

Ecological Impact Assessment and Bat Risk Assessment

EAST HOUSE COTTAGE, CHESWICK

AUGUST 2022

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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.

**ECOLOGICAL IMPACT ASSESSMENT
CHESWICK EAST HOUSE, CHESWICK**

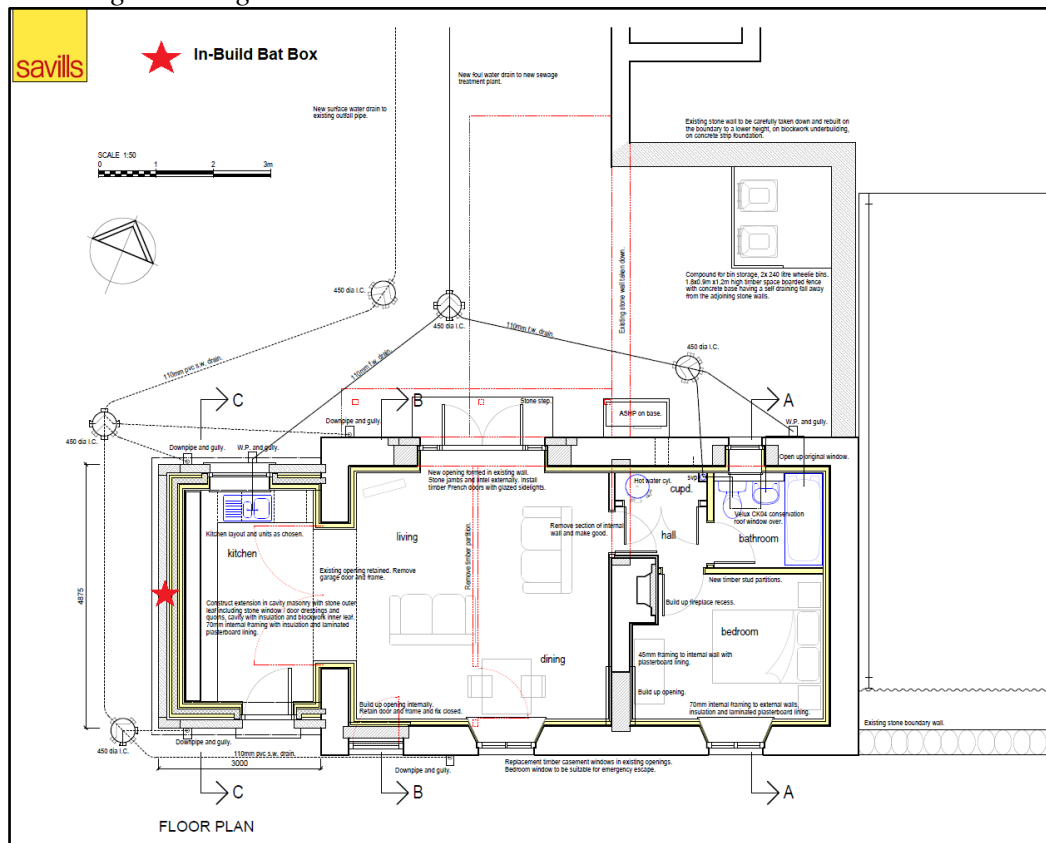
Summary.....	4
2. Relevant Policies and Legislation.	6
3. Methodology.....	6
3.1 Scope of the Assessment.....	6
3.2 Desktop Survey.	7
3.4 Assessment.	8
4. Baseline Ecological Conditions.....	8
4.1 General.....	8
4.2 Designated Sites	8
4.3 Habitats.....	9
4.4 Species and Species Groups.....	9
4.4.1 Desktop Search	9
4.4.2 Bats.....	10
4.4.3 Birds.....	11
4.4.5 Invasive Species.....	11
5. Photographs of the Site.....	12
6. Description of Proposed Development.	13
7.0 Assessment of Impacts.....	14
7.1 Constraints.....	14
7.2 Site Based Impacts.	14
7.3 Impacts on the SSSI.....	14
8. Mitigation and Enhancement.	15
8.1 Pollution Prevention	15
8.2 On Site Mitigation.....	15
8.3 Mitigation Summary.....	15
8.4 Enhancement.....	16
8.5 Monitoring	17
8.6 Conclusions.....	17
9. References.....	17
APPENDIX 1. LEGISLATION RELATING TO PROTECTED SPECIES.....	18
APPENDIX 2. SURVEY DATA.....	19
APPENDIX 3. BAT AND BIRD METHOD STATEMENT FOR CONTRACTORS.....	20
Identifying roosts.....	20
MITIGATION FEATURES.....	23

Ecological Impact Assessment for East House, Cheswick

Summary

- An ecological survey was requested primarily for bats and birds for an outbuilding at East House, Cheswick by Savills on behalf of the owners.
- The barn surveyed is situated east of the house at Cheswick, Northumberland and is a small stone-built building with a pitched slate roof.
- The present proposals are to convert the building, creating one residential unit.
- To the east, the building abuts to a corrugated metal barn that is in the adjacent farmyard. The steading is surrounded by agricultural land consisting of improved grassland and to the north, arable fields. The immediate area has some sheltered areas for feeding bats amongst the farm buildings and the boundary lines where trees are present. Further good bat foraging areas are present to the southwest, around areas of woodland and shelterbelts.
- Inspection results revealed that the single storey building, had no obvious bat evidence present. No bat droppings were located within, though the occasion crevice was present externally. There was low suitability of bat roost potential in this building and one active survey was recommended.
- Known bat activity in the area within 2km of the site consists of Brown long-eared, Natterer's Pipistrelle 55kHz and Pipistrelle 45kHz maternity/occasional roosts with foraging Pipistrelle 45kHz, Pipistrelle 55kHz and Natterer's also recorded.
- The occasional bat is unlikely to be present in the building. Timing of the works to avoid the bat hibernation period (November to March inclusive) will ensure that the works has as little negative affect on bat conservation status as possible.
- Bat roost mitigation will be put in place in the converted building with the provision of an in-built bat box.
- Any nesting bird species will be allowed access to the nest until the young have fledged.
- A contribution to the Coastal Mitigation Scheme will be required.

