PROPOSED DEVELOPMENT:

LAND AT CATHS FARM SHOP, TRELEWIS

ECOLOGICAL ASSESSMENT

2023

ISSUE 1VA

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Caths Farm Shop, Trelewis

Ecological Assessment

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NON-TECHNICAL SUMMARY

An ecological assessment was undertaken of land at Caths Farm Shop Trelewis in support of a planning application to demolish the building and replace it with housing.

The work involved a phase 1 habitat survey to categorise the habitats present, an assessment of the site's ability to provide suitable habitats for protected species and recommendations for further survey and actions if considered necessary.

The habitats on and adjacent to the site comprise of improved grassland, hedgerow, scrub, scattered trees, a building and hard standing.

None of the trees to be removed have potential roosting features. The trees present on the site to be removed (scrub) are young, thin stemmed and not suitable for roosting bats. It is probable that bats will forage over the site. Surveys undertaken did not reveal any bat roosts to be present.

There isn't enough scrub onsite to support dormice in the long term, the bramble appears to have been cut back. There are no records within 2km, food sources are not abundant at the site. As such, providing that this habitat is cleared in accordance with a method statement and ecological supervision, there will be no requirement for further survey effort. If at any point dormice or evidence of dormice are found, all works will cease and a licence from Natural Resources Wales must be applied for prior to works recommencing.

There were no waterbodies on or immediately adjacent to the site which could be suitable for use by breeding great crested newts (or other amphibians). There are records greater than 1500m away from the site, however, these are isolated by roads, houses and other infrastructure.

No evidence of badger activity was recorded within or immediately adjacent to the site boundary. It is possible that badgers will use the site for foraging, however, no evidence of badger was found throughout. It is unlikely that badgers will use the site for sett building to the high levels of disturbance present at the site.

It should be assumed that all areas of scrub, hedgerow and trees will be utilised by nesting birds during the breeding season. There is no habitat suitable for ground nesting species.

The site provides reptiles with limited habitat for some foraging, basking, sheltering and hibernation purposes.. It is likely that reptiles will be present, however, due to a number of factors justified within this report, the number of reptiles present if any are likely to be low if any.

All site clearance works should be undertaken in accordance with a method statement and ecological supervision to ensure that species are not harmed at any stage of the project.

Mitigation will be required and is outlined within the various habitat and species sections contained herein.

1 INTRODUCTION

1.1 OBJECTIVE

The objectives of this report are to:

- identify the habitats present on the site;
- identify the potential for protected species to be present on site;
- using the information gathered to determine whether there may be any impacts (both positive and negative) on protected species present;
- provide recommendations for further survey as necessary; and
- suggest outline mitigation and enhancement ideas and principles

1.2 METHODOLOGY

To achieve the objectives set out above, the following actions were taken:

- Field based assessments in respect of
    1. Habitats;
    2. Protected species, primarily:
        i. Bats;
        ii. Dormice;
        iii. Otters;
        iv. Amphibians (particularly great crested newt);
        v. Badgers
        vi. Reptiles; and
        vii. Breeding birds

The impact assessment has been undertaken by ecological feature rather than by section i.e. each subject is discussed and assessed separately and summarised in conjunction with the others.

1.3 SITE DESCRIPTION

The red line development site boundary is located on land at Caths Farm Shop, Trelewis (Figure 1).

The majority of the site appears to comprise of hard standing bounded by hedgerows and small areas of scrub.

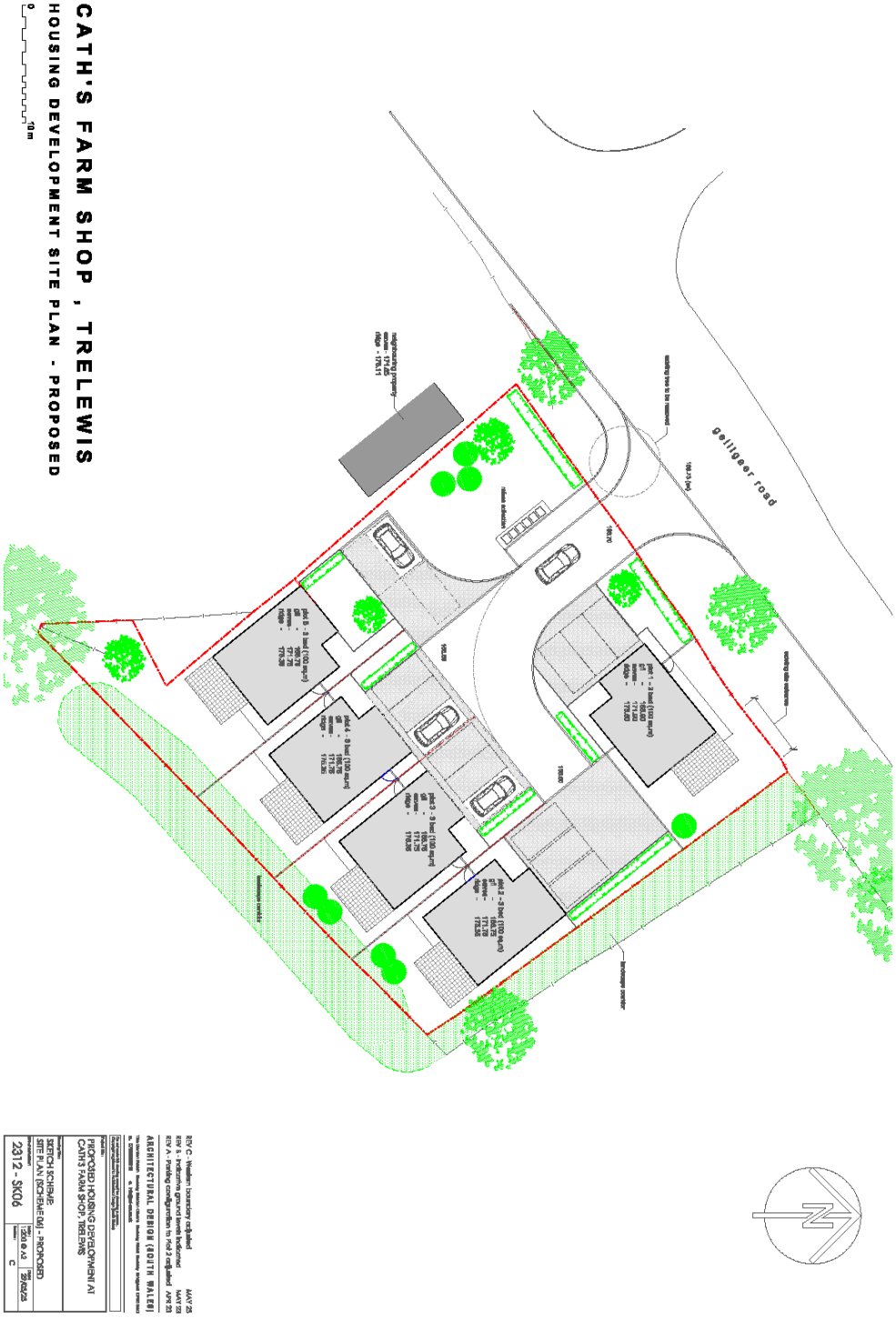
There is a building on site that is currently used as a shop. The building is T shaped and in relatively good order. The property has a slate roof which has a ridge that runs from south west to south east and a second ridge that runs from north west to south east. Barge boards and soffits where present are sealed and in good order. The property is rendered on all elevations. There is a small wood store in the north eastern corner of the site.

