

**TWEED HOUSE, BELLINGHAM, PROPOSED DEVELOPMENT
ECOLOGY, BAT AND BIRD RISK ASSESSMENT– OCTOBER 2019**

SECTION 1 BACKGROUND AND SUPPORTING INFORMATION

A. Executive Summary

- Tweed House is situated 700m to the southwest of Bellingham, in Northumberland. The buildings inspected are a timber house and lodge that have pitched tiles roofs that originally formed part of a camp school that was built in 1938-39.
- The proposals are to extend the house, adjoining it to the nearby building.
- The immediate area has some bat foraging potential nearby along plantation edges and along the River North Tyne.
- The inspection did not reveal any traces of bats or good bat roost potential within the buildings.
- There is minimal bat roost potential and a negligible risk that a bat maternity roost is present in the buildings affected by the proposals. No further surveys are recommended.
- The occasional bat may however be present in any suitable crevice at any time of the year in small numbers. Timing of any structural works to avoid the hibernation period will ensure that the development has as little negative affect on bat conservation status as possible.
- All contractors involved in the development will read the method statement, prior to commencing the work.
- There were no traces of barn owls around the building. A swallow nest was present in two locations below the overhangs of the roof. Any nesting birds will be allowed access to the nest until the young have fledged.

B. Introduction.

B1 Background.

Tweed House is situated 700m to the southwest of Bellingham, in Northumberland. The buildings inspected are a timber house and lodge that originally formed part of a camp school that was built in 1938-39.

B2 Proposed Works.

The proposals are to extend the house, adjoining it to the nearby building that runs at right angles.

C. Survey and site assessment

C1 Pre-existing information on the species at the site.

There are no known pre-existing records of bats from these buildings on the site. However records are known from the site prior to some timber buildings being removed as surveys identified a Brown long-eared bat roosting in one of the buildings to be removed and whiskered/Brandt's bats foraging, bat activity was generally low, (Own record 1999).

C2 Status of species in the local/regional area.

Records in the area within 2km consist of roost records of maternity roosts of Pipistrelle 45kHz (*Pipistrellus pipistrellus*) in Bellingham to the northeast (2010) and Pipistrelle sp. (*Pipistrelle pygmaeus/pipistrellus*) maternity roosts 3km to the east (1990) and 2km to the northwest (1992). Occasional roosting and foraging bats of Whiskered/Brandt's (*Myotis mystacinus/brandtii*), Noctule (*Nyctalus noctula*), Pipistrelle 45kHz (*Pipistrellus pipistrellus*) and Natterer's (*Myotis nattereri*) are also known within 2km to the northeast (2010). A roost of Brown Long-eared bats was identified by droppings 1.2km to the north (2014). Pipistrelle 45kHz (*Pipistrellus pipistrellus*), Pipistrelle 55kHz (*Pipistrelle pygmaeus*), Whiskered/Brandt's (*Myotis mystacinus/brandtii*), Noctule (*Nyctalus noctula*) and *Pipistrellus sp.* have also been recorded 600m to the southeast (2013) (Leeds University). (ERIC North East. A full data set available upon request).

Locally and regionally, the Common Pipistrelle is the most common bat. Both Pipistrelle 45kHz and 55kHz (Common and Soprano) 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.

