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HOLYSTONE COTTAGES, HOLYSTONE, PROPOSED DEVELOPMENT BAT AND BARN OWL REPORT – SUMMER 2014

SECTION 1 BACKGROUND AND SUPPORTING INFORMATION

A. Executive Summary

- Holystone Cottages, Holystone are situated 2km to the southeast of Holystone in Northumberland. The buildings surveyed are stone built with rosemary tiled or slate roofs and consist of a cottage and old kennels. The cottage is to be extended outwards to create a kitchen and dining room; this will entail enlarging the present single storey extension in the proposed scheme. The kennels will be converted to provide a holiday cottage unit.
- The immediate area has excellent potential for feeding bats, with immediately adjacent plantations and woodlands and the River Coquet 400m to the east.
- The cottages are in a reasonable condition with small crevices beneath the rosemary tiled roof. The kennels are in a more dilapidated condition with a mossy roof and large crevices are present in the stonework at the eaves and gable. The inspection results of the cottage lofts revealed a slight scatter of small bat droppings which appeared to have fallen through from the ridge. No traces were located in the kennel building.
- The buildings were assessed as a minimal-low (kennels) and low-moderate (cottage) risk that a bat maternity roost would be affected by the proposed development.
- The emergence surveys revealed the occasional Pipistrelle 45kHz and 55kHz and Brown Long-eared bat emerging from the eaves (raised tile) and from the ridge of the cottage, no bats were identified as emerging from the kennels. Foraging bats of were in the area before they dispersed to further afield.
- As the occasional bat may be present in any suitable crevice on the stone wall tops at any time of the year in small numbers, timing of the roof works to avoid the hibernation period will ensure that the development has as little negative affect on bat conservation status as possible.
- Retention and provision of crevices as at present will maintain the bat roost potential in the building.
- **All contractors involved in the development will read the method statement, prior to commencing the work.**
- No traces of Barn Owl were present within the buildings. Any nesting birds will be allowed access to the nest until the young have fledged.

B. Introduction.

B1 Background.

Holystone Cottages, Holystone are situated 2km to the southeast of Holystone in Northumberland. The buildings surveyed are stone built with rosemary tiled or slate roofs and consist of a cottage and old kennels.

B2 Proposed Works.

The cottage is to be extended outwards to create a kitchen and dining room, this will entail enlarging the present single storey extension in the proposed scheme, with the roof meeting

the main roof in a slightly higher positon. The main roof will remain as it is at present with only a small section affected in the region of the present lean-to. The kennels will be converted to provide a holiday cottage unit.

C. Survey and site assessment

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

There are no known pre-existing records of bats on site, though the owner sees foraging bats.

C2 Status of species in the local/regional area.

Known bat activity in the area within 2 kilometre of the site are maternity roosts of Brown Long-eared 1km to the southeast and 2km to the northwest, Pipistrelle 45kHz 1km to the south and 2km to the northwest, Pipistrelle 55kHz within 500m to the south and 2km to the northwest, Daubenton's 2km to the northwest. Foraging Natterer's and Whiskered/Brandt's are also known in the area. (Own records 1986-2013).

Bat work has previously been carried out on Woodhouses Bastle, about 300m to the south. Common Pipistrelle (*Pipistrellus pipistrellus*) and Brown long-eared (*Plecotus auritus*) use the building as hibernacula and it is also known as a summer roost for Daubenton's Bat. There is a known barn owl roost in Woodhouses Bastle (Own records).

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.

