Ecological Impact Assessment and Bat Survey

DUNHOLME FARM, HALTWHISTLE, NORTHUMBERLAND

SUMMER 2021

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Disclaimer:

Ecology surveys are carried out in good faith, to the relevant professional guidelines. Where variation from these guidelines is necessary, this is outlined in the report. Any comments regarding condition of buildings or trees are in relation to the use of the building/tree by bats and birds and should not be considered as a building survey or arboricultural opinion on the condition of those features.

The client should be aware that the mitigation recommendations in ecology reports are often translated directly into planning conditions, and as such these should be studied closely and agreed with any contractors in advance of site works commencing.

Mitigation recommendations should be clearly marked on the Architect's Plans submitted with any planning or other consent.

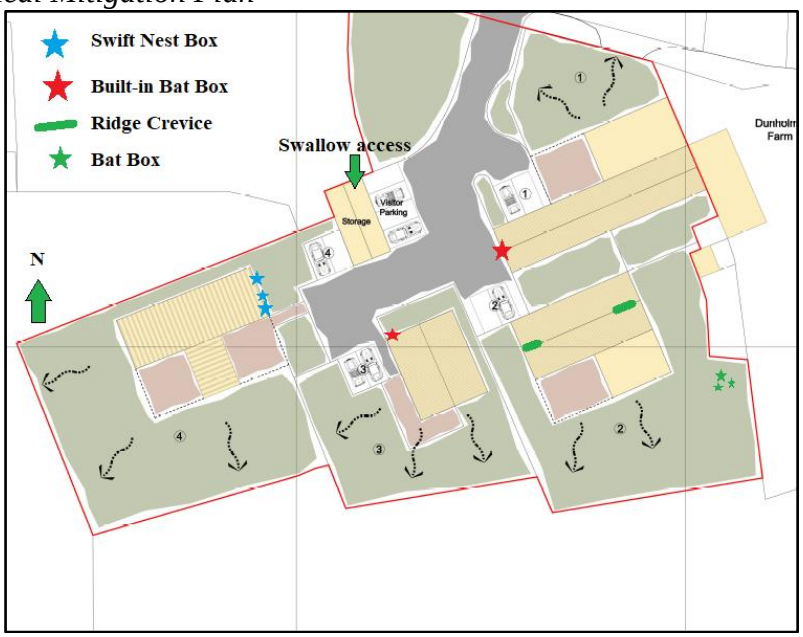
Contents

Ecological Impact Assessment for Dunholme Farm, Haltwhistle, Northumberland

Summary

- An ecological survey was requested primarily for bats and birds for a farm steading at Dunholme Farm, Haltwhistle, Northumberland by Bart Milburn on behalf of the owners, Mr and Mrs Storey.
- The steading consists of a range of dilapidated farm buildings constructed from brick, with slate or corrugated metal roofs. Two large agricultural barns are present to the northwest.
- The proposals are to convert the buildings to create four residential units.
- Inspection results of the exteriors revealed that the buildings either were open access or had missing ridges. The corrugated sections had negligible roost potential. The internal inspection of the more traditional buildings revealed little evidence of bats though a small scatter of large bat droppings were located within Building A in September and in June small bat droppings were found howbeit in a different location. Due to the negligible to moderate roost potential, two emergence/dawn surveys were carried out.
- Known bat activity in the area within 2km of the site are maternity roosts of Pipistrelle sp. and Brown long-eared bats with occasional roosts of Pipistrelle 45kHz, Pipistrelle 55kHz and Natterer's roosts are also known. Foraging Noctule bats, Natterer's, Whiskered/Brandt's and Daubenton's bats have also been recorded within 2km.
- The emergence survey identified no bat emergence from the buildings however a Brown long-eared was seen during the survey. Pipistrelle 45kHz, Noctule and Natterer's bats were noted foraging or commuting. The dawn survey identified a re-entry Building A of a single Brown long-eared bat, one Pipistrelle 55kHz bat and two Daubenton's bats.
- Three day roosts will be disturbed/destroyed due to the re-roofing planned. Mitigation will be put in place, to provide crevices in the converted/extended buildings, however as the disturbance/destruction of roosting places for bats will take place, the site requires to be registered under a low impact Natural England Licence to proceed.
- Timing of any works to avoid the hibernation period (November to March inclusive), will ensure that the works have as little negative affect as possible on bats.
- Provision of bat boxes and bat roost crevices will be required.
- Any nesting bird species though will be allowed access to the nest until the young have fledged. Provision for swallows and swifts will be made.

Figure 1. Ecological Mitigation Plan

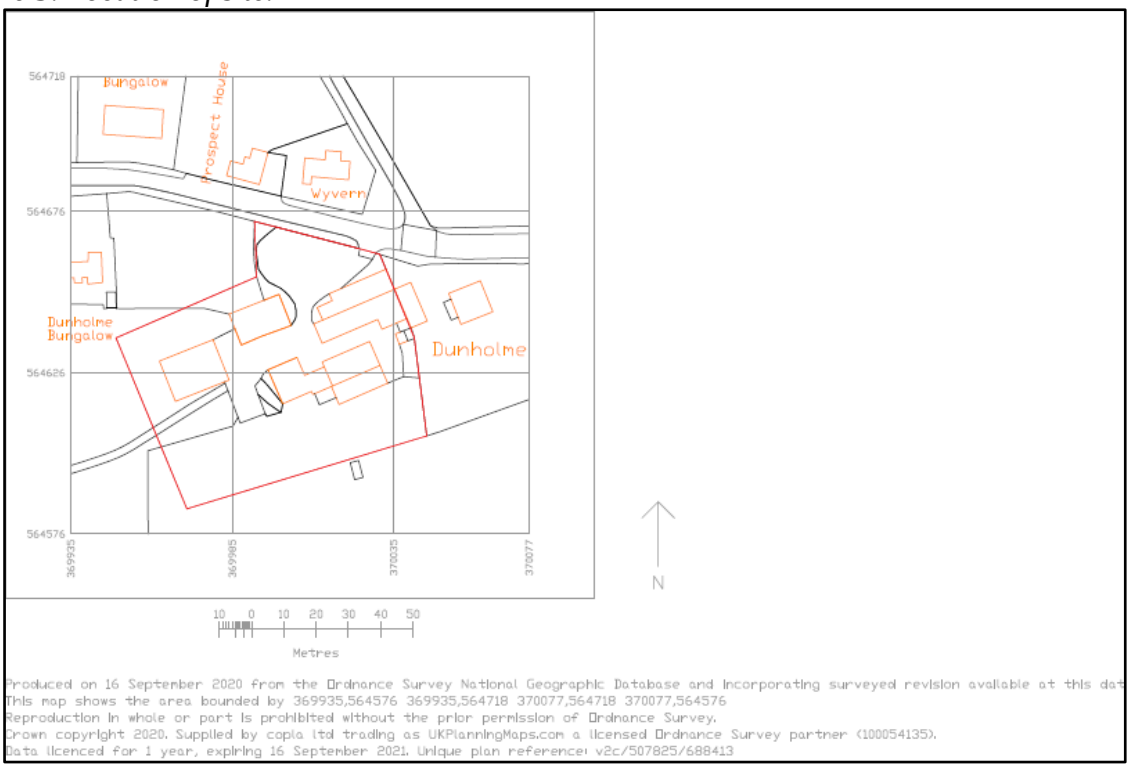


1. Introduction.

The inspection was carried out and reported by Ruth Hadden BSc an experienced Ecologist and Licensed Bat Surveyor.