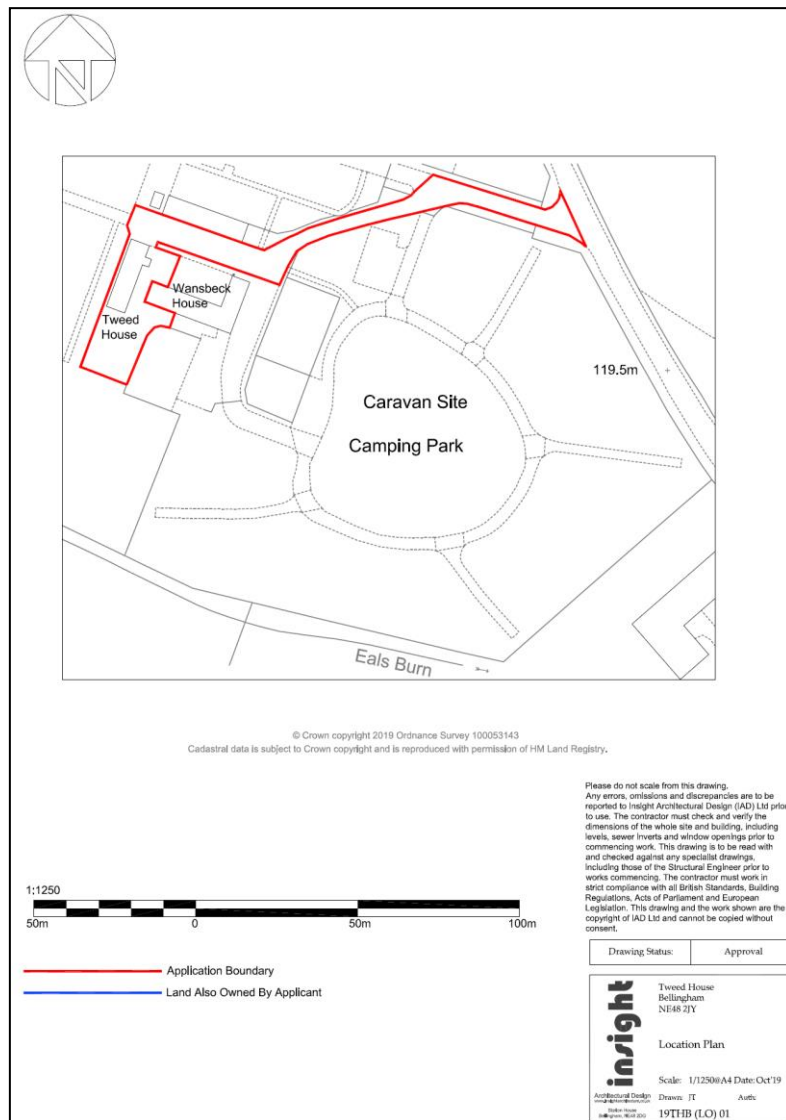
The site is close to several statutory designated sites within 2km, Hareshaw Dene SSSI, 1800m to the northeast, an important deciduous woodland that cuts through a sandstone gorge and has a rich lichen flora, Hesleyside Park SSSI, 1400m to the northwest, a woodland also with a rich lichen flora and one non-statutory site (Local Wildlife Site) within 1km of the site, Hesleyside Mill LWS within c.600m to the north, this includes the River North Tyne with various habitats including woodland and species-rich neutral grassland along the banks. The development site falls within the impact zone for the SSSI's to the northeast and north however as the proposals are a relatively small residential scheme it is unlikely to greatly impact the designated areas.

C3 Objectives of survey

The survey was to determine as far as possible, the presence of barn owls and bats including their roost sites in the buildings at Tweed House, Bellingham affected by the proposals. The aim is to prevent any animal being physically harmed, to protect all roost sites where possible and to provide mitigation for the proposed renovation to maintain conservation status.

C4 Survey area Plan of Site – c. Scale 1:1250

The site is located at NY834825 and is shown below outlined in red.



Photographs of the Site



From the south

Tweed House from the northeast





Wansbeck House from the north

Wansbeck House from the southwest



C5 Habitat description

Tweed House is located 700m to the southwest of Bellingham, there is a small amount of woodland immediately north of the site as well as small plantations within 200m to the northwest and southeast. The wooded banks of the River North Tyne runs 400m to the east. The surrounding agricultural land consists of unimproved/improved grassland to the north and upland heath to the south.

The area has some potential for foraging bats due to the wooded banks of the river and Hareshaw Burn to the north provide good feeding corridors for bats and birds. Bat roost potential will be present in Bellingham, the scattered dwellings in the area and any suitable tree.

C6 Field Survey

C6.1 Methods

A close inspection of the building was made in good light, by torch and endoscope where required. The exterior and lofts 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.

Beneath ledges the ground was examined for feathers, pellets and birdlime that could indicate occupation by barn owls.

