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Ecological Consultant

Preliminary Ecological Appraisal
'Low Impact' Ecological Impact Assessment

For

Unthank, Harwood
DL12 0HX



For

Raby Estates

March 2021

Document Verification

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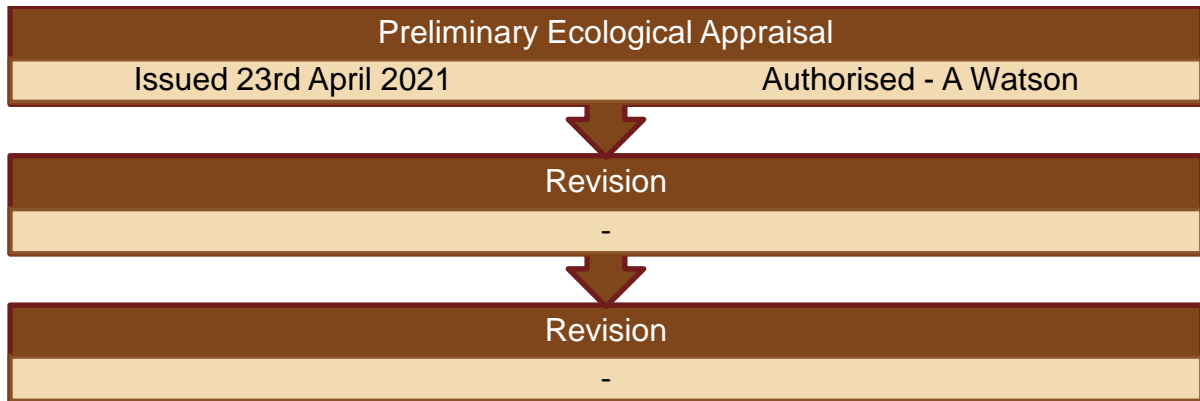


Table of Contents

1.	<i>Executive Summary</i>	1
2.	<i>Introduction</i>	4
2.1	Survey Objectives	4
2.2	Development Proposals	4
2.3	Site Location	6
2.4	Surveyors & Timing	7
3.	<i>Legal Status Of Protected Species</i>	8
4.	<i>Survey Methodology</i>	9
4.1	Pre-survey Data Search (Desk Top Survey)	9
4.2	Field Surveys	9
4.2.1	Habitat Survey	9
4.2.2	Preliminary Bat Roost Assessment	10
4.2.3	Bat Activity Survey (Presence/Absence Survey)	10
4.2.4	Bat DNA Analysis.....	11
4.2.5	Protected Species	12
4.3	Site Assessment	13
5.	<i>Survey Results</i>	14
5.1	Pre-survey Data Search (Desk Top Surveys)	14
5.1.1	Designated Sites	14
5.1.2	Local Protected Species Data.....	17
5.1.3	Previous Surveys	19
5.2	Field Surveys	20
5.2.1	Phase I Habitat Survey	20
5.2.2	Preliminary Roost Assessment (Bat Building Survey)	22
5.2.2	Bat Activity Surveys	29
5.2.3	Bat DNA Analysis Results.....	29
5.2.4	Protected Species Scoping Survey	30
5.3	Site Assessment	31
6	<i>Ecological Constraints & Opportunities</i>	32
7.	<i>Conclusion & Recommendations</i>	36
Conclusion	36
Recommendations	37
	<i>Appendix 1 - References</i>	38
	<i>Appendix 2 – Assessments</i>	41
	<i>Appendix 3- Raw Data</i>	46
	<i>Bat Owl Mitigation</i>	1
	<i>Precautionary Method Statement</i>	1

Table of Figures

Figure 1- Existing and proposed plans.....	5
Figure 2 – Position of the survey area using GIS & Google.....	6
Figure 3 – Designated Sites	15
Figure 4 – Habitats within 2km of Site.....	16
Figure 5 – Bat records supplied by DBG	18
Figure 6 – Barn Owl 5km records & potential foraging area	19
Figure 7 – Site boundary	20
Figure 8 – Eastern paddock	21
Figure 9 – Building layout.....	22
Figure 10 - southern outbuildings.....	23
Figure 11 - Barn.....	24
<i>Figure 12 –Out house.....</i>	25
Figure 13 – Farmhouse external features	26
Figure 14 – Farmhouse internal features	27
<i>Figure 15 –Byres</i>	28
Figure 16 – Barn Owl features	30

1. Executive Summary

We are requested by Karl Hankey from Raby Estates to provide a Preliminary Ecological Appraisal at Unthank, Harwood.

An initial ecological assessment, bat and Barn owl surveys were undertaken at the property.

1.1 It is proposed to renovate and convert the existing buildings on site, no increase of building footprint is expected.

1.2 Desk top data searches indicate:

- a. The site is within the North Pennines AONB and its statutory sites.
- b. A rural upland setting – within Harwood Beck valley, within the inbye land.
- c. Habitats listed in the UK Priority Habitat Inventory are present around the site.
- d. Existing records indicate the presence of Barn owls within 5km of the site.
- e. We are awaiting bat data for the 2km of the survey area.

1.3 Field surveys were carried out on in 2021:

- a. Initial ecological assessment survey – March 17th 2021.
- b. Initial bird activity survey – March 30th 2021.
- c. Dusk bat and bird/ barn owl survey – April 11th 2021

1.4 Potential impact - priority habitats

- a. Upland Hay Meadow to the north - All building work to the north of the property to be retained within the existing fencing, no building rubble to spill onto the vegetation.
- b. Lowland fens – to the south east, adjacent to the road. No proposed alteration in the management of this parcel of land.
- c. Lowland fens – eastern paddock, potential change of use from fen to garden space.
- d. Former farmyard areas, at present hardstanding/bare ground to be used as storage and working areas for the proposed development.

1.5 Potential impact - protected species:

- a. Bats – preliminary assessment – the building is situated in an area with bat foraging and commuting habitat within 200m of the site these are not well connected to the surrounding habitat.

- b. Bats – the buildings have potential roost features present – wall top eaves access and accessible crevices and cavities with limited potential to support occasional roosting bats.
 - c. Bats – necessary roof work will be carried out following the enclosed Bat Method Statement following bat activity surveys.
 - d. Barn owls – preliminary assessment – suitable foraging habitat is present around the site.
 - e. Barn owls – have been recorded as present within the buildings within 2 years.
 - f. Barn owls – Barn owl pellets were identified within the outbuildings.
 - g. Barn owls nesting – the dusk evening survey identified two Barn owls leaving the site at 18:30, both birds left site and did not return within 2 hours, indicating nesting has not been initiated.
 - h. Birds – Pigeons are present on site within the barn and farmhouse.
 - i. Birds – Curlew and lapwing are present in the surrounding grassland.
 - j. Other species – the proposals are unlikely to affect any additional species.
- 1.6 Pre development works are necessary on site:
- a. A Barn owl box has been installed within the barn to be retained in situ for the life of the development.
 - b. The tile stone roofing to be removed to prevent further roof collapse.
 - c. The building has been made secure to exclude all birds for one month prior to work starting.
 - d. Building checked for all nesting birds prior to installation of final board.
- 1.7 Further survey effort considered necessary:
- a. Bat activity surveys – an additional survey during the maternity season is advised.
 - b. Habitat – reclassification of the paddock habitat may be necessary.
 - c. No further species or habitat surveys are considered necessary at this present time.
 - d. The project ecologist will be on call during the proposed development.

1.8 Ecological considerations:

- a. The general assessment of the site is one of limited wildlife interest.
- b. Bats – the inclusion of inbuilt bat features – guidance provided in the appendix.
- c. Barn owls – a pair of Barn owls are present on site and have been recorded feeding young in August 2020, a Barn owl box has been installed, the outbuildings will be retained initially to provide additional nesting space.
- d. The inclusion of bird boxes should be considered in the outbuilding.
- e. The enclosed Method Statement should be followed during the proposed works.

1.9 The general content of the report will remain valid for a maximum of two years, further surveys will be necessary after this time.

1.10 If any BAP species are found during construction the project ecologist is to be informed so that further advice can be provided.

2. Introduction

2.1 Survey Objectives

We are requested by Raby Estates to provide a Preliminary Ecological Appraisal – Protected Species Survey at the Unthank, Harwood.

This report is to advise on ecological considerations present on site during necessary building work, also to inform the planning application – pre-planning.

The surveys will:

- Data search with parties holding pertinent wildlife and ecological records.
- Record the habitats present.
- Record incidental evidence of relevant species.
- Evaluate ecological features within the zone of influence.
- Evaluate the likelihood that protected, priority or invasive species are present.
- Identify possible ecological constraints on development.
- Determine appropriate avoidance, mitigation and enhancement measures (as far as possible) within the survey area.
- Advice on further Ecological surveys required.

Produce a written report presenting the above information either:

- 'Low Impact' Ecological Impact Assessment (EclA) Report where sufficient information has been gained to allow an assessment of no significant effects.
- Preliminary Ecological Appraisal Report if further surveys are considered necessary.

2.2 Development Proposals

It is proposed to make good the existing farmhouse roof, and refurbish the existing structures. The buildings have been uninhabited for many years. The barn has been used for bale storage

Potential for ecological impact – Potential for loss of bird nesting sites and bat roosting sites within the site.

Plans supplied by the Architect, *** – *** 2021 – to be updated on receipt of any proposals.



Figure 1- Existing and proposed plans

2.3 Site Location

Unthank, Harwood
DL12 0HX
Grid Ref: NY 82849 31863

Counties, Metropolitan Districts and Unitary Authorities (GB)	County Durham
Parishes (GB)	Forest and Frith CP
National Character Area	North Pennines

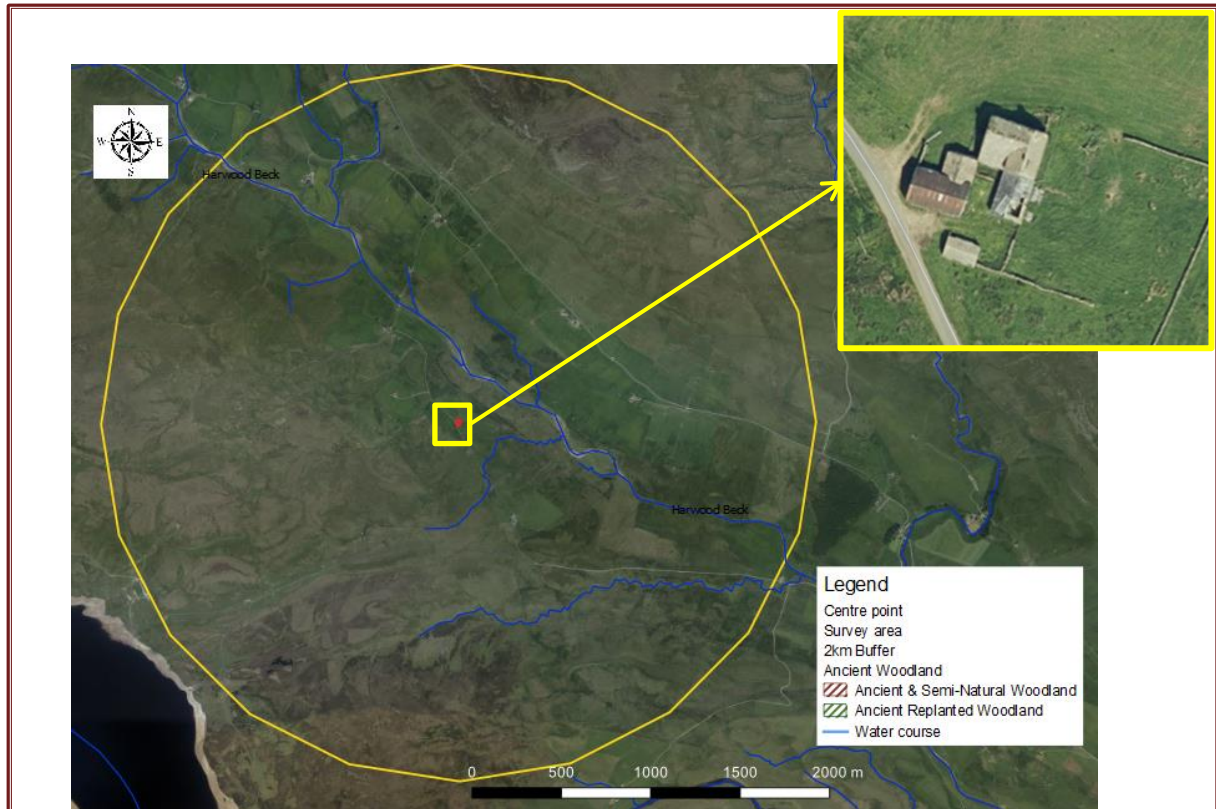


Figure 2 – Position of the survey area using GIS & Google
The yellow circle indicates an approximate 2km zone

The survey area is a farmhouse and associated farm buildings at Unthank, Harwood.

