



Ecological Impact Assessment

Ashwick House, Tranwell

December 2022

Final Report

Report Prepared For:

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Document Control

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Field Investigations and Data

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work. Where any data supplied by the client or from other sources have been used it has been assumed that the information is correct. No responsibility can be accepted by EcoNorth Ltd for inaccuracies in the data supplied by any other party.

Declaration of Compliance

“The information which we have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management’s Code of Professional Conduct. We confirm that the opinions expressed within this document are our true and professional bona fide opinions.”

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1. Summary

EcoNorth Ltd was commissioned by Sean Donkin to undertake an Ecological Impact Assessment which involved a Preliminary Ecological Appraisal (PEA) and bat surveys of land at Ashwick House in Tranwell Woods, Northumberland. The initial survey was undertaken by Claire Snowball and Niamh Hawthorne on 17th August 2022, with bat activity surveys in August and September 2022. Habitat maps were produced in accordance with the methodology described in the Handbook for Phase 1 habitat survey (JNCC, 2016), with the survey 'extended' to determine the potential suitability of the site for protected species. It is proposed to extend the main house and undertake refurbishment works on the separate annex building to the east; this report is designed to highlight key ecological constraints and support the full planning application and assesses the potential impacts upon the ecological interests of the site.

A desk study completed prior to the field visit highlighted the presence of one non-statutory sites within 2km of the site boundary (Tranwell Woods Local Wildlife Site), which lies c.300m from the site boundary. The study also identified the presence of common toad, common frog, smooth newt, great crested newt, bluebell, hedgehog, brown hare, otter, badger, red squirrel, and a range of bat species (*Myotis* sp., Brandt's, whiskered, Natterer's, noctule, common pipistrelle, soprano pipistrelle, and brown long-eared) within 2km of the site boundary.

The following table highlights the key ecological features/species identified on site and those which have the potential to be present, based on the information available to date. Requirements for further surveys are highlighted, while necessary mitigation measures are provided in Section 7.



Ecological Feature	Presence on Site	Ecological Value	Further Surveys Required Pre-planning?	Key Mitigation
Habitats	<p>Habitats on site consist of built development on an area of hard standing, with the works area surrounded by a formal garden including large areas of amenity grassland, scattered trees grading into woodland to the south, introduced shrubs and a small artificial pond.</p> <p>Extension works will be restricted to an existing area of hard standing which is currently used as a patio and abuts the southern side of the main house</p>	<p>On site – Negligible</p> <p>Surrounding area - local</p>	No	Retention and protection of mature trees through the works
Invasive Plant Species	Cotoneaster present on site.	N/A	No	Implementation of an invasive species management plan to control the spread of Schedule 9 listed plant species.
Bats	<p>Two buildings to be affected by the proposals – brick dormer bungalow with pitched slate roof, and a separate dormer annex building of the same construction to the east. Small number of scattered bat droppings recorded in the loft of both buildings</p> <p>Common and soprano pipistrelle day roosts recorded in the two buildings to be affected, with <i>Myotis</i>, brown long-eared, and noctule recorded foraging and commuting on or over the site during the surveys.</p>	Local	No	<p>No works to be undertaken which would affect bats or their roosts until a license has been granted by Natural England</p> <p>Retention and creation of roosting opportunities within both structures</p>
Great Crested Newt	A single waterbody on site with potential to support a breeding population of great crested newts. However, works will be restricted to areas of built development and existing hard standing which are unsuitable for use by amphibians	On site - negligible	No	Works to proceed to a precautionary method statement



Ecological Feature	Presence on Site	Ecological Value	Further Surveys Required Pre-planning?	Key Mitigation
Red Squirrel	The woodland which surrounds the site is considered suitable for the species, although the proposed works area lacks potential habitat.	On site - negligible	No	Works to be completed in line with a precautionary method statement.
Badger	The areas of amenity grassland which surround the site provide potential foraging habitat for badger, with small areas of scrub and woodland providing limited opportunities for sett creation. Higher quality habitat is present in the wider area. The species may utilize the site on an intermittent basis, although no field signs were recorded	On site – Negligible Surrounding area – local		Works to be completed in line with a precautionary method statement.
Birds	The buildings, trees and shrubs/scrub are considered to have the potential to support nesting birds, potentially including species of conservation concern such as House Sparrow.	Local	No	Building works will not be undertaken during the nesting period (March – September) unless a checking survey by a suitably qualified ecologist has confirmed no active nests are present within the five days prior

2. Introduction

2.1 Background

EcoNorth Ltd was commissioned by GSS Architecture (henceforth referred to as ‘the client’) to undertake an Ecological Impact Assessment which involved a Preliminary Ecological Appraisal (PEA), and bat surveys of land at Ashwick House, Tranwell Woods in Northumberland (central grid reference NZ 17958 82616). The client proposes to build an extension to the main house and convert part of an annex building to the east. The survey was designed to map the habitats and determine the potential suitability of the site for protected species, to highlight key ecological constraints and support the full planning application.

This report:

- Sets out the results of the survey.
- Analyses the site’s value for nature conservation.
- Identifies additional survey requirements in order to fully determine the baseline ecological conditions on the site, if required.
- Identifies key avoidance, mitigation and/or compensation measures required to ensure the proposals do not have an adverse impact upon biodiversity.

2.2 Site Context

The site is located within the Gubeon Wood area of Tranwell Woods, approximately 2km southwest of Morpeth. The wider area is comprised of broadleaved woodland surrounded by agricultural land. Figure 1 identifies the location of the development site.

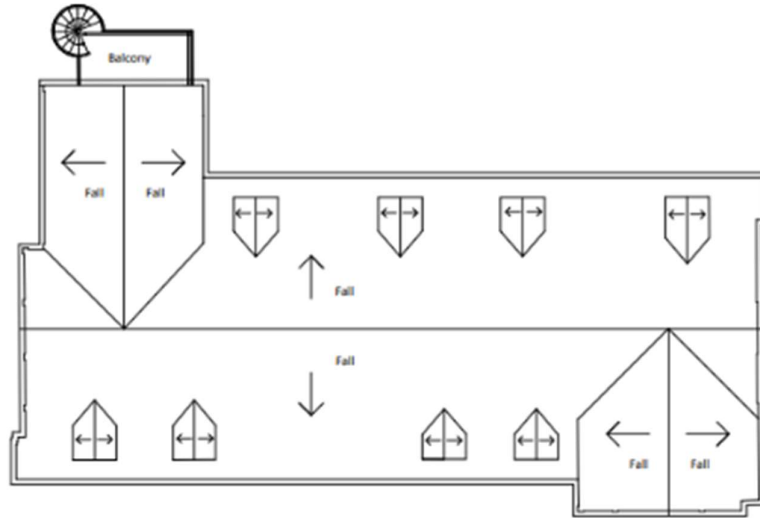
Figure 1: Indicative Site Location (yellow pin) and 2km Buffer (yellow circle)



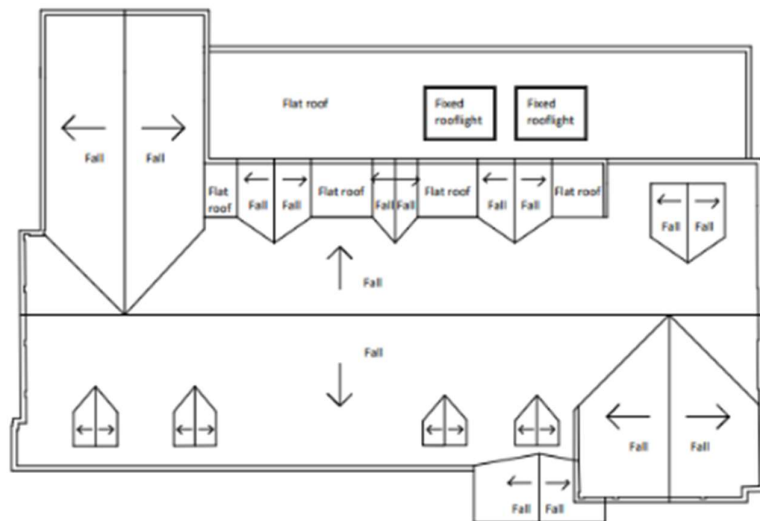
2.3 Nature of the Proposals

It is proposed to extend the main house over part of an existing area of hard standing to the south, and undertake refurbishment works on a separate annex building to the east, which will include the installation of new dormer windows and skylights, as shown in the figures below.