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.

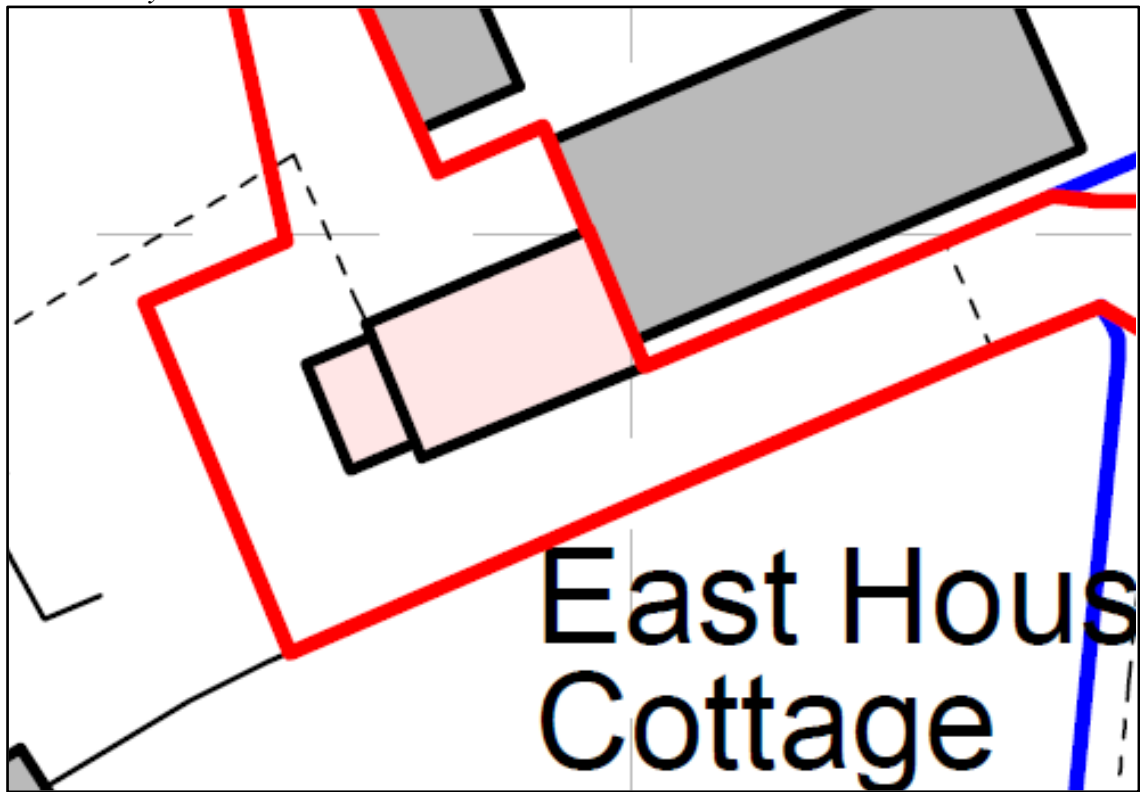
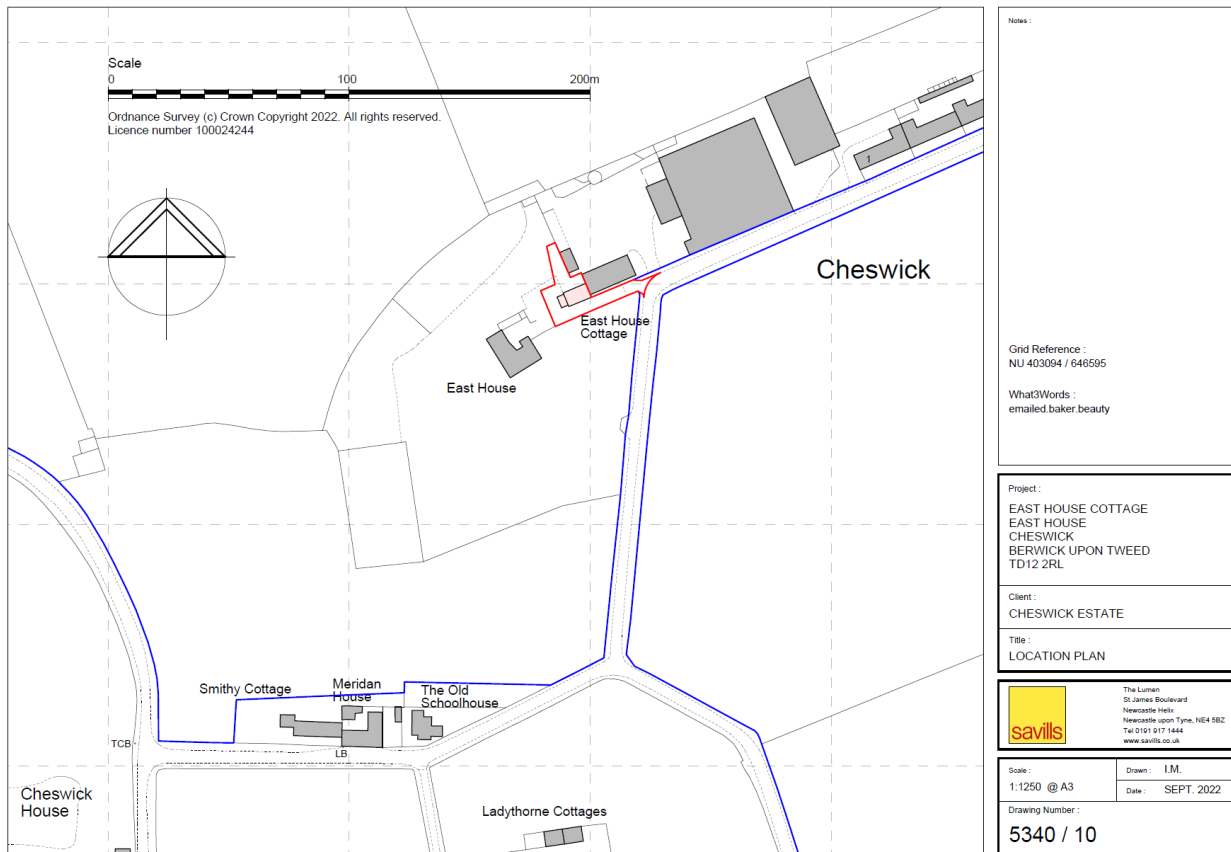


