAN provides advice for local planning authorities on the key principles of positive planning for nature conservation; nature conservation and Local Development Plans; nature conservation in development management procedures; development affecting protected internationally and nationally designated sites and habitats; and development affecting protected and priority habitats and species.

Under Section 2.4 within the TAN 5, 'when deciding planning applications that may affect nature conservation local planning authorities should:

- Pay particular attention to the principles of sustainable development, including respect for environmental limits, applying the precautionary principle, using scientific knowledge to aid decision making and taking account of the full range of costs and benefits in a long term perspective;
- Contribute to the protection and improvement of the environment, so as to improve the quality of life and protect local and global ecosystems, seeking to avoid irreversible harmful effects on the natural environment;
- Promote the conservation and enhancement of statutorily designated areas and undeveloped coast;

- Ensure that appropriate weight is attached to designated sites of international, national and local importance;
- Protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;
- Ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of development on nature conservation;
- Ensure that the range and population of protected species is sustained;
- Adopt a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered.

3. Preliminary Ecological Assessment

3.1 Desktop Survey

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 Bargod
- 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 77 areas of Ancient Semi Natural Woodland (ASNW) within the search area. The closest area is approximately 380 m northeast of the site. Ancient Semi Natural Woodlands are broadleaf woodlands comprising mainly native tree and shrub species which are believed to have been in existence for over 400 years. The ground vegetation will reflect the naturalness of these woodlands and will frequently feature species which provide clear indication of long and continued woodland cover. They will have been woodland for centuries and contribute substantially to our natural and cultural heritage.

There are two areas of Restored Ancient Woodland within the search area. The closest area is approximately 3.2 km west of the site. These are woodlands which are predominately broadleaves now and are believed to have been continually wooded for over 400 years. They will have gone through a phase when canopy cover will have been more than 50% non-native conifer tree species and now have a canopy cover of more than 50% broadleaf.

There are six areas of Plantation on Ancient Woodland Sites within the search area. The closest area is approximately 1.86 km west of the site. These are sites which are believed to have been continuously wooded for over 400 years. They have been replanted with native or non-native species, most commonly with conifers. They currently have a canopy cover of more than 50% non-native conifer tree species. They will have varying levels of remnant features of ASNW.

There are six Ancient Woodland Sites of Unknown Category within the search area. The closest area is approximately 740 m north of the site.

There are six Natural Resources Wales (NRW) Priority Woodland Areas within 2 km of the site. This is located approximately 1.86 km west of the site. NRW Priority habitat areas are large scale areas which were prioritised for targeted conservation work, based on factors including the habitats within them.

Hedgerow habitat is present within the site boundary. Hedgerow is a section 7 habitat of importance for protection under The Environment (Wales) Act 2016. Therefore any impacts to hedgerow must be avoided. If impacts are unavoidable hedgerow translocation and or replacement hedgerow planting must be provided.

3.2 Previous Ecological Survey Work

Preliminary Ecological Assessment - 2021

A Preliminary Ecological Assessment (PEA) survey of the site was completed on the 15th March 2021 by Ecological Services Ltd. Please refer to the full report for detailed information. Habitats within the site during this visit included: semi-improved grassland, bramble scrub, scattered trees and hedgerow.

The site was considered sub-optimal for dormouse, due to the small amount of suitable habitat within the site and lack of aerial connectivity to the wider landscape. The site was considered suitable for nesting birds. The site contained one building which was unsuitable for bats but the site itself could be utilised for foraging. The dry stone wall and small areas of scrub were considered suitable to house a small number of reptiles within the site. The habitats within the site were deemed suitable for reptiles, although, reptile surveys were not recommended due to the high levels of disturbance the site experiences with dog walkers and grazing cattle. It was suggested that a small population of common reptiles be assumed within the site and deterrent measures be implemented during the development works.

Recommendations included within the report required:

- Tree or scrub removal be undertaken outside of nesting bird season.
- A two stage cut of any vegetation suitable for reptiles should take place along with any stone removal being undertaken by hand, these should be undertaken outside of reptile hibernation season.
- A sensitive lighting scheme be implemented to avoid light spill onto habitats suitable for bats, birds and nocturnal animals.
- Bat and bird box provisions were suggested along with native wildflower planting within any landscaping scheme and the retention of a portion of the current dry stone wall would benefit a range of small animals.