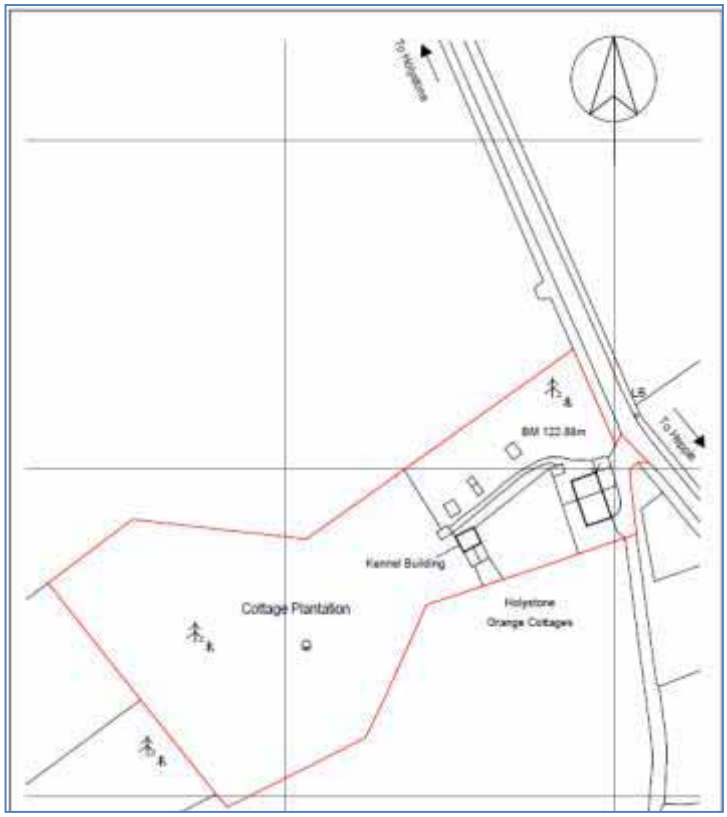
C3 Objectives of survey

The survey was to determine as far as possible, the presence of bats and barn owls including their roost sites in the buildings at Holystone Cottages, Holystone 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

The buildings surveyed are located at NT966006 and the location is outlined in red opposite.

Plan of Site – c. Scale 1:1250



Photographs of the Site

Southeast aspect of the cottage

Northwest aspect of the cottage

Southwest aspect of the cottage.

Southeast aspect of the kennel building

Southeast aspect of the kennel building.

C5 Habitat description

Landscape

Holystone Cottages, Holystone is situated 2km southeast of Holystone in rural Northumberland. The cottage is surrounded by numerous plantations both deciduous and coniferous with the surrounding agricultural land consisting of improved grassland with boundaries of walls, hedges and fences with some boundary trees. Links along the boundaries to plantations within 1km in all directions are present giving some excellent foraging areas for bats further afield. The River Coquet is present within 400m to the east.

There is good potential for feeding bats within 1km of the site the plantations providing foraging corridors that link to further afield. Bat roost potential will be restricted to the scattered houses and villages in the local area.

C6 Field Survey

C6.1 Visual Inspection

A close inspection of the buildings was made in good light, by torch and endoscope where required. The loft and exterior of the buildings 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 roofing felt and slate/tiles.

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

As dusk fell 4 surveyors, each using visual observations and bat detectors (Bat Box IIID and EM3) and two-way radios, carried out the evening emergence surveys. 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 allows 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.

C6.2/3 Timing and Weather Conditions

Date	Weather	Temperature
4 August 2014	Fine, clear and still	14 -13°C
1 September 2014	Fine, light cloud and still	14-12°C

C6.4 Personnel

Ruth Hadden - Bat Consultant since 1996, Class Survey Licence WML CL20 (Bat Survey Level 4). Licensed to handle bats and enter known roosts since 1986. Class Survey Licence WML CL15 (Volunteer Bat Roost Visitor Level 1). Registration number CLS0 2762.
Qualifications BSc Joint Honours Zoology & Plant Biology, Newcastle upon Tyne. MCIEEM
Ben Hadden – Class Survey Licence WML CL18 (Bat Survey Level 2). Registration number 2014/CLS/0181.
Sean Gilmour, Jess Hindhaugh, Beth Patience, Ben Whittle, Karen Whittle.

C6.5 Constraints

No constraints, any fresh droppings would not have deteriorated in the lofts.

C7 Results

The cottage is 2 storeys, stone built with rosemary tiled roof with a felt sarking present or torching only; a stone built lean to is present on the west side of the building with a pitched slate roof and fascia's with no gap behind. The cottage is well pointed with the occasional possible crevice for bats present on the wall tops beneath raised tiles and at the ridge. Small bat droppings were noted in both the house loft areas where a light scatter was present below the ridge where it appeared that droppings had fallen through a crevice. No bat droppings were present externally. The kennel building is small, single storey and is stone built with a heavily mossed slate roof with a wooden sarking interior, large crevices (too gappy) are present on the south gable and occasionally on the west eaves.

The emergence surveys revealed Pipistrelle 45kHz emerging from the ridge and a crevice on the west eaves, Brown Long-eared bats emerging from an eaves crevice and ridge and Pipistrelle 55kHz bats emerging from a crevice on the west eaves. After sunset foraging Whiskered/Brandt's and Natterer's bats were also seen or heard flying. No bats emerged from the kennels. Please see Table 1 below.