Figure 3. Location of site.



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 building on the existing footprint, which would constitute a small-scale development.

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 building 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 building was made in good light, and by torch where required. The interior and exterior 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. Nesting material was noted and beneath ledges the ground was examined for feathers, pellets and birdlime that could indicate occupation by birds.

Emergence Survey

As dusk fell 2 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 convert 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.

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

Lesley Rhymer 16 years of 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 guidelines¹ 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

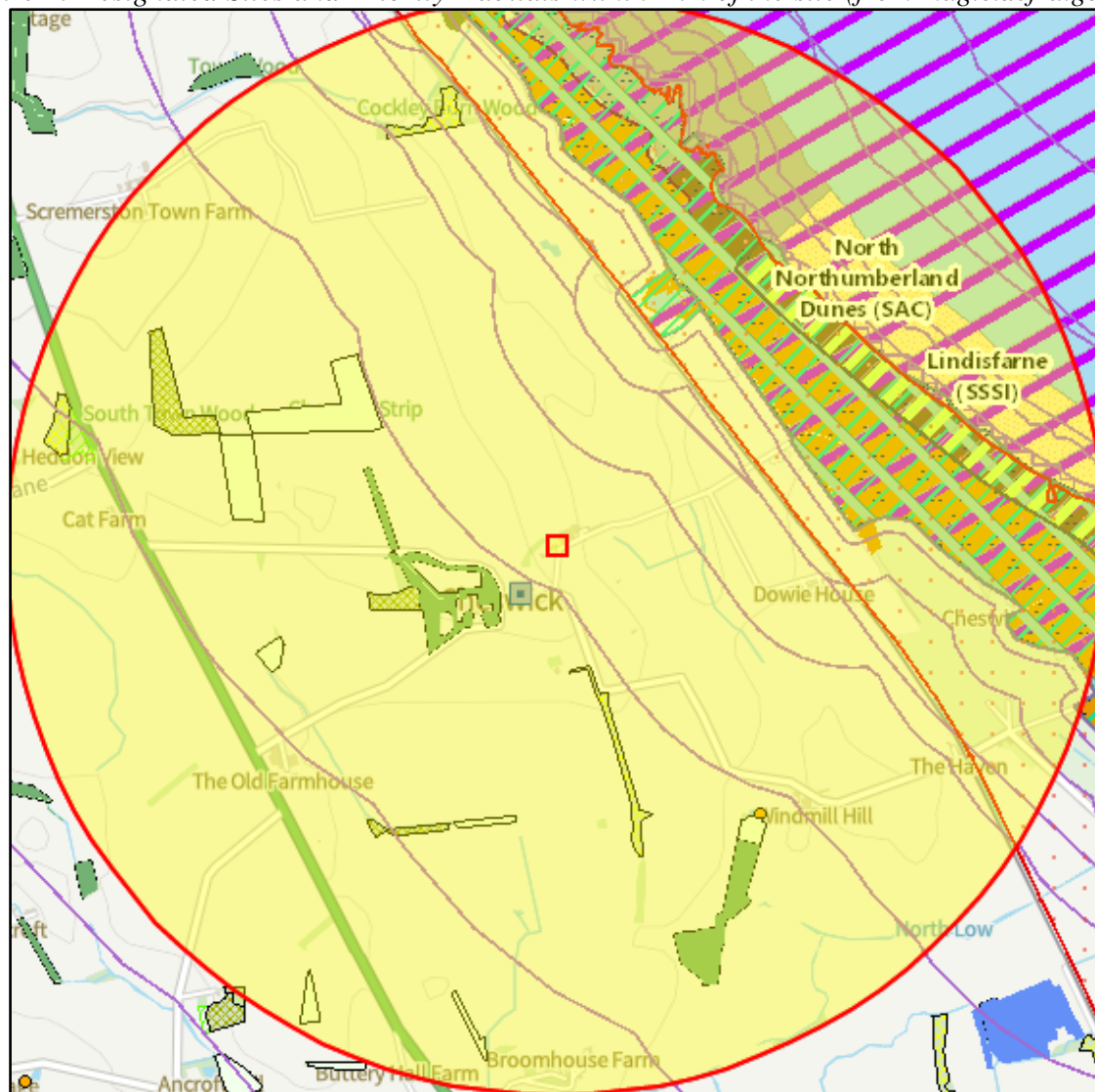
The building surveyed is located at NU031466 as shown below

4.2 Designated Sites

There are several statutory designated sites within 2km of the site, Northumberland Coast AONB, Lindisfarne SSSI, Lindisfarne Ramsar Site, Lindisfarne NNR, Lindisfarne SPA, North Northumberland Dunes SAC, and Berwickshire and North Northumberland Coast SAC. The development site falls within the impact risk zones for the SSSI's in the wider area and along the coast.