The wider landscape comprises of housing and associated infrastructure to the north with fields delineated by mature hedgerows to the south.

Figure 1 – Approximate location of site (arrowed red) (Google Maps 2023)

1.4 PROPOSED DEVELOPMENT

At the time of writing, it is not clear how much habitat will be lost to the development (outline planning only) but it is anticipated that the majority of vegetated habitats will remain and the majority of hard standing will be lost. The building will be demolished.



1.5 STUDY AREA

The field survey looked at the red line development area itself and up to 20m from the site boundaries wherever possible.

The biological records search covered a search radius of 2000m from the centre of the development site for protected sites (international, national and local), protected and priority species, other species of conservation concern and locally important species. A buffer of 2000m was applied to locally designated sites.

2 REGULATORY FRAMEWORK

2.1 INTERNATIONAL

European Union legislation requires that member states designate sites for the protection of habitats and species included in the annexes of both Council Directive 92/43/EC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive) and Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). This legislation is implemented in the UK by the Conservation of Habitats and Species Regulations 2017 (as amended) ("the Habitat Regulations"). This results in sites being designated as Special Areas of Conservation (SACs) and Special Protection Areas respectively (SPAs).

2.2 NATIONAL (UK)

The Wildlife and Countryside Act 1981 (as amended) allows sites to be designated as Sites of Special Scientific Interest (SSSI) for one or all of the following categories:

- Flora;
- Fauna;
- Habitat; and
- Geological importance.

European designated sites are automatically designated as SSSIs prior to their designation.

Other relevant legislation includes:

- The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- Countryside and Rights of Way Act 2000;
- Environment (Wales) Act 2016
- Wild Mammals (Protection) Act 1996;
- The Protection of Badgers Act 1992; and
- The Hedgerow Regulations 1997.

Section 40 of the Natural Environment and Rural Communities Act 2006 (as amended) requires all public bodies to have regard wherever possible to conserving biodiversity. Section 42 of the Act requires that a list of habitats and species of Principle Importance for the Conservation of Biological Diversity in Wales be produced; however, this has been replaced by Section 7 of the Environment (Wales) Act 2016 Priority Habitats and Species lists.

The Environment (Wales) Act 2016 requires that all public authorities, when carrying out their functions in Wales, seek to "maintain and enhance biodiversity" where it is within the proper exercise of their functions. In doing so, public authorities must also seek to "promote the resilience of ecosystems".

This ensures that biodiversity is an integral part of the decisions that public authorities take in relation to Wales. It also links biodiversity with the long-term health and functioning of our ecosystems, therefore helping to align the biodiversity duty with the framework for sustainable natural resource management provided in the Act.

In Wales, this legislation replaces and enhances the Natural Environment and Rural Communities Act (2006) which sought to raise the profile of biodiversity and to make sure that it is considered in all local authority decisions by ensuring that "Every public authority must, in exercising its functions, have

regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.".

Other elements of NERC 2006 may still apply.

Biodiversity Action Plans (BAPs) are tools which are used to monitor, manage and enhance those habitats and species which are of significance to an area or organisation, The United Kingdom BAP lists a number of priority habitats and species which are of conservation concern.

2.3 NATIONAL (WALES)

Planning Policy Wales (Welsh Government, 2016) and Planning Policy Wales Technical Advice Note 5: Nature Conservation and Planning (Welsh Assembly Government, September 2009) set out the protection given to wildlife (sites, habitats and species) by the planning system operational in Wales.

2.4 LOCAL AND REGIONAL

The proposed development is wholly within the MTCBC area of responsibility. Therefore, all policies adopted by that Planning Authority will apply, including policies which may not be specific to nature conservation or the natural environment but that may apply or be relevant and should be considered during the planning process.

There are a number of habitats and species which are of a high priority to MTCBC. These have been determined following examination of the UK BAP and the Environment (Wales) Act Section 7 list of Priority Species and Habitats and those habitats and species determined to be locally important by the Local Biodiversity Partnership.

2.5 PLANNING FRAMEWORK

The proposed development will be undertaken wholly under the auspices of the Town and Country Planning Act 1990 (as amended).

2.6 PREVIOUS SURVEYS

There are no known previous surveys of this site.

2.7 CONSTRAINTS

The survey was undertaken at a time of year early in the season and as such, the full botanical diversity may not have been apparent.

3 DESK STUDY

3.1 SUMMARY

There are no records of any priority or protected species, species of local conservation concern or other species of conservation concern from the site or immediately adjacent to it. The closest protected species records are of a hedgehog 102m from the site.

One SSSI and a number of SINCs were identified within the data search.

3.2 BACKGROUND

A desk study provides background information on historical and current biological data which can identify ecological constraints, mitigation, and biodiversity enhancement opportunities.

3.3 METHODOLOGY

The South East Wales Biodiversity Records Centre (SEWBReC) was consulted in order to provide biological information on the presence of species and sites on or adjacent to the site (0234-125)

A 2000m search buffer was applied to priority and protected species, species of local conservation concern and other species of conservation concern, statutorily designated sites (for nature conservation purposes) and 1000m locally designated sites.

The Multi-Agency Geographical Information System (MAGIC) website (www.magic.gov.uk) and the Local Biodiversity Action Plan (LBAP) for MTCBC were also consulted.

3.4 CONSTRAINTS

There were no constraints to the data search

3.5 RESULTS

3.5.1 Species: SEWBReC data search

There is one SSSI within 2km of the site.

Nelson Bog (665m)

There are no habitats present on the site that the site has been designated for and therefore this site will not be considered further in this report.

There are a number of SINCs present within 2km of the site:

Gelligaer Common (1467m)

Whitehall Golf Course (1785m)

Trelewis Woods (701m)

Cwm Mafon (1651m)

Lower Taf & Edwardsville (1488m)

Craig Berthlwyd (1283m)

Berthlwyd (972m)

Afon Bargoed Taf (936m)

Nant Caiach (115m)

Treharris Park & Cardiff Road Woodlands (1687m)

Coed Cefn-fforest & Cwm Cothi (1569m)

Lower Cwm Bargoed (1465m)

Cwm Afon Railway Line, West of Nelson (1682m)

Cwm Afon, West of Nelson (1645m)

Waun Rydd, Gelligaer (1706m)

Wern Woodland, Nelson (622m)

Brooklands Marsh, North of Nelson (416m)

Llancaiach-Fawr Meadows, Llancaiach (122m)

Coed Gelliau'r-Gwellt, East of Llancaiach (580m)

Nant Caeach, North of Llancaiach (741m)

Tredomen Tip Ponds, Nelson (1893m)

Again, the majority of habitats present on the site are to be retained other than hard standing. Any habitat to be removed is minimal and widespread and it is unlikely that development of the site will result in any adverse impacts on any of the SINCs and as such, they will not be considered further in this report.