During this most recent visit to the site in 2024, it was noted that the site was in a similar condition to that during the 2021 survey visit. When comparing habitat descriptions and site photos from the previous visit the scrub had encroached slightly further into the site during this recent visit.

Ecological Impact Assessment - 2021

An Ecological Impact Assessment (EclA) Report was produced for the site by Ecological Services Ltd in September 2021 in conjunction with the PEA survey and report outlined above. The EclA Report outlines that the proposed development has the potential to

negatively impact on nesting birds, common reptiles and hedgehog. Please refer to the full report for detailed information.

The EclA provides detail on vegetation clearance works to reduce and avoid potential negative impacts to birds, reptiles and small mammals such as hedgehog. It details the creation of a buffer around the north, east and southern boundary of the site measuring 2 m in width between the stone walling and construction area. This buffer zone will be fenced off and retained as part of the development site as a wildlife feature.

Enhancements outlined in the report include:

- The provision of 1 x Ibstock enclosed Bat Box C on the south facing elevation of two of the new buildings.
- 1 x Woodstone Build-in Open Nest Box on the east elevation of two of the new buildings.
- The planting of at least two new trees within the development site boundary.

3.3 Likely Significant Effects

Bats

33 records of bat roosts were returned within 2 km of the site with five of these being within 500 m of the site. The closest record being for an Unknown bat species approximately 220 m northwest. Other roosts of interest include a roost of over 80 individuals within an attic approximately 800 m west for an Unknown bat species and a Common Pipistrelle maternity roost of over 40 individuals approximately 1.3 km south of the site. 143 records of bat commuting and foraging activity were returned within 2 km of the site with four of these records being within 500 m of the site. The closest record was for Common Pipistrelle approximately 180 m southwest of the site.

Mitigation measures to reduce the potential impacts of lighting on commuting and foraging bat species will be implemented as part of the development works. These are detailed in section 4 of this report.

Great Crested Newt

There are no records of great crested newt (GCN) within 2km of the site.

The lack of local records and lack of a well connected pond network, it is considered unlikely GCN are present within the site. **No further recommendations are made for this species.**

Dormouse

There is one record for Hazel Dormouse approximately 1.1 km away to the south dated 2019, the record is of an unconfirmed nest.

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 Hazel Dormouse. However species diversity is low amongst the scattered trees and the site is considered too small to support a viable population of Hazel Dormouse. Connectivity to suitable habitat within the wider landscape is poor. Field boundaries appear to be dominated by stone walls. Dormouse are considered unlikely to be present within the site given the lack of local records and the overall small areas of suitable habitat being unable to sustain a Dormouse population.

The development proposes to remove some scrub within the site but retain and enhance the small section of hedgerow within the northwest of the site. **No further recommendations are made for this species.**

Otter

29 records of Otter were returned within 2 km of the site with the closest record being approximately 560 m west of the site. Many of the records are associated with the River Taff to the west. Records are also present within the Bargod Taff and the Nant Caeach watercourses to the north and east, both of which are connected to the River Taff.

The habitat within the site boundary is considered sub optimal for use by otter for resting or breeding purposes due to the disturbance and close proximity to housing on the northwest and south. **No further recommendations are made for this species.**

Badger

Five records of badger were returned within 2 km of the site. The closest record being for a field sign approximately 910 m north of the site. All records returned in the data search are not well connected to the site with many being beyond the rail line, large areas of housing or past the A472 road.

No evidence of the presence of badger, such as setts, latrine or digging, was noted within the proposed development site. As such it is considered unlikely badger are present within the site. However, they may commute or forage within the site boundary on occasion.

Precautionary measures should be taken during the construction phase of works to ensure badger are not harmed. Precautionary measures for badger will also benefit a range of smaller mammal species such as hedgehog.

Birds

No direct evidence of bird nests was noted during the site survey. The presence of ground nesting birds within the development site boundary is thought to be highly unlikely due to high levels of human disturbance and cattle grazing. However the scattered trees and hedgerow within the site have potential to be used by birds for nesting purposes. Other habitats within the site are likely to be used by a range of local birds for foraging purposes.