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

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 deciduous woodland, coastal sand dunes, mudflats, saline lagoons and lowland calcareous grassland.

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. The Magic Site shows no ponds within 500m. There is one granted European Protected Species licence for bats and no positive great crested newts pond surveys within 2km. There are no records for great crested newts within 2km (ERIC North East).

Habitat description

The building inspected is situated to the northeast of East House and is surrounded by hardstanding to the west, north and south aspects. To the east the building abuts to a corrugated metal barn that is in the adjacent farmyard. The steading is surrounded by agricultural land consisting of improved grassland and to the north arable fields. The immediate area has some sheltered areas for feeding bats amongst the farm buildings and the boundary lines where trees are present. Further good bat foraging areas are present to the southwest, around areas of woodland and shelterbelts. Foraging corridors consisting of boundaries link to these areas.

The immediate area has good potential for feeding bats. Bat roost potential will be restricted to the scattered dwellings in the area or any suitable tree.

4.4.2 Bats

Pre-existing information on the species at the site.

There are no known pre-existing records for this site within the building surveyed. Surveys in 2016 of the farm steading immediately to the east identified low numbers of Pipistrelle 45kHz, Pipistrelle 55kHz, Brown long-eared and Natterer's (latter considered to be a maternity roost) (E3 Ecology).

Status of species in the local/regional area.

Known bat activity in the area within 2km of the site consists of no further roosts, with foraging Pipistrelle 45kHz, Pipistrelle 55kHz and Natterer's also recorded to the east (2010). (ERIC North East. A full data set available upon request).

The granted European Protected Species licence for bats was for Brown long-eared, Natterer's Pipistrelle 55kHz and Pipistrelle 45kHz roosts 340m to the southwest as shown in Fig 4, at least one roost was a maternity roost (2020).

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 building is stone built, single storey and has a pitched slate roof, with no sarking and open wall tops. The building is enclosed with the roof cobwebby at the ridge. Sections are plastered with one section with no ceiling allowing all the void to be observed. The floors are concrete and no bat droppings were located within. Externally the occasional slipped or raised slate is present with the occasional crevice at the south eaves though this side is shaded by a tree to the south of the access road. The north eaves are obscured by a wood store, which will deter bats. No good potential roost crevices were identified and no further

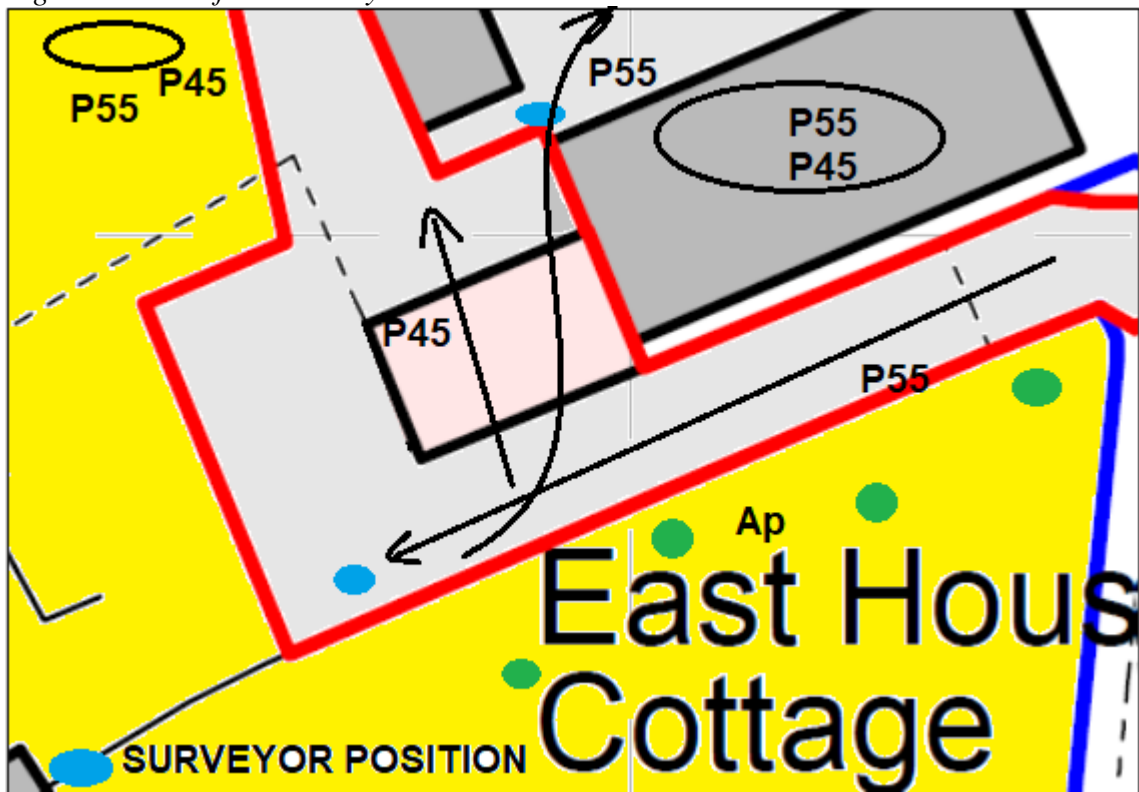
surveys are recommended. The building has low suitability for roosting bats and one dusk survey was conducted.

