METHOD STATEMENT IN RESPECT OF COMMON PIPISTRELLE AND BROWN LONG EARED BATS, AT THE COACH HOUSE, WYE HOUSE, CORBAR ROAD, BUXTON, DERBYSHIRE.

The following methodology has been guided by the bat workers manual 2003 and the bat mitigation guidelines 2004/ 2012. The statement is compiled by Natasha Estrada BSc (hons), MRes, MCIEEM who is suitably qualified in bat survey and mitigation proposals.

Summary of the proposed mitigation strategy

1. This document relates to The Coach House, Wye house, Corbar Road, Buxton, SK 05525 74167 which is confirmed as a bat roost for two species.

2. The building is planned to be renovated into residential apartments. Renovations include works associated with turning the property into individual dwellings; these include roof works.

3. Internal and external building inspections were conducted during June and into July 2014 by Natasha Estrada and Helen Holford of Estrada Ecology who are licensed and experienced in undertaking inspection surveys for bats. Field sign evidence of bats was found.

4. Emergence surveys were conducted at the site throughout June and into July 2014 to further inform on bats use of the site and to establish potential bat-entry and -exit points. Two species of bat were recorded being in situ within the building and bat access and egress points located.

5. The activity survey data and field sign evidence indicate the property is used on a breeding basis by Brown long eared and Common Pipistrelle bats.

6. The renovation of the property requires a suitable mitigation strategy to ensure the ecological functionality of the roost is retained and measurable disturbance is avoided.

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7. Mitigation will include the retention and enhancement of the roosts identified within the property.

8. Disturbance will be minimised by pre works surveys and the timings of works.

9. Modification of access and egress points to facilitate renovation will be conducted under EPS licence (subject to planning and a licence being granted).

10. All works on the roof in the affected area will be supervised by a suitably qualified ecologist.

11. Works on the areas where bat field signs were found will be conducted outside the bat activity season.

12. Post works monitoring of the bat provision will be undertaken in the autumn of years 1 and 2 following renovation.

1.0 IMPACT ASSESSMENT

Pre- and mid activity impacts

Disturbance is likely to occur when the building is re-developed. In the absence of proportionate mitigation this could lead to damage, death or encasement of any bats in situ, along with destruction of the roost.

Pre works surveys to ensure no bats are in situ will be conducted to ensure no measurable disturbance, as will the timings of the works under EPS licence.

Long term impacts: Roost modification

Some roost modification is predicted however the roosts identified are to remain in situ and enhanced. Environmental parameters of the existing roost have been recorded and will thus be replicated ensuring ecological functionality of the roost.

Works to modify access points will be conducted under EPS licence and timed to commence outside the bat activity period. New access points will be seeded by existing bat droppings in order to encourage use.

Long term impacts: Roost loss

The roost identified is to remain in situ thus no impacts in respect of roost loss are predicted.

Post development interference impacts

It is possible that human activity could contribute to disturbance of the roost post development. This however is deemed to be low as the roost will be suitably self contained. No additional impacts in respect of disturbance from lighting are predicted.

Summary of impacts in the wider context: Scale of impacts

The roosts identified will be retained within their current locations. No impacts on the ecological functionality of the roost are predicted. The roost sites will not be subject to strong artificial light sources and no obstruction by vegetation will occur.

The proposed works will have no impact on migration of the species to and from the site. Activity surveys indicate favoured foraging grounds are beyond the site boundary within the adjacent Corbar wood and beyond.

Consultation suggests that Common Pipistrelle and Brown long eared bat are widespread in the local / regional area but under recorded. Impacts based on the proposed mitigation strategy are considered low.

Bat surveys

Field sign evidence of Common Pipistrelle and Brown long eared bat was recorded within the building. Droppings of both species along with discarded wing cases (feeding remains) were recorded, the latter being synonymous with Brown long eared bat feeding.

Brown Long eared bat were recorded roosting within an area of absent mortar internally and were recorded using the interior of the property to metabolise in pre emergence.

Common Pipistrelle bat were recorded roosting in the same location. This roost was identified as a small breeding roost.

Access and egress points have been identified as have roost locations.

Location, ownership

The site is under the ownership of the applicant.

2.0 Methods

Works to be undertaken by the Landowner / Developer: In site retention of roosts

English Natures Bat Mitigation Guidelines (Mitchell-Jones, 2004) state that the level of mitigation must be proportional to the ecological impact of the development. This depends on the conservation significance of the roosting sites, which is determined by species, population size and roost status.