The closest record of protected species refers to a hedgehog 102m from the site.

3.6 PREVIOUS SURVEYS

None known.

4 PHASE 1 HABITAT SURVEY

4.1 SUMMARY

A number of habitats were recorded across and adjacent to the survey area. These included:

- Improved grassland
- Scrub
- Scattered trees
- Hedgerow
- Buildings

The potential for a number of protected species was recorded, including habitats suitable for:

- Bats;
- Badgers;
- Breeding birds;
- Reptiles;

The habitats are shown on **the phase 1 map located in the appendix.**

4.2 BACKGROUND

The Phase 1 habitat survey was carried out to assess the existing habitats, identify any protected habitats or species that may be present, determine the impact of the proposed works on them, and identify any mitigation measures that may be necessary. This was done by undertaking both a desk study and field survey.

The survey was undertaken in March 2023.

Phase 1 habitat survey is a way of recording the basic habitat data to form a baseline level of knowledge of the ecology of a site and provide recommendations for future surveys if considered necessary.

4.3 METHODOLOGY

4.3.1 Desk study:

A biological data search was undertaken. Refer to section 3 above.

4.3.2 Field survey:

Experienced surveyors from BE Ecological Ltd carried out a habitat assessment and mapping exercise in March 2023 using the Phase 1 habitat survey technique. Nomenclature follows Stace (1997)[1]. The survey was carried out by Beth Evans.

Features of note are assigned Target Notes (TN) and referenced accordingly and described at the **Appendix**

[1] Stace, C (1997). *New Flora of the British Isles* (2nd Ed.). Cambridge University Press

A full species list is at **the Appendix.**

4.4 CONSTRAINTS

There were no constraints.

4.5 RESULTS

4.5.1 Habitats

The following habitats were found on the site and are mapped at Appendix C.

- Improved grassland
- Scrub
- Scattered trees
- Hedgerow
- Buildings

Photos are located at **Appendix A**

4.5.1.1 Improved grassland

This habitat is found on the banks of hedgerows and is small in size. Due to the low species diversity and small size, , this habitat is of low ecological value only. It is anticipated that some of this habitat will be lost to the development.

4.5.1.2 Scrub

This habitat is found to the rear of the site. It mainly comprises of a section of cut bramble that backs on to an area of self seeded willow scrub which was possibly at one point a hedgerow. At the time of writing it is unclear how much of this habitat will be removed, however, it appears that any clearance will be limited in nature. Mitigation for this habitat and species which may reside in it will be required as part of any final proposals.

4.5.1.3 Scattered trees

There are a total of six trees present on the site comprising of lime, goat willow and oak. Out of the trees, only one of these will be removed to facilitate the development. The tree to be removed is a lime. The tree is of relatively good quality and does not appear to have any features capable of supporting roosting bats.

4.5.1.4 Hedgerow

There are three hedgerows present on the site. The hedgerow adjacent to Gelligaer Road comprises of hawthorn and ash and is heavily managed and low cut. A small section of this will be removed to facilitate access. The hedgerow on the eastern boundary is again well managed and is false cypress. It is anticipated that this hedgerow will be retained. The last hedgerow runs along the rear of the property

and comprises of self seeded goat willow. It is anticipated that this hedgerow will be retained in its entirety.

4.5.2 Protected species assessment

4.5.2.1 Bats

The closest roosting record for members for this group refers to a brown long-eared roost approximately 200m away from the site.

Surveys were undertaken of the onsite building. No bat roosts were confirmed within the site boundary. There are no trees to be removed that are capable of supporting bat roosts.

It is likely that bats will use the site for foraging.

This group will be considered further in this report.

4.5.2.2 Amphibians & great crested newt

There are no waterbodies on the development site which could be used by this group for breeding purposes. The terrestrial habitat on the site could provide amphibians with suitable foraging and sheltering habitat. The are records within the data search from over 1600m away. The records are separated from the development site by roads, houses and associated infrastructure.

It is considered that amphibians are unlikely to pose an ecological constraint to the development and that only common species (frog and toad with the possibility of smooth and / or palmate newts) are likely to be present on the site. Therefore, it is considered that this group can be safely dealt with via a reasonable avoidance method statement to prevent harm to individuals during site clearance. A method statement will be required.

4.5.2.3 Dormouse

There are no records of dormice within the data search. There is no suitable habitat on site that is really suitable for this group. In addition to this, food sources are not hugely abundant and the site is small. Dormice are not known in the locality so providing that any vegetation is removed in line with a method statement and ecological supervision, it is considered unlikely that dormice will pose a constraint on the development.

4.5.2.4 Badgers

There are no records of badger within the data search.

There is no suitable habitat on site for this species.

This species will not be mentioned further in this report.

4.5.2.5 Breeding birds

There are multiple records for members of this group within the data search but none from the site.

Birds heard and seen on and adjacent to the site include wood pigeon, house sparrow, blue tit and robin.

There is suitable habitat in the onsite scrub, hedgerow and scattered trees for nesting birds.

The habitats on the site are not considered to be suitable for ground nesting birds given the small overlooked nature of the site, lack of open ground, the high levels of disturbance on the site, the availability of avian predator perches and the presence of predators.

Scrub and tree nesting species will be considered further in this report.

4.5.2.6 Reptiles

There are records of slow worm and common lizard within 2km of the development site.

The site offers some habitat for this species for foraging, basking, sheltering and hibernation purposes and it should be assumed that slow worm (*Anguis fragilis*) and common lizard (*Lacerta vivipara*) use the site. It is likely that the population densities of these species are at perhaps lower levels given the location of the site and due to the fact that any suitable habitat is small in size. It is likely that small numbers of reptiles may be present on the interfaces between grassland habitat and longer vegetation.

This group will be considered further in this report.

4.5.3 Other features

None.

5 PROTECTED SPECIES

5.1 BATS

5.1.1 Summary

The closest records of bats refers to a foraging pipistrelle approximately 150m from the site. The closest roosting record refers to a brown long-eared bat roost approximately 200m from the site.

It is likely that a small number of bats species will forage over the site and boundaries.

There are no mature trees and buildings suitable for roosting bats.

There are no mature trees and buildings suitable for roosting bats. There are buildings on site that are low suitability for roosting bats. Surveys were carried out on the buildings and failed to identify roosting bats. The results of the survey can be found below.

5.1.2 Ecology

British bats are small flying nocturnal mammals that feed exclusively upon insects. There are 17 species resident in Britain, ranging in size from the smallest, soprano pipistrelle (*Pipistrellus pygmaeus*) up to the largest noctule (*Nyctalus noctula*), serotine (*Eptesicus serotinus*) and greater horseshoe bat (*Rhinolophus ferrumequinum*). Bats are active from April through to October and hibernate when insects are in short supply in the winter months. Bats emerge from hibernation in late March - early April and move into their transition / intermediary roosts. Female bats will move to maternity sites by the beginning of May and will give birth to a single baby between June and early July. The baby is reared solely by the mother and is weaned and independent by end of August. After breeding, bats move to transition / intermediary roosts and females will visit males at mating roosts. During the autumn, bats feed voraciously to gain weight for the hibernation ahead.