A precautionary approach to any removal of habitat with bird nesting potential will be required. Lighting should not spill onto suitable nesting bird habitat.

Reptiles and Amphibians

20 records of Slow-worm, two records of Adder, nine records of Common Lizard and one record of Grass Snake were returned within 2 km of the site. With the closest record being for Slow-worm approximately 450 m northwest. All other species records were returned over 1 km away from the site.

20 records of Common Frog, 17 records of Common Toad, 10 records of Palmate Newt and one record of Smooth Newt were returned within 2 km of the site. The closest record being approximately 390 m southwest for Palmate Newt.

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 scrub and grassland structure within the site provides areas for reptiles to forage and shelter close by. The dry stone walls around the periphery of the site and the stone piles in the east provide hibernacula habitat for amphibians and reptiles for overwintering and sheltering.

Precautionary measures in respect of reptiles are recommended, to include timing constraints for site clearance, and a two-stage cut of vegetation.

Habitat Protection

Hedgerow and mature trees within the site boundary are proposed for retention. **Precautionary measures to protect retained habitat are recommended, to include suitable buffer zones and root protection areas.**

4. Impact Assessment

The role of a EclA is to address significant effects which the project may have. For the purpose of this assessment significant impacts will be those that affect legally protected sites and species within and directly adjacent to the proposed development site.

The EclA process presents a hierarchy of approaches to ensure a project of plan lowers its potential impacts. The works should seek to

- **AVOID** - Consider options to avoid any potential harm to an ecological feature,
- **MITIGATE** - If negative effects are unavoidable, measures should be implemented to minimise and reduce potential effects,
- **COMPENSATE** - If negative effects are still likely to be experienced despite measures to reduce impacts being implemented appropriate compensatory measures should implemented.
- **ENHANCEMENT** - Works should always seek to provide net benefits for biodiversity to help meet the section 7 requirements of the Environment Act (Wales) 2016.

The scope of the proposed development works has been reviewed and streamlined to ensure only works necessary are to be undertaken. Much discussion has been undertaken within the design team and Local Planning Authority to agree a broad scope of suitable compensation for habitat and species impacts. Section 3.3 of this report details the likely effects to protected species and habitats within the development site. The species or features which could be impacted by the development works are discussed further in this section of the report.

The development proposals have the potential to negatively impact on the below features. However, mitigation and compensation measures have been considered and are included within the development to reduce the impact the development works may have. Features to consider are:

- Bats
- Nesting Birds
- Reptiles
- Habitat

4.1 Ecological Feature – Bats

Potential Impacts

- Disturbance to commuting and foraging bats.
- Loss of habitat used for foraging purposes.

Measures to be implemented

- All external lighting will be kept to the bare minimum required for health and safety reasons.
- Any external light source will be directional and will only illuminate a doorway or footpath as required. A directional light source can be cowled or recessed back into the casing to prevent light spill.
- All lighting must meet the recommendations in the BCT Guidance Note 08/23 Bats and Artificial Lighting at Night.
- No external light feature will be placed within 2m of any bat box provided within the new building.

4.2 Ecological Feature – Nesting Birds

Potential Impacts

- Disturbance of nesting birds.
- Loss of bird nesting and foraging habitat.

Measures to be implemented

- Any tree or scrub removal within the site boundary will 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 or activity indicating a nest might be present is identified a buffer zone of at least 5m, up to 20m depending on species, around the nest must be observed until the chicks have fledged. Only then can the vegetation be removed.
- Compensatory planting within the proposed development will include native species to provide a food source for local wildlife including bird species.

4.3 Ecological Feature – Herptiles

Potential Impacts

- Damage or injury to commuting/foraging reptiles and amphibians during the year.
- Loss of commuting/foraging habitat for reptiles and amphibians.

Measures to be implemented

- A suitably worded planning condition will be added to any planning consent the Local Planning Authority is minded to grant requesting a Reptile Mitigation Strategy to be agreed for the development work.
- All site contractors will be given a toolbox talk which covers the legal protection given to reptiles, what they look like, where they may be found, and what to do if herptiles are found on site. Information on reptiles will be included within the site induction pack. They will be made aware of the buffer zone and that access into it is not allowed.