Possible bat hibernation sites include any suitable cavities, if present, on the wall tops of the building in draught proof positions.

No traces of barn owls were seen in the buildings.

Plans of Site with Bat Activity

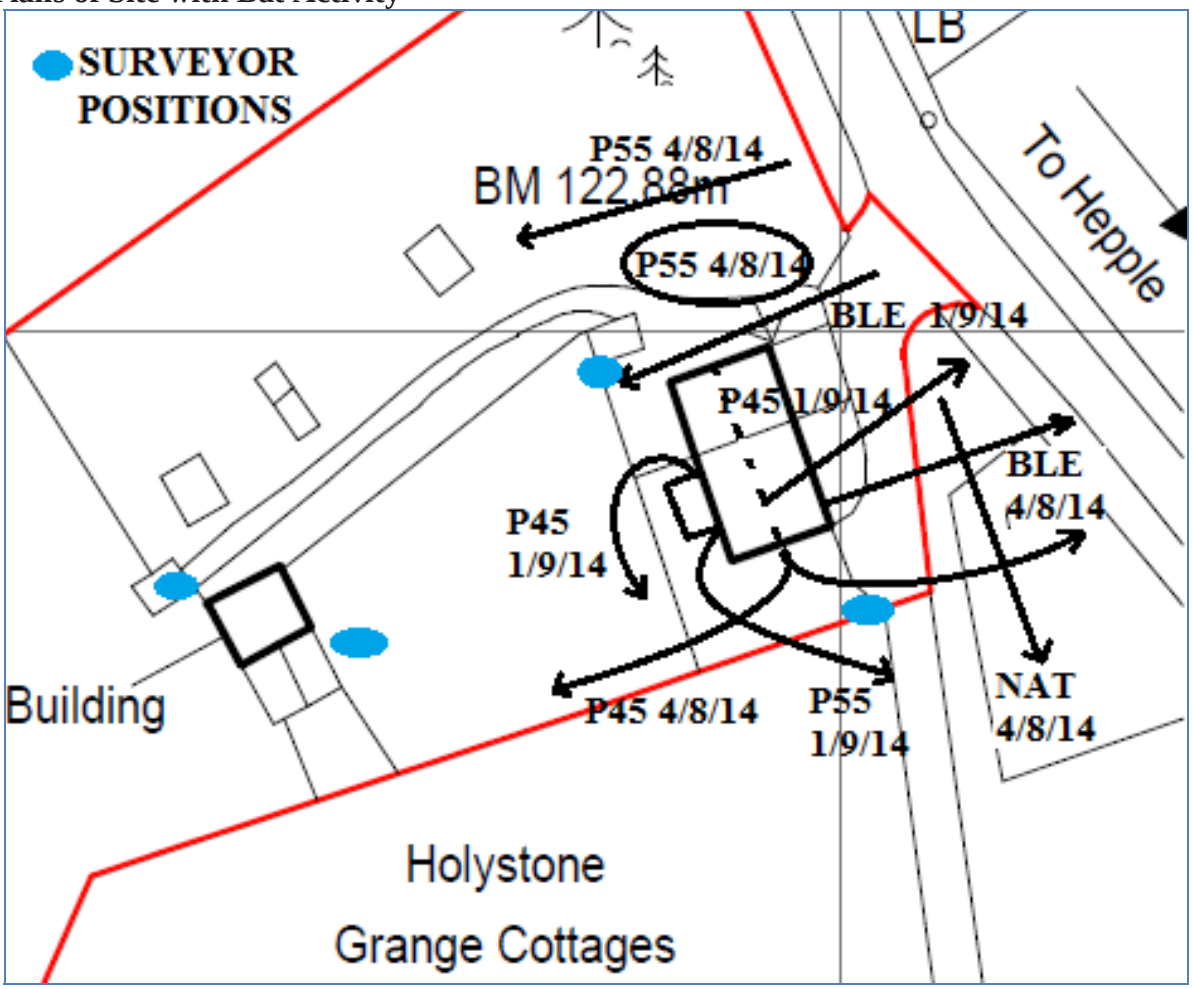


Table 1 Emergence survey results.