Figure 2. Survey area - within the redline

Figure 3. Location of site.



2. Relevant Policies and Legislation.

Under Section 25 (1) of the Wildlife & Countryside Act (1981) local authorities have a duty to take such steps as they consider expedient to bring to the attention of the public the provisions of Part I of the Wildlife & Countryside Act, which includes measures to conserve protected species.

The Natural Environment and Rural Communities Act (2006) places a Statutory Biodiversity Duty on public authorities to take such measures as they consider expedient for the purposes of conserving biodiversity, including restoring or enhancing a population or habitat.

The National Planning Policy Framework (NPPF) states "*When determining planning applications, local planning authorities should apply the following principles:*
a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;" (paragraph 175).
ODPM Circular 06/2005/Defra Circular 01/2005 states that the presence of a protected species is a material consideration when considering a development proposal that could harm the species or its habitat. Appendix 1 details legislation relating to applicable species.

Section 41 of The Natural Environment and Rural Communities (NERC) Act (2006) requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. This includes planning decisions.

2.1 Designated Sites

Site of Special Scientific Interest (SSSI) citations are for special features of importance to nature conservation. Sites of Special Scientific Interest (SSSIs) are nationally important sites protected under laws including The Wildlife and Countryside Act 1981, Countryside and Rights of Way Act 2000. LPAs must consult Natural England on planning applications that might affect SSSIs. Operations that could damage special interests require consent by Natural England. It is an offence for any person to intentionally or recklessly damage or destroy any of the features of special interest of an SSSI, or to disturb wildlife for which the site was notified.

3. Methodology.

3.1 Scope of the Assessment.

The zone of influence of this development is defined as being the site itself and habitats to the immediate boundaries within 2km.

The assessment has included consideration of:

- designated sites
- habitats and species of principal importance for conservation of biodiversity

- protected species, namely bats.

3.2 Desktop Survey.

Natural England's Magic on the Map website was accessed for details of any designated wildlife sites within 2km.

The Environmental Records Information Centre North East (ERIC) data search has been restricted to bats, as this is the major constraint to any destructive building works.

Natural England's Magic on the Map and OS Explorer 1:12500 maps were used to assess the distance to habitat features close to the site.

3.3 Site Survey

The survey area covered the buildings only within the red line boundary as shown within Figure 2 and included searching for signs of any wildlife using the site with the key aspects listed below.

The survey included an assessment of habitats on site for use by bats following the Bat Conservation Trust (BCT) *Bat Surveys for Professional Ecologists, Good Practice Guidelines* (3rd edition, 2016) and Natural England's definitions except where indicated. The survey effort at the site has taken account of the recommendations of the BCT Good Practice Survey Guidelines, taking proportionality into account and the proposals.

Field Survey for Bats and Birds

Visual Inspection

A close inspection of the buildings was made in good light, and by torch where required. The exterior and interiors of the building were examined as far as was feasible for signs of bats: droppings, urine streaks, clean cobweb-free areas on the ridge boards or crevices and potential roost exit holes. All external and internal crevices were checked using a torch and possible roosting sites were noted. Crevice loving bats can be difficult to find especially when bats are present between the roofing felt and slate/tiles. Emergence surveys were therefore used to check for the presence of bats missed during the visual inspections. Beneath ledges the ground was examined for feathers, pellets and birdlime that could indicate occupation by barn owls.

Emergence Survey

As dusk fell 4 surveyors, each using visual observations and bat detectors (Echo Meter Touch), and two-way radios, carried out the evening emergence surveys, covering all aspects of the buildings. Bat detectors demolish bat echo-location signals into audible sounds, enabling the identification of some species, and aid the monitoring of the number of bats present. Two-way radios help to determine the emergence and flight paths of a bat seen by surveyors around the site and allow the bat activity of the whole site to be understood, whilst at the site.

Surveyors are on site for at least quarter of an hour before sunset and up to 1½ hours after sunset or until darkness falls as reduced visibility does not allow bats to be seen emerging from the building being surveyed. After this time any bats picked up by detector, cannot be guaranteed to have emerged from the building in question, but confirms if additional

species are present in the area or not. If bats or a maternity colony is present the bats are counted until no bats have left the roost for 10 minutes for as long as it takes.

Re-entry Survey
A dawn survey was also carried out. For a dawn survey surveyors are on site one and a half hours before sunrise until a quarter of an hour after sunrise.

Timing and Weather Conditions

Survey	Date	Timings	Weather
Inspection	29 Sept 2020	Externally and Internally (90 mins)	Fine and dry
Emergence	29 Sept 2020	8.30 pm – 10.15pm (Sunset 8.45pm)	Fine, light cloud and slight breeze. 8-6°C
Re-entry	4 June 2021	3.10am – 4.50am (sunrise 4.37am)	Fine, clear and slight breeze 12°C

Personnel
Ruth Hadden – Bat Consultant since 1996, Class Survey Licence CL20 2015-13665-CLS-CLS (Bat Survey Level 4). Licensed to handle bats and enter known roosts since 1986. Qualifications BSc Joint Honours Zoology & Plant Biology, Newcastle upon Tyne. MCIEEM
Ben Hadden – Class Survey Licence WML CL18 (Bat Survey Level 2). Registration number 201514223-CLS-CLS. 15 years of experience.
Sean Gilmour, Beth Patience, Marc Purdy, Karen Whittle and Paul Whittle. (3-12 years' experience).

3.4 Assessment.

The assessment has been conducted according to the *Guidelines for Ecological Impact Assessment in the UK and Ireland Terrestrial, Freshwater, Coastal and Marine,* CIEEM, September 2018. Impacts are considered for during construction and occupation.

Preliminary Ecological Appraisal Reports (PEAR) which CIEEM guidelines[1] states can be used to support a planning application where it can be determined that the project would have no significant ecological effects, no mitigation is required, and no further surveys are necessary. PEARs though can also provide;

- the results of initial ecological surveys associated with a proposed development
- identify further ecological surveys necessary to inform an EcIA
- identify ecological constraints to a project
- make recommendations for design changes
- highlight opportunities for ecological enhancement.

