



BAT SURVEY REPORT
Catcleugh Farm, Northumberland

Martin Broadhead

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Quality Control

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1.0 EXECUTIVE SUMMARY

- 1.0.1 Total Ecology Ltd. was commissioned by Mr Martin Broadhead in June 2020 to undertake a building risk assessment for bats at Catcleugh Farm, Byrness NE19 1TX. The approximate National Grid Reference for the centre of the site is **NT 74674 03372**.
- 1.0.2 The building risk assessment survey was conducted by was conducted by Total Ecology on the 22nd June 2020 and was undertaken by Jodi Bell (2020-45054-CLS-CLS) and Fay Taylor. The survey is required prior to renovation and improvement works to the property which include converting the building into a holiday let dwelling.
- 1.0.3 Following the risk assessment, the property was deemed as having high potential to contain roosting bats due to the presence of a live bat roosting within a wall crevice and a small number of bat dropping found internally, at the time of the assessment. Therefore, three nocturnal surveys were carried out on the property: undertaken on 30th June 2020, 27th July 2020 and 25th August 2020.
- 1.0.4 In summary, 79 bat passes were recorded over three surveys covering the building. Activity was similar during most surveys, with a minimum of 18 bat passes recorded, and a maximum of 31. Species recorded are predominantly common pipistrelle and soprano pipistrelle, with regular *Myotis* species, Daubenton's bat, Whiskered bat and Natterer's bat, with very occasional noctule and brown long-eared bat passes. All species were recorded commuting around site with occasional feeding close to the building during surveys. Over the course of the surveys, a total of 3 roosts were identified: 2 within the building of interest and one in an adjacent building; one common pipistrelle bat was recorded re-entering a mortar gap in the stonework of the south facing corner of the building, close to a corner quoin stone, during the dawn survey of 25th August 2020 (Photograph 10, Appendix B), the same location as the bat viewed during the initial site risk assessment. 2 common pipistrelles were seen to emerge from under tiles on the northern end of the ridge during the dusk survey carried out on 27th July (Photograph 9, Appendix B), a single common pipistrelle was recorded as returning to roost in the same location on the August 25th dawn survey. During the dawn survey on the 25th August a single common pipistrelle was seen to enter a crevice in the mortar in the wall of an adjacent building close to a doorway quoin stone, approximately 1.2m from ground level (Photograph 11, Appendix B).

- 1.0.5 The development proposal will result in the loss of all roost identified on site (2 small occasionally used summer roosts). The Bat Mitigation Guidelines (Natural England, 2004) suggests that the loss of such roost sites is likely to result in a low impact on the local population of the species.
- 1.0.6 Loss of a roost of any size requires a European Protected Species licence, which must be obtained prior to the work being carried out on the building. Furthermore, with appropriate compensation and mitigation implemented through this European Protected Species Licence, loss of the roost is unlikely to have a significant effect on the conservation status of the species.
- 1.0.7 The property on site is due to have a number of improvement and conversion works completed. It is therefore recommended that 2 temporary boxes such as 2F Schwegler Bat Boxes be added to trees within the gardens of the property on suitable trees (oak, ash or beech) prior to works commencing. If no suitable trees are present within gardens, then boxes should be fitted to trees within woodland surrounding site. These bat boxes will provide suitable roosting opportunities for bats while the works take place.
- 1.0.8 Upon completion of the works, the following mitigation and enhancement measures are proposed; 1x slate bat access tiles are to be installed in both the northern and southern end of the building roof, facing the south-west aspect of the building, .Additionally a suitable mortar gap (allows access to the wall cavity) should be maintained on the southern gable end of the building, if no suitable crevice is available a wall mounted bat box should be positioned instead. This mitigation is considered to provide adequate enhancement in terms of potential bat usage of the site.
- 1.0.9 **Use of breathable membrane must be avoided during re-roofing and any future works.**
- 1.0.10 In accordance with The Bat Mitigation Guidelines there are no timing constraints associated with an occasionally used roost and as such the works will be scheduled to commence following granting of the EPSM Licence.
- 1.0.11 **See section 6 for full recommendations**

2.0 INTRODUCTION

2.1 Background

2.1.1 Total Ecology Ltd. was commissioned by Martin Broadhead in June 2020 to undertake a building risk assessment for bats at Catcleugh Farm, Byrness, NE19 1TX. The approximate National Grid Reference for the centre of the site is **NT 74674 03372**.