No potential bat hibernation sites were identified; however bats may be present in any suitable crevice.

Bats – Activity Surveys

The emergence survey confirmed no emergence of bats from the building. The occasional Pipistrelle 55kHz and Pipistrelle 45kHz bat commuted past the building and were noted foraging in the adjacent metal barn, that gives sheltered foraging, throughout the survey. Please see Appendix 2 for further details.

Figure 4. Plan of Bat activity



4.4.3 Birds

No bird nests were identified within the building; feral pigeon, blackbird, kestrel, robin swallow and house martins were seen around the site.

Barn owls are known on the adjacent farmyard site, however no evidence was noted in the adjacent metal barn during the survey and no bird was seen.

4.4.5 Invasive Species

These are non-native invasive species included in Schedule 9 of the Wildlife & Countryside Act 1981 (as amended), which makes it illegal to release or allow to escape into the wild.

Survey

No invasive species were noted on site.

5. Photographs of the Site



The building from the southwest



From the northwest



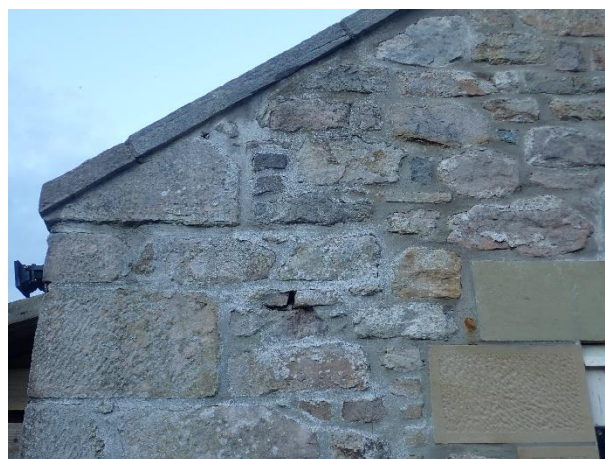
From the north

From the northeast



Gap near the chimney

West gable wall recently repointed, with crevice





Interior

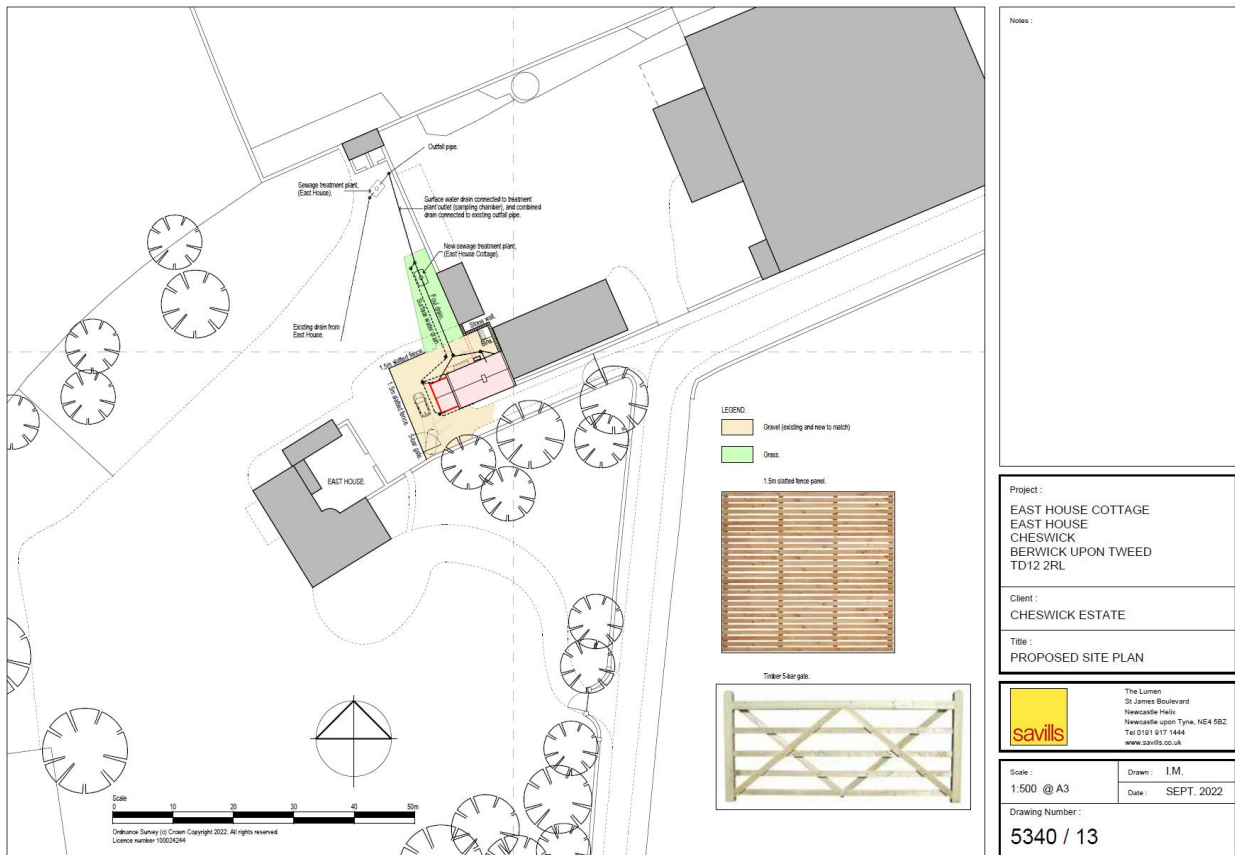
Plastered walls in places

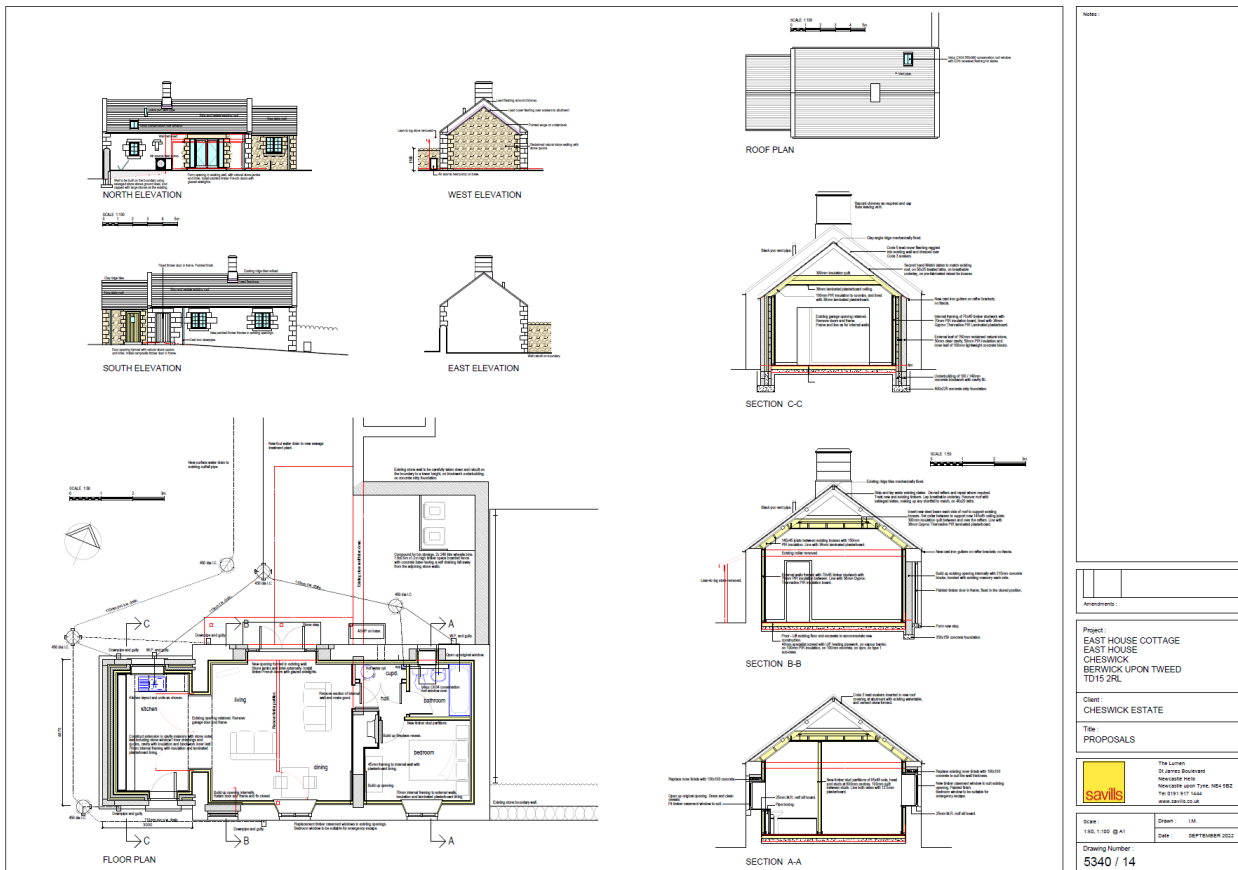


6. Description of Proposed Development.

The proposals are to convert the barn, creating one residential unit. The building will be extended to the west and the roof will be re-laid.

Figure 5. Proposed Works





7.0 Assessment of Impacts

7.1 Constraints

No constraints were present for a risk assessment.

7.2 Site Based Impacts.