4. Baseline Ecological Conditions

4.1 General

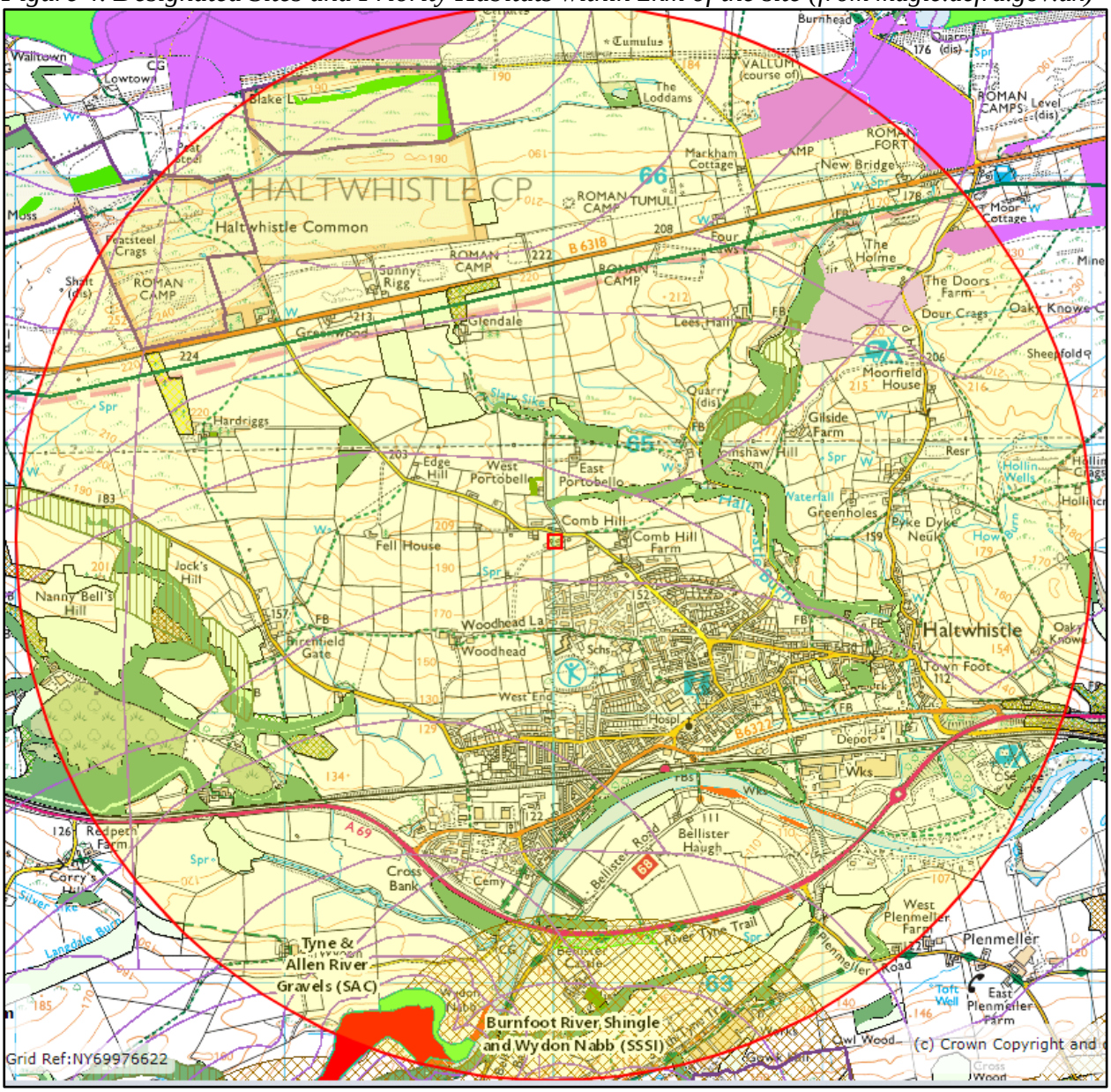
The building surveyed is located at NY699646 as shown below:

[1] *Guidelines for Ecological Report Writing Second Edition* December 2017

4.2 Designated Sites

There are two statutory designated sites within 2km of the site. Burnfoot River Shingle and Wydon Nab SSSI and Tyne & Allen River Gravels SAC, both 2km to the southwest. The development site also falls within an impact risk zones for these and the SSSI's in the wider area.

Figure 4. Designated Sites and Priority Habitats within 2km of the site (from magic.defra.gov.uk)



4.3 Habitats

Figure 4 shows BAP Priority Habitats, within 2km (listed under Section 41 of the Natural Environment and Rural Communities Act 2006). These habitats are mainly ancient and semi-natural woodland, deciduous woodland, plantations, good quality semi-improved grassland, traditional orchards, upland and lowland heathland, calaminarian grassland and wood pasture and parkland within 2km of the site.

4.4 Species and Species Groups

4.4.1 Desktop Search

Records from the Environmental Records Information Centre North East (ERIC) show results from within 2km of the site for bats. There are no ponds within 500m. There are three granted European Protected Species licence for bats and none for great crested newts within 2km.

4.4.2 Habitat description

The site is an actively used farmyard consisting of mainly hardstanding with several buildings, approached from the northeast. The immediate area is open, with little shelter and is agricultural land in all directions, consisting of improved grassland, including the field immediately to the south. Residential properties are present along the road to the north and east of the site. There is a limited potential for feeding bats to the west, however trees are present along the wooded burn less than 200m to the northeast with a few trees immediately to the east of the site.

The area has some sheltered feeding and protection present within 500m. Bat roost potential will be present in the scattered local residences, within Haltwhistle and any suitable mature trees present in the area.

4.4.3 Bats

Pre-existing information on the species at the site.

There are no known pre-existing records for the site

Status of species in the local/regional area.

Known bat activity in the area within 2km of the site are maternity roosts of Pipistrelle sp. 1km to the southeast (2008) and Brown long-eared bats 1km to the southwest (2008/2014) with occasional roosts of Pipistrelle 45kHz, Pipistrelle 55kHz (2014) and Natterer's roosts (2007) are also known. Foraging Noctule bats, Natterer's, Whiskered/Brandt's and Daubenton's bats have also been recorded within 2km. (ERIC North East. A full data set available upon request).

There are three granted European Protected Species licence for bats, a Pipistrelle 45kHz non-breeding roost, plus Pipistrelle 45kHz, Pipistrelle 55kHz, whiskered and Brandt's all non-breeding roosts all 800m to the southeast (2012). Also non-breeding roosts 1.75km to the north east of Pipistrelle 45kHz, Pipistrelle 55kHz and Natterer's (2013). (Magic Site).

Locally and regionally, the Common Pipistrelle is the most common bat. Both Pipistrelle 45kHz and 55kHz bats are frequent in northern England, although Pipistrelle bats are the most abundant species, they are thought to have declined by 70% between 1978 and 1993 (National Bat Colony Survey). Since 1997 monitoring by the National Bat Monitoring Programme (NBMP) has shown that bat numbers seem to be steady with small fluctuations up or down depending on the species and survey type carried out. The Brown long-eared bat is occasional with colonies much smaller in numbers than the Pipistrelle. Daubenton's, Natterer's and Whiskered/Brandt's bats are also occasional but widespread in Northumberland with an average colony size being about 35 adult bats. The Nathusius' Pipistrelle is a rare bat, has migratory habits and has been proved to fly across the North Sea from Bristol to Holland and has occasionally been recorded in Northumberland throughout the season.