The site is situated in Upper Teesdale, over 450m, within the inbye land of the Marwood Beck valley, open upland moorland stretches to the north and south. Some small areas of woodland are present along the water ways.

Situated on an unnamed road and 850m south west of the B6277, 14km north west of Middleton-in-Teesdale and 19km south east of Alston.

Unthank – a parcel of land, typically 12 ha, ‘taken in’ from a moor and brought under cultivation, a term used almost exclusively on the fringes of the Pennines. From medieval times to the 19th century.

2.4 Surveyors & Timing

Surveys were undertaken in 2021:

- A building and habitat survey on March 17th 2021 during daylight hours by Tricia Snaith.
- Site revisit – to identify bird activity in the area – March 30th
- Dusk activity survey – bat and barn owl emergence April 11th

Tricia Snaith holds:

WML-A34-Level 2 (Class Licence) – to survey bats using artificial light, endoscopes, hand and hand-held static nets registered number 2015-14858-CLS-CLS.

WML-CL08- To survey Great crested newts for scientific (including research) or educational purposes – Level 1 (Class Licence), which covers surveying by hand, nets, torches and aquatic funnel traps (including bottle traps) registered number 2015-13610-CLS-CLS.

Constraints Or Limitations To The Survey Or Report

The ecological status of a site can change over time, surveys can only record what is present at the time of survey.

Bats are known to move between several roosts dependent upon their requirements and may not present at the time of survey. Bats can roost deep in cracks, crevices and cavity walls making them difficult to identify during visual inspections.

The results of ecological surveys are time limited and checking surveys may be required to confirm that the survey remains current.

3. Legal Status Of Protected Species

The potential impact of planning decisions on biodiversity and geological conservation need to be fully considered.

3.1 Habitats Regulations – Appropriate Assessment

Developers are required to consider the potential effects on protected habitats. Under Article 6(3) of the Habitats Directive, an appropriate assessment is required where a plan or project is likely to have a significant effect upon a European site, either individually or in combination with other projects.

“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives”

3.2 The Conservation of Habitats and Species Regulations 2017

It is an offence for anyone to deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs. It is an offence to damage or destroy a breeding or resting place of such an animal. It is also an offence to have in one's possession or control, any live or dead European protected species.

A person will commit an offence if they deliberately disturb such animals in a way as to be likely significantly to affect:

- (a) The ability of any significant groups of animals of that species to survive, breed, or rear or nurture their young, or
- (b) The local distribution of abundance of that species.

It is an offence to deliberately pick, collect, cut, uproot or destroy a wild plant of a European protected species. It is also an offence for any purpose to possess, sell or exchange such a plant.

3.3 UK & Local Biodiversity Action Plan

UK Post-2010 Biodiversity Framework in July 2012, covering the period 2011-2020, based on the UK Biodiversity Action Plan (BAP) published in 1994. The current list of UKBAP priority species and habitats was published in August 2007 and now contains 1150 species and 65 habitats, the framework of which remains in place.

Note: This information is a guide only. Please refer to the full relevant texts for more information.

4. Survey Methodology

4.1 Pre-survey Data Search (Desk Top Survey)

Consultation of pre-existing information on Local Wildlife sites, biodiversity of the area and protected species at and around the survey site was obtained through the following:

- Google or Bing maps to study aerial photography and satellite imagery.
- Multi Agency Geographic Information Centre (MAGIC) a variety of searches are done to deduce the general character of the area and the presence of any relevant wildlife areas.
- Local wildlife groups or the Local records centre for information on relevant protected species and/or bats within a 2km radius (5km for Barn owls) of the survey area.
- Any previous reports containing relevant information.

These are used to determine if the development is within the geographical range and suitable habitat for the considered species.

4.2 Field Surveys

4.2.1 Habitat Survey

The field survey of the site was carried out in accordance with the methodology outlined in the JNCC handbook for Phase 1 habitat survey. Each parcel of land was assessed and classified. A walkover survey was conducted; habitat and features were target noted where appropriate.

Plant species were identified and compared to county axiophytes lists. Habitats which were identified as being of particular interest would be studied in more detail. Plant species lists with abundance were recorded for such areas, if necessary. Any Schedule 9 plant species are recorded.

The quality of field data will be affected by the season of the survey, with some plant species only being evident or identifiable in certain seasons. Identification of any of these plants will be noted during the survey if possible, further surveys may be considered necessary during the vegetative season.

4.2.2 Preliminary Bat Roost Assessment

Preliminary Roost Assessment Survey – Building/tree surveys can be carried out at any time of year, but bats are most likely to be seen or heard in roofs during the summer (mainly maternity roosts) or autumn (swarming/mating roosts) or seen in subterranean areas during the winter (hibernating bats).

Bat (Building) Survey

A thorough inspection of all the structures is carried out during daylight hours, following the BCT - Bat Surveys for Professional Ecologists - Good Practice Guidelines 2016, with prior arrangement of the owners, occupiers, caretakers etc., using access and inspection equipment, such as ladders, binoculars and a good torch:

- External inspection of the structure, looking for bat droppings and other evidence of bat usage, also suitable entry and exit points.
- Internal inspection of the structure focus in particular on areas which provide appropriate environmental conditions for bats.
- Record any signs of bats found on a plan of the structure and collect samples of droppings, bones or feeding remains for comparison with a reference collection.
- A risk analysis is carried out to ensure safe working methods are adopted.
- Appropriate people (owners, neighbours etc.) are asked whether there is any history of bats using the site.

4.2.3 Bat Activity Survey (Presence/Absence Survey)

A dusk emergence survey should be undertaken during the period that bats are most active (usually April through to the end of September) and are used to locate roosts in trees, buildings or built structures, as bats are not always found by internal and external inspection surveys.

Emergence/re-entry surveys can also give a reasonable estimate of the number of bats, if any, that are present. The structure will have been surveyed in daylight to assess the features and potential exit locations and the number of surveyors required.

Sufficient surveyors are used so that all aspects of the structure can be viewed at one time and position so that all possible bat exits can be observed at one time and the line-of-sight should not exceed 50m.

Activity surveys are carried out using the following timeframes:

- Dusk - Emergence survey commence ¼ hour before sunset until 2 to 3 hours after sunset.
- Dawn - Re-entry surveys consist of the 2 hours prior to sunrise.

Bat detectors which pick up the echolocation calls and are used to assist in detecting bats. Calls are also recorded for analysis, if necessary, and further confirmation of species and abundance. Care should be taken in the interpretation of this data.

Equipment used:

- Handheld bat detectors - Batbox duet and Echo Meter Touch.
- Anabat SD2 bat detectors.
- High power & close focussing binoculars.
- Torches including a Cluson high power torch & Petzl head torches.
- Endoscope.

Appropriate people (owners, neighbours etc.) are asked whether there is any history of bats using the site.

4.2.4 Bat DNA Analysis

If necessary, droppings will be collected for DNA analysis.

4.2.5 Protected Species

Additional to the habitat survey, a scoping survey for the potential for the presence of any other European protected species and local Biodiversity Action Plan (BAP) species, (more details can be found on the UK Biodiversity Action Plan website) will be undertaken within the survey area.

The potential of these BAP species being present will be assessed from the desktop surveys, consultation responses, field signs and local knowledge. In particular:

- Trees or buildings present will be viewed for their potential for bat usage.
- Buildings were assessed for their potential for use by Barn owls.
- If present any trackways, regularly used by badger, deer or relevant species, will be mapped.
- Any badger sett evidence will be recorded and assessed as to usage.
- OS maps online is used to identify ponds present within a 500m zone of the will be assessed for use by Great crested newts.
- Wetlands and waterways will be reviewed for their potential use by otter, water voles and white clawed crayfish.
- Bird presence and activity will be noted.

4.3 Site Assessment

General Site Assessment

On the basis of the survey information the site will be categorised using a three-point scale as follows:

- 1= Site of high conservation priority.
- 2= Site of lower priority for conservation.
- 3 =Site of limited wildlife interest.

Any sites rated 1 or 2 will also be categorised using the Chartered Institute of Ecological and Environmental Management - Guidelines for Ecological Impact Assessment (as detailed in appendix).

Potential To Impact Upon Sites Recognised Of Local Nature Conservation Importance

As part of the Habitats Directive developers are required to assess the likely impacts of the project either alone or in combination with other projects, upon any European sites and consider whether the impacts are likely to be significant. The Habitats Regulations Assessment is a four-stage process. Stage 1 – Screening of the site will assess the Likely Significant Effect on European sites. European sites collectively include both designated and candidate Special Protection Areas (SPA) and Special Areas of Conservation (SAC), and Ramsar sites.

Potential To Host A Priority Habitat Or Species

Each site is assessed for the presence of important habitats or the potential to support priority or important species. As listed in Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 - Habitats and Species of Principal Importance in England.

Structures present on site will be assessed for bat roost potential.

Aquatic habitats present will be assessed for their potential to support priority species.

Site assessments will be used to advise on additional survey effort required.

5. Survey Results

The raw data where appropriate can be found in the appendix.

5.1 Pre-survey Data Search (Desk Top Surveys)

5.1.1 Designated Sites

A search was made using MAGIC (Multi Agency Geographic Information for the Countryside) to look for sites of wildlife interest with a 2km zone of the survey site.

Designations

Land-Based designations

Statutory

- Areas of Outstanding Natural Beauty
- Local Nature Reserves
- Moorland line
- National Nature Reserves
- National Parks
- Ramsar Sites
- Sites of Special Scientific Interest
- Special Areas of Conservation
- Special Protection Areas
- Biosphere Reserves

Historic Non-Statutory

- Registered Parks and Gardens

Habitats

MAGIC was used to search for relevant Habitat.

Using the National Habitat Network to identify habitats in the local area.