A scheduled mitigation strategy has therefore been designed and the building requires a Natural England (EPS) bat licence.

Natural England state that for maternity roosts of commoner species timing constraints apply. Roosting provision should be more or less a like-for-like replacement. Bats should not be left without a roost and must be given time to find the replacement. Monitoring for 2 years is preferred.

Natural England (2004) states that replacement roosts for bats which use the roof void to fly should be "at least 2.8m high, 5m wide and 5m in length would be required".

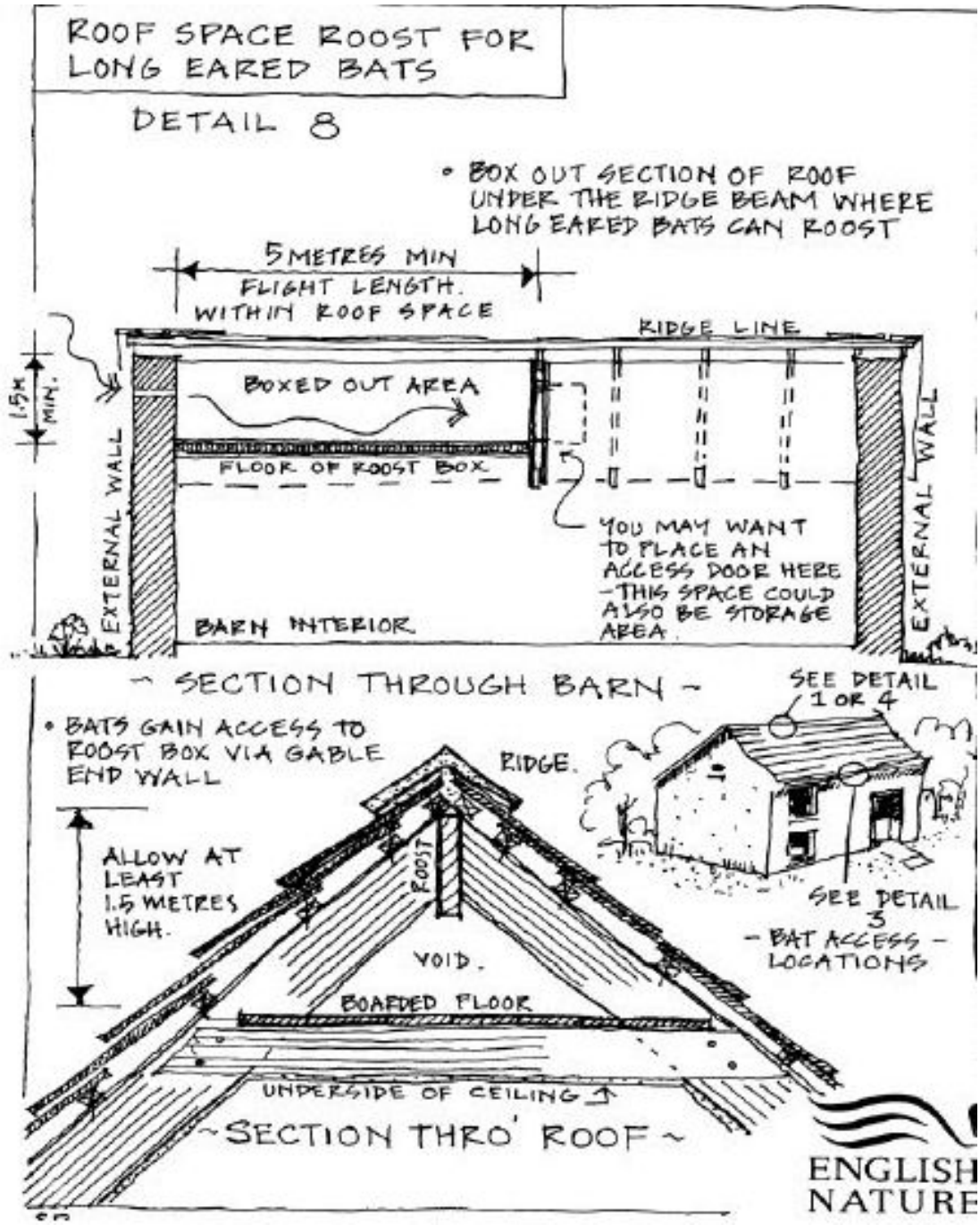
A section of the roof (south eastern elevation) under the ridge beam will be boxed out and provide an area where bats can roost. The dimensions of the roost are yet to be finalised but consultation with Natural England during the EPS licence procedure will seek conditions to be optimal for the species affected as outlined herein and within the bat mitigation guidelines 2004. Provision for Common pipistrelle bat will be provided within the bat loft via crevices between the roof beams and wall.