The building due to be converted has low conservation significance for bats or birds as a roost/nesting site at present. This assessment takes into account the location of the building and the feeding habitat within 300m, the results of the inspection, the construction of the building and the lack of 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 would be high and can cause disturbance, injury and death to bats or birds, if no care and attention is carried out in the eventuality of an animal being located during works.

Site Assessment

The site is considered to have low conservation significance for birds and bats.

7.3 Impacts on the SSSI.

The development site falls within impact risk zones for the SSSI's and other designated sites in the area and the works are likely to create a small impact on these designated sites. However as there is likely to be a small net increase with one unit of residential or holiday accommodation, a contribution to the Coastal Mitigation Service will be required.

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 as a minimum requirement.

8.1 Pollution Prevention

To protect any nearby waterways or drains, 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

One integrated Build-in WoodStone Bat Box to be built into the west gable wall at 500mm below the wall top in the new extension building. Please see plan below for locations (Figure 6) and Appendix 2 for diagram.

Bats will roost in wall cavities, on the wall tops; hang from the ridge board or between the roofing felt and slates, depending on the species. Brown long-eared and Natterer's bats like to use the roof space, hanging from the ridge beam and only require an access hole. Pipistrelle species and Whiskered/Brandt's bats prefer to roost in small cavities often staying on top of the wall and do not enter the open roof spaces.

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.

Any trenches or excavations to be closed overnight or provided with an earth or timber ramp not less than 300mm wide and no steeper than 45 degrees to provide an escape route for ground animals that might otherwise become entrapped.