Designations
Land-Based Designations
Statutory

Areas of Outstanding Natural Beauty	1 Features found – North Pennines
Moorland Line	1 Features found
National Nature Reserves	1 Features found - Moor House – Upper Teesdale
Sites of Special Scientific Interest	1 Features found – Upper Teesdale SSSI.
Special Areas of Conservation	1 Features found – Moor House – Upper Teesdale
Special Protection Areas	1 Features found - North Pennine Moors

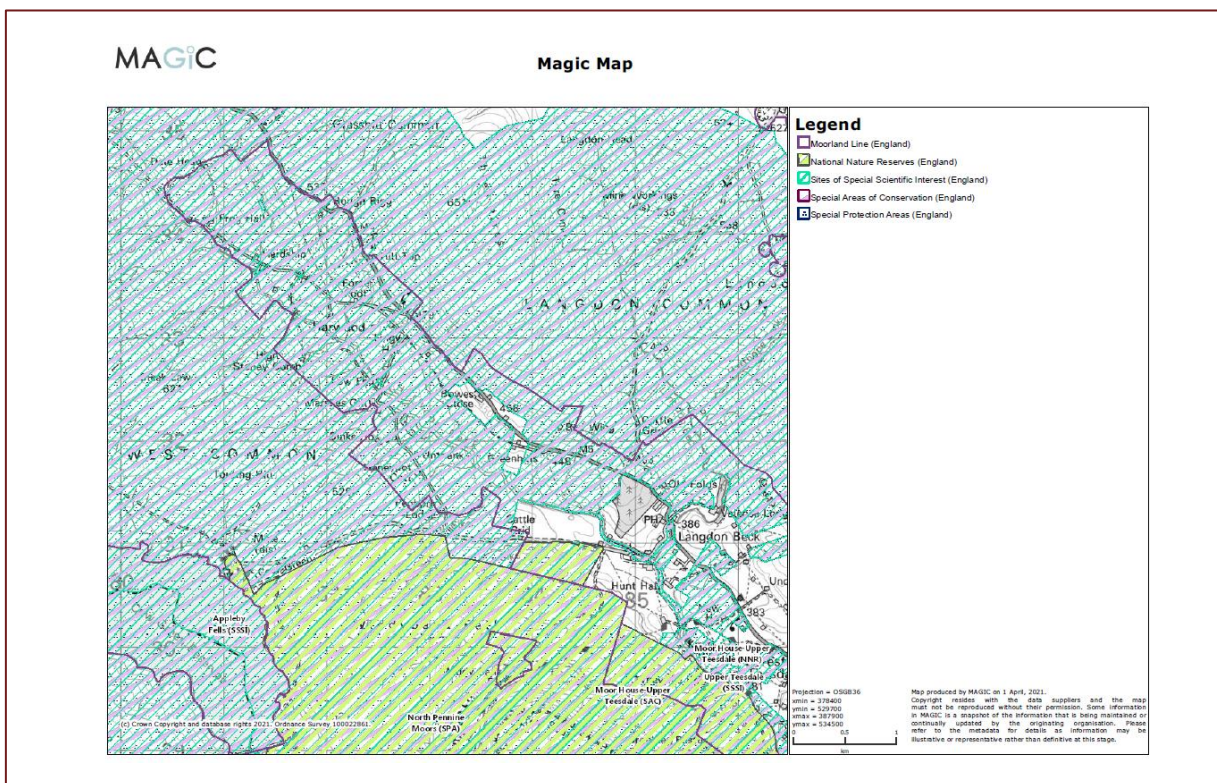


Figure 3 – Designated Sites

The site sits within

Areas of Outstanding Natural Beauty	1 Features found – North Pennines
Sites of Special Scientific Interest	1 Features found – Upper Teesdale SSSI.
Special Areas of Conservation	1 Features found – Moor House – Upper Teesdale
Special Protection Areas	1 Features found - North Pennine Moors
Habitat	Upland hay meadow – bounds the site

National Habitat Network All Habitats Combined (England)

Habitats Networks – 179 Network maps	
habitats + habitat restoration-creation, restorable habitat, plus fragmentation action, and network enhancement and expansion zones.	
Habitats – 56 Priority Habitats	
Blanket Bog	7 identified
Lowland calcareous grassland	6 identified
Lowland fens	43 identified
Lowland meadows	2 identified
Purple moor grass & rush pastures	1 identified
Rivers	8 identified
Upland calcareous grassland	12 identified
Upland flushes fens & swamps	12 identified
Upland hay meadow	4 identified
Upland heathland	2 identified
Priority Habitat Restoration and Creation – 29 parcels identified	
Habitat Restoration-Creation	17 identified
Restorable Habitat	29 identified
Network Zones – where action may be taken	
SSSI	9 identified
Network Enhancement Zone 1	7 identified
Fragmentation Action Zone	20 identified

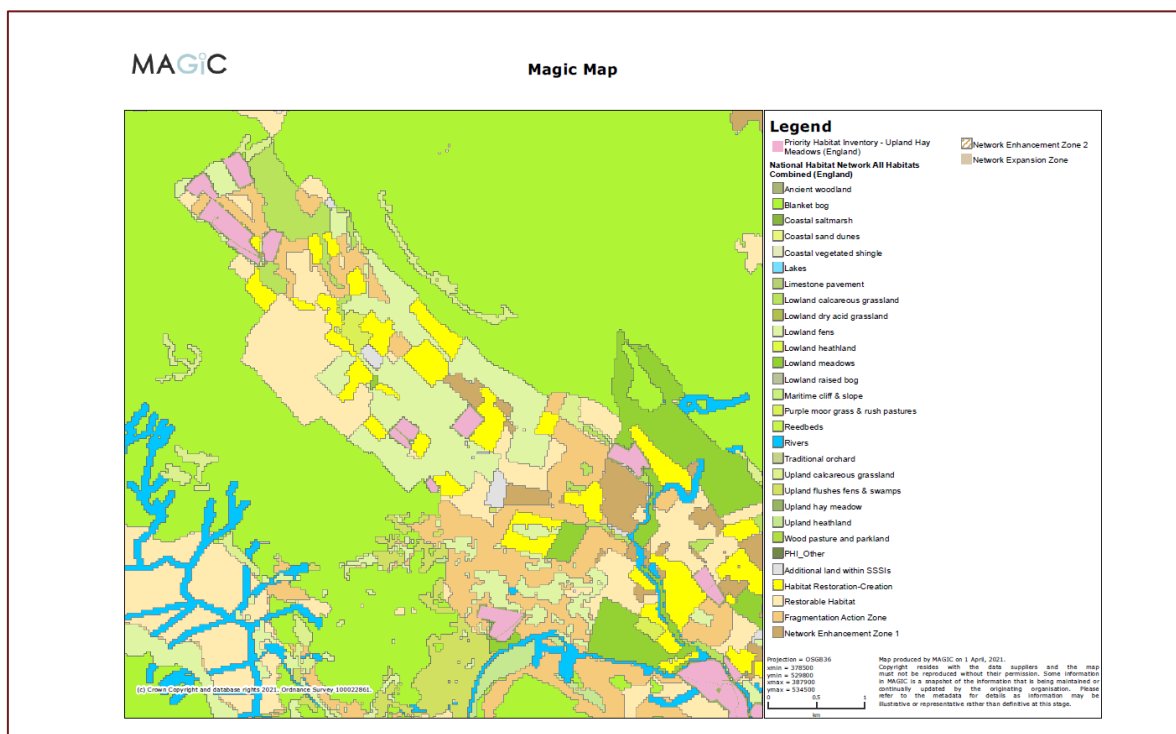


Figure 4 – Habitats within 2km of Site

5.1.2 Local Protected Species Data

MAGIC was used to search for relevant Species.

Using European Protected Species Licencing and Great Crested Pond data.

European Protected Species Licencing

European Protected Species	County Durham
	None identified

Local Records Centre

Due to the size and nature of the site - local record centre data was not considered necessary. The importance of the site is recorded in the designation of the relevant sites.

Local Wildlife Group Data

Bat Distribution Within The County

Eleven species of bat have been recorded in County Durham, of which eight are known to breed - Common pipistrelle, Soprano pipistrelle, Brown long-eared bat, Whiskered bat, Brandt's bat, Natterer's bat, Noctule, Daubenton's bat, Leisler's bat, Nathusius' pipistrelle and Serotine.

The two most commonly found roosting in buildings are the common pipistrelle (*Pipistrellus pipistrellus*) and the soprano pipistrelle (*Pipistrellus pygmaeus*). Nathusius' pipistrelle have been observed at a number of wetland sites and the serotine has only been recorded twice.

Durham Bat Group has been requested for an updated data search for the area. We have no archived data for the area.

Bat Records From The Area Around Unthank, Harwood

Roost records within the 2km area.

1km square	Description	Bat species	No

Bat Map of Records around the area

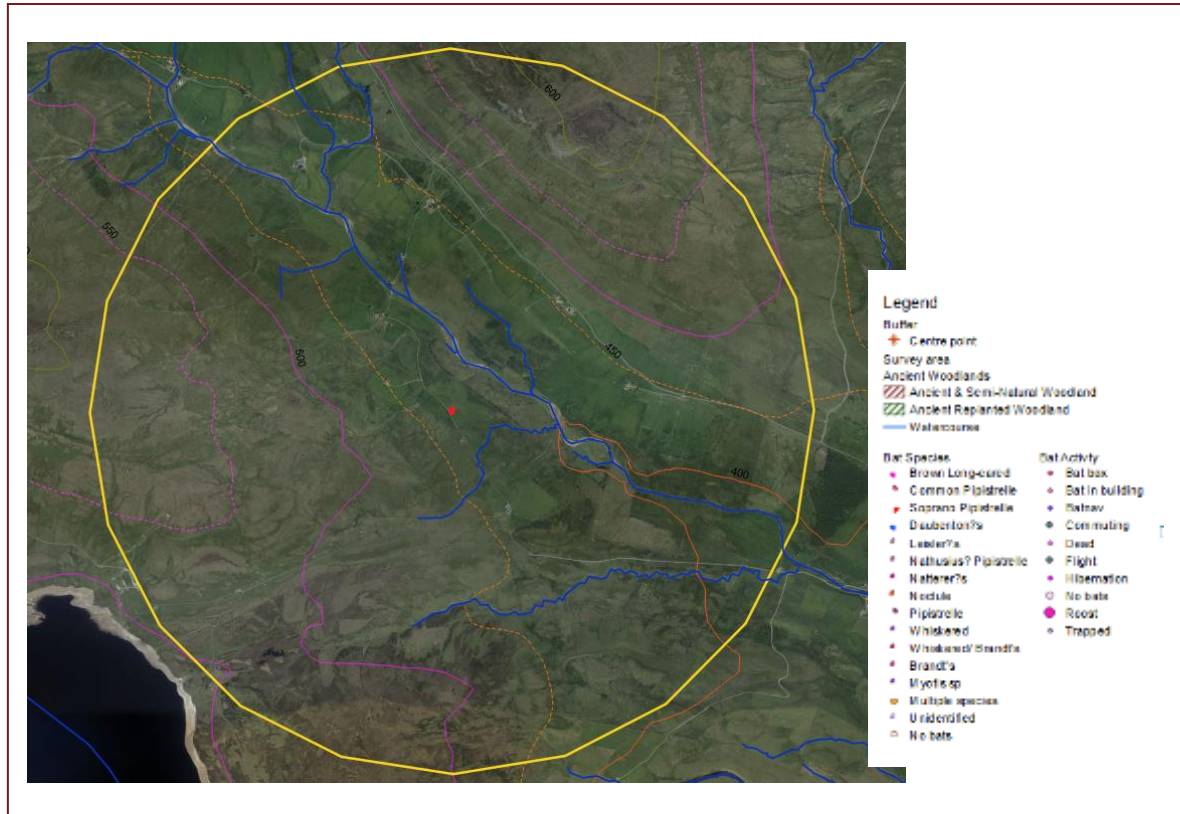


Figure 5 – Bat records supplied by DBG
Plotted using QGIS.

NB – much of the area sits above 500m on Open moorland with limited bat roosting opportunity, few buildings and suitable trees.

Barn Owls

The site has a known Barn owl in the area, a single owl was disturbed during a building survey in November 2020.

A Barn Owl roost & nest is recorded to a 5km square.

Further investigation identified Barn owls noted feeding young in August 2020, data received from a local birder and considered to be correct.