Date	Bat Activity
4 August 2014	
9.02pm	Sunset
9.20pm	**Pipistrelle 45kHz bat emerged from the south gable of the cottage heading west**
9.23pm – 9.46pm	**3 Brown long-eared bats emerged from east eaves of the cottage heading east.**
9.26pm	**A Pipistrelle 45kHz emerged from the cottage ridge heading east.**
9.36pm	**A Pipistrelle 45 kHz emerged from the cottage ridge heading west.**
9.37pm	A Pipistrelle 55 kHz passed to the north of the cottage heading west.
9.42pm	Whiskered/Brandt's heard but not seen on the west side of the cottage.
9.46pm	A Natterer's bat heard but not seen on west side of the cottage.
9.48pm	A Natterer's bat heard but not seen on east side of the cottage.
9.55pm	Pipistrelle 45kHz seen foraging over the cottage.
10.35pm	Survey concluded.
1 September 2014	
7.58pm	Sunset
8.17pm-8.30pm	**3 Pipistrelle 55kHz emerged from the southern internal corner on the west side.**
8.32pm – 8.36pm	**3 Pipistrelle 45kHz bats emerged from the northern internal corner of the west side.**
8.34pm	2 Pipistrelle 45kHz seen foraging to the east of the cottage.
8.40pm	**Pipistrelle 45kHz bat emerged from the ridge towards the north end of the cottage.**
8.41pm	**Brown Long-eared emerged from the ridge near the southern chimney. Pipistrelle 55kHz heard at the north end of the cottage.**
8.42pm	Brown Long-eared seen in the trees to the west of the kennels.
8.44pm	Whiskered/Brandt's heard but not seen on the west side of the cottage.
8.48pm-9.00pm	Pipistrelle 45kHz bat seen foraging to the east and south of the cottage.
8.53pm	Pipistrelle 45kHz bat heard not seen.
9.25pm	All quiet, survey concluded.

Interior of southern cottage loft with a felt sarking.

Interior of kennel building

The north loft space with torching

Gap above the gutter adjacent to the lean-to used by bats.

C8 Interpretation and evaluation

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

C8.1 Presence

The occasional Pipistrelle 45 and 55kHz bat was identified as roosting in the cottage eaves close to where the proposed work will be carried out. There is always the possibility of the occasional bat being present in any crevice throughout the year including the hibernation period. Additionally Pipistrelle 45kHz and Brown Long-eared were also seen emerging from the ridge and east eaves of the cottage.

C8.2 Population size

< 5 Pipistrelle 55kHz bats
< 5 Pipistrelle 45kHz bats
< 5 Brown Long-eared bats

C8.3 Site status

The cottage surveyed has moderate conservation significance for bats as a roost site at present. This assessment takes into account the feeding habitat/shelter in the immediate vicinity and in the surrounding area, the commuting corridors, condition of the building and the results of inspection and survey together with the maternity bat roost potential present.

The kennels have minimal conservation significance for bats as a roost site at present, due to the dilapidated condition of this small building.

The occasional male or non-breeding female bat may be present on the wall tops or in a small crevice such as in the wall cavity where they may be present at any time throughout the year.

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 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 to maintain crevices as at present some disturbance may occur but carrying out the extension work 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.

D2 Long-term impacts: roost modifications

Not applicable**.**

D3 Long-term impacts: roost loss

If no mitigation is carried out bats would be displaced and possibly harmed during the works of the building in relation to any bats that may use the site. The proposed mitigation is therefore expected to result in only minimal impact on the bats species recorded on site at a local level.

D4 Long-term impacts: fragmentation and isolation

There are no proposals that will affect bat flight lines and cause isolation.

D5 Post-activity interference impacts

Any additional floodlights that would increase light levels and shine on any bat access points or foraging areas would be a high impact.

D6 Predicted scale of impact

The impact level on bats will be low/moderate on site, minimal in the county and at regional level. However the proposed mitigation will reduce the impact level to minimal for any bat that may be present on site.

E Land ownership – Mitigation sites

E1 Mitigation site ownership

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

F References

Barn Owl Trust (2002), Barn Owls on Site. English Nature
Bat Conservation Trust (2012) Bat Surveys – Good Practice Guidelines. BCT
Corbet and Harris (1991). The Handbook of British Mammals. Blackwell.
English Nature (2004) Bat Mitigation Guidelines. EN
Joint Nature Conservancy Council (2004) The Bat Workers Manual. JNCC.

Bat boxes: **http://www.nestbox.co.uk/Improved-Cavity-Bat-Box.html**
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 conversion, 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 of Habitats and Species Regulations 2010. 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, 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, that and 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.

A Mitigation and compensation.