2.1.2 The building risk assessment survey was conducted by Total Ecology on the 22nd June 2020 and was undertaken by Jodi Bell (2020-45054-CLS-CLS) and Fay Taylor. The survey is required prior to renovation and improvement works to the property which include converting the building into a holiday let dwelling.

2.2 Site Description

2.2.1 The properties are located within Catcleugh Farm, approximately 1.8 km North-West of the village of Byrness, beside the A68. The site itself are outbuildings associated with the farm and was previously used as a tack room/storage. The building is detached and is situated near the detached farmhouse and beside the old farm stead which is derelict. The site is surrounded by trees, also with woodland 338m North-West, 400m North-East and 200m East of the site. The closest water source is Catcleugh Reservoir which is approximately 30m from site. Within the wider area are other sections of woodland, arable fields and moorland (Figures 1 & 2, Appendix A).

2.3 Survey Objectives

2.3.1 Surveys were undertaken to:

- establish the presence / absence of bat roosts in the building
- assess the level of usage of confirmed roost sites and the status of the roosts,
- identify access points utilised by bats,
- determine an appropriate mitigation strategy to minimise impacts on roosting bats arising from the proposed works.

3.0 METHODOLOGY

3.1 Desk Study

A request was issued to Northumberland Bat Group for any information regarding protected/controlled species on, or in the direct vicinity of the site. The Magic website was searched for the details of Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR) within 2km of the site.

3.2 Survey Approach

3.2.1 The survey for bats involved external and internal examination of the properties following the methodology outlined in the Bat Worker's Manual (Mitchell-Jones and Mcleish 2004). The survey was undertaken by Jodi Bell (**2020-45054-CLS-CLS**) and Fay Taylor on the 22nd June 2020.

1.0.12 August 2020, Following the risk assessment, the property was deemed as having high potential to contain roosting bats. Therefore, three nocturnal surveys were carried out on the property: undertaken on 30th June 2020, 27th July 2020 and 25th August 2020, which is within the active period for bats (BCT, 2016) and therefore within the appropriate survey period to confirm the presence of likely absence of a bat roost.

3.3 Buildings

3.3.1 The buildings' exteriors were visually assessed for potential access points and evidence of bat activity in June 2020. Features which have potential as access points were sought, such as small gaps in barge/soffit/fascia boards, raised or missing ridge tiles or flashing and gaps in mortar, brick and/or stonework. Evidence that potential access points were actively used by bats including staining within gaps and bat droppings or urine staining under gaps was recorded. Indicators that potential access points were likely to be inactive included the presence of cobwebs and general detritus within the access.

3.3.2 The interior of the buildings was also visually assessed where possible for evidence of bat activity and/or for the potential to be used by bats. Evidence of a roost was determined as the presence of a dead or live bat, concentrated piles or scattered droppings, food remains such as insect wing fragments as well as scratch marks and/or staining.

3.3.3 Suitable gaps and crevices, both internally and externally, were also further inspected with an endoscope.

3.4 Nocturnal Surveys

3.4.1 The nocturnal surveys were conducted by surveyors equipped with Batbox duet, EM3 or EM Touch bat detectors, positioned to give a clear view of all sides of the buildings being surveyed. The dusk emergence survey commenced 15 minutes before sunset and continued until all bats were considered to have emerged in accordance with the Bat Conservation Trust Guidelines (BCT, 2016). The dawn survey commenced 90 minutes before sunrise and continued until 15 minutes after sunrise (BCT, 2016).

3.4.2 **Table 1** Survey dates and personnel

Date	Surveyor 1	Licence No	Additional Surveyors
30/06/2020	Glen Brewis		Rachel Collier
Start: 21:37 Sunset: 21:52 Finish: 23:22			
Temp: S/ 12°C E/ 11°C			
Wind: Light air Rain: None			
27/07/2020	Fay Taylor		Rachel Galler
Start: 21:05 Sunset: 21:20 Finish: 22.50			
Temp: S/13°C E/ 12°C			
Wind: Light breeze Rain: None			
25/08/2020	Jodi Bell	2020-45054-CLS-CLS	Jeanette Bryden
Start: 04.32 Sunrise: 06.02 Finish: 06.17			
Temp: S/ 12°C E/ 12°C			
Wind: Still Rain: Very light intermittent drizzle 05.00- 05.28			