The boxed out area will be sealed with a boarded floor. Any insulation required in the re -developed property will be on the underside of the ceiling in order to retain the thermal properties of the boxed area.

The false ceiling will run flush to the interior walls ensuring no gaps are left in which bats could enter the tenanted space below.

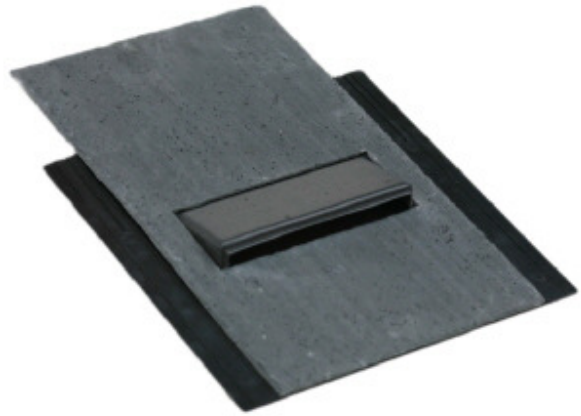
The roost situated within the apex will remain in situ and individuals have free flight within the boxed section of the roof void.

Figure 1: Natural England advice for Brown Long eared bat roost design.



Access and egress is proposed to be relocated within the roof area via a "Bat access tiles". Such tiles provide suitable access points for bats; the back of the tile is removed allowing entry directly into the roost. Under current plans it is proposed that access will be provided on front and rear of the south eastern elevation in order to minimise conflict to any future inhabitants of the property.

Figure 2: Examples of bat access tiles/vents commercially available.



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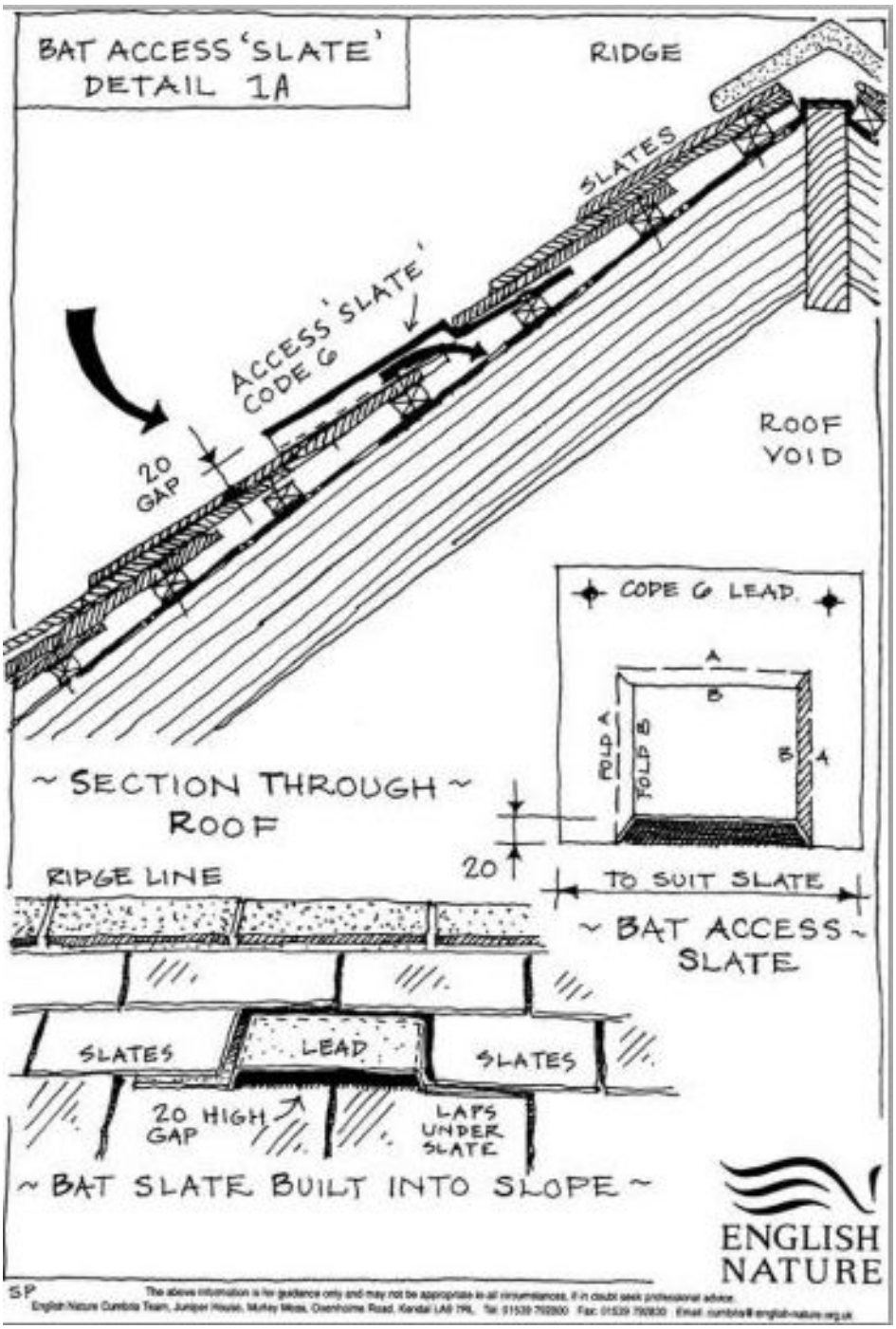
The bat tiles and loft will be "seeded" with droppings from the existing roost as a method of habituating returning bats to the site.