Figure 2: Ashwick House Development Proposals – Existing and Proposed Site Plans



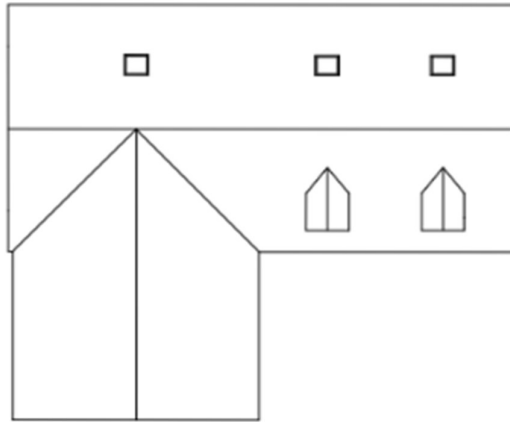
3. Existing Ashwick House Roof Plan
SCALE - 1 : 100@A1



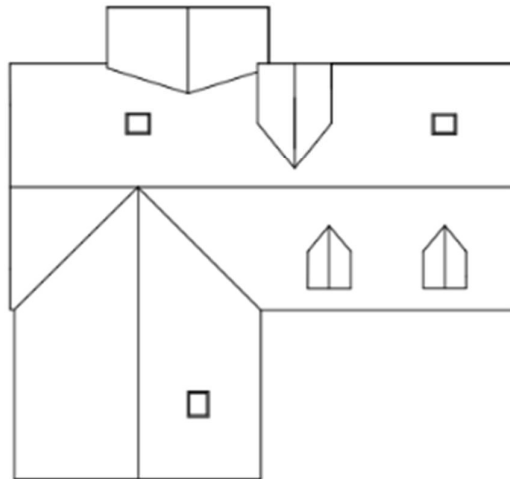
6. Proposed Ashwick House Roof Plan
SCALE - 1 : 100@A1



Figure 3: Annex Building Development Proposals – Existing and Proposed Site Plans



3. Existing Annex Building Roof Plan
SCALE - 1 : 100@A1



6. Proposed Annex Building Roof Plan
SCALE - 1 : 100@A1

1:100 Scale 0 1m 2m 5m 10m

3. Planning Policy and Legislation

3.1 Planning Policy and Guidance

A series of national and local planning policies are in place which are designed to ensure that development works do not have an adverse impact upon biodiversity, at a site or wider level. Such policies ensure that both developers and public bodies must give due consideration to the potential effects of development works upon both ecological receptors (in line with existing wildlife legislation) and biodiversity.

3.1.1 National Planning Policy Framework (NPPF) (2021)

The NPPF outlines the Government's policies through the planning process, acting as guidance for local planning authorities and decision-makers. The document places a duty on local authorities to consider the principles included when assessing planning applications and preparing Local Plans and Regional Spatial Strategies. Chapter 15 relates to the conservation and enhancement of the natural environment, in line with existing wildlife legislation. Further details are provided on the gov.uk website.

3.1.2 Habitats and Species of Principal Importance / Biodiversity Action Plans (BAPs)

The UK BAP was published in 1994 to guide national strategies for the conservation of biodiversity. BAPs were designed to ensure the conservation and re-establishment of natural habitats, and that measures were implemented to aid the conservation and enhancement of habitats and species of local importance, the latter through the development of Local BAPs. The UK BAP was succeeded by the 'UK Post-2010 Biodiversity Framework' in 2012, however, the lists of species and habitats of conservation importance are still considered a valuable tool for identifying features of local and national conservation concern. As such, the potential presence of both Local and UK BAP habitats and species were considered throughout the surveys and assessment.

Species and habitats formerly identified and included within UK BAPs are typically also those which are considered to be "of principal importance for the purpose of conserving biodiversity" and listed under section 41 (England) of the NERC Act (2006) in accordance with the requirements of the NERC Act. Such species and habitats need to be taken into consideration by a public body when performing any of its functions.

3.2 Legislation

A range of legislation is in place to ensure that habitats and species of conservation importance are protected from both direct and indirect harm. Key legislation includes:

- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (The Habitat Regulations).
- The Convention on the Conservation of European Wildlife and Natural Habitats 1979 (The Bern Convention).
- The Wildlife and Countryside Act 1981 (as amended).

- The Natural Environment and Rural Communities (NERC) Act 2006.
- The Countryside and Rights of Way (CRoW) Act 2000.
- The Wild Mammals (Protection) Act 1996.
- The Protection of Badgers Act 1992.
- The Hedgerow Regulations 1997.

An overview of the above legislation is provided in Appendix A.

The potential presence, on or near the site, of species afforded protection under the above legislation was considered throughout the surveys and assessment. Species considered include:

- Bats.
- Great crested newt.
- Otter.
- White-clawed crayfish.
- Water vole.
- Red squirrel.
- Badger.
- Birds.
- Migratory fish.

An overview of the legislation and level of protection relating to such species is provided in Appendix A.

4. Methodology

4.1 Desk Study

Contextual information was gathered as part of a desk study undertaken prior to the start of field surveys. Such information can identify protected or notable species which may occur on the proposed development site or in the local area, as well as identifying statutory and non-statutory ecological sites which may have the potential to be affected by the proposals. Species records and the location of statutory and non-statutory nature conservation sites within 2km of the survey site were requested from Environmental Records Information Centre North East (ERIC NE) and from the Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk).

Additionally, 1:10,000 Ordnance Survey maps were consulted to help identify waterbodies or watercourses within 500m of the site. This search reflects the potential for great crested newts to utilise terrestrial habitat up to 500m from their breeding ponds and also helps determine the potential for other riparian or semi-aquatic species which will move away from a watercourse to be present (e.g. otter *Lutra lutra*).

It should be noted that an absence of records is likely to reflect an absence of survey data and cannot be taken as confirmation that a particular species is not present in the site or surrounding area.

4.2 Field Survey

4.2.1 Habitats

Mapping of the habitats within the site followed the Phase 1 habitat survey methodology outlined in the 2016 edition of the 'Handbook for Phase 1 habitat survey' by the Joint Nature Conservation Committee (JNCC). This follows a standardised system which can be easily interpreted, with habitats and boundary features correlating to one of around ninety set definitions. Target notes were used to record further information regarding features of interest, or specific habitats or features identified during the survey which do not closely match any of the Phase 1 habitat criteria.

Plant species were identified in accordance with Rose (2006) and Stace (2019). A search was also conducted for presence of Schedule 9 invasive non-native plant species such as Japanese knotweed *Fallopia japonica* and Himalayan balsam *Impatiens glandulifera*.

The results of the Phase 1 habitat survey are shown in Appendix B, with site photographs in Appendix C.

4.2.2 Protected and Notable Species (Excluding Bats)

Throughout the field survey, searches were made for field signs indicating the presence of protected and notable species, including but not being limited to those species listed in Section 3.2. Any field signs recorded (including sightings of the animals themselves) were mapped. An assessment was also made of the potential for the site and adjacent areas to support protected and notable species, to identify where the proposals may impact upon such species and identify any requirements for further (species-specific) surveys.


4.2.3 Bats

Habitat Assessment

An assessment of the potential suitability of the habitats within the site and surrounding area for bats was undertaken, as part of the preliminary ecological appraisal. This included an assessment using the criteria set out in the Bat Conservation Trust Survey Guidelines, as shown in Table 1, below.

These criteria were used to provide a guide as to the potential suitability of the site for bats. It is important to note that an absence of potential commuting routes or 'good quality' foraging areas around a site cannot be used to confirm the absence of bats from a site. Bats are highly mobile animals which will use different habitats at different times of the year, therefore an appropriate level of additional survey work must be carried out in order to determine if and how bats utilise a particular site.

Table 1: BCT Guidelines for Assessing the Value of Habitats for Bats

Feature	Value
<p>Evidence indicating that a structure/feature is used by bats, such as:</p> <ul style="list-style-type: none"> • Bats seen roosting or emerging/entering a structure/ feature; • Field signs such as droppings, feeding remains or carcasses found; and/or • Bats heard calling or ‘chattering’ within a roost. <p>Bats recorded/observed using an area for foraging or commuting.</p>	<p>Confirmed Roost</p>
<ul style="list-style-type: none"> • Site is close to known roosts. • Site is connected with the wider landscape by strong linear features that would be used by commuting bats <u>e.g.</u> river/stream valleys or hedgerows. • Habitat of high quality for foraging bats <u>e.g.</u> broadleaved woodland, tree-lined watercourses, parkland. • Buildings, trees or other structures <u>e.g.</u> mines, caves, tunnels, ice houses and cellars, with features of particular significance for roosting bats. <ul style="list-style-type: none"> • Site is connected with the wider landscape by linear features that could be used by commuting bats <u>e.g.</u> lines of trees and scrub or linked back gardens. • Habitat could be used by foraging bats <u>e.g.</u> trees, scrub, grassland or water. • Several potential roosts in the buildings, trees or other structures. <ul style="list-style-type: none"> • Isolated site not connected by prominent linear features (but if suitable foraging habitat is adjacent it may be valuable if it is all that is available). • Isolated habitat that could be used by foraging bats <u>e.g.</u> a lone tree or patch of scrub, but not parkland. • Small number of potential roosts generally of lower conservation importance <u>e.g.</u> probably not maternity roosts or hibernacula. <ul style="list-style-type: none"> • No features that could be used by roosting bats for foraging, roosting or commuting. 	<p>High Value Habitat</p>  <p>Low Value Habitat</p>

Building Survey

Preliminary Bat Roost Assessment / Field Sign Survey

An initial inspection of the buildings within the site was completed on 17th August 2022. The internal and external areas of the buildings were inspected and notes made regarding both the nature of the structure (materials, loft structure, age etc.) and condition of the buildings, to help identify any areas or features which may allow bats access or have the potential to provide roosting opportunities. Where potential access or roosting opportunities were noted, these were inspected for signs of bats, including droppings, feeding remains, staining or bats themselves. Where droppings were found, these were collected to allow for DNA analysis at a later date, if required.