3.5 Surveyor Experience

3.5.1 Jodi Bell (Licence No 2020-45054-CLS-CLS)

Jodi has a BSc in Environmental Science and MSc in Environmental Consultancy along with over 10 years of bat surveying experience. Wide ranging and in-depth knowledge of bat behaviour and legislation and extensive practical experience in the use of various bat detectors, static detection equipment, infra-red camera surveillance/recording, radio tracking, harp trapping, handling and leading surveys with up to 20 surveyors of various abilities. She has experience of analysis and interpretation of data and searching for evidence of presence of bats within built structures and trees. She is a member of both Durham and Northumberland bat groups and is also a registered bat carer for both groups.

3.5.2 Fay Taylor

Fay began working with bats in 2016 while working in Mauritius, where she carried out research on a lesser known free-tailed species and assisted working with Mauritian fruit bats. She has also worked in Malawi, carrying out bat conservation and research. Her experience abroad involved handling, trapping (using mist nets and harp traps) and emergence surveys, as well as roost inspections. This will be her second season working with bats in the UK. She has completed multiple dawn and dusk surveys at a range of property types, such as residential housing and castles, and on both single- and multi-building sites.

3.5.3 Jeanette Bryden

Jeanette has vast experience of volunteering as part of a team, to help, observe, record and monitor bats throughout the UK, with surveys completed using various bat detection equipment as well as recording bat sounds with MP3 player. She has a wide range and in-depth knowledge of bat behaviour as well as extensive practical experience doing both vantage and transect surveys. She is a member of the Durham and Northumberland bat carer and handling groups.

3.5.4 Glen Brewis

Glen has been a seasonal surveyor since 2010 for various consultancies. Within bat ecology this has included static and transect surveys (both dawn and dusk) and assisting with bat risk assessments. This work has been at a variety of sites including schools, housing estates and rural developments. Outside of the working environment, Glen has undertaken training to help with rearing bats with Durham bat group in addition to assisting with the rearing of injured bats and on hibernation visits in adits as part of being a volunteer with the Northumberland bat group.

3.5.5 Rachel Collier

Rachel is currently in her first season in Ecology. She has received in house training on bat species and calls.

3.5.6 Rachel Galler

Rachel has received intensive in-house training both in 2018 and 2019. She has conducted nocturnal bat surveys across a number of different sites from houses to farm buildings and historic properties over the past two years.

4.0 SURVEY RESULTS

4.1 Desk Study and Consultation Response

4.1.1 The results obtained from the MAGIC search revealed that there is one Site of Special Scientific Interest (SSSI) – Kielderhead and Emblehope Moors (1.7km south), one National Nature Reserve (NNR) – Kielderhead (1.7km south) and one Special Area of Conservation (SAC) – Bordermires, Kielder-Butterburn (1.7km south). There are no Local Nature Reserves (LNRs) within 2km of the site. Additionally, the site also falls just within the Northumberland National Park boundary, which lies 20m to the south of the site.

4.1.2 A request was sent to Northumberland Bat Group seeking any information regarding bat species on, or within 2km, of the site. The consultation returned 21 records of bats within 2km including records of common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, noctule *Nyctalus noctula*, Natterer's bat *Myotis nattereri*, Whiskered/ Brandt's bat *Myotis mystacinus/ brandtii*, Daubenton's *Myotis daubentonii* and brown long-eared bat *Plecotus auritus*. Records are also present for unknown species of pipistrelle, and unknown bats. Records exist from 1993 – 2015. Of the 21 records, 20 records are present for bats roosting within 2km of site, also from 1993 – 2015. Species recorded roosting are common pipistrelle, soprano pipistrelle, noctule, whiskered bat, Brandt's bat, Daubenton's bat, Natterer's bat and brown long-eared bat. Two records exist for maternity roosts, both of which are pipistrelle species from 2013. The closest record returned is a roost located within Catcleugh Farm for a brown long-eared bat roost. In addition to the bat group records, previous surveys carried out by Total Ecology in 2013 highlighted 4 common pipistrelle roosts within the adjacent farm buildings and one within the building of interest.