Figure 3: Bat access detail as specified by English Nature



2.1 Works to be undertaken by a suitably qualified ecologist or accredited agent (subject to planning and subsequent licence being granted).

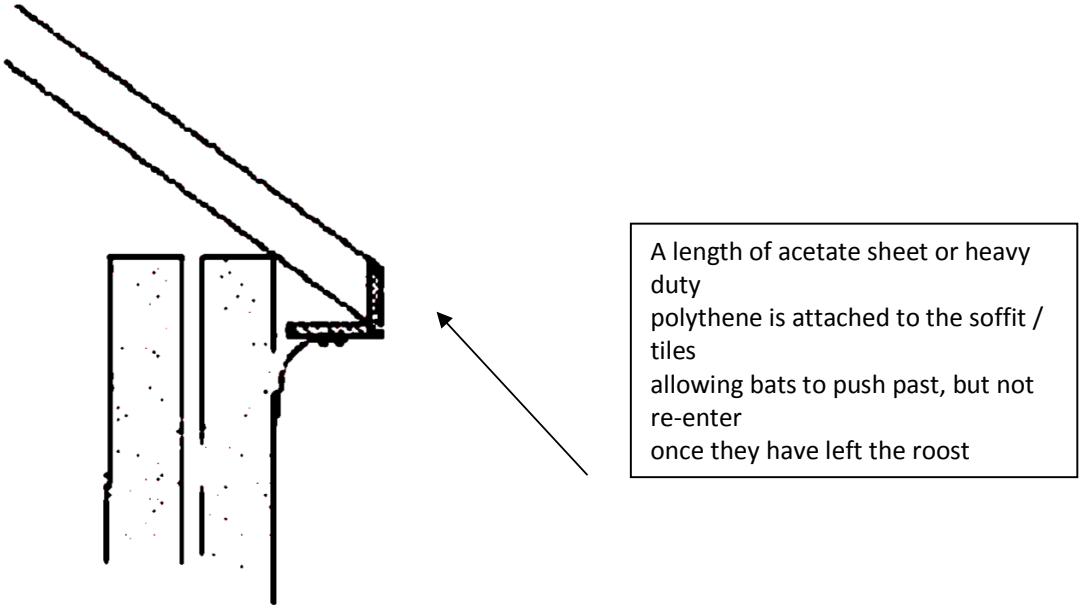
Surveys to ensure bats are absent from all areas of the roof space will be conducted immediately pre-works by suitably licensed bat ecologists. Consequently, all mortice joints and recesses will be carefully inspected for bats. If the area is deemed empty then all suitable roosting areas will be soft blocked with cotton wool. If bats are found to be in situ then exclusion devices will be fitted. Any bats captured will be placed in a suitable container and transported to pre erected bat boxes on the site.