The survey included an assessment of the likely potential use of the building at times throughout the year to take into account the fact that bats will utilise different roost sites at different times and for different purposes, sometimes including multiple roost types within a single structure.

The layout of the buildings within the site is shown in Appendix B; site photographs are provided in Appendix C.

Activity Surveys

Two activity surveys were completed at the site, comprising one dusk and one dawn visit. Dusk surveys commenced 15 minutes before sunset and continued for 1.5 - 2 hours after sunset; dawn visits started 1.5 - 2 hours before sunrise and finished 15 minutes after sunrise, in line with current best-practice guidelines.

Surveyors were positioned around the exterior of the building to watch for bats emerging/entering the structure, with all elevations viewed at one time and the line-of-sight not exceeding 50m.

Each surveyor used an EchoMeter Touch Pro 2 detector linked to an Amazon Fire tablet to identify bats and allow subsequent analysis of calls where necessary. Bat activity during the surveys was recorded on field sheets detailing the time, roost emergence/entrance points, the number of bats, species (where possible), key flight-lines and foraging areas. A note was also made of any other activity recorded, such as foraging or social calling. An overview of the activity surveys is provided in Appendix B.

Analysis of Results

Recordings made using the EchoMeter Touch Pro 2 detector and Amazon Fire tablet were analysed using Kaleidoscope Pro. The program can help to confirm the identification of the different calls recorded to species level using sonograms and power spectra, along with the measurements of a range of variables such as inter-pulse interval, minimum and maximum frequencies and pulse length. Foraging activity or social calling can also be identified in this way.

It should be noted that it is not always possible to confirm calls to species level. *Pipistrellus* sp. and *Myotis* sp. can usually be separated with a high degree of confidence and it is normally possible to identify pipistrelle bats to species level however, many of the *Myotis* sp. have similar calls and it is not always possible to confirm identification to species level. This is also the case with *Nyctalus/Eptesicus* sp., which can again have very similar calls, or for species which echolocate very quietly, such as brown long-eared bats, as it may not be

possible to record a strong enough call to confirm the assessment. Any uncertainties in identification are noted in this report.

4.2.4 Survey Conditions and Personnel

The field surveys were completed as shown in Tables 2 and 3, below. For further information on the team's experience, please visit <https://www.econorth.co.uk/who-we-are/team/>

Table 2: Activity Survey Times and Weather Conditions

Date	Sunset/rise (BST)	Start Time (BST)	End Time (BST)	Precipitation	Temperature (°C)	Cloud Cover (Oktas)	Wind (Beaufort Scale)
19/08/22	20:31	20:16	22:01	Nil	17	1/8	1
07/09/22	06:22	04:22	06:37	Nil	13	3/8	0-1

Table 3: Survey Personnel

Survey	Date	Survey Leader	Assistant Surveyors
PEA & PBRA	17/08/22	<u>Claire Snowball</u>	Niamh Hawthorne
Dusk Survey	19/08/22	<u>Claire Snowball</u>	Phil Pearson, Ross Pearson, Heather Pearson, Kate Snowball, Adam Little
Dawn Survey	07/09/22	<u>Claire Snowball</u>	Niamh Hawthorne, James Quirk, Thomas Wilson , John Thompson, Sophie Webster
<u>N.B.</u> Those surveyors in bold are licensed to work with bats by Natural England. Where names are underlined, it indicates that this individual is licensed to work with great crested newts by Natural England.			

Any constraints or limitations to the survey are discussed in Section 6.1.

4.3 Assessment of Value

The botanical value of the habitats on site and the value of the site for protected species, as determined through the extended Phase 1 habitat survey, were based on the criteria published by the Chartered the Institute of Ecology and Environmental Management (CIEEM) in 2018 (<http://www.cieem.net/ecia-guidelines-terrestrial->). Each feature was classified as being as one of the following levels of value:

- International.
- National.
- Regional/County.
- City/District/Borough.

- Local.
- Low.

Examples of different ecological features meeting each of these criteria are outlined in Appendix D.

5. Baseline Conditions

5.1 Desk Study

5.1.1 Designated Sites

Table 4 shows those designated sites identified through the desk study as lying within 2km of the site boundary.

Table 4: Designated Sites within 2km

Designated Site	Distance & Direction from Site	Reasons for Designation
Tranwell Woods Local Wildlife Site	300m north	No information is available.

5.1.2 Protected and Notable Species

A range of protected and notable species were identified through the desk study as having been recorded within 2km of the site boundary within the last 10 years, including common toad, common frog, smooth newt, great crested newt, bluebell, hedgehog, brown hare, otter, badger, red squirrel, *Myotis* sp., Brandt's bat, whiskered bat, Natterer's bat, noctule, common pipistrelle, soprano pipistrelle, and brown long-eared bat.

Further information is provided in Appendix E.

5.2 Field Survey

5.2.1 Habitats

Habitats within the site were found to be dominated by built development and hard standing, surrounded by a mature, well-managed garden dominated by amenity grassland, with introduced scrub, scattered trees, broadleaved woodland and an artificial pond. The site boundary is lined with hedgerows. Such habitats are described in the following sub-sections. The results of the Phase 1 survey are shown in Appendix B, with site photographs in Appendix C.

Amenity Grassland

Much of the garden is dominated by highly managed amenity grassland, which had a very short sward height at the time of survey. Species noted are typical of such habitats and included perennial ryegrass *Lolium perenne*, meadowgrass *Poa* sp., Yorkshire fog *Holcus lanatus*, dandelion *Taraxacum* agg., creeping buttercup *Ranunculus repens* and daisy *Bellis perennis*.

Introduced Shrub

Patches of introduced shrubs are present within formally managed beds in the garden, with cotoneaster noted to the south of the main house.

Broadleaved Woodland and Scattered Trees

Scattered mature trees, including a range of ornamental species are present through the gardens surrounding the house, particularly to the south; tree cover becomes increasingly dense and grades into broadleaved woodland to the south of the property.

Pond

An artificial pond is present within the garden. The pond is steep sided and lined with plastic, with bricks at the edges. A small amount of duckweed *Lemna* sp. was present on the water's surface at the time of survey.

Hedgerow

Mature hedgerows, which are well-managed, delineate the boundaries of the property.

Buildings and Hard Standing

Two buildings are present within the site which will be affected by the works, and which are described below (section 5.2.3 – Bats) with a third building, a small garage/shed structure, lying to the south east which will not be affected by the proposals. The house and annex building are surrounded by open areas of hard standing which form footpaths and patios to the south (and part of which will be used for the extension of the main house) with further areas of hard standing to the north of the buildings which is used by vehicles for parking and access.

5.2.2 Schedule 9 Plant Species

Cotoneaster was recorded on site. Not all species of cotoneaster are listed as under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) which lists invasive non-native species that are subject to specific control and removal however, four species are listed. Cotoneasters are a very similar group of species requiring specific expert identification. Therefore, as a precautionary approach, the cotoneaster recorded is assumed to be designated under the Act and will require appropriate mitigation.

5.2.3 Protected and Notable Species

Bats

Habitat Assessment

Habitats within the works area were found to be dominated by hard standing and built development, with adjacent habitats in the wider survey area comprising a mature, well-managed garden dominated by amenity grassland, with introduced shrubs, scattered trees and an ornamental pond. Although the areas of hard standing, buildings and amenity grassland provide sub-optimal habitat, providing little shelter or potential foraging opportunities, the mature garden with its pond and good amounts of tree cover provide small areas of high quality habitat for a range of bats, including both potential foraging areas and commuting routes.