Vegetation Clearance – Grassland Vegetation

- All areas of grassland within the site will be cut in stages and undertaken during the months of **April - September inclusive** when reptiles are active and likely to relocate of their own accord. Whilst the presence of hibernating reptiles is considered unlikely, this timing constraint will be implemented as a precaution. Grassland cutting will start along the southern edge of the development site and progress northwards to retained habitat areas outside of the construction site.
- **First Stage Cut** - vegetation will be cut, using hand tools or an adjustable height flail, to a height of between 100-150mm. The cut material will be raked and removed from the site to avoid potential future colonisation by reptiles. The cut material must be removed the same day it is cut. Work area must be left for 24hrs once the first stage cut is completed.
- **Second Stage Cut** - vegetation will be cut to ground level (a maximum height of 50mm) and the arisings raked and removed from the site as above. Any reptiles or other fauna will be treated as above.
- Any herptiles present should naturally move away of their own accord due to the disturbance from cutting. However, in the unlikely event that any reptiles or other fauna are encountered during this operation all cutting work will stop and the the on call Ecologist will be consulted. Reptiles will either be carefully collected and moved

away to the retained vegetation to the north of the development site or be allowed to do so of its own accord.

Vegetation Clearance – Trees & Scrub

- **First Stage Cut** - The first stage cut of trees/scrub will be required outside of the bird nesting season. Trees dense scrub will be cut to a height of 0.5m between the months of **September to February inclusive**. All cuttings will be collected and removed from the site to prevent future colonisation by birds and or reptiles.
- **Second Stage Cut** - Tree roots/scrub will be grubbed up using a toothed bucket of a JCB or an appropriately sized digger. The roots will be removed under ecological supervision and any reptiles found will be captured and moved to adjacent habitat. The roots systems will be removed slowly and gently to allow any reptiles present to escape. All roots will then be removed from the proposed development site.
- Once all suitable vegetation has been cleared from within the site boundary, the construction site footprint must remain in a vegetation free state. This will help to reduce the likelihood of reptiles using the site while construction works are underway.

Dry Stone Walling

- All dry stone walling will be retained as part of the development works. Any area of damaged walling will be repaired. No cement will be used as part of the dry stone walling to ensure access is retained and created for small animals such as reptiles to continue to use the wall for shelter, cover and basking.
- An ecologist will supervise the removal of rubble piles and or fly tipping to ensure reptiles are not disturbed, injured or killed during the works. These features must be removed during the months of April and September inclusive.
- A buffer around the north, east and southern boundary of the site measuring 2m in width will be created between the stone walling and construction area. This buffer zone will be fenced off using secure heras fencing or similar to prevent any site contractors accessing it. The buffer zone will be left unmanaged during development works to ensure it is suitable for reptile use during the construction works.
- Access into the buffer zone will only be permitted in writing by the supervising ecologist for the repair of any stone walling which is required. Work will be completed by hand and no machine access into the buffer zone will be permitted. Work to the dry stone walls will only be permitted during the months of April and September inclusive.

4.4 Ecological Feature – Habitat

Potential Impacts

- Loss of habitat used by a wide range of local fauna.
- Loss of trees.

Measures to be implemented

- The trees and hedgerow 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 and hedgerow 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.
- Light spillage into adjacent semi-natural habitats must be avoided and brightness kept to the lowest permissible level in the areas adjacent to such habitats. All external lighting must be motion activated and set to the lowest time to remain lit that is possible. This will avoid lights being left on over night. All lighting must meet the 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/>