4.2 Habitat Description

4.2.1 The site is situated on the north-east corner of the Catcleugh reservoir, approximately 1.7km north-west of Byrness, and 2.6km south of the Scottish border. The building of interest consists of a single-storey stone building that was previously used a tack room. The property is detached and adjacent to the farmhouse and other derelict farm buildings. The A68 runs parallel to the property to the south, directly beyond this lies Catcleugh reservoir. The site is immediately bounded on all the other sides by woodland and rough grazing land. Beyond the immediate vicinity of the site lies a mixture of forests, predominantly conifer plantation, and grassland fields. Woodland can be found 338m North-West, 400m North-East and 200m East of the site. The site also sits just within the

Northumberland National Park, with the boundary 20m to the south, with habitats such as upland heath, blanket bog and hay meadows present. The River Rede runs from the Catcleugh reservoir through Redesdale forest approximately 830m south-east. Significant areas of woodland/ plantations around the site forms good wildlife corridors, suitable for bats to commute and forage along, leading to habitats further afield (Figure 1 & 2, Appendix A).

4.3 Internal/ External Surveys

4.3.1 Full details of the findings of the building assessments can be found in Table 3 overleaf with photographs in Appendix B and building reference plan shown in Figure 3, Appendix A. In summary, a live bat and droppings were found within the building.

4.3.2 The property was assessed as having high potential to contain roosting bats, under current guidelines (BCT, 2016) due to the number of possible roosting features in the structures, good commuting and foraging habitat around the property, and presence of a live bat and droppings located within the building and the close proximity of other recorded bat roost.

4.3.3 The property is a single-storey stone building with a pitched slate tile roof. The building is detached, adjacent to the farmhouse and other derelict agricultural buildings. Wooden and glass panels cover the front elevation between sandstone uprights. Stone skewers are present on the gable ends as well as felt beneath the slate tiles that overlaps the external joists. A number of small gaps were recorded throughout the property in the stonework, some of which go through into the internal part of the building. Gaps were also present under ridge tiles, under the slate edge, between timbers and underneath slipped and missing tiles. A live bat was found in a gap in the stonework on the western elevation and a single bat dropping was located internally. Table 2 below shows the features considered when attributing a level of potential to a building. Full details of the findings of the assessment are given in Table 3.

4.3.4 **Table 2** Guidelines for assessing the potential suitability of proposed development sites for bats. (BCT 2016).

* For example, temperature, humidity, height above ground, light levels, levels of disturbance

Suitability	Description Roosting Habitats	Commuting and Foraging Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.

Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions* and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRF's but with none seen from the ground or features seen only with very limited roosting potential.</p>	<p>Habitat that could be used by small numbers of commuting bat such as a gappy hedgerow or vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in parkland situation) or a patch of scrub.</p>
Moderate	<p>A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions* and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – irrespective of species conservation status).</p>	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
High	<p>A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions* and surrounding habitat.</p>	<p>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees, and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broad-leaved woodland, treelines watercourses, and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>

4.3.4 **Table 3** Building Structural Features.

Building Code (Figure 3, Appendix A; Photographs 1 – 18, Appendix B)	Building construction details	Structural features present						Other structural features of note	Potential bat access and roosting points	Internal features	Evidence
		Gables	Barge boards	Soffit Boards	Fascia Boards	Flashing	Roof void				
Building A Photographs Appendix B	<p>A single-storey, stone outbuilding with a pitched, slate tile roof. Ridge tiles and stone skew are present. Felt is present beneath the slate tiles and overlaps at the edge of the roof over the wooden joists. Metal guttering is also present.</p> <p>The front elevation consists of wooden and glass panels set between sandstone uprights.</p>	✓	x	x	x	x	x	<p>Rubble-filled walls.</p>	<p>Gaps under ridge tiles, slate edge, between timbers. Numerous gaps in stonework on western elevation - holes go all the way into the internal section of the building.</p> <p>Misaligned stone brickwork, in particular quoin stones on the eastern elevation.</p> <p>Missing and misaligned roof tiles.</p>	<p>The space is open up to the roof. Felt is beneath the slate tiles, with rockwool insulation and plasterboard, which has fallen in parts, exposing the felt section of the roof.</p> <p>A timber wall with a void behind is present in the north-eastern corner of the building.</p> <p>House martin and swift nests are present, with signs of damp. It appeared to have been recently swept.</p>	<p>A single live pipistrelle bat found in a gap in the stonework on the western elevation, approximately 60cm from the ground.</p> <p>A single bat dropping was located internally.</p> <p>Dead Natterer's bat was found approximately 38m from the building.</p>

4.4 Nocturnal Surveys

4.4.1 Three nocturnal surveys were carried out on the property: undertaken on 30th June, 2020, 27th July 2020 and 25th August 2020. The dates and surveyor details relating to the nocturnal surveys undertaken are given in Table 1. Weather conditions during the June and July surveys were optimal with no/ light rain and appropriate ambient air temperatures and timings. During the August survey there was a period very light intermittent drizzle, however bats were still recorded throughout the survey, and therefore is not considered a constraint.