Building Surveys

Preliminary Bat Roost Assessment / Field Sign Survey

Two buildings are present within the site, which comprise the main house and a separate annex/outbuilding to the east.

The main house is a dormer bungalow of brick construction with a metal balcony and spiral staircase to the south east. The house has a pitched slate roof; some gaps are present under lifted roof slates and ridge tiles. Timber-clad dormer windows are present on both the northern and southern elevations, with gaps present under the lead flashing between the dormers and main roof. Gaps are present behind the fascias on the dormer windows and the owners reported seeing bats emerge from these areas on the southern elevation; two pipistrelle bats were visible in this area at the time of survey.

Internally, a loft void is present, which is c.2m high to the exposed ridge beam. The roof is supported on modern cut timbers in an attic truss design. The floor of the void is lined with dense fibreglass insulation, with a timber walkway providing access through the centre. A brick chimney extends through the void and the roof is lined with large timber boards. A small number of scattered bat droppings were present within the void.

The annex/outbuilding is of brick construction, with a pitched slate roof and dormer windows to the north. Metal garage doors are present to the north west of the building. The dormer windows are of the same construction as those on the main house, with small gaps present behind the fascias, and areas of lead flashing present between the dormer and main roof, the latter of which is in generally good condition.

Internally, a loft void is present, which is c.2m high to the exposed ridge beam. The roof is supported on modern cut timbers. The floor of the void is lined with dense fibreglass insulation, and the roof is lined with traditional 1F sarking which extends through the full height of the void and covers the ridge beam. The western gable is of blockwork construction with small gaps/ledges noted at the wall tops, and a small airbrick/vent is present which is not considered to provide potential access to bats. A number of large wasp nests were recorded in the void, which were inactive at the time of survey.

Bat droppings were recorded scattered throughout the void, although no bats were present at the time of survey.

*Activity Surveys*Dusk 19th August 2022

High levels of activity were noted during the survey, with common pipistrelle, soprano pipistrelle, noctule, brown-long eared, and *Myotis* sp. recorded. Foraging activity was concentrated around the trees surrounding the property, with large amount of commuting across the site also noted. Sunset was at 20:31, and the first bat (soprano pipistrelle) was recorded at 20:19, 12 minutes before sunset, confirming the presence of roosts in the immediate area.

Main House

Five soprano pipistrelles were seen to emerge from the dormer roost on the southern elevation, which was recorded during the initial building inspection (two from one side, three from the other). Two soprano pipistrelles were seen to emerge from under the fascia on the southern elevation and three soprano pipistrelles emerged from the soffit on the southern elevation. One common pipistrelle was seen to enter the apex of the gable on the western elevation, and later a soprano pipistrelle was seen to emerge from the same roost. One soprano pipistrelle was possibly seen to emerge from the eastern gable.

Outbuilding

No bats were seen to enter or emerge from the outbuilding.

Dawn 7th September 2022

Moderate levels of activity were noted during the survey, with common pipistrelle, soprano pipistrelle, noctule, and brown long-eared bat recorded. A large amount of foraging was again noted around the trees. Sunrise was at 06:22, and the last bat (a noctule) was recorded at 06:36.

Main House

One soprano pipistrelle was seen to enter the gable on the southern elevation. Two soprano pipistrelles were seen to enter a gap under the lead flashing under the left-hand dormer window on the northern elevation, with two further soprano pipistrelles recorded entering a gap under the next dormer window along on the northern elevation. Three soprano pipistrelle were seen entering the roof structure under roof tiles on the southeastern corner of the house.

Outbuilding

One soprano pipistrelle was seen false returning near the apex of the western elevation but did not enter. Two soprano pipistrelles were recorded entering the area behind the fascias on a dormer window on the northern elevation.

Summary of Roosts

Table 5 summarises the types of roost confirmed and/or potentially present within the site, based on the results of the surveys above.

Table 5: Summary of Roosts

Roost Type	Location	Bat Species / Numbers
Day	Gap under lead flashing where meets dormer window on southern elevation of main house.	5 x soprano pipistrelles
Day	Under fascia boards on southern elevation of main house.	2 x soprano pipistrelles
Day	Soffit on southern elevation of main house.	3 X soprano pipistrelles
Day	Apex of western gable of main house.	1 x soprano pipistrelle, 1 x common pipistrelle
Day	Left hand dormer of northern elevation of main house of main house.	2 x soprano pipistrelles
Day	Second dormer along on northern elevation of main house.	2 x soprano pipistrelles
Day	Under roof tiles on south-western corner of building of main house.	3 x soprano pipistrelles
Day	Under a dormer window on the northern elevation of outbuilding.	2 x soprano pipistrelles
<u>N.B.</u> Not all of the above roosts were found to be in use at the same time		

Based on the timing of the surveys, low levels of field signs recorded internally, and small numbers of bats recorded using roosts scattered across different parts of the buildings, the presence of a maternity roost can be ruled out with some certainty. Activity levels in both August and September were comparable, with 12 soprano and one common pipistrelle recorded roosting on site in August, and 10 soprano pipistrelles present in September. Small numbers of droppings were recorded scattered through the lofts.

Bats are unlikely to hibernate around the dormer windows, due to the relatively open nature of these roost areas creating conditions which would be subject to significant fluctuations over the winter period, making torpor difficult to maintain. Conditions within the loft void of the main house are likely to be too warm for hibernation use, with a series of services/pipes and a chimney running through the void, although the loft of the annex is likely to be cooler and may be suitable for such purposes.

Great Crested Newts

A single waterbody on site which is considered to have some potential to support great crested newts. Surveys known to have been undertaken in at least two other properties within Tranwell Woods over the last 10 years did not confirm the presence of the species (Claire Snowball *pers comm*) however, great crested newts are known to be present in the surrounding area; the MAGIC website includes records of the species from 2014 from an area near Tranwell c.580m to the north east of the site.

Although the pond, wooded area and flower beds provide potential terrestrial habitat for amphibians, the amenity grassland which dominates the garden is considered to be sub-optimal for such species, creating conditions which are open and exposed and therefore increase the risk of predation or desiccation.

The proposed extension works will be restricted to habitats which are unsuitable for amphibians, comprising the existing buildings and an area of hard standing to the south of the structures, only part of the latter of which is to be used for the extension works. As such, it is not considered that the species would be present within the works area or affected by the proposals.

Red Squirrel

The woodland which surrounds the site is considered suitable for the species, therefore the garden around the property may be used at times in the event a population persists in the local area. No evidence indicating the presence of the species was recorded during the survey. Habitats within the proposed works area are considered to be unsuitable for red squirrels due to the lack of vegetation.

Badger

The areas of amenity grassland which dominate the garden provide potential foraging habitat for badger however, no field signs indicating the presence of the species were recorded during the survey. Good quality woodland habitat and large areas of agricultural land which provide further areas of suitable habitat for both foraging and sett creation are present throughout the surrounding area. Badgers are known to be present within the local area and have the potential to utilise the site at times.

Birds

A small range of locally common species, potentially including a small number of conservation concern, are considered to have the potential to breed on the site, within both the buildings and surrounding gardens however, the small areas of such habitat present on site are considered to limit the number of pairs potentially present, and hence the value of the site for nesting birds.

BAP and Other Species

Locally common species such as hedgehog and fox may move through or forage within the site at times however, the nature of the habitats within the proposed works area (hard standing) are considered to provide unsuitable habitat for species such as hedgehog, which are priority species of conservation concern under the UK BAP / NERC Act.

Species Scoped Out of This Assessment

Given that there are no watercourses present on or in close proximity to the site, no impacts are predicted upon otter, water vole, white-clawed crayfish or migratory fish as a result of any redevelopment works on the site.

6. Interpretation and Discussion

6.1 Survey Constraints and Further Survey Requirements

There are considered to be no constraints to the survey.

No further surveys are considered to be necessary at this stage. If works on site do not commence within 12 months of the most recent activity survey, an updating survey should be undertaken prior to commencement to ensure conditions on site remain the same; if works do not start until 2024 onwards, or a walkover survey in 2023 identifies any changes which may alter how bats utilise the site, then activity surveys should be undertaken to provide an up to date assessment.

6.2 Assessment of Value

Based on the results of the desk study and field work completed to date, the ecological interests of the site are valued as shown in Table 4, below, using the criteria outlined in Section 4.3 and Appendix D.