Small Mammals

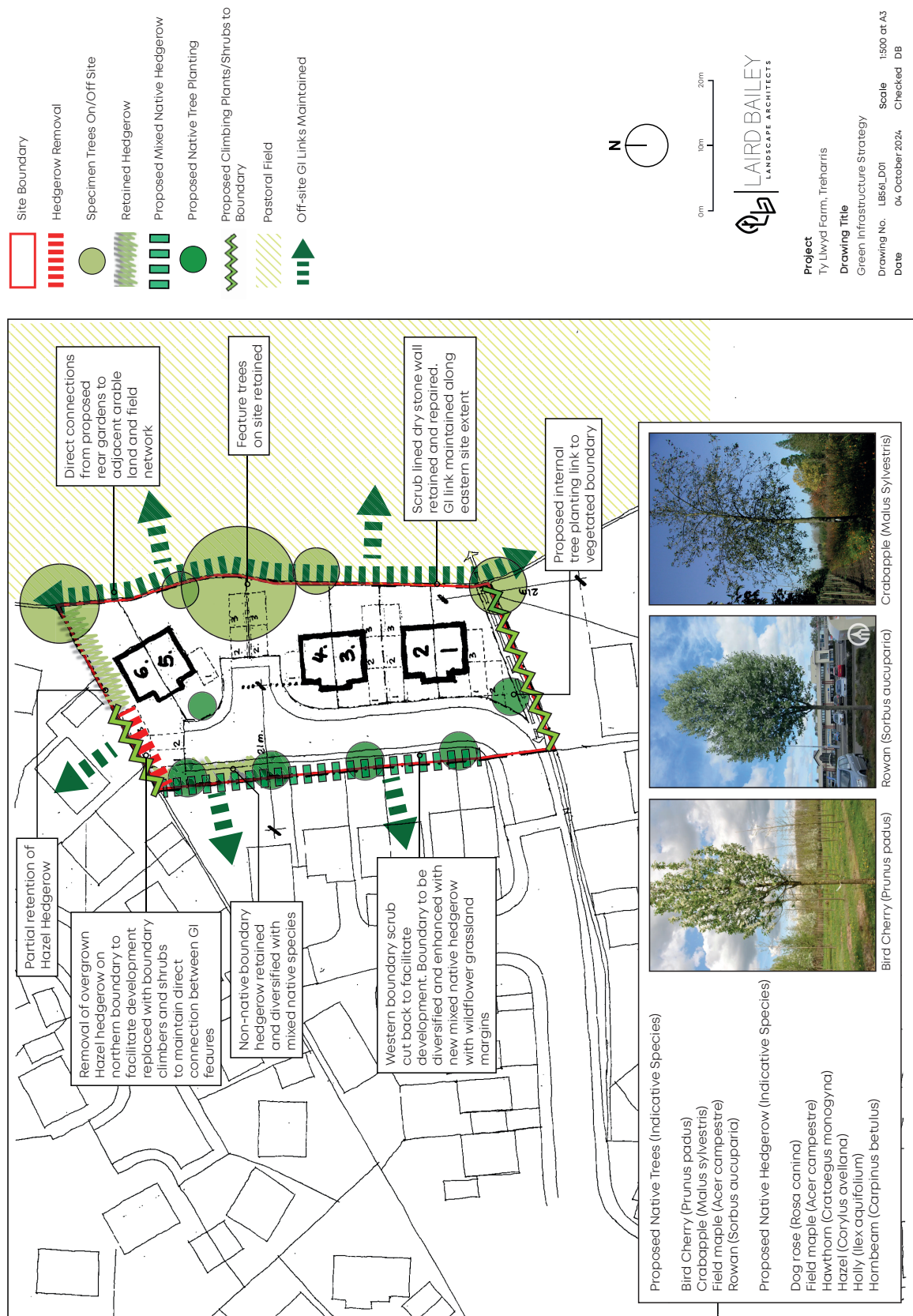
- The presence of hedgehog on the site is likely; it is therefore recommended that all fencing around the site will be hedgehog friendly in design. A friendly design is considered to allow the passage of small animals across the site. It should provide either a continuous gap between the bottom of the fence and ground of approximately 13cm or 13cm by 13cm gaps cut every 3m distance along fencing.

5. Enhancement Measures

The Environment Act (Wales) 2016 places a duty on competent authorities to ensure biodiversity is not only conserved but enhanced. The proposed development works create potential features that can be improved for the benefit of biodiversity. The below bullet points are some simple measures that could be achieved to enhance the biodiversity of the site:

- The provision of 1 x Ibstock enclosed Bat Box C on the south facing elevation of 2 of the new buildings. The bat boxes will be installed no lower than eaves level within the new buildings. The boxes will be built into the walls of the buildings.
- The provision of 1 x Woodstone Build-in Open Nest Box on the east elevation of 2 of the new buildings. The bird boxes will be installed no lower than eaves level within the new buildings. The boxes will be built into the walls of the buildings.
- 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 all dry stone walling around the boundary of the site would be beneficial for a range of small animals and invertebrates.
- The planting of at least 2 new trees within the development site boundary. The provision of tree planting will increase the biodiversity levels of the proposed development site.
- Any close board or mesh fencing within the site boundary will incorporate features to ensure it is wildlife friendly. Such fencing will have either: a 13cm by 13cm gap cut at ground level every 2m or a continuous gap of 13cm from the base of the fence and ground along the entire fence line. Any mesh fencing must have a continuous gap of 13cm from the base of the fence and ground along the entire fence line