Bats – Daytime Risk Assessment

The steading consists of a range of dilapidated farm buildings constructed from brick, with slate or corrugated metal roofs. Two large agricultural barns are present to the northwest. Please see Table 1 below for descriptions and findings.

Inspection results of the exteriors revealed that the buildings either were open access or had missing ridges. The corrugated sections had negligible roost potential. The internal inspection of the more traditional buildings revealed little evidence of bats though a small scatter of large bat droppings were located within Building A in September and in June small bat droppings were present howbeit in a different location. Due to the moderate roost potential, two emergence/dawn surveys were carried out.

No potential bat hibernation sites were identified in the building; however, bats may be present in any suitable crevice, in the pointing crevices or on the wall top.

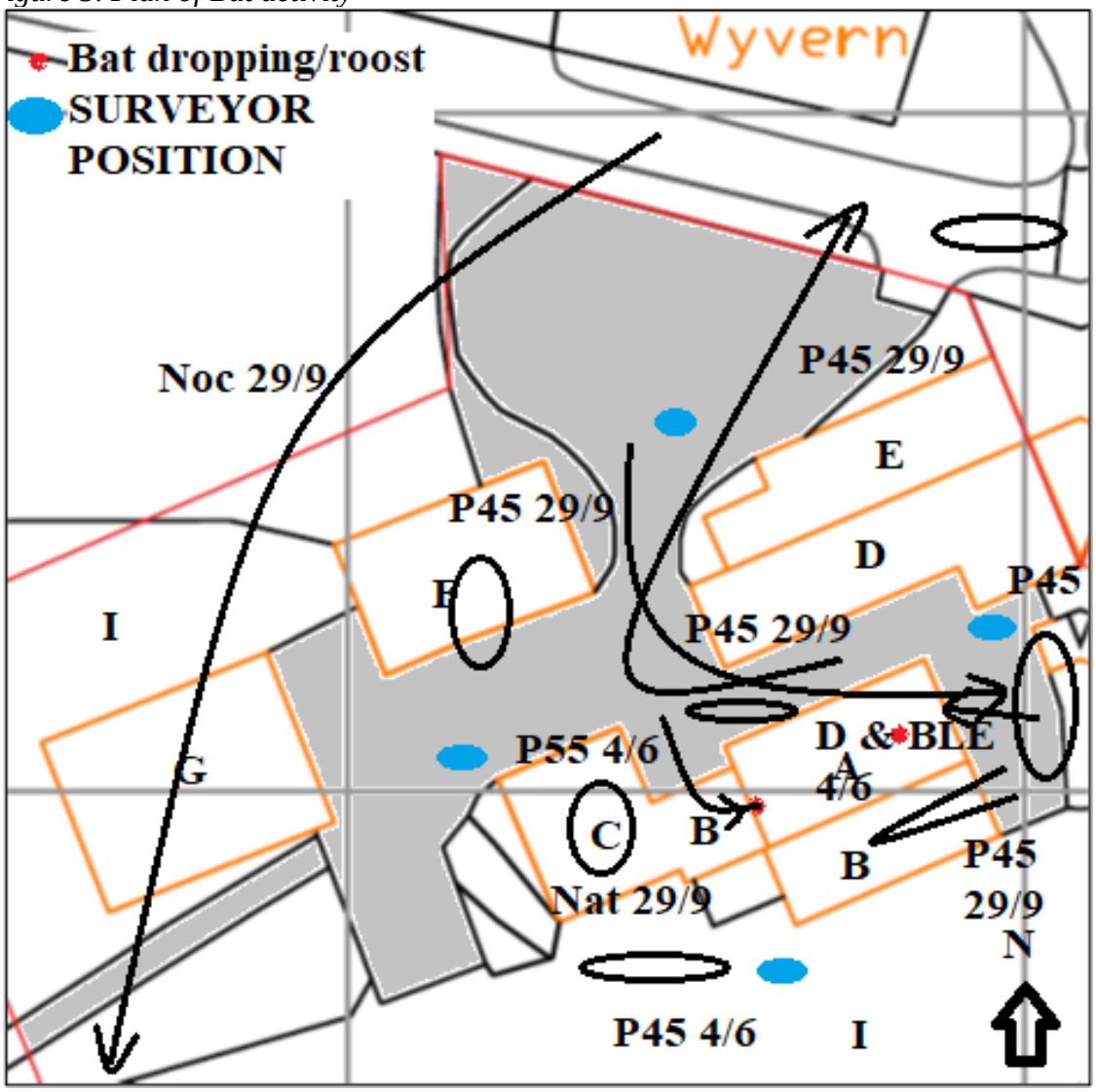
Table 1 Observations

Building/ Section	Description	Comments
A	Brick built walls, pebbeldashed, slate roof with old bitumen sarking, single storey. Roof vents, roof lights and missing ridges.	Moderate roost potential. Crevices below ridge tiles. Bat droppings present in two locations below the ridge. Single Pipistrelle 55kHz and Brown long-eared bats plus two Daubenton's bats were identified using the ridge
B	Lean-to against south aspect of Building A. Breezeblock base walls with profiled metal roof and corrugated metal upper walls. Single storey. Also profiled metal infill between Buildings A and C.	Low roost potential. No bat traces. Used by foraging bats.
C	Single storey, brick built, pitched profiled metal roof, open to east and large gaps at the eaves.	Low roost potential. No bat traces. Pigeons present. Used by foraging bats.
D	Two storey at west end only, corrugated asbestos roof and east gable wall, pebbledashed brick, corrugated metal roof with roof lights over main section and open access to north.	Low bat roost potential.
E	Profiled and corrugated metal clean-to.	Negligible bat roost potential.
F & G	Large agricultural barns, Building F with brick base walls and corrugated metal roofs. Building G has ventilated profiled metal walls and roof with 3m breezeblock base walls and corrugated metal roof	Negligible bat roost potential. No evidence of owls. Nesting swallows in Building F.

Bats – Activity Surveys

The emergence survey identified no bat emergence from the buildings however a Brown long-eared was seen. Pipistrelle 45kHz, Noctule and Natterer's bats were noted foraging or commuting across the site. The dawn survey identified a re-entry to Building A of a single storey Brown long-eared bat, and two Daubenton's bats to the east gable apex and one Pipistrelle 55kHz bat to the west gable apex. Please see Appendix 2 for detail.

Figure 5. Plan of Bat activity



4.4.4 Bird Assessment

Nesting swallows were identified in Building F. Pigeons were present in Buildings C and old blackbird nests in Building D.