Table 4: Value of Ecological Features Recorded on Site

Ecological Feature	Ecological Value	Justification
Amenity Grassland / Introduced Shrub	Low	Large areas of mown/intensively managed habitats with a limited species diversity and which can be readily recreated over a short time period.
Hard Standing and Built Development	Negligible	Man-made features which lack botanical interest and can be readily recreated.
Scattered Trees	Local	Small numbers of mature trees which may be recreated, but with a longer lead-in period. Habitats of similar or higher quality present throughout the local area.
Pond (outside of the red line boundary)	Local	Man-made feature which can be readily recreated over a short time period, but which occurs less frequently in the local area
Invasive Plant Species	N/A	Cotoneaster present on site.
Bats	Local	Site supports small numbers of day roosting bats of locally common species, with numerous alternative roost sites present in the surrounding area
Great Crested Newt	On site - negligible	Habitats within the works are comprise hard standing and built development which are unsuitable for use by the species
Red Squirrel	On site - negligible	Proposed works area lacks any potential habitat for the species
Badger	On site - negligible Surrounding area - local	Proposed works area lacks potential foraging habitat or opportunities for sett creation. Surrounding area provides small areas of potentially suitable habitat for foraging badger, with habitats of similar or higher quality present throughout the surrounding area.

Ecological Feature	Ecological Value	Justification
Birds	Local	Site has the potential to support a small number of territories of a small range of locally common species, potentially including a number of conservation concern.

6.3 Input into the Design Process

In order to minimise the potential impacts of the proposals, the client has ensured that no works will be required on any of the mature trees within the site. Features such as the pond will also be retained and protected through the works, with the proposed works being restricted to existing areas of hard standing of minimal ecological value.

An appropriate bat-friendly lighting strategy should be implemented both during and following any redevelopment works, particularly along linear features such as tree lines and hedgerows.

6.4 Impact Assessment

Based on the proposals as shown in Figures 2 and 3, the development will have the following impacts upon the ecological interests of the site in the absence of mitigation:

- The loss or disturbance of habitats of negligible botanical value, comprising hard standing and buildings.
- The harm or disturbance of any protected or notable species present on site at the time of works, such as roosting, foraging or commuting bats, great crested newts, red squirrel, badger, nesting birds and hedgehog.
- The loss or disturbance of habitats of no more than local value to protected and notable species, but which are typically of negligible importance to such species.
- The potential to harm or disturb any roosting bats present within the structure at the time of works
- The loss or disturbance of pipistrelle day roosts from within the buildings, and potential hibernation roosts from within the annex building
- The potential to destroy any active bird nests that may be present, should works commence during the breeding season
- The spread of invasive non-native species listed on Schedule 9, including Cotoneaster.

7. Mitigation and Compensation Strategy

7.1 General Protection and Mitigation Measures

The following measures will be implemented in order to minimise the ecological impacts of the proposals, including the risk of protected species being adversely affected:

- Works with the potential to affect bats and their roosts will not commence until a license has been obtained from Natural England
- Works will not commence until those contractors involved have received a toolbox talk from a suitably qualified ecologist (the named ecologist on the Natural England license, or their accredited agent) to ensure they are aware of the presence of bat roosts on site, what to do in the event a bat is encountered at any time, and the working methods which must be implemented through the works period
- Works on all buildings will proceed to a method statement produced by a suitably qualified ecologist (SQE), and which will form part of the license.
- Works will be undertaken to a precautionary method statement to minimise the very low, residual risk of works affecting species such as great crested newts, red squirrel, badger, nesting birds and Schedule 9 species, which will also be communicated to those contractors undertaking the works by a SQE
- No lighting will be installed which would illuminate bat roost sites either within the works area or adjacent buildings
- Roosting opportunities for bats will be retained and created wherever possible on site as part of the works (see Appendix F), including:
 - the installation of 1no. general purpose woodcrete bat box on one of the mature trees within the site prior to works affecting the roof structures, which will act as a receptor site in the event any bats are found during the works period
 - the creation of gaps along the edges/behind the fascias of the new dormer windows on the southern side of the annex building, and the south western corner of the main house, which will be of similar construction to those areas currently used by roosting bats on both the annex building and the main house
 - the installation of 1no. general purposes woodcrete bat box on the western gable of the annex building
 - the installation of 1no. woodcrete bat box on the eastern gable of the main building
 - the installation of 1no. woodcrete bat box on the western side of the new second storey extension to the south of the main house
- No timber treatments which are poisonous to bats will be used
- No breathable roofing membrane will be used in areas which can be accessed by bats, to avoid the risk of entanglement, injury and/or death. Only traditional 1F bitumen felt will be permitted in those areas which are accessible to bats
- Works with the potential to affect roosting bats will not commence during the winter period (November to March inclusive) in order to ensure no hibernating bats are adversely affected. In the event works

prior to this time have made the relevant sections of the structure unsuitable for such use prior to the start of November, works may continue throughout the winter period

- Works with the potential to affect active bird nests will not commence during the nesting period (March – September inclusive) unless a checking survey by a Suitably Qualified Ecologist (SQE) has been undertaken no more than 5 days prior which confirms that no active nests are present or would be affected. In the event any active nests are identified at this time, the SQE will implement a buffer zone around these features into which no works will progress until the SQE confirms (via further checks / surveys) that the nest is no longer active
- Mature trees present on the site will be retained, and subject to appropriate protection measures throughout the works period

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Appendix A – Key Legislation

Table A1: Overview of Key Legislation

Legislation	Key Features
The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019	<p>The Habitat Regulations transpose <i>Council Directive 79/409/EEC on the Protection of Wild Birds</i> (the EC Birds Directive 1979) and <i>Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna</i> (the EC Habitats Directive 1992) into UK law. The Birds Directive was amended in 2009, becoming Directive 2009/147/EC.</p> <p>The Habitat Regulations make it an offence (with certain exceptions) to deliberately capture, disturb, kill or trade in those animal species listed in Schedule 2, or to pick, cut, uproot, collect, destroy or trade in those plant species listed in Schedule 4.</p> <p>The EC Birds Directive requires member states to establish and monitor Special Protection Areas (SPAs) for all rare or vulnerable species included in Annex I, as well as for all regularly occurring migratory species, with key focus on wetlands of international importance. Annex I and II of the Habitats Directive respectively list those habitats and species for which a similar network of sites – Special Areas of Conservation (SACs) – must be established and monitored. Collectively, SPAs and SACs form a network of pan-European protected areas which are referred to as ‘Natura 2000’ sites.</p>
The Convention on the Conservation of European Wildlife and Natural Habitats 1979 (Bern Convention)	<p>The Bern Convention was adopted in 1979 and ratified by the UK Government in 1982. The principal aims of the Convention are to ensure the conservation and protection of all wild plant and animal species and their natural habitats (listed in Appendices I and II), to increase cooperation between contracting parties, and to afford special protection to the most vulnerable or threatened species (including migratory species).</p> <p>Members of the European Community meet their obligations via the Birds Directive and the Habitats Directive. These are transposed into UK law by the Wildlife and Countryside Act 1981 (as amended), Nature Conservation (Scotland) Act 2004 (as amended), Wildlife (Northern Ireland) Order 1985, and the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985.</p>
The Wildlife and Countryside Act 1981 (as amended)	<p>The Wildlife and Countryside Act consolidates and amends existing national legislation to implement the requirements of the Bern Convention and the Birds Directive throughout Great Britain. The Act is the primary UK mechanism for the designation of statutory ecological sites - Sites of Special Scientific Interest (SSSIs) - and the protection of individual species listed under Schedules 1, 2, 5, 6 and 8 of the Act, each of which is subject to varying levels of protection.</p> <p>Schedule 9 of the Act also lists those plant species which it is an offence to plant or otherwise cause to grow in the wild, while Schedule 14 prevents the release into the wild or sale of certain plant and animal species which may cause ecological, environmental or socio-economic harm.</p>
Natural Environment and Rural Communities Act 2006	<p>The NERC Act places a duty on public bodies to consider and conserve biodiversity through the exercise of their functions and includes a range of measures to strengthen the protection of both habitats and wildlife. The Act makes provision in respect of</p>

Legislation	Key Features
	biodiversity, pesticides harmful to wildlife, protection of birds and invasive non-native species.
The Countryside and Rights of Way (CRoW) Act 2000	<p>The CRoW Act, which applies to England and Wales only, strengthens the provisions of the Wildlife and Countryside Act 1981 (as amended), both in respect of protected species and statutory ecological sites, the latter primarily relating to the management and protection of SSSIs. It also provides for better management of Areas of Outstanding Natural Beauty (AONBs).</p> <p>The Act places a statutory obligation on public bodies to further the conservation of biodiversity through the exercise of their functions, thereby providing a statutory basis to the Biodiversity Action Plan (BAP) process. Section 74 of the Act lists those habitats and species of principal importance in England.</p>
The Wild Mammals (Protection) Act 1996	This Act provides protection for wild mammals from acts of cruelty. An offence is committed if any person mutilates, kicks, beats, nails, or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.
The Protection of Badgers Act 1992	This consolidates the existing legislation relating to the protection of badgers, and makes it an offence in England and Wales to wilfully kill, injure or take a badger (or attempt to do so) and affords protection to both the animals themselves and their setts.
Hedgerow Regulations 1997	The Hedgerow Regulations are intended to protect important countryside hedgerows from destruction or damage in England and Wales.