Bats will be excluded from all gaps and other potentially suitable crevices of by the use of one way exclusion devices.

Exclusion techniques will involve those as outlined on pages 88-90 of the Bat workers Manual (2004) if appropriate (*Figure 1, below*), or using lengths of 32mm drainage pipe inserted into cavities at an angle thus allowing bats to escape, but not return.

Exclusion devices will remain in place for five consecutive nights of good weather for bats (>8 °C, no rain and no strong winds). Following this, and providing bats are not present, the features will be dismantled by hand. This will ensure no bats are present in the roost the time of redevelopment works.

Figure 3. *Exclusion method to be employed (Bat Mitigation Guidelines, 2004)*



The slates will be excluded as outlined above and dismantled by hand under the supervision of a licensed bat ecologist. If the slates can be removed by hand to destroy the roost, the gap at the wall top will be soft sealed (using cotton wool or similar) to prevent bats accessing the building.

If it is not possible to remove the soffits by hand, they will be sealed and filled with expanding foam to permanently exclude bats mid works and reinstated post works.

The integrity of the expanding foam will be inspected on a monthly basis to ensure bats cannot access the eaves area between the time of exclusion and the time of works.

Prior to renovation, the roof covering will be removed by hand under the supervision of a licensed bat ecologist. This will ensure no bats will be left between the roof covering and lining, at wall tops or under tiles.

The roof cover will be removed from the top down to ensure that if any bats are present, they will not be at risk of crush injuries.

Any other areas suitable for roosting bats will be inspected and dismantled with an ecologist present.

In order to minimise the disturbance to bats, exclusion, stripping and renovation works will be timed to outside the summer roosting season from October to April.

Works will avoid encountering torpid bats in roof structures, by only working during periods when temperatures have not dropped below 8°C over 4 consecutive days and nights.

Exclusion works are programmed to commence outside the main bat activity season and are anticipated to be completed within a month

A licensed bat ecologist will be present on site to supervise the installation of exclusion devices and all works involving roof stripping in the locations where bat were observed emerging and areas with features likely to be used by bats.

A suitably qualified bat ecologist will be on site to supervise the installation of bat access tiles and loft and ensure work is completed in line with this method statement.

2.2 Timings

Natural England requires that for maternity roosts that are likely to be occupied between April to September, work should be carried out between 1st October and the 1st May. Such timings avoid the sensitive breeding season.

The site exhibits limited features for use as a hibernation site. Natural England within the Bat Mitigation Guidelines 2004 states that *"Unless significant numbers of bats are known to be hibernating in a building, there is no advantage in requesting a deferment of scheduled works".* However care must be taken to ensure no bats are killed or injured. Such works will be carried out by a suitably qualified ecologist as per section 2.1.

2.3 Continuity

Pre works a total of 8 bat boxes will be erected around the site and mounted on mature trees in pairs. Bat boxes are to include:

- 3 x Improved Cavity Bat Box
- 2 x 2F General purpose Bat box- Double front panel
- 1 x 1FF Bat Box
- 2 x Improved Roost / Maternity box

Such boxes will be retained for the long term.

2.4 General recommendations for all bat species

Any new roof and construction timbers on the property should be pre-treated prior to arrival on site to minimise the need for application of preservatives at a later date. Pre treated timbers are unlikely to blister.

Should timbers require treatment during the life of the building a list of chemicals that are non toxic to bats is available from both the Bat Conservation Trust and Natural England. Advice from Natural England should be sought prior to any treatment of a roof that is used by bats.

No artificial lighting will be present in the vicinity of the enhanced roost sites and no disturbance to emerging bats is predicted.

3.0 POST DEVELOPMENT SITE SAFEGUARD

Habitat management and maintenance

Renovated building

The provisions proposed for bats within the building will be supervised by a suitably qualified bat ecologist ensuring they are positioned in areas providing optimum conditions for bats and avoiding both direct and indirect artificial light sources.

Roost provision and unimpeded access will be in situ pre 1st May within the given year of works in order to maximise use by returning bats and avoid measurable disturbance.

Mechanisms for ensuring delivery: A suitably qualified ecologist will be employed and undertake:

- Pre works surveys to ensure no bats are in situ pre works.
- Supervision of bat loft and access points to ensure like for like provision and environmental conditions are retained.
- Supervising ecologist to ensure provision is in situ by the 30th April of the given year of works.