Appendix 1 – Proposed Development Layout

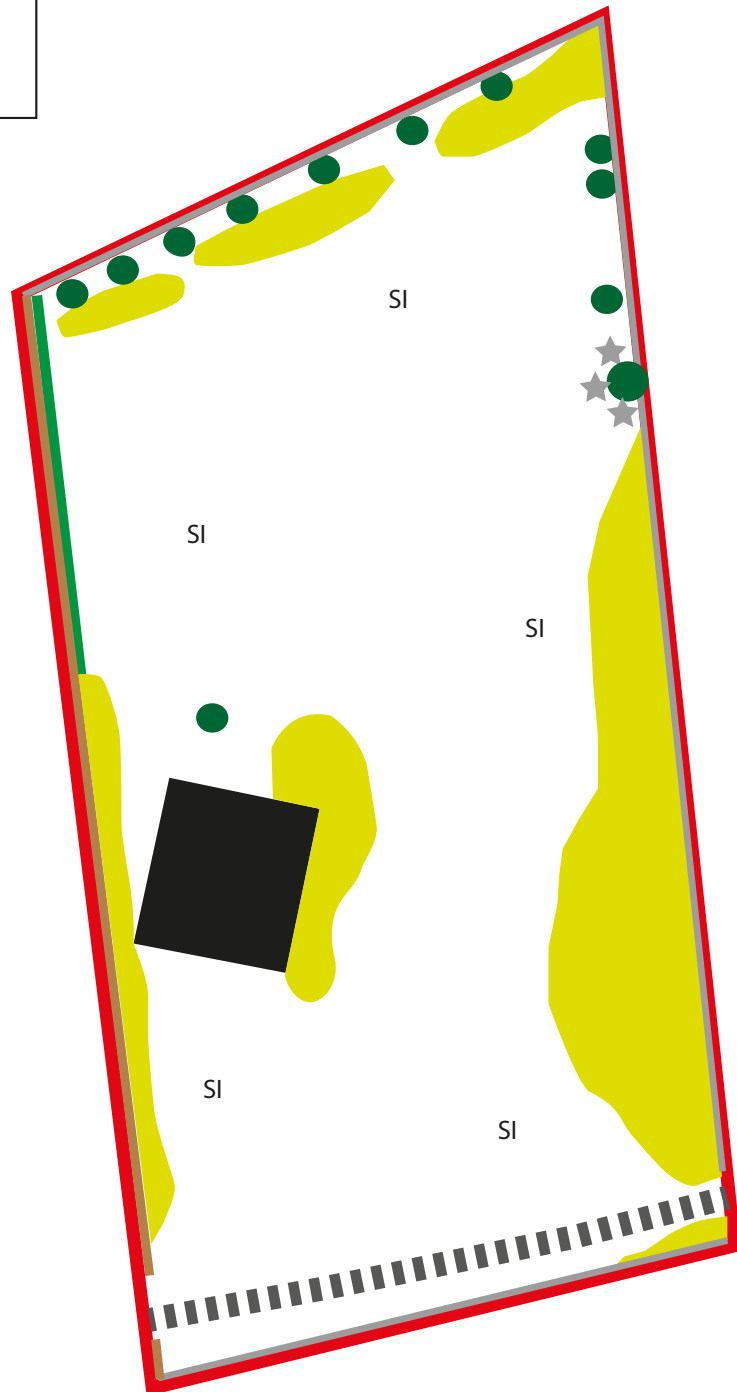


Appendix 2 – Habitat Map

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

Habitat Map

October 2024



- Bramble Scrub
- Telephone Mast & Footings
- SI Semi Improved Grassland
- Footpath
- Fly Tipping
- Scattered Tree
- Non Native Hedgerow
- Stone Pile
- Dry Stone Wall
- Site Boundary