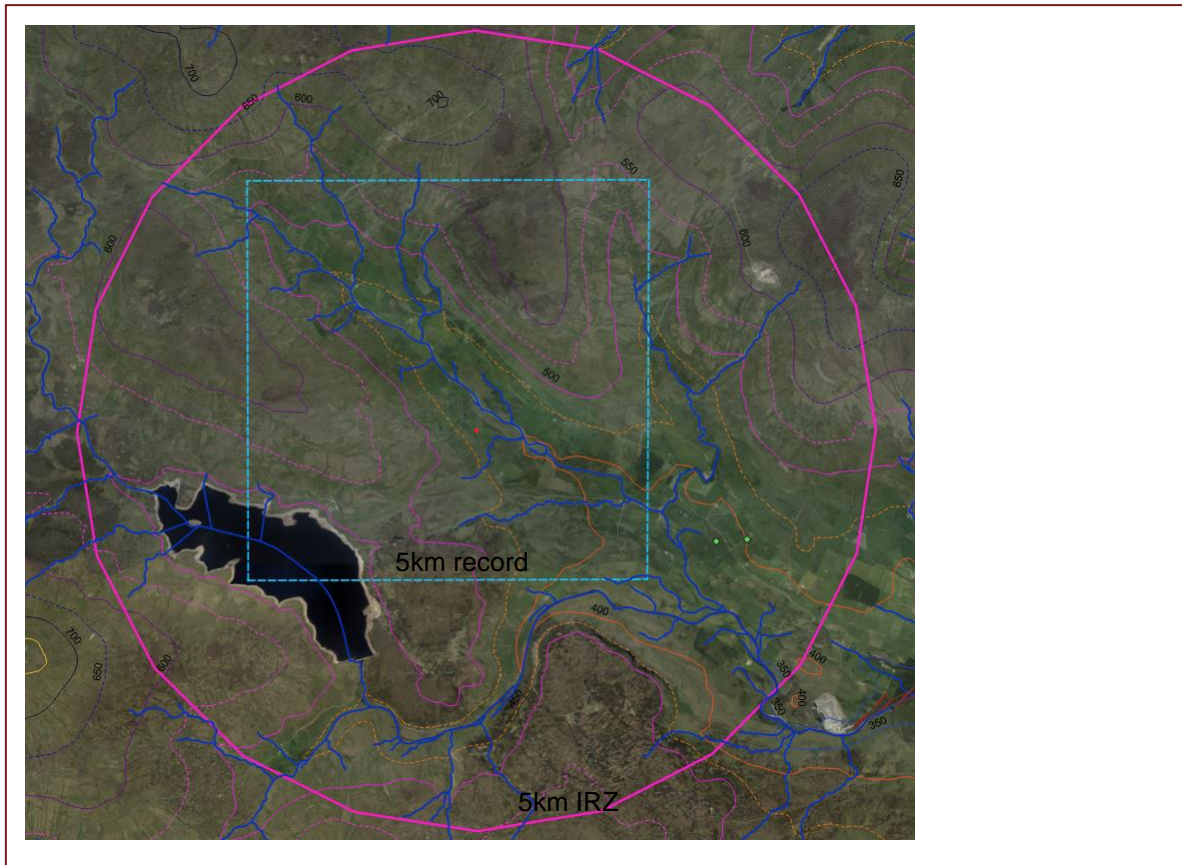


Figure 6 – Barn Owl 5km records & potential foraging area
Plotted using QGIS.

5.1.3 Previous Surveys

No previous ecological surveys have been conducted on site.

5.2 Field Surveys

5.2.1 Phase I Habitat Survey

A detached property situated within its own grounds. Within a moorland habitat, the site is surrounded by priority habitat.

No increase in the building footprint is proposed, all building materials will be stored within the yard.

The land surrounding the property is designated priority habitat, Upland hay meadow, lowland fens and good quality semi-improved grassland.



Figure 7 – Site boundary
Habitat as identified by the Natural England Priority Habitat Inventory.

A 1m curtilage is present around the property to the north.

Paddock

A paddock approximately 0.1ha in size, to the east of the buildings. The area has evidence of former tractor use, possible large bale storage and movement. This area would always have been used as a small livestock paddock, for looking after pet lambs, keeping livestock under observation etc creating an improved grassland area.



Figure 8 – Eastern paddock

The triangular parcel adjacent to the road is predominantly hard rush – Lowland fen habitat. To be retained.

5.2.2 Preliminary Roost Assessment (Bat Building Survey)

The existing property is in a state of disrepair and needs renovation. Permission was not granted to enter the main farmhouse due to safety concerns.

Unthank farmhouse and buildings. All the buildings are whitewashed, standard for the area.

Building Layout



Figure 9 – Building layout

Ref		walls	roof	Access
1	Stables	stone	Tile stone	yes
2	Barn	Stone	Tin	yes
3	Outhouse	Stone	Tile stone	yes
4	Main house	Stone	Tile stone	no
5	Byres	stone	Tin	yes

1 – Stables

Situated to the south of the farm range. Detached, single storey, random stone walled with a tilestone roof.

Used by birds, Barn owl pellets present – 1x western floor, 2x on eastern stable on window ledge.

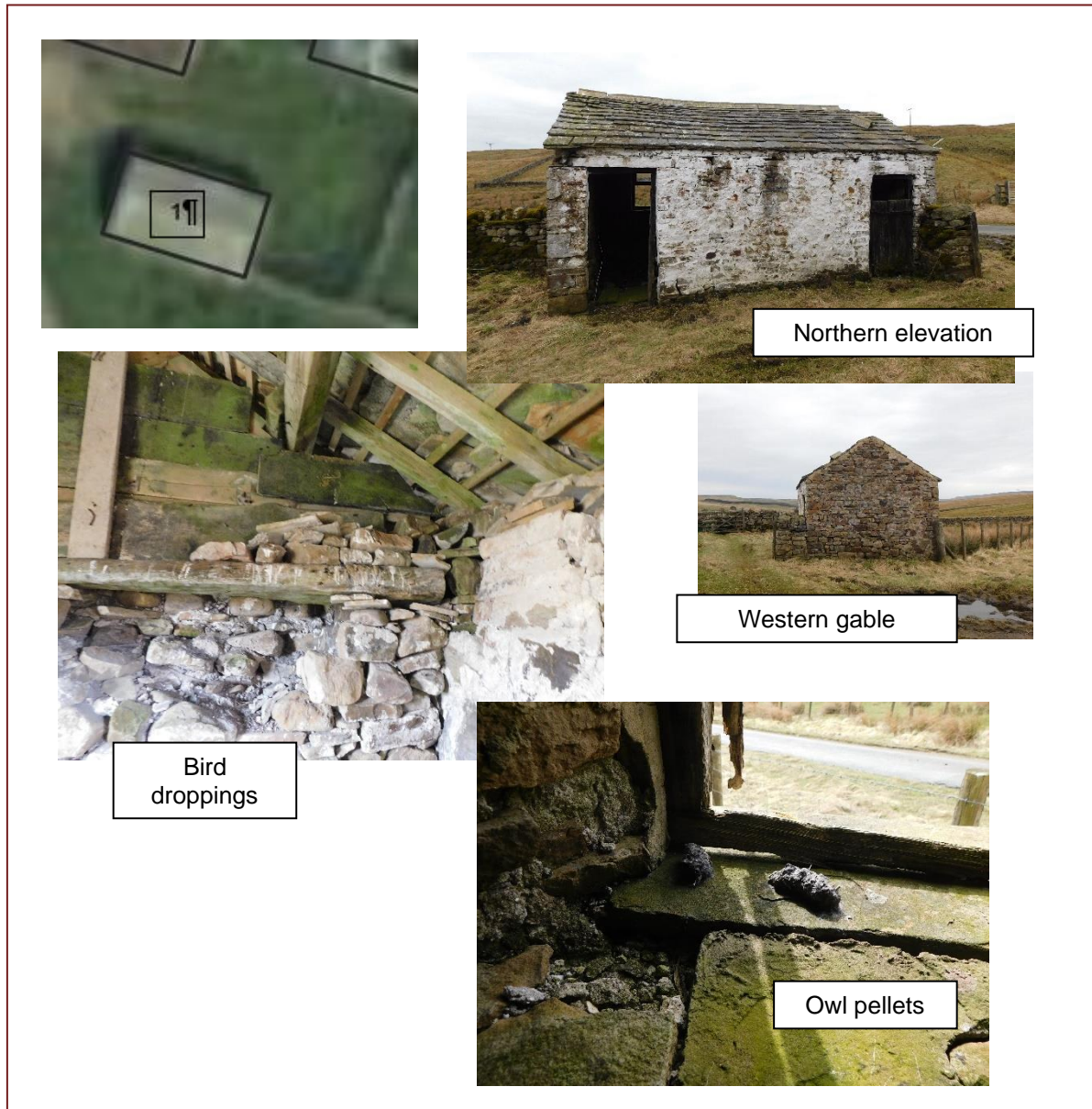


Figure 10 - Southern outbuildings

2 – Main Barn

Double height stone barn with corrugated metal roof. To the south and west of farmhouse.

The barn was empty but has been used for bale storage, a few pigeons are present within the barn.



Figure 11 - Barn

3 – Outhouse

Single storey stone walled, tilestone roof structure built on the north of the barn. Several stone tiles are missing on the western roof, the interior is damp and draughty.

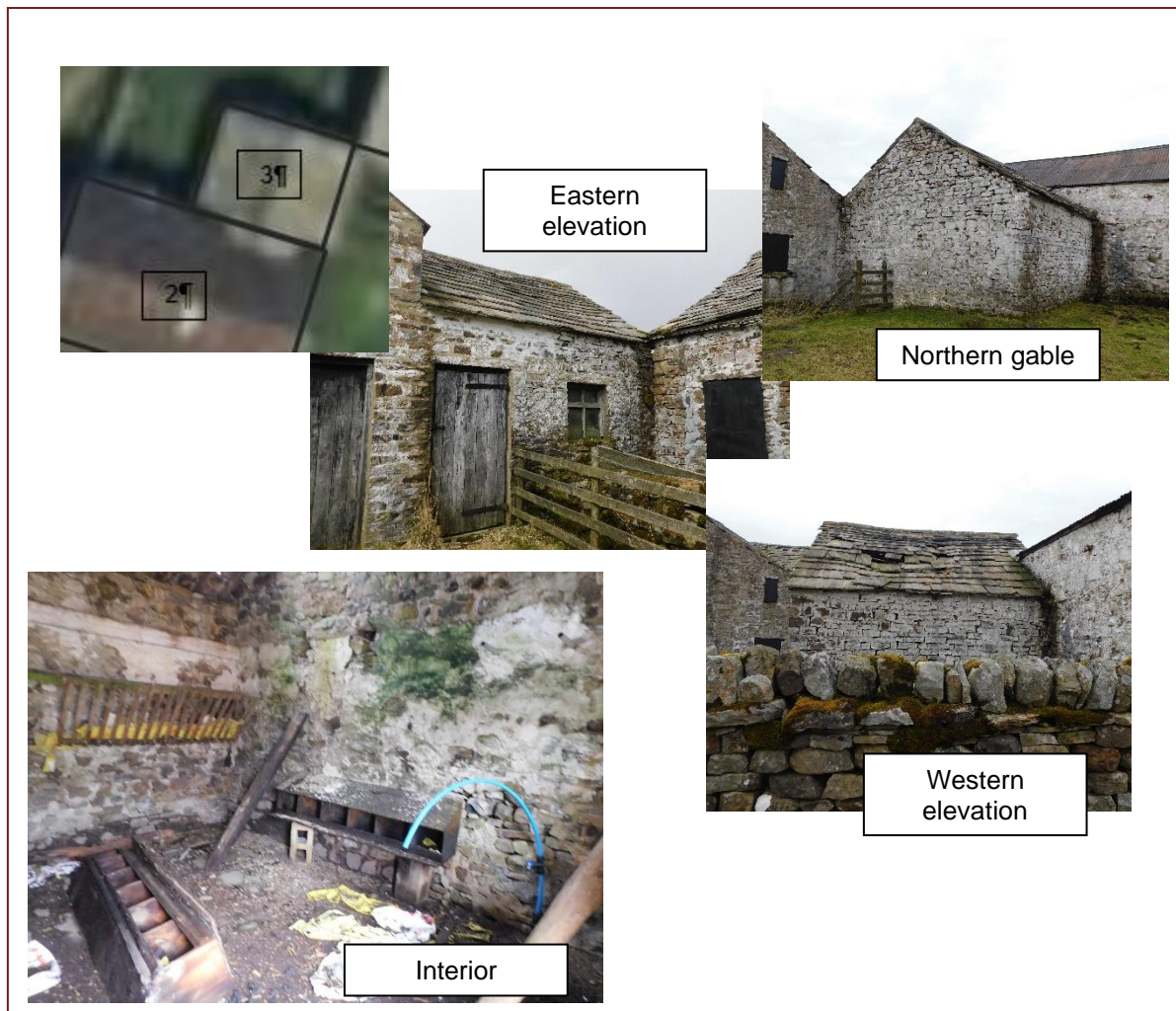


Figure 12 –Outhouse

4 - Main Farmhouse

The main farmhouse, the northern most of the buildings. Two storey stone walled with a cross gable tilestone roof, and a catslide southern extension. The building was boarded up for safety reasons, internal access was not granted.

The roof is in a state of disrepair, with many stone slates are missing, considering the length of time the building has been uninhabited the walls are in a good state of repair, the areas around the chimney stacks have some cracks and crevices.



Figure 13 – Farmhouse external features

Internal Building Survey

No physical access was granted into the main farmhouse. It was possible to investigate the internal structure using drone photography (provided by the client). Access was possible via the partially boarded window.