8.3 Mitigation Summary

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

- A bat and bird method statement will be followed.
- 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).
- One integrated Build-in WoodStone Bat Box to be built into the west wall at 500mm below the wall top in the converted building. Please see plan below for locations (Figure 6) and Appendix 2 for diagram.
- 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 will be allowed access to the nest until the young have fledged.

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.

Figure 6. Mitigation Locations

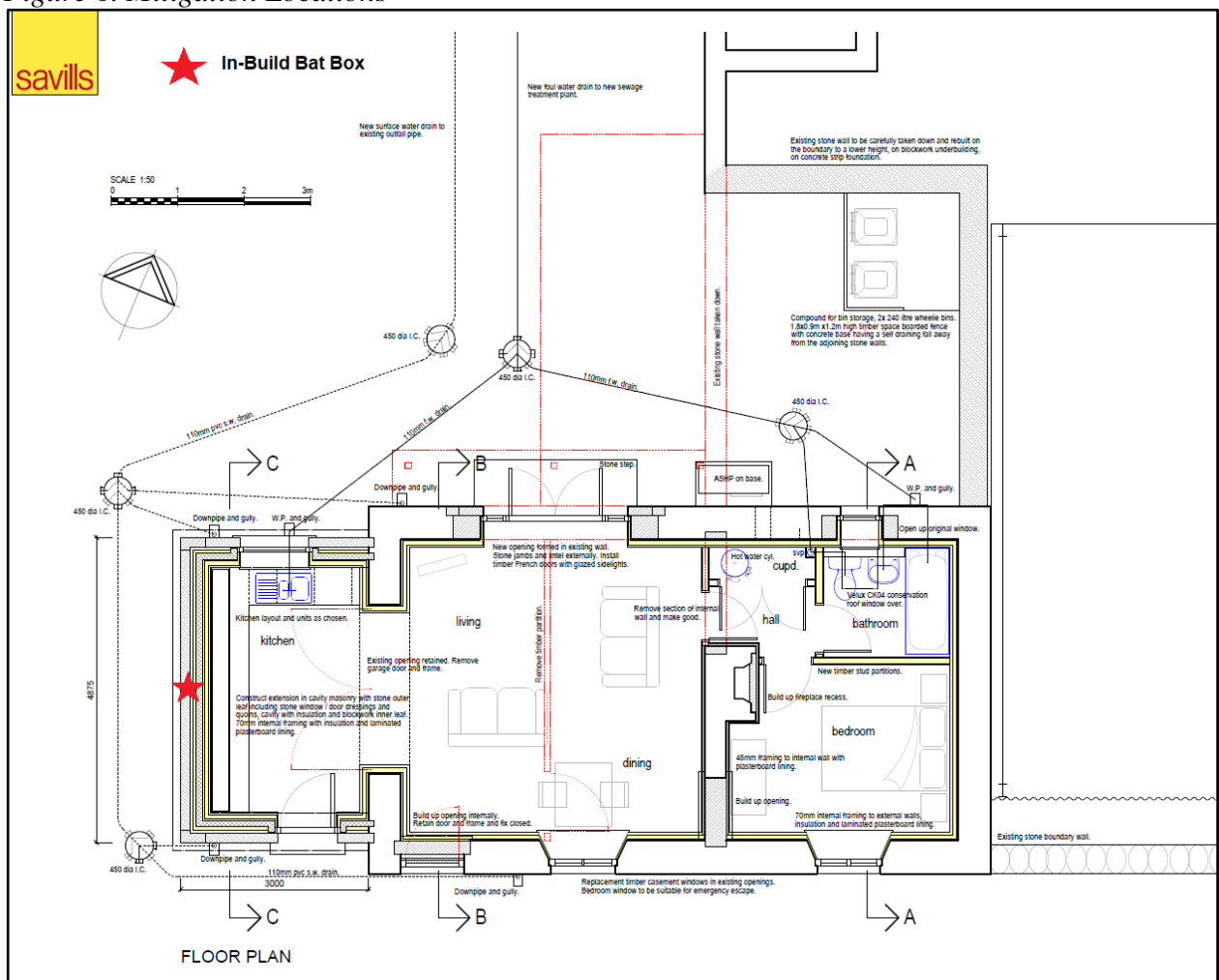


Table 1 Mitigation Summary

Location	Mitigation Type
West gable wall	One integrated Build-in WoodStone Bat Box,

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.

In areas to be landscaped such as around any parking areas and driveway areas, the following garden plants are suggested to increase insect life, which in turn will be food for bats and birds. Ivy, honeysuckle, dog-rose, field-rose, lemon balm, thymes, evening primrose, campions, pinks and hebes. Sheltered corners created by tree planting, the building and fences are all beneficial to bats. Walls with sedums, pennywort and ivy leaved toadflax are attractive and also encourage insects. Any small area of shrubs and hedges planted throughout the site, and further garden plantings will enhance the feeding areas for bats and give cover for nesting birds.

8.5 Monitoring

Due to low bat activity on site, 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

- The development will result in the loss of one traditional outbuilding, which has low conservation significance for bats as a roost site, or other wildlife.
- The provision of mitigation in the form of a built-in bat box will give a net biodiversity gain over the existing site.