4.4.2 In summary, 79 bat passes were recorded over three surveys covering the building. Activity was similar during most surveys, with a minimum of 18 bat passes recorded, and a maximum of 31. Species recorded are predominantly common pipistrelle and soprano pipistrelle, with regular *Myotis* species, Daubenton's bat, Whiskered bat and Natterer's bat, with very occasional noctule and brown long-eared bat passes. All species were recorded commuting around site with occasional feeding close to the building during surveys. Over the course of the surveys a total of 3 roosts were identified: 2 within the building of interest and one in an adjacent building; one common pipistrelle bat was recorded re-entering a mortar gap in the stonework of the south facing corner of the building during the dawn survey of 25th August 2020 (Photograph 10, Appendix B), the same location as the bat viewed during the initial site risk assessment. 2 common pipistrelles were seen to emerge from under tiles on the northern end of the ridge during the dusk survey carried out on 27th July (Photograph 9, Appendix B), a single common pipistrelle was recorded as returning to roost in the same location on the August 25th dawn survey. During the dawn survey on the 25th August a single common pipistrelle was seen to enter a crevice in the mortar in the wall of an adjacent building close to a doorway quoin stone, approximately 1m from the ground (Photograph 11, Appendix B).

4.4.3 *30th June 2020, Dusk Emergence Survey:* Thirty-one bat passes were recorded during the survey with almost all activity being attributed to common and soprano pipistrelles. A number of *Myotis* species were also recorded, along with two commuting Noctule bats. Bats were recorded commuting across the site, with foraging activity noted close around the building and along the woodland edge, throughout the survey. **No roost were noted during the survey.**

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- 4.4.4 *27th July 2020, Dusk Emergence Survey:* Eighteen bat passes were recorded during the survey. Activity during this survey was dominated by *Myotis* species, with occasional common and soprano pipistrelle passes. Commuting and feeding were recorded commonly across site, around and close by the building. Two unknown bats (bats did not echolocate) were recorded as emerging from under raised roof tiles close to the ridge at the northern end of the building (Photograph 9, Appendix B),
- 4.4.5 *11th July 2019, Dawn Re-entry Survey:* Activity during this survey was again similar as to survey 1, with 30 bat passes recorded. Numerous species were identified during the survey: common pipistrelle, soprano pipistrelle, Natterers, Daubenton's bat and Whiskered bat and unidentified myotis species. A total of three roosts were identified during this survey; two on the building of concern and one within the wall of an adjacent building, all three roosts were common pipistrelles. One common pipistrelle bat was recorded re-entering a mortar gap in the stonework of the south facing corner of the building (Photograph 10, Appendix B), the same location as the bat viewed during the initial site risk assessment, and a single common pipistrelle was seen to re-enter under tiles on the northern end of the ridge, similar location as the emergence recorded during the dusk survey carried out on 27th July (Photograph 9, Appendix B). A single common pipistrelle was seen to enter a crevice in the mortar in the wall of the adjacent stone storage building (Photograph 11, Appendix B).

5.0 ASSESSMENT

5.1 Constraints to Survey

5.1.1 The bat risk assessment was conducted in May when bat species are active. Bat species utilise a number of roosts throughout the year and a lack of evidence should not therefore be considered proof of a lack of bat roost, as roosts remain protected throughout the year, including periods during which they are not occupied.

5.1.2 Weather conditions during the June and July surveys were optimal with no rain and appropriate ambient air temperatures and timings, however during the August survey there was a 15 minute period at the start of the survey of very light intermittent drizzle, however bats were still recorded throughout the survey, and therefore is not considered a constraint.