No floors or ceiling are present internally with limited roosting potential available.



Figure 14 – Farmhouse internal features

5 – Byres

Single storey stone walled, steel sheet, single ridge barn roof, the southern end of sheeting is missing.

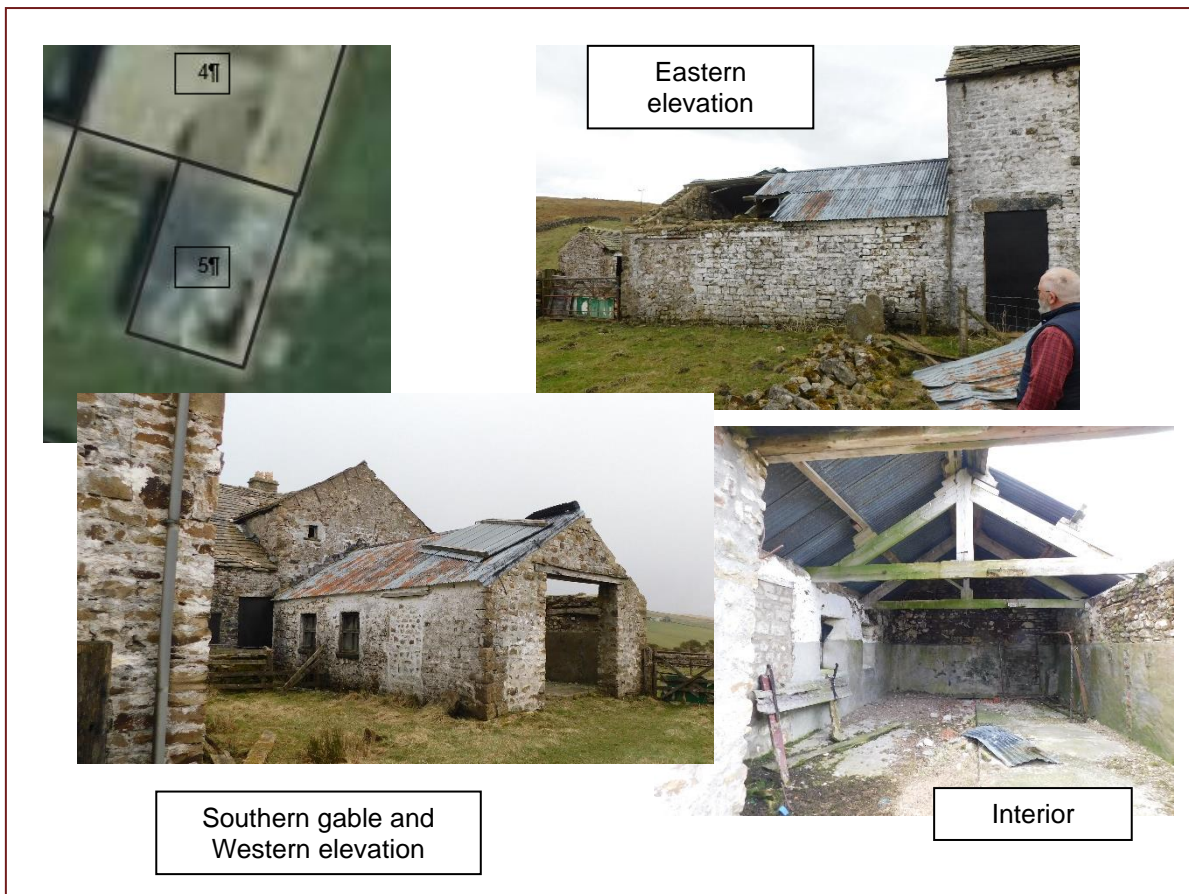


Figure 15 –Byres

5.2.2 Bat Activity Surveys

A single bat activity survey has been conducted to date, on April 11th - no bats were identified on site.

5.2.3 Bat DNA Analysis Results

No evidence of bats or droppings were seen within the building.

5.2.4 Protected Species Scoping Survey

The study area was also searched for potential for use by any protected species.

There is limited potential for potential presence of additional protected species to be affected.

A Barn owl has been recorded roosting in the bedroom of the main building. The structure has been boarded up to prevent accidents, a portion of boarding was removed to allow continued access for the owls if needed.

Access was not granted into the building for health and safety reasons.

A Barn owl nest + roost is recorded at NY83SW on the Barn owl Trust web site, (the record marker position is at the centre of an approximate 5km grid), this sits with 5km of the survey site.

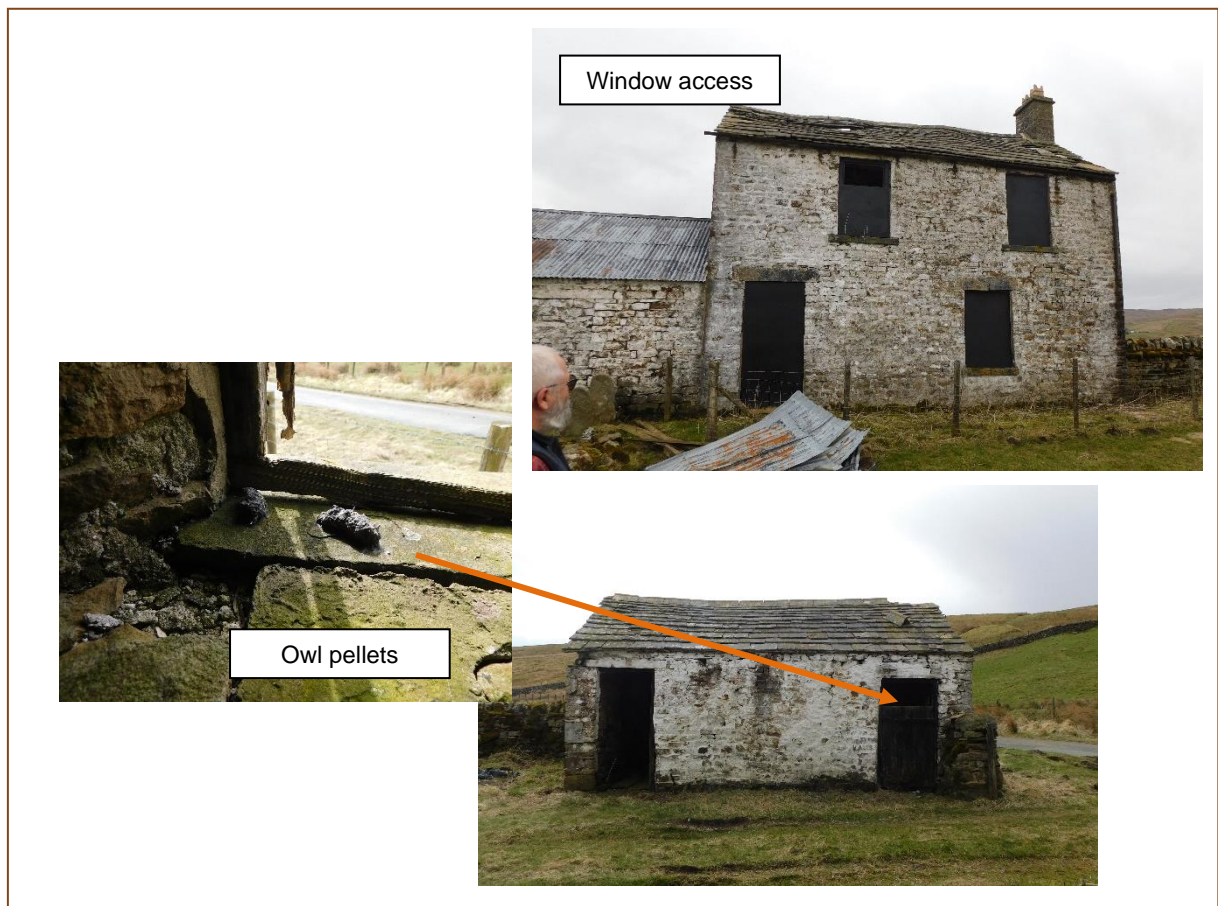


Figure 16 – Barn Owl features

No additional species were observed within the bounds of the property. The area is a hot spot for some important ground nesting birds – lapwing, curlew, Black grouse, Golden plover all were present within the wider landscape.

5.3 Site Assessment

The general assessment is that the land falls into category 3 - that of limited wildlife interest, due to the size of the proposals.

Habitat

The habitat surrounding the proposed development area is of ecological value and has been included in the UK Priority Habitat Inventory, Upland Hay Meadow to the north assessed via Higher Level Stewardship and Lowland Fens assessed via Natural England's SSSI database.

Protected Species

Bats

The buildings are situated in an upland habitat with limited bat foraging and commuting potential in the wider area, Marwood Beck provides some potential foraging. The site has limited connectivity to the surrounding habitat.

The building has bat roost features present, eaves and wall top access. The buildings has been uninhabited for many years.

Birds

Pigeons – several pigeons were noted on site, nests will be checked for use prior to any work.

Barn Owl -

A Barn owl is known to have roosted within 2 years, evidence of Barn owls present within the outbuildings.

A pair of Barn owls was noted leaving the property during the bat activity survey. One was observed flying south the other north, both left the site and were seen leaving south west. No return was noted during the following 2 hours.

Ground nesting birds – the area is important for a range of species with both curlew and lapwing present in the area.

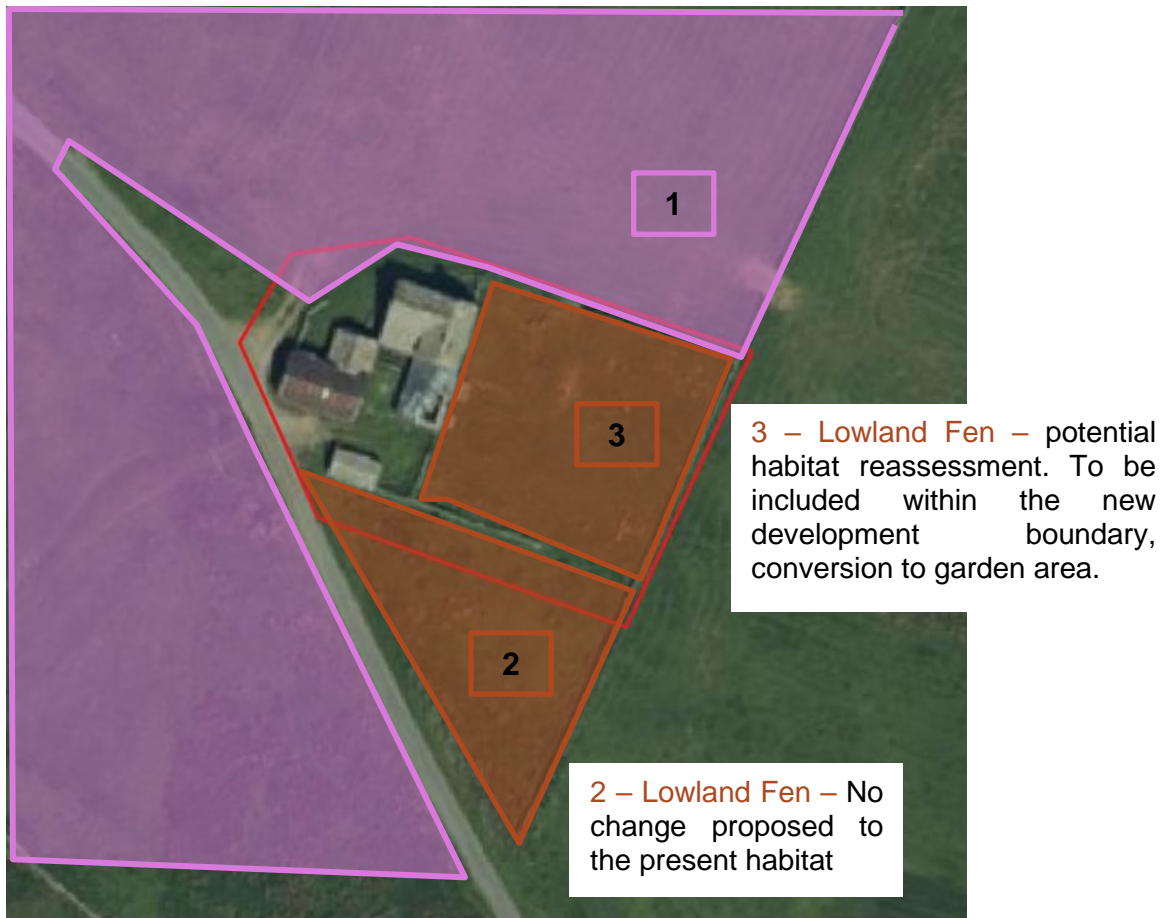
6 Ecological Constraints & Opportunities

Ecological constraints – Habitat.