5. Photographs of the Site

Building A from the northwest

Building D from the southwest

Building E from the north

Building E and C from the northeast

Building C from the northeast

Building C from the west

Building F from the southwest

Building G (and F) from the east

Building A and B from the southwest

Building B from the east

Interior of Building A

West end of Building A with small plastered room with bitumen felt sarking

Bat droppings in Building A

Interior of Building C

Interior of Building D

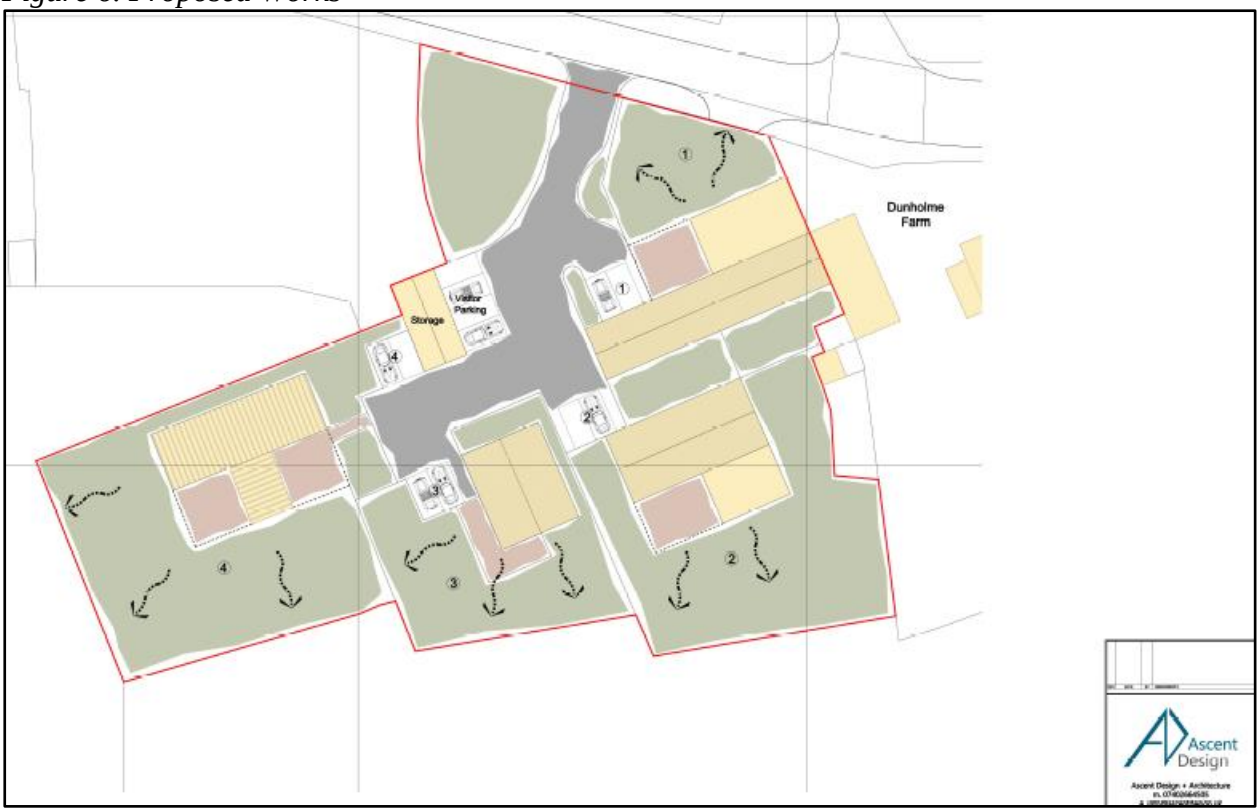
Interior of Building D, open access into Building E

Blackbird nests in Building D

6. Description of Proposed Development.

The proposals are to convert the buildings to create four residential units.

Figure 6. Proposed Works



7. Assessment of Impacts

7.1 Constraints

No constraints.

7.2 Site Based Impacts.

The buildings due to be converted had negligible to moderate conservation significance for bats as a roost site at present. This assessment takes into account the location of the building and the restricted feeding habitat and shelter within 300m, the results of the inspection, the crevices within the building and the potential of the building as a maternity bat roost site.

Pre-activity impacts are negligible with no changes being made to the use of the buildings.

Mid-activity impacts will be low for bats. The works may cause disturbance, injury and death to bats or birds, if no mitigation is carried out in the eventuality of an animal being located during any destructive works.

Site Assessment
The site is considered to have negligible conservation significance for amphibians and negligible to moderate conservation significance for bats and birds.

7.3 Impacts on the SSSI.

The development site falls within the risk impact zones for nearby SSSI's in the area, however the works are unlikely to greatly impact the designated area.

8. Mitigation and Enhancement.

The National Planning Policy Framework (NPPF) requires that the planning system minimizes impacts on biodiversity and provides net gains. The following recommendations will likely be translated into conditions placed on any planning consent. They are intended to reduce the risk of this development to protected species and habitats.

Natural England guidelines on mitigation states timing constraints and like-for-like replacement is a minimum requirement.

8.1 Pollution Prevention

To protect any nearby waterways, measures to be made to ensure that there is no runoff (herbicides, wheel washing, cement washings etc.) either during construction to prevent pollution or sediment issues, or after development. (See Environment Agency's Pollution Prevention Guidelines (PPG5) for guidance.

8.2 On Site Mitigation

Timing

As bat roosts are present which will be impacted, the site will require to be registered under a Natural England Mitigation Licence (Low Impact) before the works can proceed. This is applied for after any necessary consents are granted and can take up to 2 weeks (10 days). Surveys have to be current in the year of registration. The surveys reported in this report are current up to April 2022.

One integrated Build-in WoodStone Bat Boxes, to be located on the west aspect of Unit 1 and 4. Please see plan at Fig. 7 for locations.

Bat access will also be created through the mortar fillet to beneath the ridge tiles and above the ridge/sarking board on Unit 2 in two locations by ensuring that the ridge tile is not totally filled with mortar. Access through the mortar fillet measuring 20x20+mm will be created leading to a larger gap measuring 400mm long below the ridge tile, a section of split pipe can be used to give access from ridge tile to ridge tile.

Wooden beams and timbers will be treated only with 'bat friendly' products, permethrin or cypermethrin as insecticides for example. Further information is available if the contractor requires it.

A traditional bitumen felt (F1) or wood sarking that would give bats some grip will be used in the region of any bat roost potential and not a more modern smooth or breathable roofing membrane (BRM) that may fray and entrap bats. **No BRM (Breathable Roofing Membrane) to be used in any areas where bats could gain access to roof as a result of new roost provisions.**

Any external lights will be set on a motion detector and short timer and be positioned in such a way that they do not shine on any of the bat access positions or the buildings, as this can deter bats. Please see references Bat Conservation Trust/Institute of Lighting Engineers' Guidance 2018.

Three Low Profile Woodstone bat boxes will be located in a tree to the southeast of the buildings.

Three Woodstone Swift Nest Boxes to be located at a height of at least 5m, below the eaves with a clear flight path to the entrance on an east facing wall of Unit 4. Please see plan at Fig. 7 below for locations and Appendix 2 for diagram.

Swallow access measuring at least 30x10cm to be provided into the Storage Building.