Although traditionally trees, caves and rock faces were used by roosting bats and are still used, many different structures are used nowadays by bats, which take advantage of readymade (man made) roosts. Structures used frequently include bridges, ice-houses, pill-boxes, disused railway tunnels, houses and barns etc. Bats have home ranges which vary from species to species; from just 3-4km from the roost for the smaller bats while the larger noctule may fly 20km or more. Threats to bats include habitat destruction and the severance of commuting routes, use of agricultural pesticides, intensification of farming methods and deliberate persecution by man. Bats have few natural predators; however, the domestic cat is probably the most efficient predator.

5.1.3 Legislation

5.1.3.1 Conservation of Habitats & Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations (2017) provides safeguards for European Protected Species (those listed under Annex IV Habitats Directive). With regards to bats, this makes it an offence to:

- Deliberately (or recklessly in Scotland) capture, injure or kill a bat
- Deliberately (or recklessly in Scotland) disturb a bat in a way that would (significantly in Scotland) affect its ability to survive, breed or rear young (or hibernate or migrate in England, Wales and Northern Ireland) or (significantly in England, Wales and Scotland) affect the local distribution or abundance of the species.
- Damage or destroy a roost (this is an ‘absolute’ offence)

- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat

It is possible to undertake damaging activities under the auspices of a European Protected Species Licence issued by Natural Resources Wales which provides a derogation from the Regulations, meaning that an otherwise illegal operation carried out under licence is lawful.

5.1.3.2 Wildlife & Countryside Act 1981

The Wildlife & Countryside Act 1981 (as amended) is the legislation for England and Wales for nature conservation, making it an offence to:

- Intentionally or recklessly disturb a bat in or at a roost;
- Intentionally or recklessly obstruct access to a roost;
- Intentionally destroy, damage or otherwise disturb a roost (whether bats are present or not); and
- Intentionally or recklessly kill, injure or take (capture) a bat.

5.1.3.3 The Environment (Wales) Act, 2016

The Environment (Wales) Act 2016 requires that all public authorities, when carrying out their functions in Wales, seek to "maintain and enhance biodiversity" where it is within the proper exercise of their functions. In doing so, public authorities must also seek to "promote the resilience of ecosystems".

This ensures that biodiversity is an integral part of the decisions that public authorities take in relation to Wales. It also links biodiversity with the long-term health and functioning of our ecosystems, therefore helping to align the biodiversity duty with the framework for sustainable natural resource management provided in the Act.

In Wales, this legislation replaces and enhances the Natural Environment and Rural Communities Act (2006) which sought to raise the profile of biodiversity and to make sure that it is considered in all local authority decisions by ensuring that "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.".

Other elements of NERC 2006 may still apply.

5.1.3.4 Bat Survey

METHODOLOGY

Survey Objectives

- To carry out an initial bat inspection survey along with the recommended activity surveys
- To present the above details and if necessary recommendations for mitigation, future research and compensation within this report.

Survey Summary

The bat survey comprised of two parts

- Part 1- Initial bat inspection survey
- Part 2- A single activity survey

Surveyor Information

The survey was run by Beth Evans. Beth is the owner of BE ECOLOGICAL LTD and has a postgraduate degree in Environmental Biology: Conservation & Resource Management, specialising in British bats. Beth has six years' experience of ecological surveys, both in a small scale and large multi-disciplinary context. Beth also holds Natural Resources Wales and Natural England bat licences to disturb and handle bats.

Beth Evans was assisted during the surveys by Michael Hogan, Gavin Vella and Dion Rowles. Michael Hogan previously held bat licences in England and Wales for over 15 years and has worked with a number of consultancies over the years. Michael is currently reapplying for his licences and undertaking surveys with BE Ecological Ltd. Dion has been training and undertaking bat surveys with BE Ecological Ltd for the last two seasons.

Internal & External Inspection

An initial inspection survey was carried out on 15th March 2023 to search all buildings, both externally to identify potential bat roosting areas and signs of bat use including; live bats, dead bats, droppings, urine staining, grease marks and discarded prey items. The buildings and all areas/items of interest were recorded and photographed. Extension ladders/steps were used to safely access roof areas and fascia boards etc; where no safe access was available the survey was conducted using, close focus binoculars and/or a high powered lamp.

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Activity Surveys (emergence/re-entry surveys)

Building 'emergence' and 're-entry' surveys were carried out on the following dates, times and weather conditions. Climatic conditions including rain, wind, temperature and cloud cover were recorded for each survey using a hand held Kestrel 4500 weather station.

Survey 1- 13th May 2023

A dusk survey was carried out on 13th May 2023 using surveyors positioned in such a way that as much of the building was visible to surveyors as possible. Surveyors were equipped with Batlogger M and M2 detectors and a thermal imaging camera.

Figure 3: Approximate surveyor locations (Google Maps 2023)

Survey 1- 13th May 2023

A dusk survey was carried out on 13th May 2023 using surveyors, positioned in such a way that as much of the building was visible to surveyors as possible. Surveyors and cameras were equipped with Batlogger M detectors (as above).

RESULTS

Inspection survey

External survey results

The survey carried out by BE Ecological Ltd revealed no droppings or evidence of bats on the exterior of the building. Generally the building appears to be well sealed. Soffits and barge boards are tight fitting and rendered into the building with no obvious gaps. The roof slates appear to be in good order and well sealed over the majority of the building. The ridge tiles appear to form a tight seal. The building has been maintained well and any gaps would be limited to possibly a small number of slipped slates, however, nothing obvious was noted at the time of survey.

As such, the property was categorised as being of low potential for roosting bats and further emergence/re-entry surveys were recommended.

No birds were noted during the survey.

Internal survey results

Internally there are two roof voids within the property. The rear roof void spans across the length of the building and is accessed via stairs within the eastern portion of the building. The roof void is boarded and used for storage. The area is extremely clean and well sealed. The roof membrane is exposed with no obvious holes or tears. No evidence of bats was found in this location.

The second roof void runs from south east to north west. The void is smaller than the rear void and lined with bitumen felt. No bats or evidence of bats was found in this location. The roof void is relatively shallow and the lower section has been made into a first floor. No obvious light ingress' or points of entry were noted.

Activity surveys

The surveys were undertaken as per the table below:

Survey Schedule and Weather Conditions

Table 1: Schedule and weather conditions

Visit	Date (sunrise) (sunset)	Start End	Time	Temp C	Wind	Cloud Cover	Notes
Survey 1 13/05/23	20:57	Start End	20:45 22:35	16 16	Low Low	30% 15%	Dry evening, insects flying

Activity Survey Results

Survey 1- 13th May 2023

Species heard on site include common pipistrelle, soprano pipistrelle, noctule and brown long-eared.

The first bat heard and seen was a common pipistrelle. The bat was heard approximately 15 minutes post sunrise and was seen commuting along the vegetation to the rear of the site from south west to south east.

Bat activity was frequent throughout the night with a small number of common and soprano pipistrelles consistently foraging over the vegetated boundaries of the site. Noctule bats were heard infrequently but not seen. A single brown long-eared bat was seen foraging over the vegetation to the rear of the site.