9. References

- Barn Owl Trust (2002), Barn Owls on Site. English Nature
Chartered Institute and Ecology and Environmental Management (CIEEM) (2017). Guidelines for Ecological Report Writing 2nd Ed.
Collins J (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). Bat Conservation Trust, London.
Corbet and Harris (1991). The Handbook of British Mammals. Blackwell.
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-or-near-water.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/build-in-woodstone-bat-box>
Barn Owl Box : <http://www.barnowltrust.org.uk/infopage.html?Id=41>
Sparrow Terrace: [Vivara Pro WoodStone House Sparrow Nest Box | NHBS Practical Conservation Equipment](#)
Swift boxes: <https://www.nhbs.com/vivara-pro-cambridge-swift-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
25 August 2022	
8.19pm	Sunset
8.46pm	Pipistrelle 5kHz bat seen foraging to the north of the site.
8.47pm	Pipistrelle 55kHz flew from the east up the track
8.48pm	Pipistrelle 55kHz flew over the building to the yard
8.51pm	Pipistrelle 45kHz flew over the ridge to the north
8.55-9.00pm	Pipistrelle 45kHz and 55kHz bats foraging over the lawn to the north
8.25-9.00pm	Pipistrelle 55kHz bat foraging in the metal barn
8.25-8.35pm	Pipistrelle 45kHz bat foraging in the metal barn
9.00-9.10pm	Pipistrelle 45kHz bat foraging in the metal barn
9.30-9.40pm	Intermittent Pipistrelle 45kHz foraging around the site to the south.
9.50pm	Survey concluded

APPENDIX 3. BAT AND BIRD 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, stone 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.

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- 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 brickwork, 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

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 5°C 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

One integrated Build-in WoodStone Bat Box to be built into the west wall at 500mm below the wall top in the converted building. Please see plan below for locations

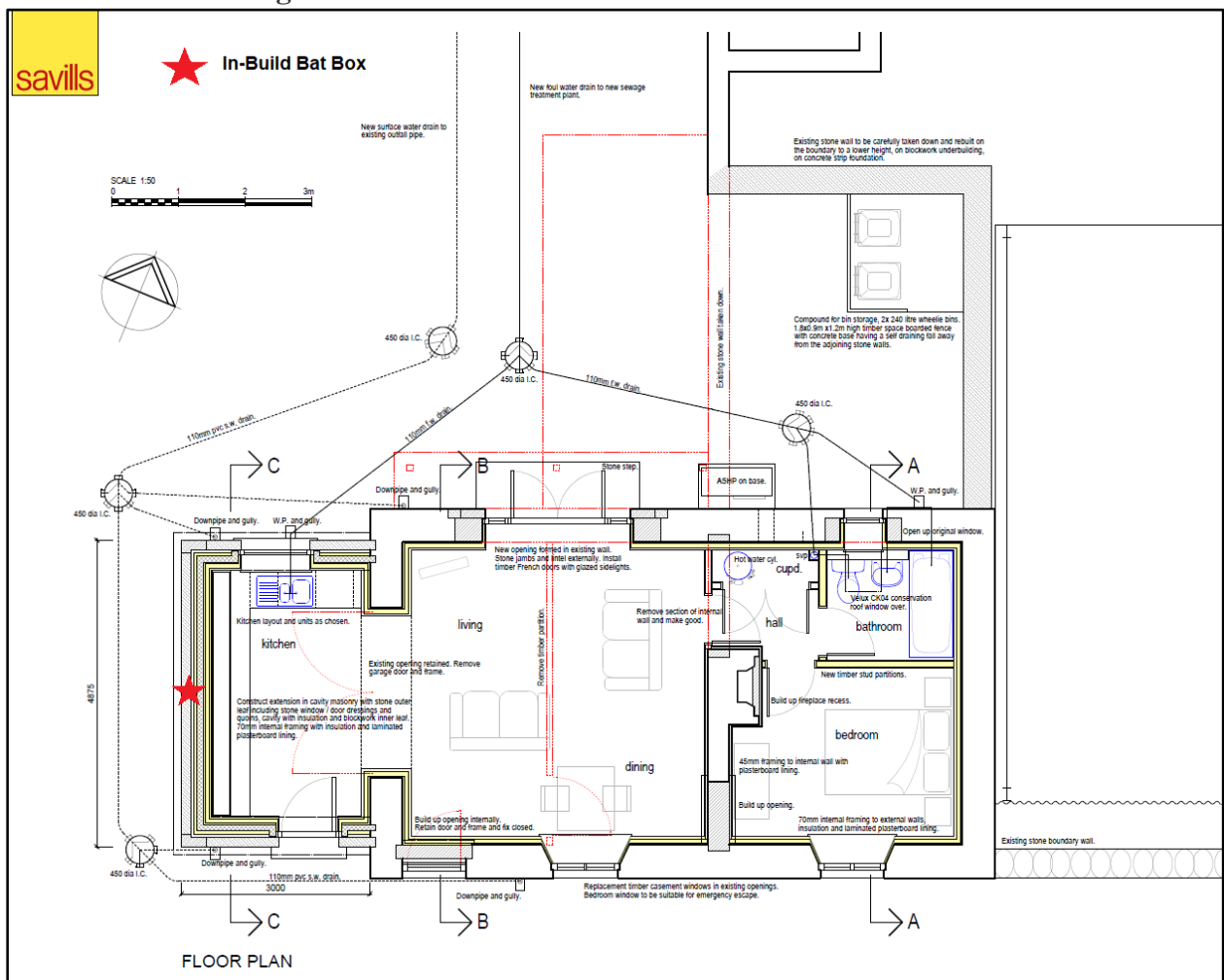
Wooden beams and timbers will be treated only with 'bat friendly' products, permethrin or cypermethrin as insecticides for example. Further information is available if the contractor requires it.

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.

Any nesting bird species will be allowed access to the nest until the young have fledged.

Location of Bat Mitigation



MITIGATION FEATURES

Build-in WoodStone Bat Box