8.3 Mitigation Summary

To maintain bat and bird populations in the area the following will be carried out:-

- The site will be registered under a low impact Natural England Licence.
- Three Low Profile Woodstone bat boxes will be located in a tree to the southeast of the buildings.
- One integrated Build-in WoodStone Bat Boxes, to be located on the west aspect of Unit 1 and 4. A ridge crevice for bats to be provided in two locations on the converted, re-roofed building of Unit 2. Please see plan at Fig. 7 for locations.
- Three Woodstone Swift Nest Boxes to be located on an east facing wall of Unit 4.
- Any external lighting will be on a relatively short timer, directed away from bat roost access points and flight paths and motion-sensitive only to large objects.
- Any nesting bird species that may be present will be allowed access to the nest until the young have fledged between April and October.
- Access for swallows to be permitted into the storage building to the north.
- A Method Statement will be followed for bats and birds, please see the Appendix 3 and 4.

Figure 7. Mitigation Locations

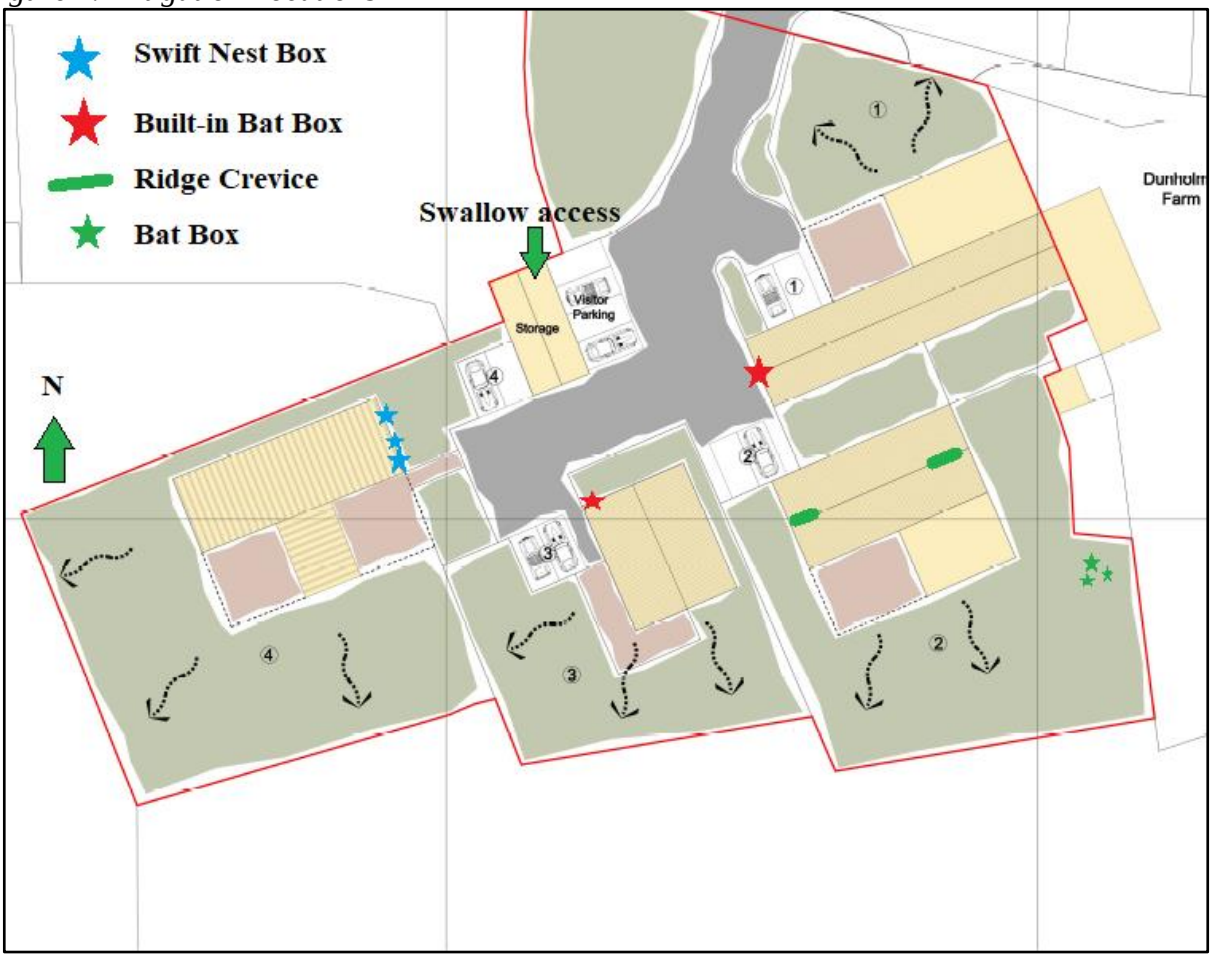


Table 2 Mitigation Summary

Location	Mitigation Type
West wall of Unit 1 and 3	One integrated Build-in WoodStone Bat Box, access to be located 500mm below the eaves/gable apex. Please see Figure 7 for locations.
Ridge of Unit 2	Bat ridge crevice created in two locations
Southeast of Buildings	Three Bat boxes will be located on a tree at a height of 3m with no overhanging branches, facing southwest, southeast and north.
Unit 4	Three Woodstone Swift Nest Boxes to be located at a height of at least 5m, below the eaves with a clear flight path to the entrance on an east facing wall of Unit 4.
Storage Building	Swallow access measuring at least 30x10cm to be provided

8.4 Enhancement

Post construction, landscaping on the site will use locally native species and pollinator friendly species where possible.

In areas to be planted with hedging (such as the site boundaries) native shrubs are recommended for any plantings, these are Elder, Hawthorn, Crab Apple, Dog Rose, Field Maple, Guelder Rose, Honeysuckle and Hazel. A mix of species shown on the proposals will add a net gain to the biodiversity of the site.

8.5 Monitoring

Due to low impact on bat activity on site, by the proposals no monitoring after the development is completed will be required to assess the success of mitigation. (Bat Mitigation Guidelines 2004, Section 7.2). Ruth Hadden available to liaise with the owners as required regarding the mitigation.

8.6 Conclusions

- Without any mitigation the proposed works will result in low impact on the bat and bird population present.
- The provision of mitigation in the form of in-built bat and swift boxes and the provision of roosting opportunities Unit 2, plus native hedging will maintain and give a net biodiversity gain for this site.

9. References

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Corbet and Harris (1991). The Handbook of British Mammals. Blackwell.

Durkin J L (2016) Amphibian Atlas of North East England.

English Nature (2004) Bat Mitigation Guidelines. EN

Environment Agency's (2007) Pollution Prevention Guidelines: Works and maintenance in or near water: PPG5 **https://www.sepa.org.uk/media/100531/ppg-5-works-and-maintenance-in-ornearwater.pdf**

Institution of Lighting Professionals/Bat Conservation Trust (2018) Bats and artificial lighting in the UK, Guidance Note 08/18.

Joint Nature Conservancy Council (2004) The Bat Workers Manual. JNCC.