No bats emerged from or interacted with the building in any way throughout the course of the survey.

Identified Roosts

Survey 1

The property was not identified as a bat roost.

Conclusion

Generally bat activity at the site is moderate with mainly two species heard throughout the surveys, common and soprano pipistrelle. Small numbers of noctule and brown long-eared bats were heard. The majority of bats appeared to be foraging around the vegetated boundary to the rear of the site from south west to south east.

The property was not identified as a bat roost at the time of writing.

A licence from Natural Resources Wales will not be required prior to any works being undertaken on the building.

5.1.4 Bats - impact characterisation

Bats were not identified roosting within the onsite building and therefore impacts on roosting bats are unlikely. It is likely that bat foraging habitat over the development site will be modified by the development.

5.1.5 Bats - impact assessment without mitigation

It is considered that there will be **no adverse** impacts on roosting bats as a result of the development

There may be impacts on foraging bats as a result of reduction in habitat and increased site lighting. All boundaries will remain completely unlit to ensure there are dark corridors for bats to commute and forage on completion of the development.

5.1.6 Bats - mitigation measures

Mitigation will be required

Protection and mitigation measures will include:

- Retention of the flight lines along all boundaries as unlit dark corridors;
- A method statement for the demolition of the buiilding
- New planting will be required to enhance the area for bats
- Any site lighting will conform to that recommended for bats

The following will need to be included within the development:

- Provision of pole mounted bat boxes or boxes on houses;
- Sympathetic landscape planting t provide bats with foraging habitat.

5.1.7 Bats - impact characterisation with mitigation

It is considered that there will be **no adverse** impacts on roosting bats as a result of the development.

5.1.8 Bats - significance of the impact

Without mitigation

It is considered that the significance of the impact is **slight**

With mitigation

It is considered that the significance of the impact is **neutral**

5.2 BREEDING BIRDS

5.2.1 Summary

A full breeding bird survey was not undertaken as it should be assumed that all the areas of scrub, hedgerow and trees are likely to be used by birds for nesting.

It should be assumed that all scrub and tree vegetation on the site is used by birds for breeding purposes during the nesting season.

5.2.2 Ecology

Most British avian species are found breeding during the spring and summer months, between April and August, although some, such as pigeons, and doves will frequently breed at all times of year, as they are not dependent on small, soft-bodied invertebrates to provide food for their chicks. Some other species, such as barn owl (*Tyto alba*) have also been recorded breeding in the winter months, in years when winters have been mild, and small mammal prey plentiful, although such breeding attempts are unusual, with chicks frequently failing to fledge. The breeding season can be extended for most species if the weather is mild, and food plentiful.

Contrary to common belief, whilst some bird species, such as crows and rooks, nest high in trees, often more than 10m high, the majority of British breeding birds will nest within 2m of the ground (or on the ground) within dense scrub or within holes and other natural and manmade cavities in rocks and walls.

Most bird species take considerably less than 60 days from egg-laying to chick fledging, whilst others, such as barn owl, can take more than 90 days. Many, but not all British species will make multiple breeding attempts if environmental conditions and food availability allow.

5.2.3 Legislation

In Britain, all naturally occurring avian species are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended). The legislation protects all birds, their nests and eggs, and it is an offence to:

- Intentionally kill, injure or take a wild bird;
- Intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built; and
- Intentionally take or destroy the egg of any wild bird.

In addition, birds listed on Schedule 1 of the Act, such as the Red Kite (Milvus milvus), are afforded further protection, and it is an offence to:

- Intentionally or recklessly disturb the bird whilst nest building or while at (or near) a nest with eggs or young; and
- Disturb the dependant young of such a bird.

5.2.4 Methodology

5.2.4.1 Habitat assessment

Signs looked for included:

- Availability of nesting habitat;
- Availability of foraging habitat;
- Territorial displays by birds;
- Courtship displays;
- Territory establishment and holding behaviour;
- Nests;
- Food carrying;

5.2.5 Constraints

There were no constraints to the assessment.

5.2.6 Results

5.2.6.1 Desk study

There were no records of birds from the development site or immediately adjacent land, however, there were multiple records of birds from the data search. There are records of barn owl approximately 180m from the site but there is no suitable roosting habitat for barn owl on site.

5.2.6.2 Habitat assessment

The trees, scrub and hedgerows are suitable for nesting birds.

All habitats on the site were suitable for foraging purposes, providing a variety of food sources. It should be assumed that the scattered trees and scrub are used for nesting purposes during the breeding season.

It is considered that the site does not provide suitable habitat for ground nesting species as the open areas are small and overlooked, all of which could be used by avian predators.

5.2.7 Breeding birds – evaluation

Birds should be considered to be of **high national** importance as a result of the legislation protecting them.

Within the context of the site, there is abundant suitable habitat for the smaller and more common species to utilise for nesting and foraging within the site boundaries. It is therefore considered that birds are of a **medium local (site)** ecological importance.

5.2.8 Breeding birds - impact characterisation

It is anticipated that at the time of writing very little habitat suitable for breeding birds will be removed as a result of the proposed development. A single tree will be removed from adjacent to Gelligaer road

and some scrub/hedgerow habitat may be pruned/cut back slightly. A small section of hedgerow against Gelligaer Road will be removed to facilitate access.

5.2.9 Breeding birds - impact assessment without mitigation

In the absence of mitigation, the removal of vegetation during the breeding season would result in the likely disturbance and destruction of nests and the disturbance, killing and injuring of birds (both adults and juveniles). This would constitute a **certain moderate medium term adverse** impact at a **local (site)** level.

5.2.10 Breeding birds - mitigation measures

Mitigation will be required and should include (but not be limited to) the following measures:

- All vegetation and brash removal should be undertaken outwith the breeding season i.e. between mid-August / September and April inclusive;
- Any clearance close to the start and end of this period should only be undertaken following an assessment by a suitably experienced ecologist as the breeding season is not fixed and is subject to annual variation;
- Where clearance is required during the breeding season, all areas should be subject to an assessment no more than 48 hours in advance to check for the presence of breeding birds;
- Should evidence of breeding birds, in particularly nests, be recorded, no clearance may be undertaken within 15m of any nest site until such time as the nest is vacated naturally; and
- Any post-development landscaping plan should include the provision of scrub &/or shrub habitats that can be utilised by breeding birds.

Consideration should be given to including measures to benefit birds within the housing development e.g. installation of bird boxes on new buildings.

Bird boxes will be erected on the houses on completion of the builds.

5.2.11 Breeding birds - impact characterisation with mitigation

It is considered that there will be a **possible minor short term adverse** impact at a **local (site)** level on breeding birds as a result of the proposed development.

5.2.12 Breeding birds - significance of the impact

Without mitigation

It is considered that the significance of the impact is **slight**.

With mitigation

It is considered that the significance of the impact is **neutral**.

5.3 REPTILES

5.3.1 Summary

No reptile survey was undertaken at the site. The majority of the site is hard standing. It is considered likely that if reptiles are present, they will only be present on the interfaces between the cut bramble and the hedgerow to the longer areas of grass between the verges.