Post works monitoring: The bat loft will be checked once annually for two years post installation. Records to be sent to the local records centre / bat group along with a licence return form to Natural England.

Site management and maintenance

Should, post development the properties go on general sale, the new owners of the property will be supplied with information informing them of mitigation measures at the property and the legal protection afforded to bats.

4.0 Habitat Regulations Derogation Tests

Test 1
Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.

The renovation route is the only option the applicant can pursue due to the layout and current condition of the existing building. The proposed plans are to renovate the building into residential units. The retention of the property without re development will continue to place a financial burden on the applicant with the continuous financial outlay and upkeep of a vacant property.

The roosts identified will be retained in their original locations and proportionate provision is proposed for the species affected.

Test 2
There is no satisfactory alternative

To adopt the "Do nothing" option would ultimately accelerate the cycle of decline of the building leading to sub optimal conditions for bats and ultimately lead to deterioration of the existing roost. Currently the building is vacant and areas of disrepair are recorded particularly within the roof. Should extreme weather conditions be experienced further decline of the roof is likely.

The building is likely to continue to place a financial burden on the owner if it remains empty and un- tenanted. Under current mitigation proposals the roost is to remain in situ and environmental and ecological functionality retained.

Test 3

***The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range*.**

The renovation will retain the existing roosts identified and only access for two species will be modified as a result of redevelopment works

The level of impact on the site is considered low as permanent roosting provision will remain in original locations and works will be conducted outside the bat activity season under EPS licence.

The impact is considered to be low in a wider context and is not thought to contribute in any way to the reduction in abundance or distribution of any bat species or roosting habitat in a regional or national context. Therefore the favourable conservation status of the species would not be detrimentally affected.

No changes to the foraging and commuting landscape for bats are predicted under current plans and it is not considered there will be any impacts for foraging bats. Activity surveys recorded favoured foraging grounds outside the site boundary.

The Common Pipistrelle bat is native, widespread and common, with an estimated UK population of 2.4 million individuals (Bat Conservation Trust 2010). Common Pipistrelle are an adaptable species of bat and the level of impact on the site is considered low, roosting provision will be retained for the species within the redevelopment.

The Brown long eared bat is considered widespread within the UK and whilst population estimates are considered poor and should be treated with caution, current UK estimates are a population of 245,000 with the England population thought to be in the region of 155,000 (Bat Conservation Trust 2010).

Appendix one: Location of the roost within the redeveloped property

Key	Bat access tiles	Roost location

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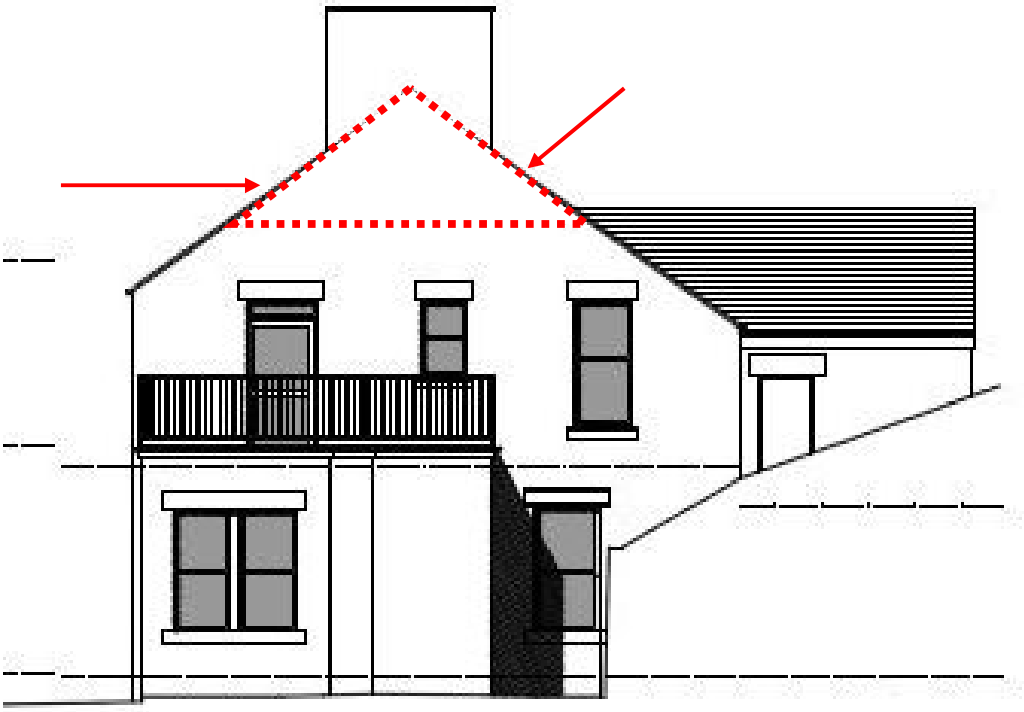
Appendix two: Cross section of bat loft and proposed new access