C6.2/3 Timing and Weather Conditions

Survey	Date	Timings	Weather
Inspection	9 October 2019	2pm - 3pm 1 hour	Fine, dry and mild

C6.4 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. Class Survey Licence CL15 2015-10388-CLS-CLS, (Volunteer Bat Roost Visitor Level 1).
Qualifications BSc Joint Honours Zoology & Plant Biology, Newcastle upon Tyne. MCIEEM

C7 Results

The buildings are timber built with pitched tiled roofs with a bitumen felt/wood sarking. The lofts are shallow being less than 1.2m in height. No bat traces or good bat roost potential was noted externally or internally. Please see Table 1 for details.

Building	Description	Notes
Tweed House	Wood clad bungalow, with loft area well insulated and a timber sarking with tiles nailed on directly.	No evidence of bats within the loft. Overhanging eaves used by swallows
Wansbeck House	Timber clad hall with overhanging eaves and bitumen felt sarking. Well insulated with Kingspan. Shuttered vents present at gable end, meshed. Solar panels on the south aspect.	No bat roost potential or bat traces noted. Swallow nest on top of the vent at the west gable wall beneath overhanging roof.

Possible bat hibernation sites include any cavities, if present, in the walls/wall tops of the building.

There was no evidence of barn owl activity on site.



Interior of Wansbeck House loft

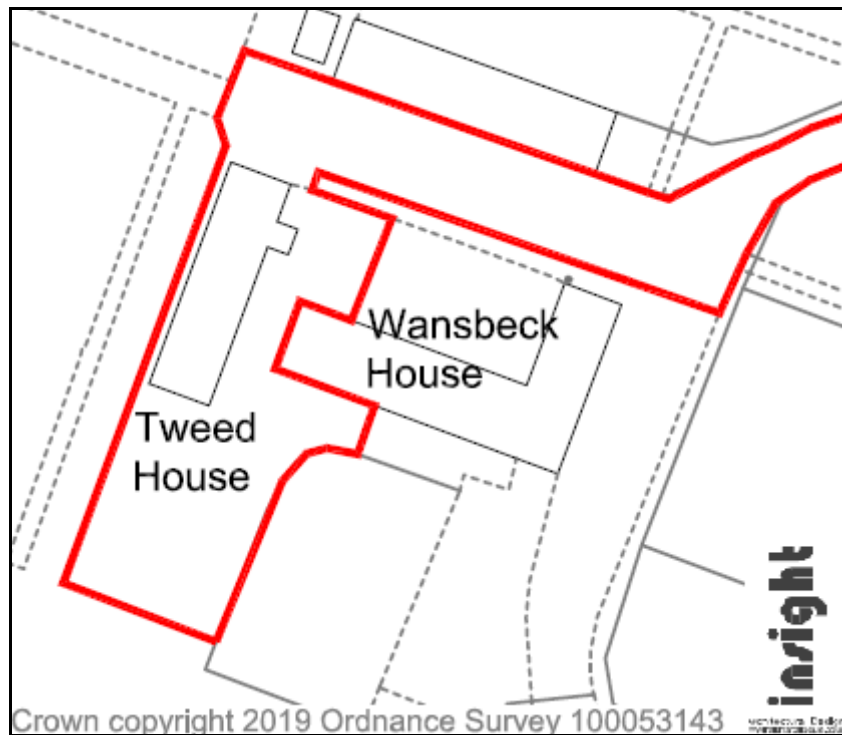
West gable of Wansbeck House with swallow nest and bird box



Loft of Tweed House



Plan of Site



C8 Interpretation and evaluation

Bat presence and populations at certain times of year are only best estimates.

C8.1 Presence - Not applicable.

C8.2 Population size

Not applicable. The occasional male or non-breeding female bat may however be present in any suitable crevice where they may be present at any time throughout the year.

C8.3 Site status

The building due to be extended has minimal conservation significance for bats as a roost site at present. This assessment takes into account the feeding habitat within 500m, the results of the inspection and the potential of the buildings as a maternity bat roost site. The occasional male or non-breeding female bat may be present on the gable wall tops or in a small crevice in walls where they may be present at any time throughout the year.

C8.4 Constraints

No constraints.

D Impact assessment in absence of mitigation

D1 Short-term impacts

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

Mid-activity impacts would be moderate and can cause disturbance, injury and death to bats, if no mitigation is carried out in the eventuality of a bat being located during works, however

mid-activity impacts on bats will be negligible if mitigation such as caution and timing to avoid the hibernation period for any structural work carried out.