It is unclear at the time of writing how much suitable reptile habitat will be removed. However, given the habitats within the red line boundary, it is likely to be minimal at best. A full trapping and translocation exercise is not considered necessary as long as clearance of the site is undertaken in strict adherence to a method statement designed to prevent harm to any reptiles. A methodology for this will be required at any reserved matters stage.

5.3.2 Ecology

Reptiles are ectothermic, meaning they have to rely on external heat sources to warm their blood sufficiently to allow foraging and other activity. During the winter they are in brumation (similar to hibernation), emerging in April (or when the temperatures are consistently warm enough). Males tend to emerge before females, to enable them to prepare for mating. Females emerge a few weeks later and mating takes place. Female reptiles in the UK generally breed every other year to allow them to build up sufficient energy reserves. Grass snakes are the UK's only egg-laying reptile, eggs are laid in summer in warm piles of decomposing vegetation (or similar) and left to develop and hatch on their own. Young reptiles are born/hatch in late summer/early autumn. Brumation (hibernation) starts again as temperatures fall in the autumn.

The four more commonly occurring species of reptile in the UK (adder (*Vipera berus*), grass snake (*Natrix natrix*) slow worm (*Anguis fragilis*) and common lizard (*Lacerta vivipara*) have different preferences for habitat and diet. Adders generally prey on small mammals in drier habitats, grass snakes primarily hunt amphibians in wetter areas and aquatic habitats, slow worms take small, slow-moving invertebrates and inhabit drier areas and common lizards prey on small, faster-moving invertebrates and tolerate both wet and dry habitats.

5.3.3 Legislation

The four common species listed above are protected by the Wildlife and Countryside Act 1981 (as amended) against killing, injury and sale.

Smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) are not found in this area, having very specific geographical distribution within Britain, and so will not be referred to in this report despite the higher legislative protection afforded to them.

5.3.4 Methodology

5.3.4.1 Habitat assessment

The habitat assessment looked for features which would be attractive to reptiles such as:

- south facing banks;
- varied profile ground form;

- basking areas;
- vegetation cover;
- structurally diverse vegetation;
- potential hibernation sites; and
- evidence of suitable prey sources.

5.3.5 Results

5.3.5.1 Desk study

There are records of slow worm and common lizard greater than 1km from the site.

5.3.5.2 Habitat assessment

The site offers some limited habitat for this species for foraging, basking, sheltering and hibernation purposes and it should be assumed that slow worm (*Anguis fragilis*), common lizard (*Lacerta vivipara*) potentially use the site in low numbers. It is likely that the population densities of these species are at perhaps lower levels given the location of the site and the small size of suitable habitat along the peripheries of the site.

5.3.6 Reptiles – evaluation

Reptiles are protected by UK legislation and therefore they are of **medium** to **high national** ecological importance.

No reptiles were found throughout the course of the survey.

5.3.7 Reptiles - impact characterisation

It is anticipated that the site will be largely cleared of vegetation, thereby removing the majority of the suitable habitat for this group. It is still possible that in the absence of mitigation, reptiles are likely to be killed or injured during the clearance for the site.

5.3.8 Reptiles - impact assessment without mitigation

It is considered that in the absence of mitigation there would be a **probable minor short term adverse** impact at a **local (site)** level.

5.3.9 Reptiles - mitigation measures

As long as reptile presence is assumed and site clearance us undertaken in accordance with an appropriate method statement, it is considered that a full trapping and translocation exercise is not required, and that habitat manipulation and denial is an appropriate method of ensuring that reptiles are not harmed during the site clearance.

Therefore, the following mitigation will be adopted:

- Clearance will be conducted in accordance with a Method Statement (to ensure that should reptiles be found in the course of site clearance or any other development activity, they will not be harmed and can be adequately cared for;
- Clearance will only be undertaken during the reptile active season (April-October, inclusive) unless it is determined that some areas of the site are not suitable for hibernation, unless the ground is too wet for hibernation or temperatures are consistently above 12 for seven consecutive days;
- Clearance outwith this period is possible, but depends on weather and temperatures being suitable to ensure that reptiles are likely to be active;
- There will be no clearance of hibernation habitat outwith the active season unless temperatures allow;
- Reptiles will be excluded from entering or re-entering the site during clearance/operational phase of works by ensuring that the site is kept as bare ground i.e. clear of any vegetation or other shelter
- A viable Ecological Mitigation Strategy (MS) will be included to include nesting birds, reptiles and invertebrates.

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5.3.10 Reptiles - impact characterisation with mitigation

It is considered that there will be an **unlikely minor short term adverse** impact at a **local (site)** level as a result of the proposed development.

5.3.11 Reptiles - significance of the impact

Without mitigation

It is considered that the significance of the impact is **slight**.

With mitigation

It is considered that the significance of the impact is **neutral**.

6 CONCLUSION AND RECOMMENDATIONS

Overall the site is of a low to moderate ecological value at a local level due to the habitats present, and the species that may reside on the site.

Breeding birds should be assumed to be present on the site. Mitigation for these groups is therefore required. All site clearance should be undertaken under ecological supervision.

A viable Ecological Mitigation Strategy (MS) will be included to included at reserved matters stage for nesting birds, reptiles and invertebrates..

A method statement for the dismantling of the building will be required in order to safeguard the presence of roosting bats.

13cm x13cm gaps will be created at the bases of fences at the site boundaries to allow passage of hedgehogs across the site. Cautious working will be undertaken when clearing the site to prevent killing or injury to this species.

It is recommended that the mitigation measures, outlined in the various sections above are incorporated as far as is possible into the design process for this development. and construction methodologies.

A wildflower meadow will be planted within the garden of the properties to benefit invertebrates. The wildflower areas will be seeded with Emorsgate EM3 https://wildseed.co.uk/mixtures/view/4/special-general-purpose-meadow-mixture

Any proposed lawned areas will be seeded with EL1 – Flowering Lawn Mixture, this contains slow growing grasses with a selection of wild flowers that respond well to regular short mowing (https://wildseed.co.uk/mixtures/view/56).

Native planting will need to be included as part of the final design.

The following sparrow terrace or similar will be integrated into the new properties https://www.nhbs.com/vivara-pro-woodstone-house-sparrow-nest-box

The following bat block https://www.nhbs.com/bat-block?bkfno=246596&ca_id=1495&adlocale=uk&gclid=CjwKCAiAnO2MBhApEiwA8q0HYTrIItmUdfXSmZQgvmupqeYj1cFwdN5KLrnJOB2F_rfrsElNTpQV1BoCx1EQAvD_BwE or similar will be integrated in to the new properties

There will be no lighting of retained habitats , dark corridors will need to be implemented throughout the development to allow light intolerant species to continue using the site should they wish Any new lighting (internal or external will conform to the following guidelines: https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/ . There will also be dark routes for access to the integrated bat boxes. A plan showing the areas to be kept dark will be included.