Table A2: Overview of Key Protected Species Legislation and Protection

Species	Key Legislation and Protection
Bats	<p>All European bat species are protected in Britain under the Habitat Regulations 2019. All British bat species are included on Schedules 5 and 6 of the Wildlife and Countryside Act 1981 (as amended) and the whole of Section 9 applies to European bat species. The above collectively prohibits the following:</p> <ul style="list-style-type: none"> • Deliberately or recklessly capturing, injuring, taking or killing of a bat. • Deliberately or recklessly harassing a bat. • Intentionally or recklessly disturbing of a bat in its place of rest (roost), or which is used for protection or rearing young. • Deliberately or recklessly damaging, destroying or obstructing access to any resting place or breeding area used by bats. • Deliberately or recklessly disturbing a bat in any way which is likely to significantly affect the local populations of the species, either through affecting their distribution or abundance, or affect any individuals' ability to survive, reproduce or rear young. • Possession or advertisement/sale/exchange of a bat (dead or alive) or any part of a bat. <p>Bats are also protected by the Wild Mammals (Protection) Act 1996. Licenses are issued by Natural England for any works which may compromise the protection of European</p>

Species	Key Legislation and Protection
	protected species, including bats. This license is required irrespective of whether the works require planning permission. Selected species are also listed in the UK BAP.
Great Crested Newt	Great crested newts receive the same levels of protection under British and European law as is afforded to bats (see above). Great crested newts are included on the UK BAP.
Otter	Otter are protected under British and European law, receiving the same level of protection as bats (see above). Otter are also listed as a priority species in Appendix II of the Bern Convention. Otter are included on the UK BAP.
White-clawed Crayfish	<p>White-clawed crayfish are partially protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:</p> <ul style="list-style-type: none"> • Take white-clawed crayfish. • Sell, possess or transport white-clawed crayfish for the purpose of sale. • Advertise the buying or selling of white-clawed crayfish. <p>The species is also protected under the Habitats Directive, being listed under Annex II and V, and is included on the UK BAP.</p>
Water Vole	<p>Water voles are protected under Schedules 5 and 6 of the WCA 1981 (as amended). This makes it an offence to:</p> <ul style="list-style-type: none"> • Intentionally kill, injure or take water voles. • Possess or control the species. • Damage or destroy any place used by water vole for shelter or protection. • Disturb water vole while they occupy such places of shelter. • Sell, possess or transport water vole for the purpose of sale. • Advertise the buying or selling of water vole. <p>The species is also protected under the Wild Mammals (Protection) Act 1996 and is listed on the UK BAP.</p>
Red Squirrel	Red squirrels are protected under Schedules 5 and 6 of the WCA 1981, receiving the same level of protection as water vole. The species is also protected under the Wild Mammals (Protection) Act 1996 and listed on the UK BAP.
Badger	<p>Badger are protected under the Protection of Badgers Act 1992, which makes it an offence to:</p> <ul style="list-style-type: none"> • Knowingly kill, capture, injure or disturb any individual. • Intentionally damage or destroy a badger sett, or any part thereof. • Obstruct access to an area which is used for breeding, resting or shelter. • Disturb a badger while it is using any place used for breeding, resting or shelter. <p>The species is also protected by the Wild Mammals (Protection) Act 1996 and receives partial protection through inclusion on Schedule 6 of the Wildlife and Countryside Act 1981 (as amended).</p>
Birds	With the exception of some species listed on Schedule 2, the majority of bird species are protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to intentionally or recklessly:

Species	Key Legislation and Protection
	<ul style="list-style-type: none"> • Kill, injure or take any wild bird. • Take, damage or destroy any nest which is in use or being built. • Take, damage or destroy the eggs of any such bird. <p>Additional protection against disturbance at the nest is also afforded to any bird species listed on Schedule 1 of the Act. Selected bird species are also listed on the UK BAP.</p>
Migratory Fish	<p>Atlantic salmon and sea trout are protected under the Salmon and Freshwater Fisheries Act 1975, supplemented by the Salmon Act 1986. Both species also listed under the EC Habitats Directive 1992, Annexes IIa and V.</p> <p>All three species of lamprey receive a degree of legal protection, being listed under Annexes Iia and Va of the Habitats Directive. The conservation of species listed under Annex II of the Habitats Directive requires the designation of Special Areas of Conservation. Species listed under Annex V of the Directive are also considered to be of community interest and their taking in the wild and exploitation may be subject to management measures.</p> <p>River and sea lampreys, Atlantic salmon, European eel and brown/sea trout are listed on the UK BAP.</p>



Appendix B – Field Survey Maps

Figure B1 – Phase One Map

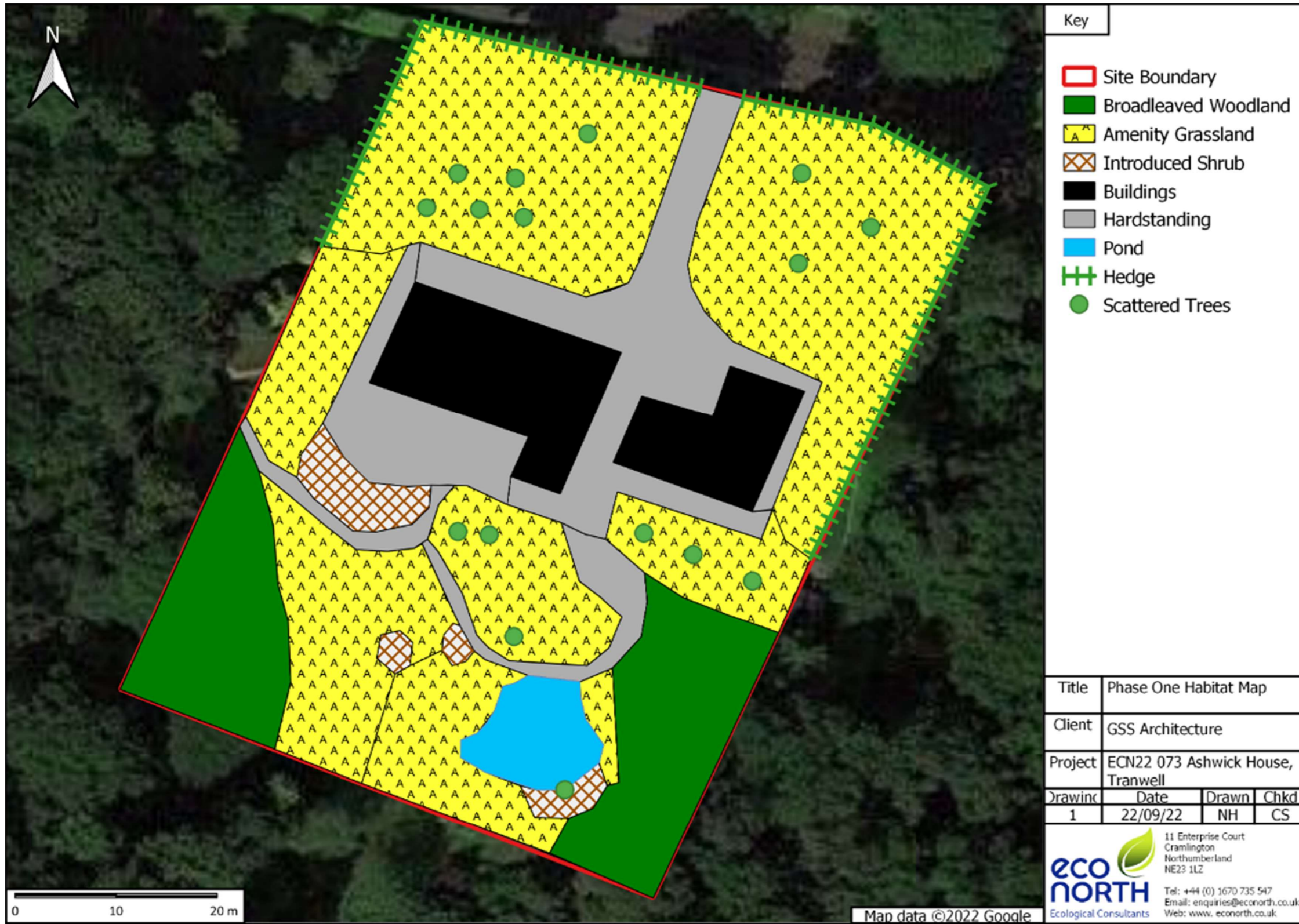




Figure B2 – Bat Activity Survey Dusk 19.08.22





Figure B3 – Bat Activity Survey Dawn 07.09.22



Appendix C - Site Photographs

Photos 1 and 2: Southern elevation of main house



Photo 3: Dormer windows on southern elevation of main house, gaps are present under lead flashing