ROPOSED SIDE ELEVATION OF COACH HOUSE
CALE 1:100

Proposed dimensions: 2.8m high
5m wide
5m in length

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Appendix three: Roost location (hatched in red) and access points to the existing roost (green).

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Appendix four: Bat records received from Derbyshire Bat group

Results of a search for bat records in the area around Corbar Road, Buxton

Grid squares searched: SK 0472, 0473, 0474, 0475, 0572, 0573, 0574, 0575, 0672, 0673, 0674, 0675, 0772, 0773, 0774, 0775

Map Reference	Roost Code	Common name	Record	Date	Number Counted	Comments
SK050724		Bat	6631	12-Feb-13	1	NBMP Internal hibernation counts
SK050724		Bat	6641	15-Jan-13	1	NBMP Internal hibernation counts
SK050732		Bat	6476	04-Sep-12		Bats disturbed when soffit disturbed, possible roost but unconfirmed.
SK0772		Bat	4428	24-Jul-10	1	Several bats in flight and noises from inside fissure above old blast cave, western end of quarry on s rockface. Bats echolocating between 45 & 55 kHz.
SK0772		Bat	4431	05-Jul-10	1	22:20 to 22:50 Several observations of one bat, erratic flight at tree top height, "wet, slappy" clicks at 53 kHz, further clicks at 47 kHz, and rapid clicks at 50 kHz at 22:30. Also clicks inside building at 45 kHz (Old boiler house)
SK0772		Bat	4430	04-Jul-10	3	Three medium sized bats circling central roofspace of old boiler house building, they left and one small bat appeared. Echolocation at 50 kHz.
SK0772		Bat	4429	04-Jul-10	1	Two bats in flight and noises from inside fissure behind trees at extreme western end of quarry. Echolocating at 45-50 kHz.
SK055737		Bat	2599	07-Sep-06	1	Bat in living room, escaped.
SK0774	63	Bat	2321	03-Jul-02	107	
SK0673		Bat	2328	19-Mar-98	1	Bat with hole in wing, care, released later.
SK0572	40308650	Bat	4153	01-Jun-92	119	Date approx only, assumed 1992. 119 bat counted from roof.
SK0573		Bat	922	26-Oct-88	1	Bat seen flying in area of Old Station House.
SK0573		Bat	913	16-Jun-88	1	Bats in house
SK052738		Myotis bats	6472	24-Jul-13	2	Foraging and commuting (plus one unidentified species)
SK049725	321	Myotis bats	5731	19-Jan-10	1	NBMP Temp & humidity recorded
SK050724		Whiskered/Brandt's/Alcathoe	6632	12-Feb-13	2	NBMP Internal hibernation counts