1 – Upland Hay Meadow - The present habitat regime will be retained with no change.

Building work to be conducted from scaffolding where possible to prevent excessive trampling.

All building renovation debris to be retained within the existing property fencing.



Ecological Constraints – Protected Species

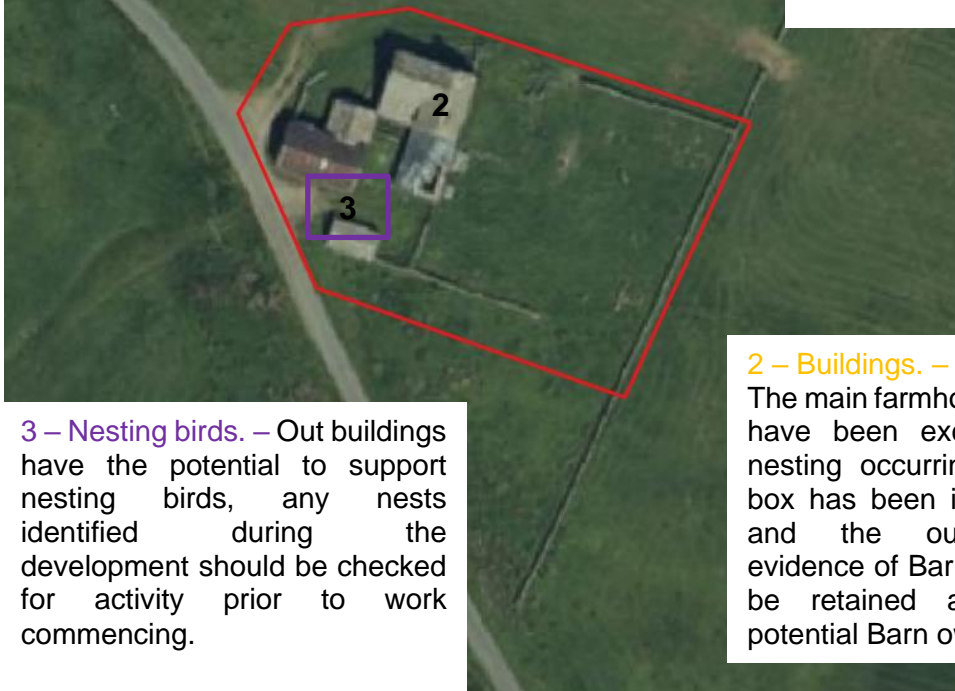
1 – Ground nesting birds – The grassland vegetation has the potential to support a range of ground nesting birds – both Curlew and Lapwing were noted in the area. No impact is proposed to this area by the development.



2 – Buildings. –

The main farmhouse has potential for roosting bats – further surveys are advised during the activity season.

Any work carried out should consider the presence of bats.



3 – Nesting birds. – Out buildings have the potential to support nesting birds, any nests identified during the development should be checked for activity prior to work commencing.

2 – Buildings. –

The main farmhouse – barn owls have been excluded prior to nesting occurring, a Barn owl box has been installed on site and the outbuilding with evidence of Barn owl use are to be retained at present for potential Barn owl use.

Wildlife Enhancements and Considerations

The site has potential for ecological enhancement. The inclusion/retention of bat roost features should be included in the proposed extension.

A Barn Owl box to be erected within the existing barn to be retained for the life of the build as per Barn Owl Method Statement – erected April 2021.

Ecological Considerations – Barn owls Reasoned Discussion.

Barn owls are protected under the Wildlife & Countryside Act 1981, it is an offence to:

1. Kill, injure or take any wild bird.
2. Take, damage or destroy the nest of any wild bird while that nest is in use or being built.
3. Take or destroy an egg of any wild bird.

Barn owls do not intentionally 'build' a nest. However, their nest-places are characterised by a compacted layer of nest debris that is considered to be their nest. Barn owls are considered to be nesting when the female remains on the nest area prior to laying eggs, the male will bring food to the female during this period. Considered to be 10 days prior to laying the first egg.

It was not possible to investigate physically all areas of the building, a drone was used to investigate the potential nesting areas. Additional survey effort was considered necessary to prevent damaging or destroying an active nest during the proposed reroofing work.

The Barn owl activity around the site was recorded prior to necessary work starting to assess the breeding status of the birds present prior to sealing the building to prevent bird access.

The activity survey recorded both parents leaving the main building at 18:30, neither returned to the building by 20:30, no food delivery was noted back to the site.

Fledgling feeding was observed during August 2020 at the site. Considering the timeline of Barn owl development, eggs would be predicted to be laid in May, this ties in with the previous average laying date of May 7th, (this has been brought forward to April 17th Nationwide) nesting and egg laying will be delayed due to adverse weather, 2021 has seen snow and hail and nights below 0°C through April, it is considered that the weather during Spring 2021 should delay egg laying.

It is considered that Barn owls are not nesting at present on site.

A nest box has been installed within the barn on site, as per enclosed advice. The building has been boarded up and work will not start on site until the end of May.

Scaffolding was erected on April 16th no Barn owls were noted by the workmen, they had been advised on the potential presence of the species.



7. Conclusion & Recommendations

Conclusion

- 7.1 Desktop surveys identified the site is within the North Pennines AONB and its associated statutory sites, within an area of important upland and grassland areas.
- 7.2 Potential for Protected Species
- a. Bats – bat foraging and commuting habitat is present with moorland habitat in the wider vicinity.
 - b. Barn owl – a roost + nest site is recorded in the 5km area, suitable foraging habitat is present in the vicinity. A Barn owl was noted on site in November 2020. Local birding knowledge informed of owl feeding in August 2020.
- 7.3 Field surveys were conducted during March 2021:
- a. A habitat assessment – Upland hay meadow is present to the north of the site, a parcel of lowland fen is present to the south east. The parcel of land to the east of the property is designated as Lowland fen.
 - b. Building assessment – the main farmhouse has potential bat roost features and Barn owl activity has been reported.
 - c. Additional buildings – Barns and outhouses present on site have nesting bird potential with limited bat roost potential.
 - d. Additional species – None identified on site, Black grouse, curlew and lapwing were noted on adjacent land.
- 7.4 No invasive species were identified on site.
- 7.5 Ecological species surveys
- a. A general bird activity survey was conducted during daylight hours. Nesting pigeons were present in the main barn, no ground nesting birds were noted within the site curtilage.
 - b. A dusk survey was conducted on April 11th surveyors were present on site at 18:00 to identify any birds returning to roost and observe any Barn owls, a pair of Barn owls were observed leaving the main farmhouse, no return was observed, no feeding behaviour was observed. No bats were present.
- 7.6 The size and nature of the proposed development is unlikely to significantly impact on the local wildlife.

Recommendations

7.7 Further survey requirements:

- a. Bat activity surveys are proposed for the 2021 activity season.
- b. A watching brief has been advised for potential Barn owl activity during the roof strip.
- c. The enclosed Method Statement should be followed during the development.

7.8 The proposals have the potential to include suitable wildlife enhancements:

- a. Bats – the proposed conversion has the potential to include bat roost features.
- b. Barn owls – a permanent accessible nesting space for Barn Owls has been provided within one or more of the buildings.
- c. The outbuildings have the potential to include nesting bird features.

7.9 Any building demolition, tree or hedge removals considered necessary during the breeding bird season March 1st to August 31st inclusive will require nesting bird surveys.

For and on behalf of
AllAboutEcology

Tricia Snaithe BSc BA PGCE PGCEst MIFL ACIEEM

Appendix 1 - References

8.1 References

- The Wildlife and Countryside Act 1981.
- The Conservation of Habitats and Species Regulations 2017.
- National Planning Policy Framework – (updated 19 February 2019).
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.
- Handbook for Phase 1 habitat survey – a technique for environmental audit – England Field Unit Nature Conservancy Council 1990 revised 2007.
- Bat Conservation Trust – Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition 2016.
- Great Crested Newt Suitability Index – Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155.
- Barn Owl Conservation Handbook – The Barn Owl Trust - Illustrated edition (25 Jun. 2012)

8.2 Legal Status Of Protected Species - Background

8.2.1 The Conservation Of Habitats & Species Regulations 2017

Paragraph 43 - A person commits an offence if they deliberately capture, injure or kill any wild animal of a European protected species; or deliberately disturbs wild animals of any such species impairing the ability of any significant group of animals of that species to survive, breed, or rear or nurture their young; or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong; deliberately takes or destroys the eggs of such an animal, or damages or destroys a breeding site or resting place of such an animal.

Paragraph 42 - Schedule 2 lists those species of animals listed in Annex IV(a) to the Habitats Directive which have a natural range which includes any area in Great Britain.

8.2.2 Key Principles Of Planning

The National Planning Policy Framework (NPPF), updated February 2019 to include minor clarifications to the revised version published in July 2018. Setting out the Government's planning policies for England and how they should be applied.

Chapter 2. Achieving sustainable development.

Para 8.c) an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment;.....helping improve biodiversity....

Para 11 Plans and decisions should apply a presumption in favour of sustainable development.

Chapter 11. Making effective use of land

Para 117...in a way that makes as much use as possible of previously developed or 'brownfield' land.

Para 118a), b) c) d)

Chapter 15. Conserving and enhancing the natural environment.

Para 170 Planning policies and decisions should contribute to and enhance the natural and local environment by: a) to f)

Para 171 to Habitats and Biodiversity par 174 to 177

NB para 214 The policies in the previous Framework published in March 2012 will apply for the purpose of examining plans, where those plans were submitted⁶⁹ on or before 24 January 2019. Where such plans are withdrawn or otherwise do not proceed to become part of the development plan, the policies contained in this Framework will apply to any subsequent plan produced for the area concerned.

8.3 Terminology

Zone Of Influence

The 'zone of influence' for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site.

The zone of influence will vary for different ecological features depending on their sensitivity to environmental change. It may therefore be appropriate to identify different zones of influence for different features. The features affected could include habitats, species, and ecosystems and the processes on which they depend.

The zone of influence should be regularly reviewed and amended as the project evolves. If inadequate information is available a precautionary approach adopted.

Bat Roost Type

Roost type	NE definition
Day roost	A place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.
Night roost	A place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.
Feeding roost	A place where individual bats or a few individuals rest or feed during the night but are rarely present by day.
Transitional/occasional roost	Used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.
Swarming site	Where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites
Mating sites	Where mating takes place from late summer and can continue through winter.
Maternity roost	Where female bats give birth and raise their young to independence.
Hibernation roost	Where bats may be found individually or together during winter. They have a constant cool temperature and high humidity.
Satellite roost	An alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

Appendix 2 - Assessments

9.1 Potential To Support Important Species

Bats

Initial Bat Site Assessments

Commuting & Foraging Habitats	
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Medium	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, treelined watercourses and grazed parkland. Site is close to and connected to known roosts.