This report will need to be updated once the final development layout has been agreed. It is considered that due to the application being outline only, details of planting, specification and management of retained and newly created habitats can be covered by a LEMP at reserved matters stage or as a condition on the planning application. The LEMP will need to include details of the following:

1) Details of retained existing habitat
2) A non-licensed method statement for bats
3) Details of new native planting
4) Wildflower areas (Emorsgate EM3)
5) Lawned areas (EL-1 Flowering Mixture)

6) A 5 year establishment, maintenance and management plan for retained and new habitat
7) Details of the above mentioned bat and bird boxes
8) Lighting details
9) Areas to be kept dark
10) A mitigation strategy for nesting birds, bats, reptiles and invertebrates (should any vegetation require removal/pruning)
11) Details of gaps in all boundary fences (13cmx13cm) for passage of hedgehogs and other species

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APPENDIX A - PHOTOS

PHASE 1 HABITAT SURVEY PHOTOS

Plate 1- managed hedgerow to north east

Plate 2- rear boundary

Plate 3- photograph demonstrating sealed eaves

Plate 4- photograph of north eastern corner of the building

Plate 5- photograph of hedgerow facing roadside

Plate 6- photograph of loft over north eastern end of building

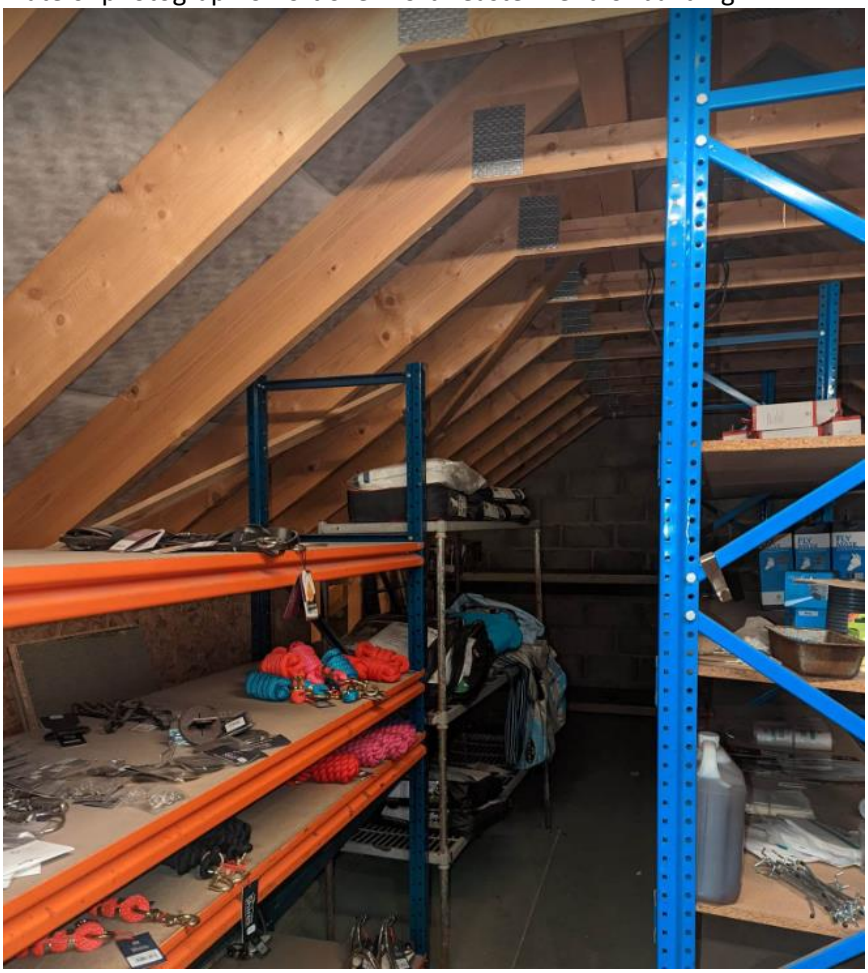


Plate 7- photograph of loft over north eastern end of building

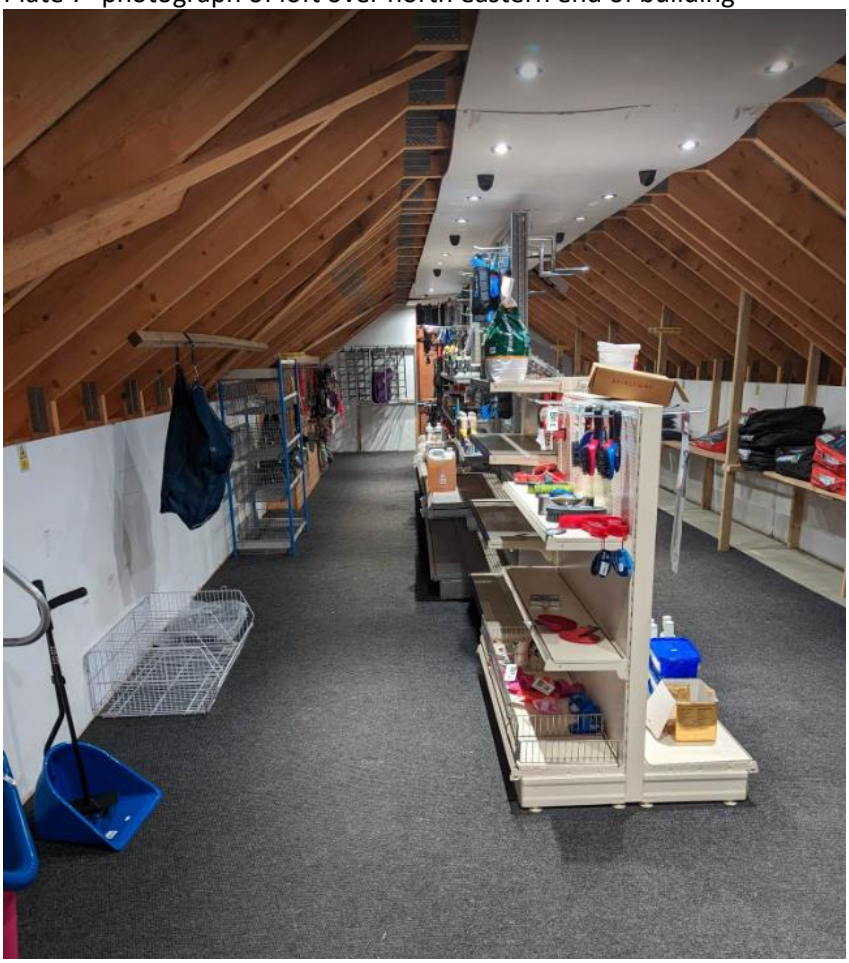


Plate 8- example of tightly fitted roof

Plate 9- View of shop

Plate 10- view of smaller roof void

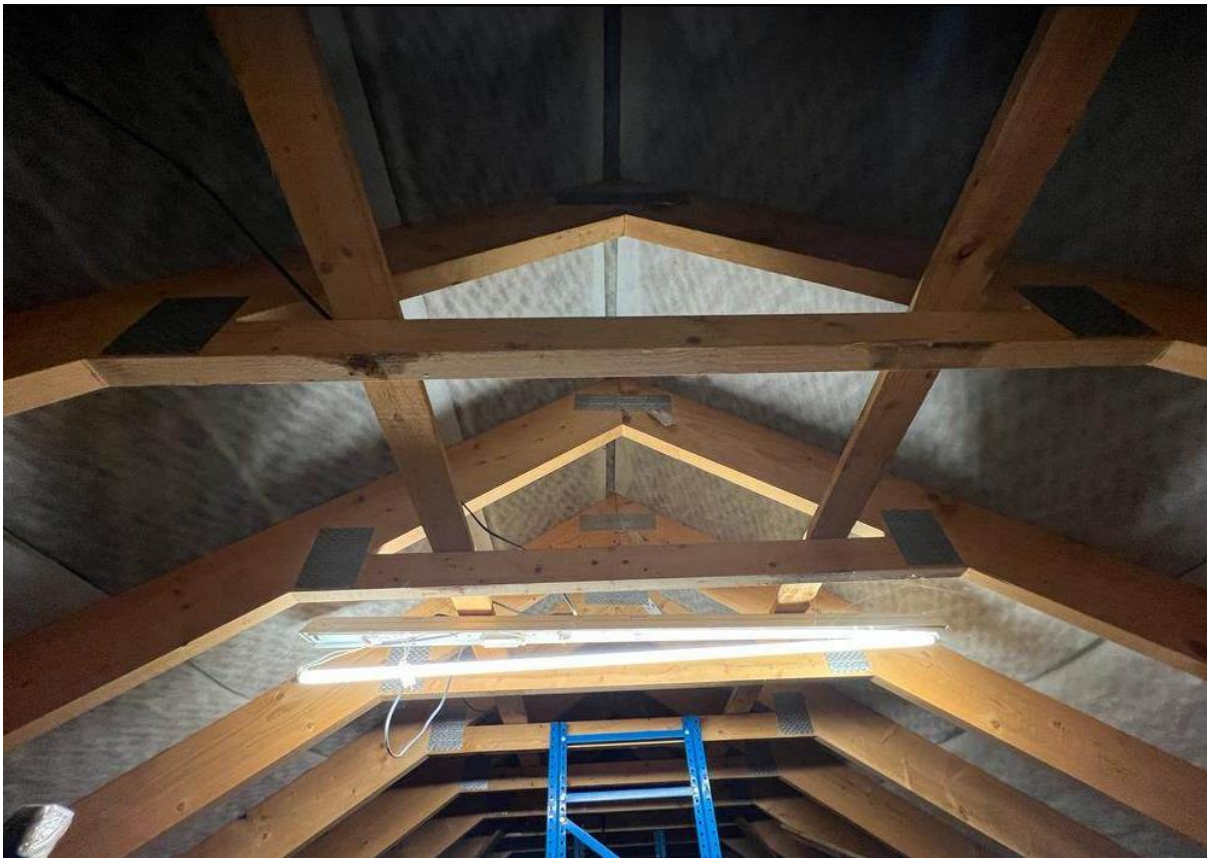
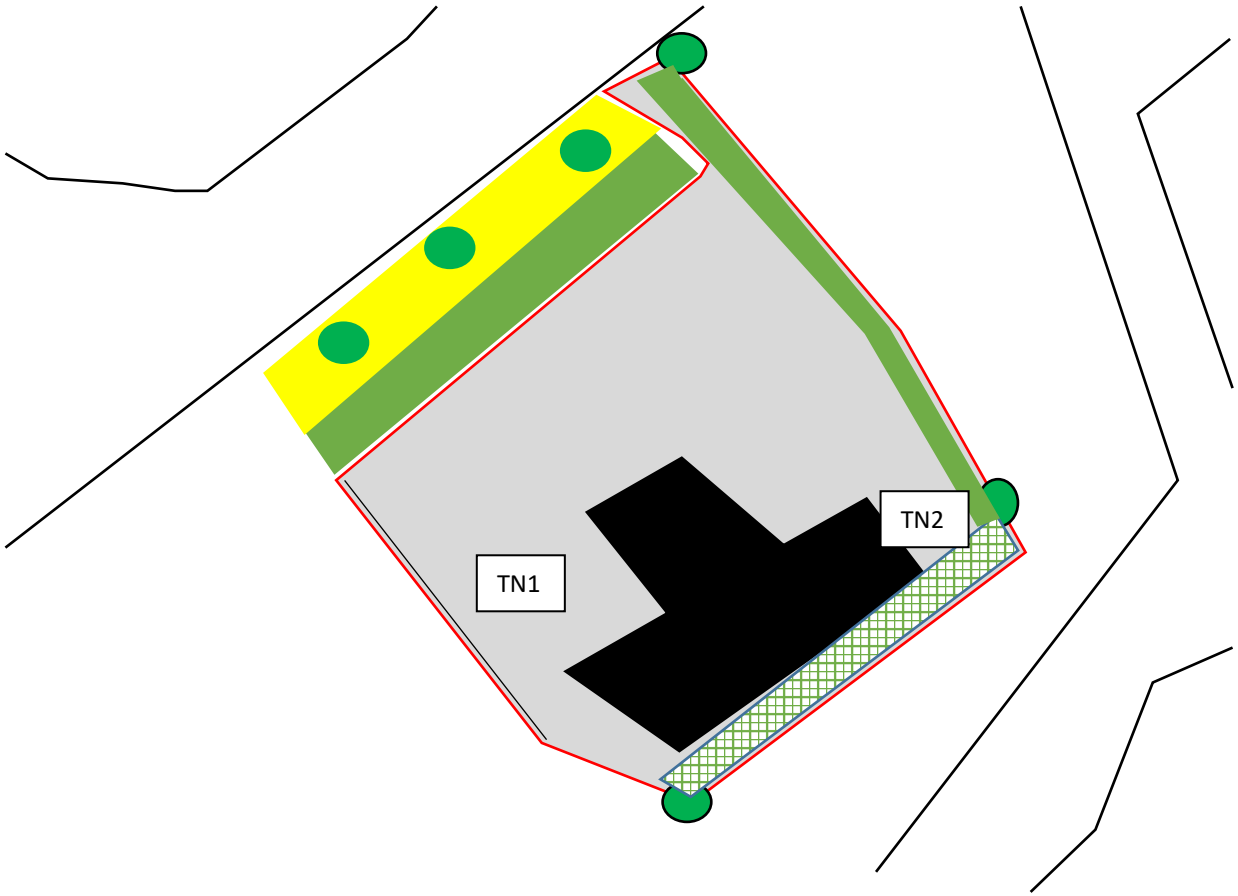


Plate 11- managed hedgerow

APPENDIX B– SPECIES LIST

Bramble, springy turf moss, rosebay willowherb, red fescue, common nettle, cocksfoot, perennial ryegrass, ivy, ribwort plantain, meadow buttercup,broadleaved dock, curled dock, , greater plantain, perennial ryegrass, herb Robert, white clover, dandelion and wild strawberry, daisy, ground elder. Lime, oak, hawthorn, goat willow, ash, false cypress

APPENDIX C – PHASE 1 MAP



KEY

1= Target notes (appendix d)

Building

improved grassland verge

Scrub/overgrown hedgerow

Red line boundary

Scattered tree

Bare ground

Hedgerow

Heras site fence

TARGET NOTE

TN1- sealed containers and pallets
TN2- metal wood storage shed