Bat boxes: **https://www.nhbs.com/low-profile-woodstone-bat-box**
Build-in WoodStone Bat Box https://www.nhbs.com/vivara-pro-build-in-woodstone-bat-box
Barn Owl Box : http://www.barnowltrust.org.uk/infopage.html?Id=41
Sparrow Terrace: www.nhbs.com/1sp-schwegler-sparrow-terrace
Swift boxes: **https://www.nhbs.com/vivara-pro-cambridge-swift-nest-box**
Bird box : https://www.nhbs.com/1b-schwegler-nest-box

APPENDIX 1. LEGISLATION RELATING TO PROTECTED SPECIES

Bats

All bats are protected under the Wildlife and Countryside Act (Schedule 5). They are also included in Schedule 2 of the Conservation Regulations 2017. The Act and Regulations make it illegal to:

Intentionally or deliberately kill, injure or capture (take) bats

Deliberately disturb bats (whether in a roost or not)

Damage, destroy or obstruct access to bat roosts

The Countryside and Rights of Way Act 2000 extended the protection given to bats to cover *reckless* damage or disturbance.

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.

Barn Owls

Similarly, the Barn Owl is protected under Part 1 of the Countryside Act 1981 and is listed on Schedule 1, which gives them special protection. It is an offence, with certain exceptions to:

- Intentionally or deliberately kill, injure or capture (take) any wild barn owl.
- Intentionally take, damage or destroy any wild barn owl nest whilst in use or being 'built'.
- Intentionally take or destroy a wild barn owl egg.
- Intentionally or recklessly disturb any wild barn owl whilst 'building' a nest or whilst in, on, or near a nest containing young.
- Intentionally or recklessly disturb any dependant young or wild barn owls.

Biodiversity

The National Planning Policy Framework (NPPF) 2012 requires Local Planning Authorities (LPA's) to seek to deliver biodiversity enhancement through the planning system, see paragraphs 9, 109 and 118. In particular Paragraph 109 includes a statement:

The planning system should contribute to and enhance the natural and local environment by:

- 'minimising impacts on biodiversity and providing net gains in biodiversity.'

APPENDIX 2. SURVEY DATA

Table 2 Emergence survey results.

Date	Bat Activity
29 Sept 2020	
6.48pm	Sunset.
6.53-7.06pm	Pipistrelle 45kHz bat flying in and out of Building B.
7.06pm	Noctule bat seen flying to the southwest. Pipistrelle 45kHz bat flew to the north where trees present.
7.07-7.26pm	Pipistrelle 45kHz bat flew from the north to the east of Build B where it foraged
7.12pm	Pipistrelle 45kHz bat foraging to the south of the buildings in the field.
7.14pm	Pipistrelle 45kHz bat flew to the north across the road.
7.17pm	Pipistrelle 45kHz bat foraging along the road to the north
7.21pm	Pipistrelle 45kHz bat foraging in the barns and field to the north.
7.37pm	Brown long-eared heard not seen between the buildings.
7.40pm	Pipistrelle 45kHz bat pass between the buildings.
7.42pm	Natterer's bat flew from the west to south of the buildings
7.46pm	Pipistrelle 45kHz bat foraging on the road
7.46-7.50pm	Natterer's bat foraging between the buildings, several passes.
7.53pm	Natterer's bat foraging in Building C.
8.15pm	Survey concluded.
4 June 2021	
3.05am	Pipistrelle 45kHz bat foraging intermittently around the site.
3.20am	2 Pipistrelle 45kHz bat foraging between the barns.
3.35am	Pipistrelle 45kHz bat seen flying from the north through the site to the south social calling
3.43am	Pipistrelle 45kHz bat pass to the south of the buildings
3.48am	Swallows flying.
4.01am	2 Daubenton's bats seen flying up to the east gable apex of Building A
4.03am	Pipistrelle 55kHz bat entered a crevice on the west gable the Building A
4.05am	Brown long-eared entered ridge.
4.35am	Sunrise
4.50am	Survey concluded

APPENDIX 3. BAT METHOD STATEMENT FOR CONTRACTORS

This statement should be copied to the site owner, architect, clerk of works and to those contractors whose work may affect bat roosts including those involved in conversion, wood treatment, roofing and building works.

Bats 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.

Legislation
All bats are protected under the Wildlife and Countryside Act (Schedule 5). They are also included in Schedule 2 of the Conservation Regulations 2017. The Act and Regulations make it illegal to:

Intentionally or deliberately kill, injure or capture (take) bats

Deliberately disturb bats (whether in a roost or not)

Damage, destroy or obstruct access to bat roosts

The Countryside and Rights of Way Act 2000 extended the protection given to bats to cover *reckless* damage or disturbance.

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.

Similarly the Barn Owl is protected under Part 1 of the Countryside Act 1981 and is listed on Schedule 1, which gives them special protection. It is an offence, with certain exceptions to:

- Intentionally or deliberately kill, injure or capture (take) any wild barn owl.
- Intentionally take, damage or destroy any wild barn owl nest whilst in use or being ‘built’.
- Intentionally take or destroy a wild barn owl egg.
- Intentionally or recklessly disturb any wild barn owl whilst ‘building’ a nest or whilst in, on, or near a nest containing young.
- Intentionally or recklessly disturb any dependant young or wild barn owls.

Identifying roosts
Pipistrelle the most common bat, favours small crevices and spaces between stonework, stone and roofing felt. Bats are small mammals and when at rest the bodies are only 4-6 cm long, their fur colour can range from brown to pale and dark grey. When disturbed the bat is likely to be torpid and unable to fly effectively for some minutes, because of this they are vulnerable to injury as they are not fast moving and may fall to the ground, breaking bones or be accidentally crushed. Basically, when material from the roof and tops of the walls is removed any crevices underneath should be checked to ensure that no bat has been disturbed.

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.

Photo showing disintegrated bat droppings beneath coping stones. If examined carefully, in the black dust exoskeletons of insects can be seen shining.

Timing

As bat roosts are present which will be impacted, the site will require to be registered under a Natural England Mitigation Licence (Low Impact) before the works can proceed. This is applied for after any necessary consents are granted and can take up to 2 weeks (10 days). Surveys have to be current in the year of registration.

Any development work involving the removal of the existing roof materials or stonework will be carried out avoiding the hibernation period (November to March inclusive). Periods of cold weather (below 5ºC including night temperatures) will also be avoided if possible as any bats present will be in hibernation torpor and be extremely vulnerable. If torpid bats are encountered and disturbance is unavoidable the bat will be taken into care and fed until suitable conditions for release at the site is possible.

Contractors

All contractors will be aware that bats may be present in the area and could be present within the loft space and may be found torpid in crevices if any. Table 1 below highlights where bats may be found and the recommendations. Any bats found during operations will have the cavity re-covered for its safety and any work in the vicinity will cease. Ruth Hadden to be informed for advice immediately (01661 886562). As only licensed bat handlers can move bats and the contractors are not permitted to handle bats, the bat will be allowed to disperse of its own accord overnight.