Potential Roosting Habitats	
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e., unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential
Medium	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

	Minimal	Low	Medium	High
Setting	Inner city	Urban with little green space	Rural upland/ urban green space	Rural lowland
Distance to wetlands	>1km	500m-1000m	200m-500m	<200m
Distance to woodlands	>1km	500m-1000m	200m-500m	<200m
Commuting routes	Isolated by unsuitable development	No clear flyways linking the site to wider countryside	Some potential commuting routes to and from site	Site well connected to surrounding areas with multiple flyways
Recent records				Roost records within 1km

Building Assessment

	Minimal	Low	Medium	High
Building type	Industrial type / materials	Single small building	Several buildings, large old single structure	Traditional farm buildings, castle, hospital etc.
Storeys	Flat roofed	Single	Multiple	Multiple large roof voids
Materials/condition	Modern sheet materials – steel, concrete frame	Good condition, tight joints	Few cracks and crevices	Notable cracks and crevices
Roof condition	Modern sheet materials	Good condition no gaps, weatherproof	Some access, slates, tiles	Uneven with gaps, not too open
Key features	No features	Very limited features	Some features	Hanging tiles, cladding, barge boards, soffits with access
Residents' information	No bats recorded	'few' bats	'many' bats seen	Known roost

Barn Owl Decision Table

Ecological survey results	Mitigation, compensation and enhancement measures				
	Make temporary alternative provision nearby	Require an immediately pre-development survey	Impose a timing restriction (March to August incl.)	Require a built-in nesting place	Require foraging habitat creation and management
No Barn Owl evidence but site suitable	No	Yes	No	Yes	Yes
Barn Owl roosted here over 2 years ago	No	Yes	No	Yes	Yes
Barn Owl roosted here within the last 2 years	Yes	Yes	No	Yes	Yes
Barn Owls nested historically/ pair roosting	Yes	Yes	Yes	Yes	Yes
Barn Owl evidence found here (unspecified)	Yes	Yes	Yes	Yes	Yes
Incomplete survey or inadequate survey report	Yes	Yes	Yes	Yes	Yes
Action Required	As soon as possible; erect one or more Barn Owl nest boxes within 200m and in clear line of sight of the development at least 30 days before any works commence. This alternative provision should be kept free from disturbance by	Require a full survey for evidence of Barn Owl occupation by a suitably qualified person, to be conducted no more than 3 days before development works start to ensure no offence is committed under the Wildlife and Countryside	Restrict the timing of the development; works must not commence and disturbance must not increase between 1st March and 31st August. This will help ensure no offence is committed under the Wildlife and Countryside Act (1981)	A permanent accessible roosting and nesting place for Barn Owls must be created inside (i.e. within) the development: typically in a roof void or within the structure of a roof or wall at least 3 metres above ground level. The owls' access	Create as a minimum the same amount of suitable Barn Owl foraging habitat to that which is being lost by development to ensure no net loss in biodiversity. This can be on or off-site. A habitat management plan

	on-site protection measures such as signage and fencing. In order of preference, nest boxes should be erected; i) in suitable buildings. If there are no suitable buildings, then; ii) in suitable trees. If no suitable trees then; iii) on poles.	Act (1981) as amended. Survey reports must identify, age and map evidence of occupation by Barn Owl, state occupation status (e.g. nest site) and provide specific recommendations stating what needs to happen (where, when, how) and in what order.	as amended. Approximately 75% of nesting cycles occur between March and August inclusive so at sites with evidence of nesting, either current or historic, or where a pair of birds is in residence, a timing restriction is an essential safeguard.	should replicate the existing owl access point. If there is no existing access, face the access towards open countryside.	should specify a topping regime of not more than once a year and not before 15th July. Annual topping on a rotational basis can help ensure there is always some optimum foraging habitat available for the Barn Owls.

Appendix 3- Raw Data

Only raw data not already used within the report will be presented here.

10.1 MAGIC – Multi Agency Geographic Information for the Countryside (including the Ancient Woodland Inventory)

Site Check Report generated on Mar 12 2021
Centroid Grid Ref: NY82853186

The following features have been found in the search area:

Counties, Metropolitan Districts and Unitary Authorities (GB)	County Durham
Parishes (GB)	Forest and Frith CP
National Character Area	North Pennines

Designations

Land-Based Designations

Statutory

Areas of Outstanding Natural Beauty	1 Features found – North Pennines
Local Nature Reserves	No Features found
Moorland Line	1 Features found
National Nature Reserves	1 Features found - Moor House – Upper Teesdale
National Parks	No Features found
Ramsar Sites	No Features found
Proposed Ramsar Sites	No Features found
Sites of Special Scientific Interest	1 Features found – Upper Teesdale SSSI.
Special Areas of Conservation	1 Features found – Moor House – Upper Teesdale
Possible Special Areas of Conservation	No Features found
Special Protection Areas	1 Features found - North Pennine Moors
Possible Special Protection Areas	No Features found
Biosphere Reserves	No Features found

Historic non-Statutory

Registered Parks and Gardens	No Features found
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National Habitat Network All Habitats Combined (England)

Used to identify the priority habitats within the 2km search zone.

Habitats Networks – 179 Network maps	
habitats + habitat restoration-creation, restorable habitat, plus fragmentation action, and network enhancement and expansion zones.	
Habitats – 56 Priority Habitats	
Ancient Woodland	none identified
Blanket Bog	7 identified
Lowland calcareous grassland	6 identified
Lowland fens	43 identified
Lowland meadows	2 identified
Purple moor grass & rush pastures	1 identified
Rivers	8 identified
Upland calcareous grassland	12 identified
Upland flushes fens & swamps	12 identified
Upland hay meadow	4 identified
Upland heathland	2 identified
PHI (Priority Habitat Inventories)	none identified
Priority Habitat Restoration and Creation – 29 parcels identified	
Habitat Restoration-Creation	17 identified
Habitat Creation	None identified
Restorable Habitat	29 identified
Network Zones – where action may be taken	
SSSI	9 identified
Network Enhancement Zone 1	7 identified
Network Enhancement Zone 2	none identified
Fragmentation Action Zone	20 identified
Network Expansion Zone	none identified

European Protected Species Licensing

MAGIC was used to identify the presence of Granted Protective Species Applications 2km of the survey site.

European Protected Species	County Durham
Amphibian	None identified
Bats	None identified
Cetacean	None identified
Invertebrate	None identified
Other mammal	None identified
Plant	None identified
Reptile	None identified

Great Crested Newt Records

Great Crested Newt Class Survey Licence Returns		
Number of ponds surveyed	GCN Present	
	yes	No
None		

Great Crested Newt Pond Surveys 2017-2019		
Number of ponds surveyed	GCN Present	
	yes	No
No features found	-	-

Additional Searches

Important Bird Area	North Pennine Moors
Important Plant Areas	Moor House to Upper Teesdale IPA

The site sits within

Areas of Outstanding Natural Beauty	1 Features found – North Pennines
Sites of Special Scientific Interest	1 Features found – Upper Teesdale SSSI.
Special Areas of Conservation	1 Features found – Moor House – Upper Teesdale
Special Protection Areas	1 Features found - North Pennine Moors
Habitat	Upland hay meadow – bounds the site

10.2 Local Data Search

10.2.1 Local Records Centre

Due to the size and nature of the site - local record centre data was not considered necessary.

10.2.2 Local Wildlife Group

Much of the 2km search area sits above 500m, within the high Pennines of Co Durham. The site sits within an upland former glacial valley, with limited roosting potential.

Durham Bat Group has been requested for a data search for the area.

NY8033	NY8133	NY8233	NY8333	NY8433	NY8533
NY8032	NY8132	NY8232	NY8332	NY8432	NY8532
NY8031	NY8131	NY8231	NY8331	NY8431	NY8531
NY8030	NY8130	NY8230	NY8330	NY8430	NY8530

Bat Records From The Area Around Unthank, Harwood

We have no records for the area.

1km square	Description	Bat species	Activity	No

Barn Owls

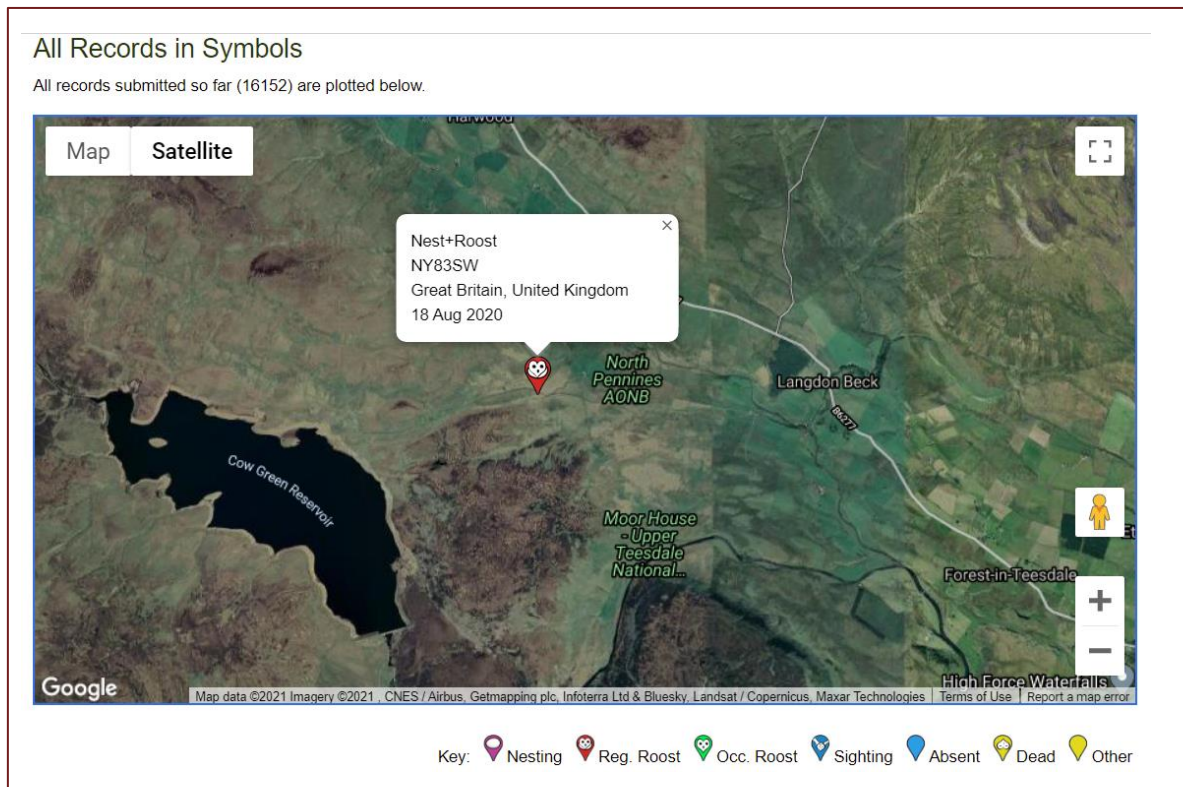
Detailed information on Barn owls and their roosts is in short supply. The Birds of Durham – reports the Barn owl as being as far west as Langdon Beck in Co Durham.

Word of Mouth reports - Barn owls using the front bedroom of the main farmhouse. A single bird was disturbed in November 2020 during building surveys.