A.1 Summary of mitigation strategy

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

- Sensitive timing of works to the roof in spring to autumn to avoid hibernating bats.
- Provide Method Statement to contractors;
- Advice given for the safe removal of any bats found from harm during the development under different weather conditions.
- External lighting will be on a relatively short timer, directed away from bat flight paths and motion-sensitive only to large objects.
- Bat access provision to the west eaves to be maintained as at present.
- No works planned on the main roof ridge, east eaves and south gable.

Timing

Any development work on site involving dismantling any stonework and the removal of any existing roof materials will be carried out avoiding the hibernation period (November to March inclusive). Periods of cold weather (below 5ºC 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.

Contractors

Table 1 General Methodology for Extension and 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. 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.
Walls - Pointing	**Only point crevices where the full depth can be seen.**	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.

All contractors will be aware that bats may be present in the area and could be present when removing roof coverings, ridge tiles, etc and may be found torpid on wall tops and in wall cavities if any. Table 1 above 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.

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

B1 Capture and exclusion

Only an ecologist licensed to handle bats will handle any bats found on site.

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. 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.

The same will apply 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.

C works to be undertaken by the Developer/Landowner

C.1 Bat roosts

C1.1 In-situ retention of roost(s)

Crevices at the cottage ridge, below the ridge tile and at the south gable and east eaves, will remain as at present to safeguard the roost potential on site during the works.

Two eaves crevices will be maintained on the west eaves as at present below a raised tile leaving access of at least 15mm to the wall top with a notch in the wall plate/batten on that section of the eaves**, with access to the gap between the roofing felt and tiles**. The position will be checked to ensure that the bats can access further that the first batten and a notch cut if necessary. Please see plan at C1.4 for location.

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. Pipistrelle bats, the commonest 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. Natterer's and Brown long-eared bats will use loft spaces.

A traditional felt or wood sarking that would give bats some grip will be used where bat provision will be provided and not a more modern smooth membrane. It is prudent that a double layer of sarking and insulation will be used in the region of the eaves provision.

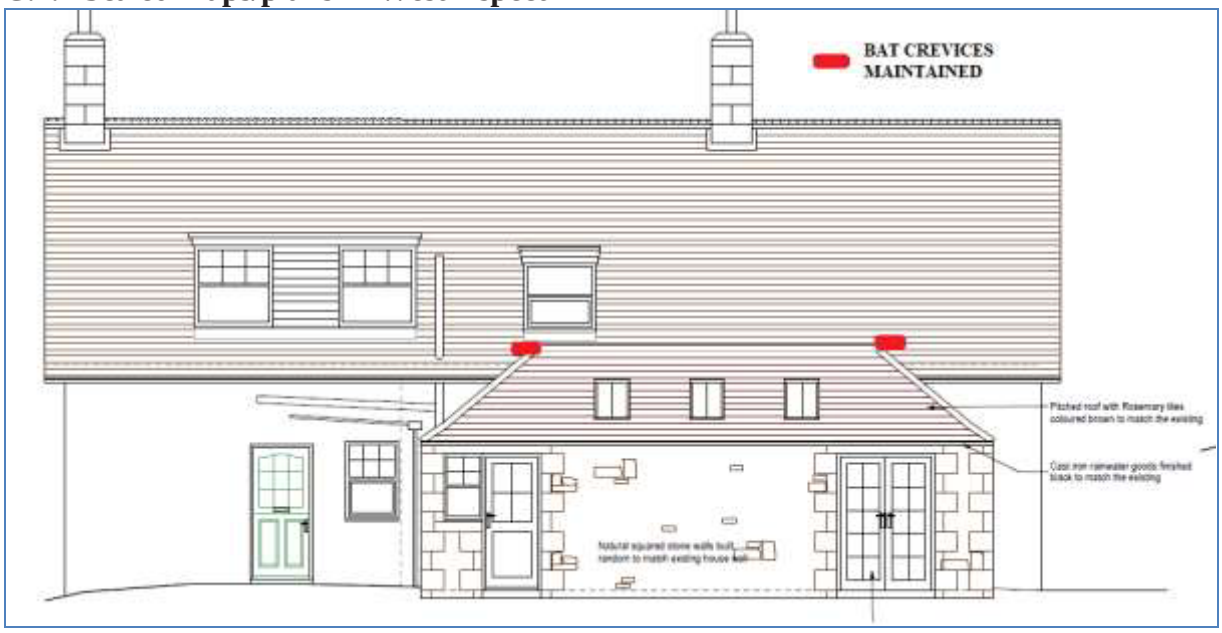
Timbers will be treated only with 'bat friendly' products, permethrin or cypermethrin as insecticides for example. Further information is available if the contractor requires it.