D2 Long-term impacts: roost modifications

Not applicable.

D3 Long-term impacts: roost loss

Mid-activity impacts would be high and can cause disturbance, injury and death to bats, if no mitigation is carried out, in the eventuality of bats being located during works.

Even with mitigation some disturbance will occur but carrying out the development in a less sensitive time of year will avoid disturbing hibernating bats. In the short term, the works will disturb any bats still present during the spring to autumn period.

D4 Long-term impacts: fragmentation and isolation

There are no proposals that will affect bat flight lines.

D5 Post-activity interference impacts

Any additional floodlights that would increase light levels and shine on the bat foraging areas would be a high impact.

D6 Predicted scale of impact

The impact on bats will be minimal on site, negligible in the county and negligible at regional level. However, the proposed mitigation will reduce the impact level to negligible for any bats present on site.

E Land ownership – Mitigation sites

E1 Mitigation site ownership

Mitigation will be carried out on this site, which is all in the same ownership.

F 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>
Barn Owl Box : <http://www.barnowltrust.org.uk/infopage.html?Id=41>

SECTION 2

DELIVERY INFORMATION/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 demolition, timber 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.

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.'

Identifying roosts

Pipistrelle the most common bat, favours small crevices and spaces between brickwork, timber 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.

A1 Mitigation strategy

A.1 Summary of mitigation strategy

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

- Sensitive timing of any structural works between spring to autumn to avoid hibernating bats if possible.
- Avoidance of any destructive works that will affect nesting birds.
- Provide Method Statement to contractors.
- Advice given for the safe removal of any bats found from harm during the development.
- External lighting will be on a relatively short timer, directed away from bat flight paths and motion-sensitive only to large objects
- Provision of two bat boxes.

Architect

The bat provision specified below will be incorporated into the plans submitted to planning to prevent delays. This will show the location of the bat boxes to be provided as in this report.

Timing

Any development work involving any structural works and the removal of any existing roof materials (tiles) 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. 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.

No timing constraints on the internal works.

Contractors

All contractors will be aware that bats may be present in the area and could be present in any suitable crevice etc and may be found torpid in wall cavities 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.

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.

Table 1 General Methodology for Extension Works

STRUCTURE	METHOD	INSPECT
Roofs	Remove any tiles or roof coverings including loose felt by hand, lifting vertically to prevent any bats from being crushed. Removal of any timbers/beams. Avoid blocking any external pre-existing gaps by leaving 15 x 20mm access point.	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 walls, by hand.	Examine for bat droppings and any wall cavities for bats. 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 cavities exposed. Avoid blocking any external pre-existing gaps.

B Works to be undertaken by the ecologist or suitably experienced person.

B1 Capture and exclusion

If any bat is found unexpectedly during operations the cavity will be recovered or protected and work will cease in that area. Ruth Hadden to be informed (01661 886562) immediately for assistance.

C works to be undertaken by the Developer/Landowner

C.1 Bat roosts

C1.1 In-situ retention of roost(s) - Not applicable.

C1.2 Modification of existing roost(s) - Not applicable.

C1.3 New roost creation

Two low profile Woodstone bat boxes will be located on the south aspect of Tweed House and the east aspect of the new extension. The boxes will have an access gap of 15-20 mm wide and be permanently positioned to provide roosting places for bats. They will be positioned at a height of 3-4 metres as high as possible below the hanging eaves with nothing obstructing the flight path. Please see plan at C.1.4 for locations and references for supplier.

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 or wood sarking that would give bats some grip will be used and not a more modern smooth or breathable membrane that may fray and entrap bats.