Photo 4: Northern elevation of main house



Photos 5 and 6: Loft void of main house



Photo 7: Bat droppings found in loft void



Photo 8: Loft void of main house



Photo 9: Garage / Outbuilding



Photo 10: Northern elevation of outbuilding



Photo 11: Eastern elevation of outbuilding



Photo 12: Loft void of outbuilding



Photo 13: Loft void of outbuilding



Photo 14: Vent brick with access holes



Photo 15: Loft void of outbuilding

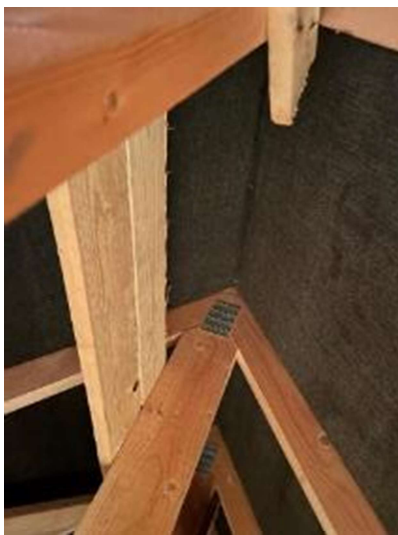


Photo 16: Bat droppings in loft void of outbuilding



Photos 17 and 18: Artificial pond in garden



Photo 19: View of garden, consisting mainly of amenity grassland, with scattered trees and introduced planting



Photo 20: Cotoneaster present in garden



Appendix D – Value of Ecological Receptors

Table D1: Examples of Ecological Receptors of Differing Value

Value	Examples
International	<ul style="list-style-type: none"> • An internationally designated site or candidate site (SPA, pSPA, SAC, cSAC, pSAC, Ramsar site) or an area which meets the designation criteria for such sites. • Internationally significant and viable areas of a habitat type listed in Annexe 1 of the Habitats Directive, or smaller areas of such habitat, which are essential to maintain the viability of a larger whole. • Any regularly occurring, globally threatened species. • A regularly occurring population of an internationally important species, which is threatened or rare in the UK, of uncertain conservation status • A regularly occurring, nationally significant population/number of any internationally important species.
National	<ul style="list-style-type: none"> • A nationally designated site (e.g. SSSI, NNR) or a discrete area which meets the published selection criteria for national designation (e.g. SSSI selection guidelines) irrespective of whether or not it has yet been notified. • A viable area of a UK BAP priority habitat, or smaller areas of such habitat which are essential to maintain the viability of a larger whole. • A regularly occurring significant number/population of a nationally important species e.g. listed on the Wildlife and Countryside Act 1981 (as amended). • A regularly occurring population of a nationally important species that is threatened or rare in the county or region. • A feature identified as being of critical importance in the UK BAP.
Regional/County	<ul style="list-style-type: none"> • Viable areas of key habitat identified in the Regional or County BAP or smaller areas of such a habitat, which are essential to maintain the viability of the larger whole. • Regional/county significant and viable areas of key habitat identified as being of regional value in the appropriate English Nature (now Natural England) Natural Area. • A regularly occurring significant population/number of any important species important at a regional/county level. • Any regularly occurring, locally significant population of a species which is listed in a Regional/County Red Data Book or BAP on account of its regional rarity or localisation. • Sites of conservation importance that exceed the district selection criteria but that fall short of SSSI selection guidelines.
City/District/Borough	<ul style="list-style-type: none"> • Areas of habitat identified in a District/City/Borough BAP or in the relevant Natural Area profile. • Sites that the designating authority has determined meet the published ecological selection criteria for designation, including Local Nature Reserves selected on District/City/Borough ecological criteria. • Sites/features that are scarce within the District/City/Borough or which appreciably enrich the District/City/Borough habitat resource. • A diverse and/or ecologically valuable hedgerow network.

Value	Examples
	<ul style="list-style-type: none"> • A population of a species that is listed in a District/City/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation. • A regularly occurring, locally significant number of a District/City/Borough important species during key phases of its life cycle.
Local	<ul style="list-style-type: none"> • Areas identified in a Local BAP or the relevant natural area profile. • Sites/features which are scarce in the locality or which are considered to appreciably enrich the habitat resource within the local context, e.g. species-rich hedgerows. • Local Nature Reserves selected on Parish/Local ecological criteria. • Significant numbers/population of a locally important species e.g. one which is listed on the Local BAP. • Any species, populations or habitats of local importance.
Low	<ul style="list-style-type: none"> • Habitats of moderate to low diversity which support a range of locally and nationally common species, the loss of which can be easily mitigated.