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.

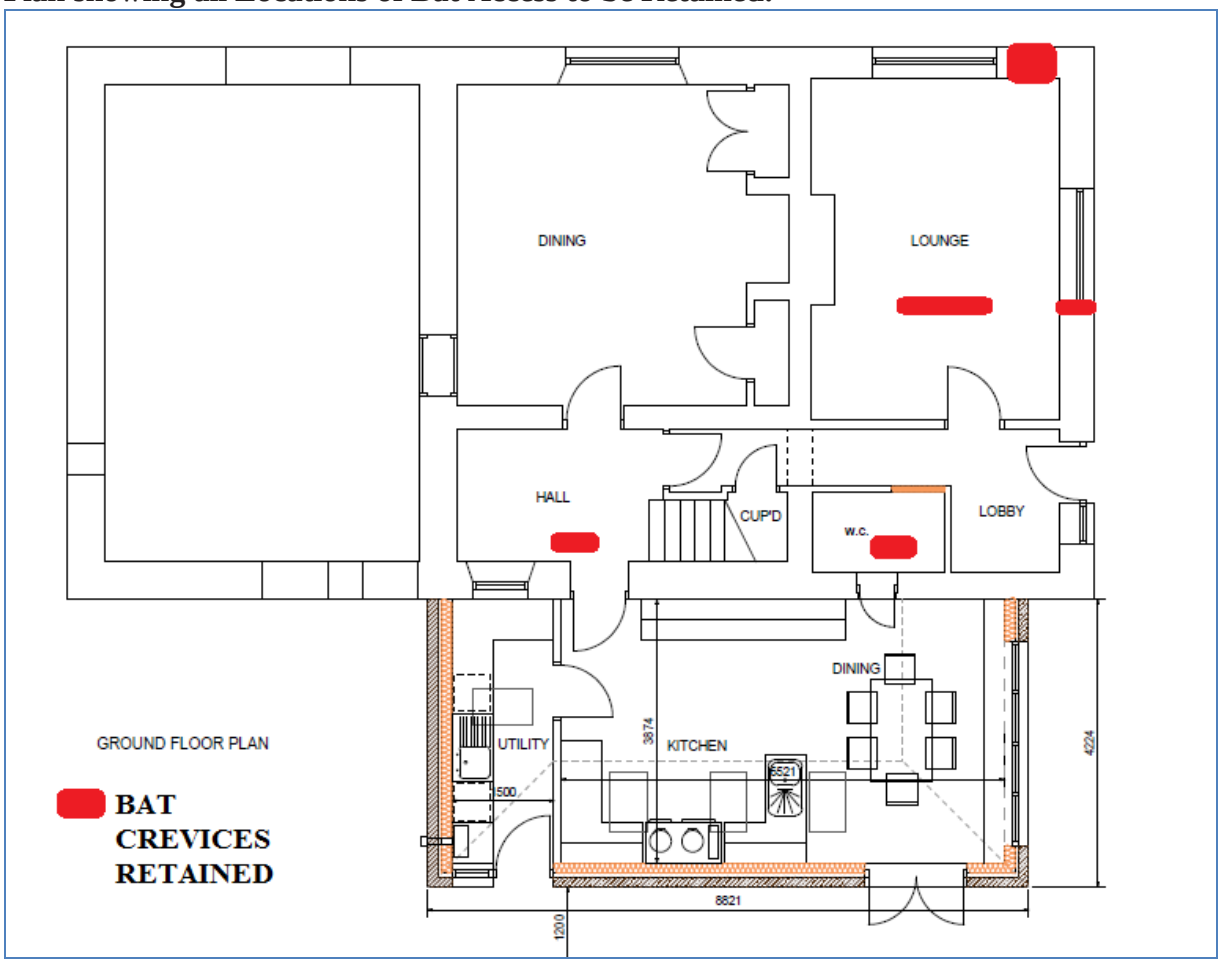
C1.3 New roost creation

Not applicable.

C.1.4 Scaled maps/plans - West Aspect



Plan showing all Locations of Bat Access to be Retained.



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 low bat activity on site, no monitoring will be required to assess the success of mitigation after completion. (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.