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SK050724		Whiskered/Brandt's/Alcathoe	6632	12-Feb-13	2	NBMP Internal hibernation counts
SK049725	321	Whiskered/Brandt's	5727	16-Feb-09	1	NBMP Temp & humidity recorded
SK049725	321	Whiskered/Brandt's	5726	30-Jan-09	1	NBMP Temp & humidity recorded
SK049725	321	Whiskered/Brandt's	5725	14-Feb-07	2	NBMP Temp & humidity recorded
SK049726	321	Whiskered/Brandt's	3067	14-Dec-06	2	Hibernation roost. Whiskered/Brandt's.
SK050724		Natterer's bat	6630	12-Feb-13	4	NBMP Internal hibernation counts
SK050724		Natterer's bat	6640	15-Jan-13	2	NBMP Internal hibernation counts
SK049725	321	Natterer's bat	5724	07-Feb-12	4	NBMP Temp & humidity recorded
SK049725	321	Natterer's bat	5723	17-Jan-12	2	NBMP Temp & humidity recorded
SK049725	321	Natterer's bat	5722	08-Feb-11	2	NBMP Temp & humidity recorded
SK049725	321	Natterer's bat	5721	19-Jan-11	1	NBMP Temp & humidity recorded
SK049725	321	Natterer's bat	5720	18-Feb-10	5	NBMP Temp & humidity recorded
SK049725	321	Natterer's bat	5719	19-Jan-10	1	NBMP Temp & humidity recorded
SK049725	321	Natterer's bat	5718	16-Feb-09	2	NBMP Temp & humidity recorded
SK049725	321	Natterer's bat	5717	14-Feb-07	4	NBMP Temp & humidity recorded
SK049725	321	Natterer's bat	5716	12-Feb-07	4	NBMP Temp & humidity recorded
SK049726	321	Natterer's bat	3066	14-Dec-06	4	Hibernation roost.
SK049726	321	Natterer's bat	2424	09-Oct-06	1	1 on right hand side of entrance to Pooles Cavern, deep in crevice, small number in cave itself. Occasional Natterer's on woodland edge throughout
SK049726	321	Natterer's bat	3065	12-Feb-06	4	Hibernation roost, plus one unidentified bat.
SK049726		Noctule	2427	09-Sep-06	1	Single hawking up and down NE side of wood near Poole's Cavern.
SK058735		Pipistrelle bats	5477	12-May-08	1	VLA Data M Adult
SK0573	233	Pipistrelle bats	646	20-Aug-03	0	Bats getting into living area. Droppings presentbelow access point.
SK060723	18	Pipistrelle bats	317	07-Nov-00	0	Up to 10 bats in living area over 2 years none at time of visit.
SK060723	18	Pipistrelle bats	2323	17-Sep-98	0	Bats in living area, this and last autumn. V few old droppings in roof space.
SK053736	63	Pipistrelle bats	2332	13-Jul-93	100	Possibly bats present for 6yrs. Also present in property 2 doors away.
SK0774	309	Pipistrelle bats	2335	23-Jul-91	3	Bat in bedroom, 3 dead in attic. Evidence of bats in

SK044729	40308509	Pipistrelle bats	3216	18-Jun-90	40	
SK052738		Common pipistrelle (45)	6473	25-Jul-13	12	10 foraging and 2 commuting.
SK052738		Common pipistrelle (45)	6471	24-Jul-13	18	6 commuting bats and 12 foraging
SK052738		Common pipistrelle (45)	6470	18-Jul-13	19	10 commuting bats and 9 foraging bats
SK069742		Common pipistrelle (45)	6195	19-Jun-12	1	Ad M found dead on path
SK0573		Common pipistrelle (45)	2805	12-Apr-07	1	Injured bat found, into care, died later.
SK049726		Common pipistrelle (45)	2426	09-Sep-06	20	Up to 2 dozen coming from housing and feeding in woodland area near Poole's Cavern.
SK044729		Common pipistrelle (45)	2185	13-Feb-06	1	Injured bat, died later.
SK048736	94	Common pipistrelle (45)	476	21-Jun-99	5	Bats seen previous years but this is first time droppings noticed.
SK049726	321	Soprano pipistrelle (55)	2425	09-Sep-06	2	One in crevice, emerged joined by second feeding in cave entrance. Approx dozen coming from housing and feeding in woodland area
SK050724		Brown long-eared bat	6629	12-Feb-13	1	NBMP Internal hibernation counts
SK050724		Brown long-eared bat	6639	15-Jan-13	1	NBMP Internal hibernation counts
SK049725	321	Brown long-eared bat	5730	07-Feb-12	1	NBMP Temp & humidity recorded
SK049725	321	Brown long-eared bat	5729	08-Feb-11	2	NBMP Temp & humidity recorded
SK049725	321	Brown long-eared bat	5728	19-Jan-11	1	NBMP Temp & humidity recorded
SK040751	40308561	Brown long-eared bat	3740	01-Aug-07	0	No bats at visit, reasonably fresh droppings scattered under ridge beam. Baby bat found in bathroom 10yrs
SK053727	326	Brown long-eared bat	2485	29-Sep-05	0	No bats at visit. Droppings present.
SK0573		Brown long-eared bat	1742	21-Sep-04	1	Juvenile found during building work, care, released later.

Appendix five: Bat field signs recorded at the property

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Appendix six: Roost location with field signs highlighted

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