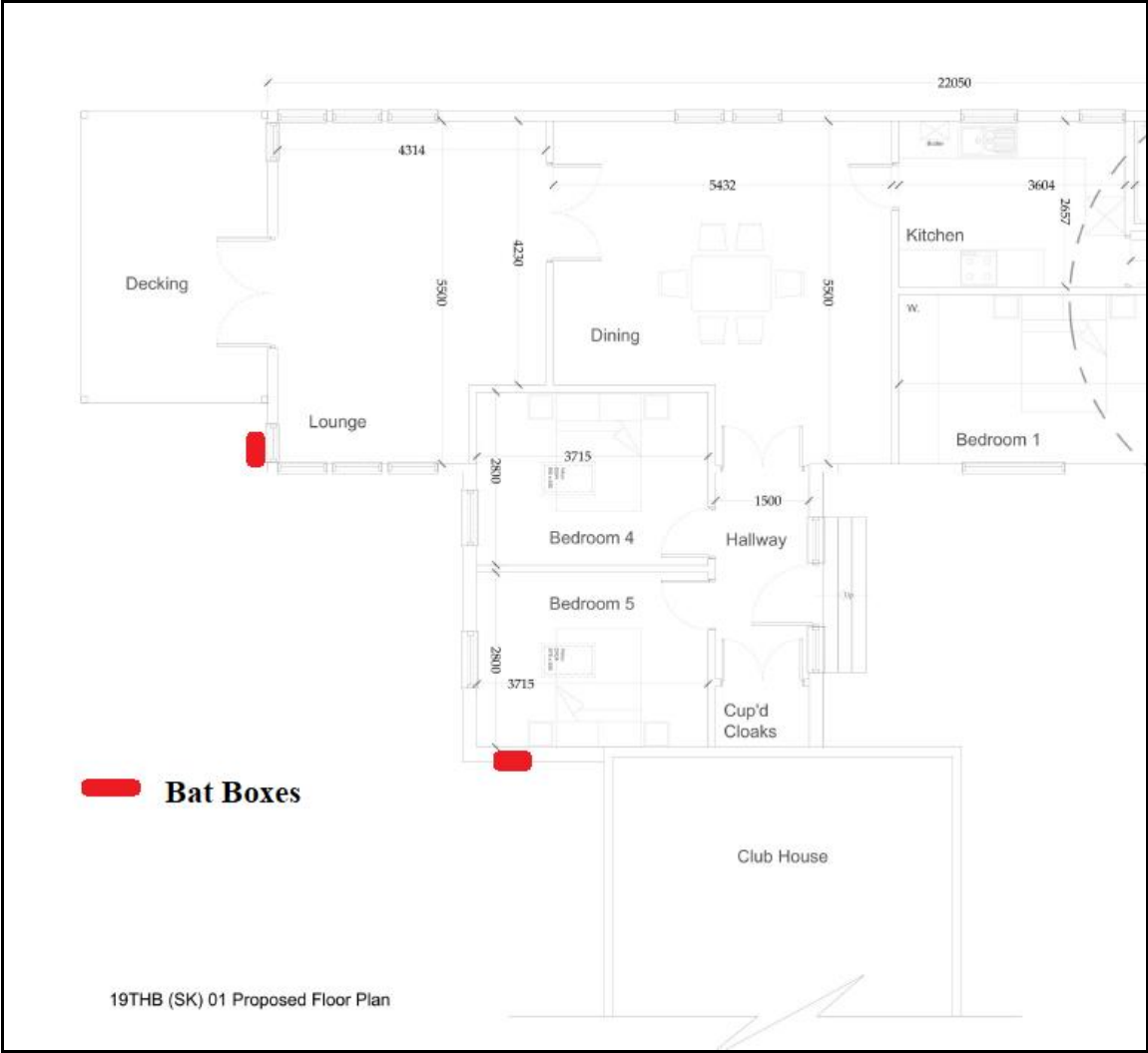
Any external lights will be set on a motion detector and short timer and be positioned in such a way that they do not shine on any of the bat access positions or the buildings, as this can deter bats.

Bird provision

Bird box to be relocated between September and February.

The new extension will have over hanging eaves and gables so will provide similar habitat as is presently being used by swallows.

C.1.4 Scaled maps/plans



D Post-development site safeguard

D.1 Habitat/site management and maintenance

Any water tanks present in the buildings will be covered to prevent debris and bats from falling in.

D.2 Population Monitoring

Due to the low bat activity on site no monitoring will be carried out 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.

D.3 Mechanism for ensuring delivery

Bat mitigation as shown on the plans will be subject to the conditions of the Planning Consent when granted.

E Timetable of works

Not known at present.