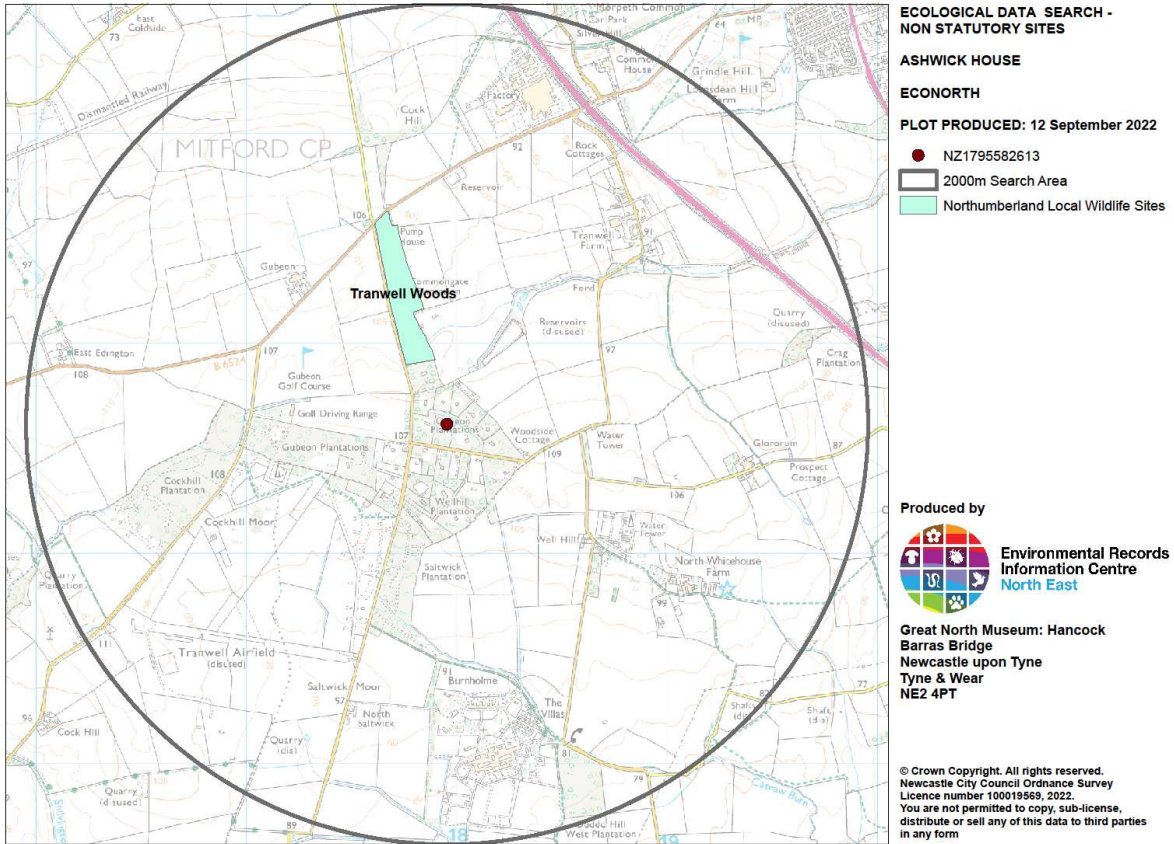
Appendix E – Desk Study Results

Table E1: Protected Species Records within 2km

Species	Number of Records	Most Recent Record	On Site?	Level of Protection		
				HR 2019	WCA 1981	NERC /UK BAP
Common toad <i>Bufo bufo</i>	3	2016	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Common frog <i>Rana temporaria</i>	2	2016	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Smooth newt <i>Lissotriton vulgaris</i>	9	2014	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Great crested Newt <i>Triturus cristatus</i>	10	2014	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bluebell <i>Hyacinthoides non-scripta</i>	1	2013	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
West European Hedgehog <i>Erinaceus europaeus</i>	10	2020	No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Brown Hare <i>Lepus europaeus</i>	1	2013	No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Eurasian Otter <i>Lutra lutra</i>	1	2014	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Eurasian Badger <i>Meles meles</i>	3	2019	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Eurasian Red Squirrel <i>Sciurus vulgaris</i>	14	2021	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Myotis sp.</i>	9	2016	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Brandts Bat <i>Myotis brandtii</i>	2	2015	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Whiskered Bat <i>Myotis mystacinus</i>	4	2016	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natterer's Bat <i>Myotis nattereri</i>	2	2012	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Nyctalus Sp.</i>	1	2016	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Noctule Bat <i>Nyctalus noctula</i>	5	2016	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Species	Number of Records	Most Recent Record	On Site?	Level of Protection		
				HR 2019	WCA 1981	NERC /UK BAP
<i>Pipistrellus sp.</i>	1	2013	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Common Pipistrelle <i>Pipistrellus pipistrelus</i>	52	2017	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Soprano Pipistrelle <i>Pipistrellus Pygmaeus</i>	29	2017	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Brown Long-Eared Bat <i>Plecotus auritus</i>	10	2016	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Unidentified Bat sp.	2	2017	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Key: HR 2019 – The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 WCA 1981 – The Wildlife and Countryside Act 1981 (as amended) (Bird species listed relate solely to those included on Schedule 1) NERC – The Natural Environment and Rural Communities Act 2006 UK BAP – UK Biodiversity Action Plan</p>						

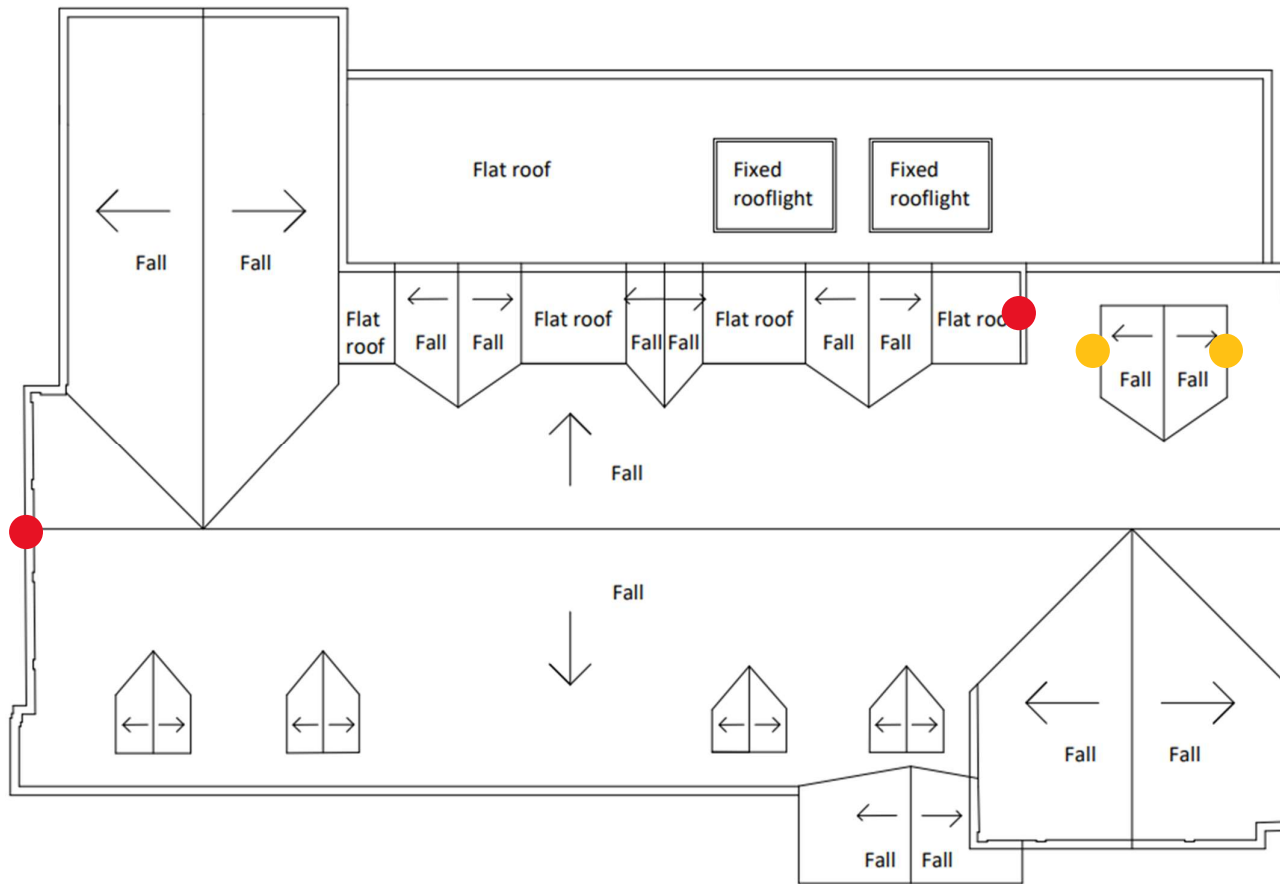
Figure F1: Map of Species and Designated Site Records





Appendix F – New Bat Roost Features

Figure F1: Main House

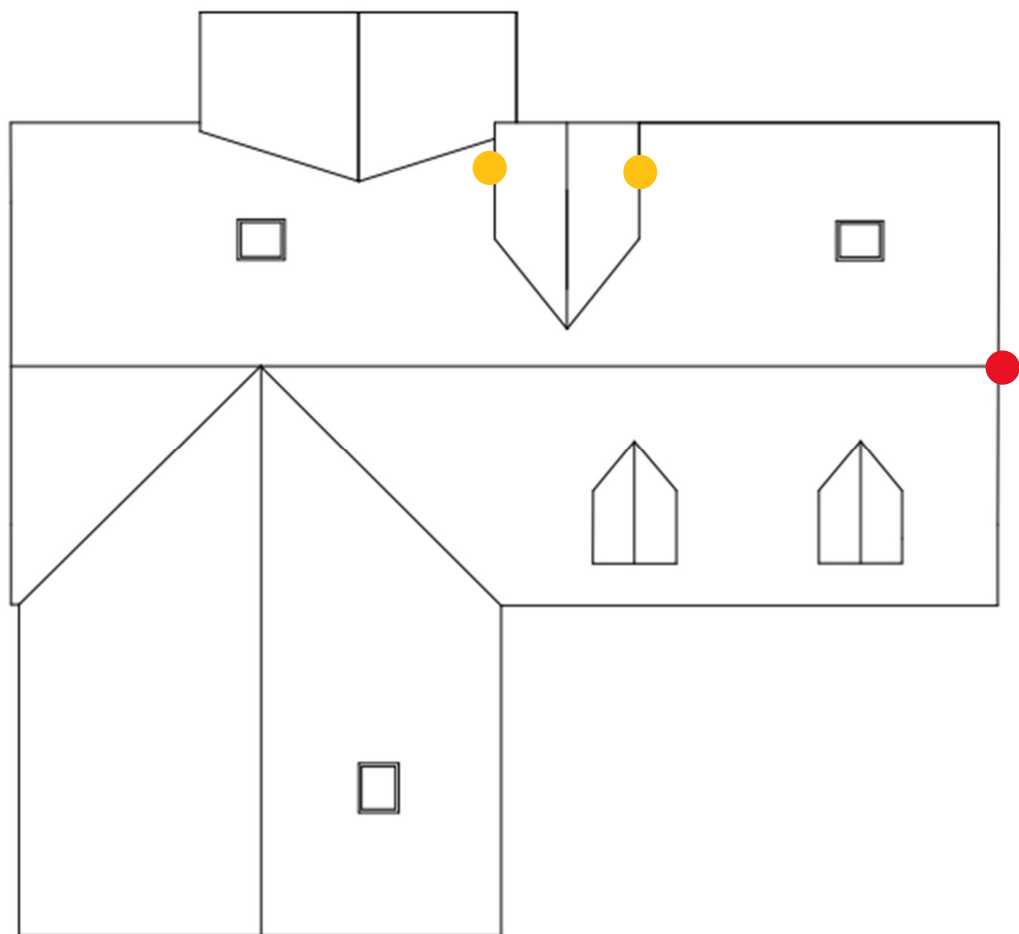


Key.

- Woodcrete bat box
- Access behind fascias on dormer



Figure F2: Annex Building



Key.

- Woodcrete bat box
- Access behind fascias on dormer