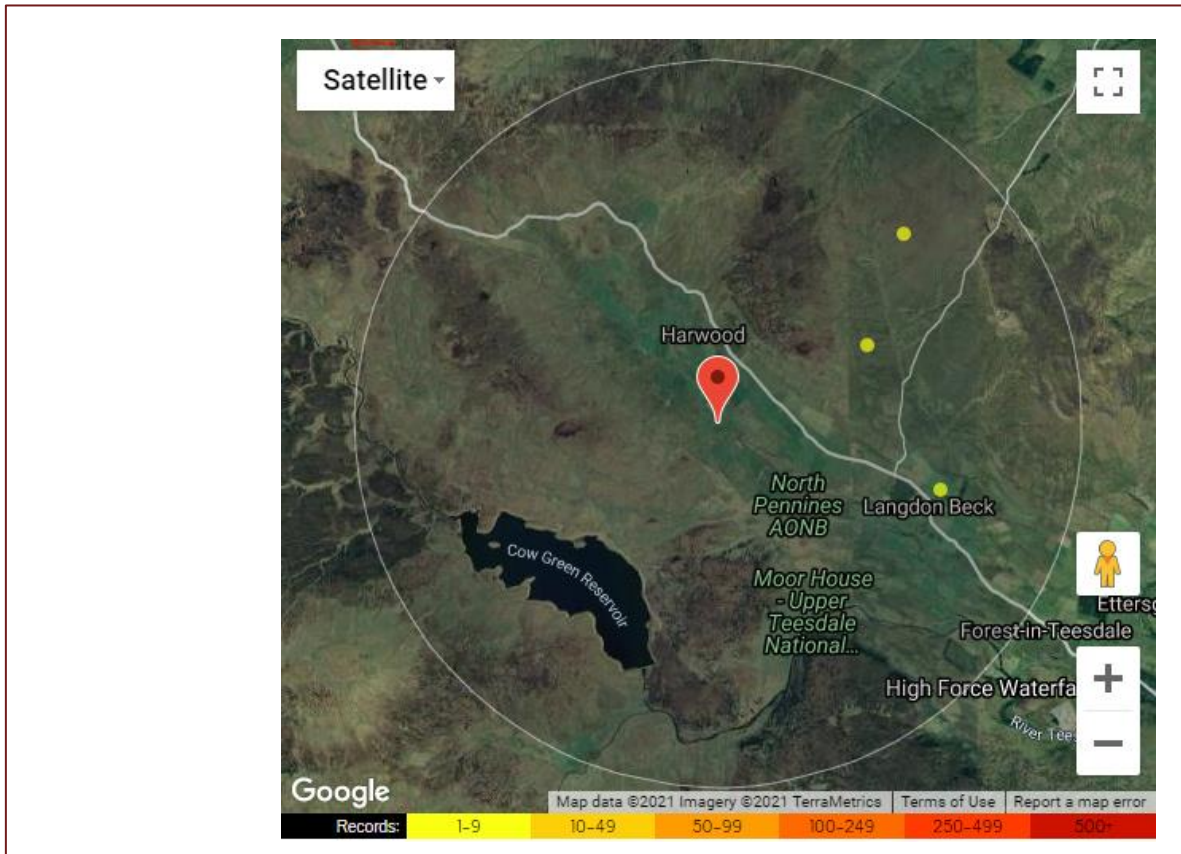
Barn Owl online Survey

All Records in Symbols (barnowlsurvey.org.uk)

A single nest + roost record.



The NBN atlas reports nine Barn owl records in the 5km radius of site.

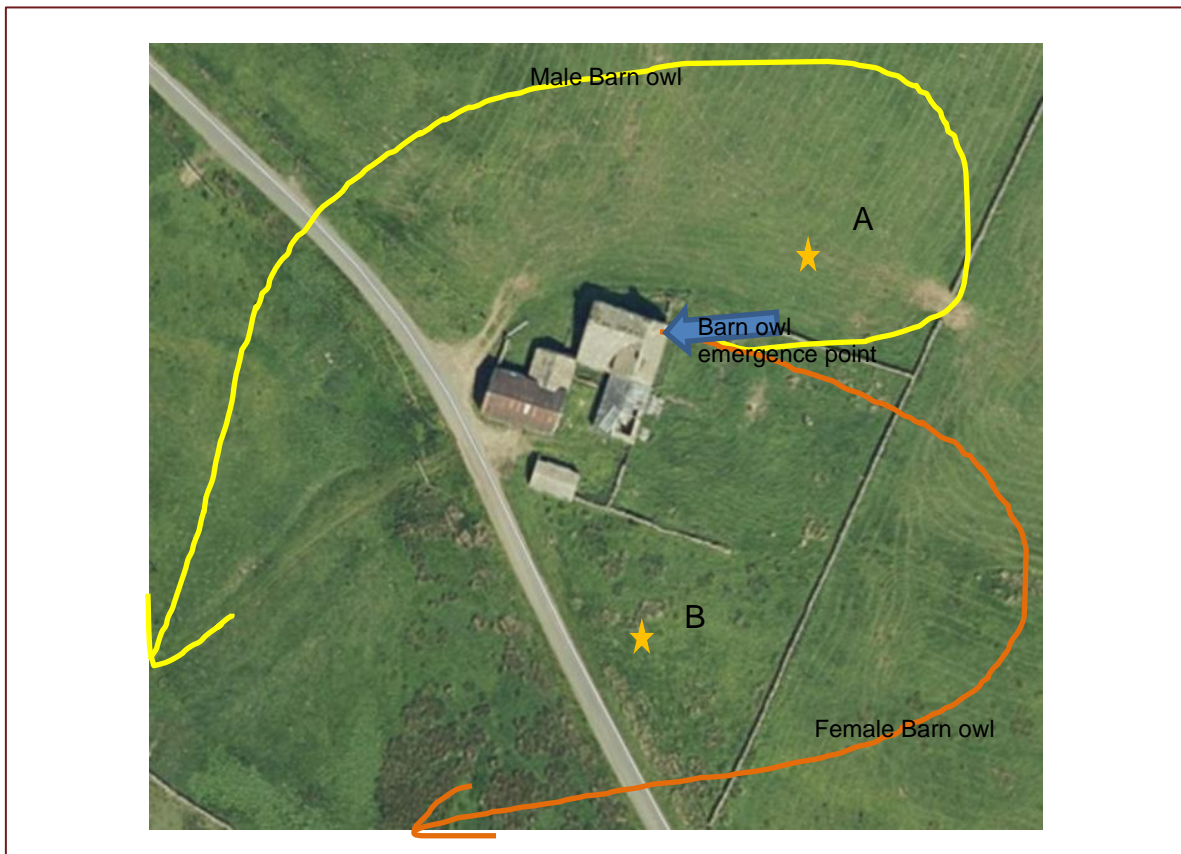


10.3 Species Activity Survey

10.3.1 Weather Data

	Dusk		
Date	April 11th		
Start time	18:00		
Finish time	22:00		
Sunrise/Sunset	20:06		
Dusk/Dawn Civil twilight	20:42		
Temp at start of survey	8.0°C		
Temp at end of survey			
Wind speed	light		
Precipitation	nil		
Notes			

Temperatures were still low and possibly not suitable for bat activity, the lack of bat activity is not to be taken as lack of bats, although the connectivity and lack of trees on site added to the dereliction of the buildings may detract from bat usage.





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Bat Owl Mitigation

Barn owls are covered by the basic legal protection afforded to most wild birds and also extra legal protection against disturbance when nesting. The Barn owl is listed on Schedule One of the Wildlife & Countryside Act and so receives additional protection during the breeding season.

Unthank, Harwood

The Wildlife & Countryside Act 1981 provides protection for Barn owls and most other wild bird species in England, Scotland and Wales. The eggs and nests of most bird species are also protected. Specifically, under Part 1, Section 1 (1), it is an offence to intentionally:

- Kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird while that nest is in use or being built.
- Take or destroy an egg of any wild bird.

Penalties for infringement

Barn owls are included in Schedule 1 of the Wildlife & Countryside Act 1981, under Part 1 Section 21 (1) the penalty for an offence involving a Barn owl, its nest, or egg, includes a fine of up to £5,000, or up to six months imprisonment, or both, per bird, nest or egg.

A Schedule one licence is required to visit the nest of this species.

Background

The Barn owl is a species of open country, favouring lowland habitats such as farmland and young plantation woodland.

Roosting sites - Sites used by Barn owls have no protection *per se*, the buildings or trees they occupy are effectively protected during nesting periods. At other times nest and roost sites can be legally altered or even destroyed. Traditional Barn owl sites seem to be attractive to the species as a whole; nest sites can be re-used over long periods of time, not only by the same birds, but by successive generations of unrelated individuals, and even re-occupied by new individuals after long periods of absence.

Foraging habitat - Suitable Barn owl foraging habitat receives no protection an area may prove attractive to a foraging Barn owl, it does not confer the area any sort of statutory legal protection, irrespective of the time of year, and whether or not the birds are breeding.

Populations have recovered somewhat from an earlier period of decline and have benefited from the erection of nest boxes and appropriate habitat management.

Surveys have been conducted at Unthank, Harwood . Barn owls have been identified as present previously in and around the area. No Barn owls have been identified on site prior to the boarding up of the site.

Barn owl box position – to be installed within the barn situated to the south west of the site.



Loss of Barn owl roosts to development must be compensated for by the provision of alternative roost and nest sites within 200 metres of the development, these should be made available at least 30 days prior to the start of works though the longer the better. Timing constraints will apply to avoid the periods when the Barn owls are nesting and raising dependant young. The provision of permanent roost and nest sites will be required within the redevelopment.

Precautionary Method Statement Bats

To define methods which will be employed during the works to minimise the risk of an offence being committed to any bats or other protected species potentially present and sets out how bat roosting opportunities will be retained as part of the development activity at:

Unthank, Harwood

In order to avoid harming any bats potentially present, damaging or blocking access to their habitats the following method statement should be followed.

Copies should be given to the site owner, Architect, Clerk of Works and contractors involved in the building works and on display at the development.

Should any bats (or any other protected species) be found during any procedures works will be placed on hold and the ecologist Tricia Snaith to be informed (01388710481) immediately for assistance, further survey work and a Natural England Species licence may be required before works can proceed.

Bats, their breeding sites and resting places are protected by law.
The law protects them throughout their lifecycle.

This document applies to all structures within the development proposals

All UK bats and their roosts are fully protected by law. To avoid breaking the law by damaging or disturbing bat roosts, resulting in possible imprisonment, fines or confiscation of equipment, certain procedures have to be followed.

You will be breaking the law if you:

- Capture, kill, disturb or injure bats (on purpose or by not taking enough care).
- Damage or destroy a breeding or resting place (even accidentally).
- Obstruct access to their resting or sheltering places (on purpose or by not taking enough care).
- Possess, sell, control or transport live or dead bats, or parts of them.

Fines of up to £5000 per bat affected and confiscation of vehicles used can be imposed for deliberate or reckless disturbance of bats or damage to a roost site.

Bat Roost

A bat roost is interpreted as 'any structure or place which is used for shelter or protection', whether or not bats are present at the time.

Bat roosts can be difficult to locate. It is possible that small colonies may be present within a building and no external signs are visible. British bats vary in size, the smallest being the crevice roosting Pipistrelle with a body the size of a matchbox. This means these animals can roost within the smallest cracks or crevices. When disturbed the bat is likely to be torpid and unable to fly effectively for some minutes during this time, they are vulnerable to injury. During removal of material from the roof and tops of the walls any crevices underneath should be checked to ensure that no bat has been disturbed.



Figure 1 - Examples of bat droppings. If examined carefully, when crumbled exoskeletons of insects can be seen shining.

Common locations for crevice roosting bats within buildings include beneath roof coverings, within mortice joints, rubble fill and cavity walls and between loose stones or bricks.

Other traces that can indicate a past presence of bats are their droppings. These resemble mouse droppings but unlike mouse droppings can be crumbled to dust between finger and thumb.

Droppings may be found on wall tops and beneath slates and tiles on top of any sarking.

Timing

Any development work involving dismantling any stonework and the removal of the existing roof materials will be carried out avoiding the hibernation period (November to March inclusive). Periods of cold weather (below 5°C including night temperatures) will be avoided as any bats present will be in hibernation torpor and be extremely vulnerable.

Although no nesting birds were observed during the survey if the works commence during the bird nesting season (1st March to 31st August) the buildings should be checked for active bird's nests prior to demolition.

Summary Of Bat Survey Findings

No evidence of bats identified on site. The building has the potential to support the occasional/transient/single roosting bat and care should be taken during demolition works.

Work Schedule

It is advised that building works where possible are designed to **avoid both the bat maternity season May – August inclusive and the bat hibernation season November – February inclusive**

Prior To Any Work Commencing

All site operatives including contractors and sub-contractor staff will be made aware of particular issues relating to the site and their responsibilities in the event of any bats being found.

During Any Works

When removing the existing roof tiles, they are to be lifted vertically, the space below observed for the presence of bats. Paying particular attention to the areas above the wall tops and the ridge tiles.

Guidance

Within the new roof it is advised that bitumen roofing felt or a similar material should be used as an underlay for roofing tiles. It is advised that breathable roofing membranes (BRM) are avoided in particular along the ridge area.

Any timber treatment should follow guidelines TIN212 published by Natural England. Permethrin and cypermethrin compounds are the most 'bat friendly' wood treatments currently available.

Summary Of Protected Species Survey Findings

Any bat or protected species found during operations will have the area re-covered or protected and work to cease in that area. AllAboutEcology to be informed (01388710481) immediately, to contact Tricia Snaith the project Ecologist for assistance.

Ideas for the inclusion of Potential Bat access Points – Originally produced by the English Nature Cumbria Team

Bat Bricks