Table 1 General Methodology for Conversion Works

STRUCTURE	METHOD	INSPECT
Roofs	Remove any ridge tiles, tiles/slates or roof coverings including loose felt by hand, lifting vertically to prevent any bats from being crushed. Removal of any timbers/beams.	Check any crevices underneath the roofing materials including the underside, as it is removed. Check any crevices around the beams as work proceeds.
Walls/Eaves	Expose the wall tops. Remove any gutters. Dismantle any walls required, by hand.	Examine for bat droppings and any wall cavities for bats.
Walls - Pointing	Only point crevices where the full depth can be seen otherwise leave as at present.	Check deep crevices for the presence of bats using a torch.
Windows/doors	Remove windows, doors and frames by hand, where gaps exist around the frames.	Examine any wall cavities exposed. Avoid blocking any external pre-existing gaps.

If a barn owl is found unexpectedly during operations the cavity will be re-covered or protected and work will cease in that area. Ruth Hadden to be informed (01661 886562) immediately for

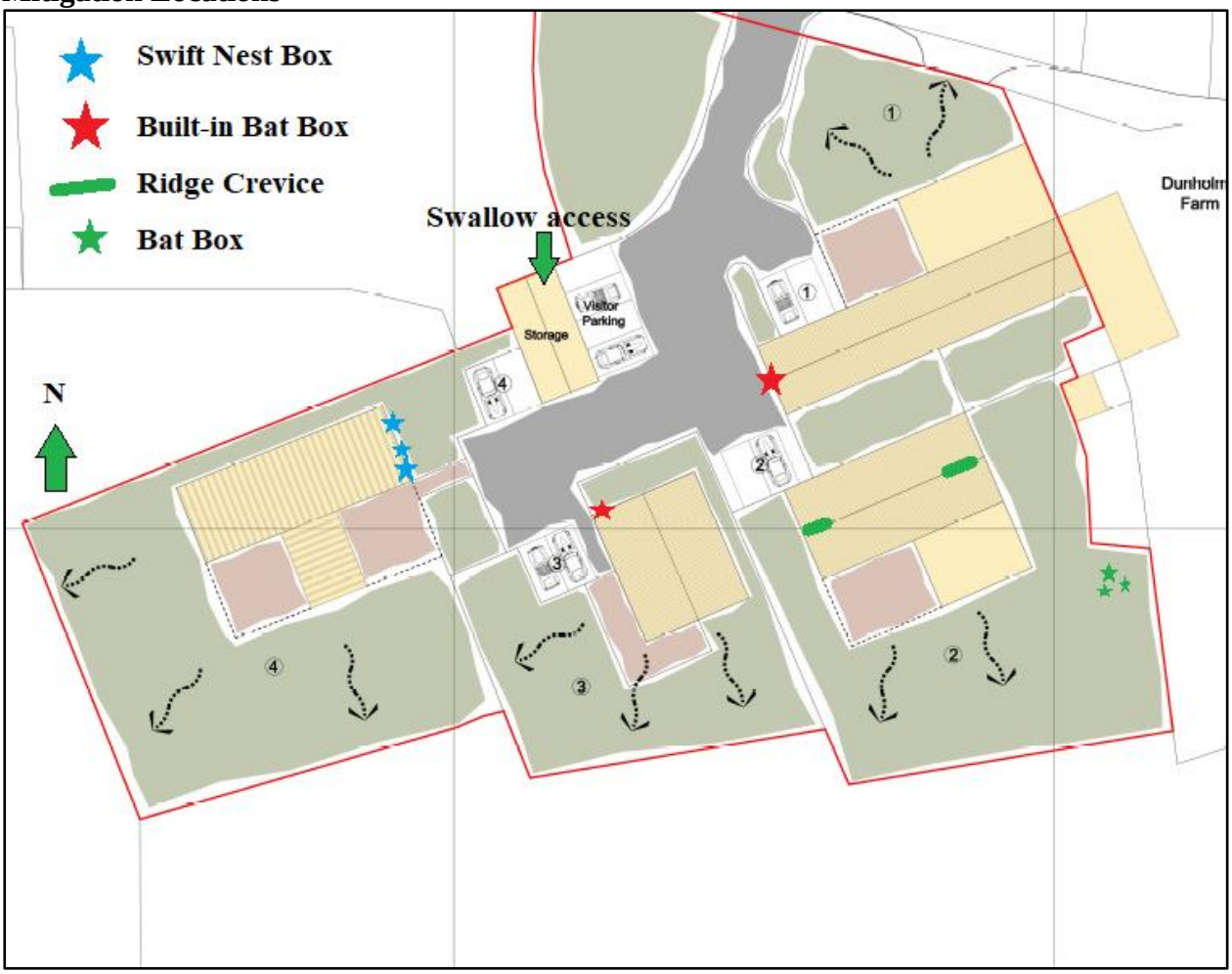
assistance. Any nesting bird species will be allowed access to the nest until the young have fledged between April and October.

Mitigation Summary

To maintain bat populations in the area the following will be carried out:-

- One integrated Build-in WoodStone Bat Boxes, to be located on the west aspect of Unit 1 and 4. Please see plan at plan below for locations.
- Bat access will also be created through the mortar fillet to beneath the ridge tiles and above the ridge/sarking board on Unit 2 in two locations by ensuring that the ridge tile is not totally filled with mortar. Access through the mortar fillet measuring 20x20+mm will be created leading to a larger gap measuring 400mm long below the ridge tile, a section of split pipe can be used to give access from ridge tile to ridge tile.
- Wooden beams and timbers will be treated only with 'bat friendly' products, permethrin or cypermethrin as insecticides for example. Further information is available if the contractor requires it.
- A traditional bitumen felt (F1) or wood sarking that would give bats some grip will be used in the region of any bat roost potential and not a more modern smooth or breathable roofing membrane (BRM) that may fray and entrap bats. **No BRM (Breathable Roofing Membrane) to be used in any areas where bats could gain access to roof as a result of new roost provisions.**
- Any external lights will be set on a motion detector and short timer and be positioned in such a way that they do not shine on any of the bat access positions or the buildings, as this can deter bats. Please see references Bat Conservation Trust/Institute of Lighting Engineers' Guidance 2018.
- Three Low Profile Woodstone bat boxes will be located in a tree to the southeast of the buildings.
- Three Woodstone Swift Nest Boxes to be located at a height of at least 5m, below the eaves with a clear flight path to the entrance on an east facing wall of Unit 4. Please see plan below for locations and for diagrams.
- Swallow access with measurement of at least 30x10cm to be left in the Storage Building.
- To protect any nearby waterways, measures to be made to ensure that there is no runoff (herbicides, wheel washing, cement washings etc.) either during construction to prevent pollution or sediment issues, or after development. (See Environment Agency's Pollution Prevention Guidelines (PPG5) for guidance.
- Any nesting bird species will be allowed access to the nest until the young have fledged.
- **I**f a barn owl is found unexpectedly during operations the cavity will be re-covered or protected and work will cease in that area. Ruth Hadden to be informed (01661 886562) immediately for assistance.

Mitigation Locations



Build-in WoodStone Bat Box

Low Profile Woodstone Bat Box

Integrated Vivara Pro Cambridge Brick Faced Swift Nest Box

Inner cavity