5.2 Potential Impacts of Development

5.2.1 *Short-term impacts: disturbance*

Without appropriate mitigation and method statement, potential impacts on the roost sites at Catcleugh Farm during the works will be from;

- The potential killing / injuring of individual bats during the works

Given the small size and status of the roosts in the building, and the availability of similar roost sites in the immediate surrounding area for bats to utilise, it is considered that the impact arising from the disturbance of these roost sites is likely to be low (Bat Mitigation Guidelines, Natural England, 2004). Common pipistrelle bats are known to occupy several roost sites, sometimes moving between roosts in a single season (Altringham, 2003).

5.2.2 *Long-term impacts: roost modification*

The proposed improvement works will result in the loss of all roosts, therefore the impacts arising from roost modification are not considered to be applicable.

5.2.3 *Long-term impacts: roost loss*

The plans for the proposed works are to include structural realignment of stonework, repair, and repointing of the brickwork to the main building a repairs and repointing of the roof and internal layout alterations and the construction of a new extension. Without appropriate mitigation, the proposed works will result in the loss of 2 small occasionally used day roosts for a small number of non-breeding females and/ or male common pipistrelles. Overall, impacts from the loss of these

roosts are considered to be low, as day roosts of common species have low conservation value and as such the scale of impact is low. This is reflected in the mitigation and compensation required as part of the European Protected Species Licence (EPSL) submission.

5.2.4 *Long-term impacts: fragmentation and isolation*

The site is surrounded by trees and woodland, with a number of watercourses within the area. These provide excellent foraging and commuting habitat for bats. There are no planned works to the surrounding landscape and therefore the surrounding habitats and connectivity will remain intact. There will therefore be no impact from fragmentation and isolation if mitigation measures are not undertaken.

5.3 Legislation

5.3.1 All bat species and their roosts in Britain are protected under the Wildlife and Countryside Act 1981 (as amended) (WCA) through their inclusion on Schedule 5. The implementation of the Countryside and Rights of Way Act 2000 (CRoW 2000) has amended the WCA 1981 to include 'reckless' damage to, or destruction of a roost, and disturbance of bats whilst in a roost.

5.3.2 Bats are also included on Annex IV of Council Directive 92/43/EEC of 21st May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive). As a result of the United Kingdom ratifying this directive, all British bats are protected under The Conservation of Habitats and Species Regulations 2017. Combined, these make it an offence to kill, injure, capture or disturb bats or obstruct access to, damage or destroy roosts.

5.3.3 Paragraph 43 of the Regulations states: A person who deliberately disturbs wild animals of any such (European Protected) species, is guilty of an offence. For the purposes of this paragraph, the disturbance of animals includes in particular any disturbance which is likely: -

- a. to impair their ability-
 - i. To survive, to breed or reproduce, or to rear or nurture their young, or
 - ii. In the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- b. to affect significantly the local distribution or abundance of the species to which they belong.

5.3.4 Under the law, a bat roost is any structure or place used for shelter or protection e.g. a building, bridge or tree. Bats use many roost sites and feeding areas throughout the year and they tend to re-use the same roosts for generations.

5.3.5 All British birds, their nest and eggs are protected in law under Part 1 of the Wildlife and Countryside Act 1981 (WCA 1981) (as amended). It is an offence (with exception to species listed in Schedule 2) to deliberately take, kill or injure any wild bird or to take, damage, or destroy any nest or egg of any wild bird. As a Schedule 1 listed bird, building owls receive further protection (WCA 1981). It is an offence to disturb a building owl, unless under licence, 'while it is building a nest or is in, on or near a nest that is containing eggs or young' or to 'disturb dependent young of such a bird'.

5.4 National Planning Policy Framework

5.4.1 The NPPF outlines government planning policies and how they should be applied within local authorities. The framework places an emphasis on sustainable development, encouraging the re-use of land that has previously been developed over using land that has a higher environmental value and by minimising impacts on biodiversity. The NPPF states that developments should aim to conserve or enhance biodiversity and encourages opportunities to incorporate biodiversity in and around developments.

5.5 UK and Local Biodiversity Action Plans (BAP)

5.5.1 Noctule, soprano pipistrelle and brown long-eared bats are listed as UK priority species (UKBAP, 2007). Actions for conservation effort have been identified for each of these species, which includes consideration of the effects of land use, the promotion of habitat creation, enhancement and improvement and the protection of roosts via the implementation of legislation and policy.

5.5.2 Several species of bat relevant to Northumberland are listed as Species of Principal Importance under Section 41 of the NERC Act (2006) including noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, and brown long-eared *Plecotus auritus*.

5.6 Natural Environment and Rural Communities (NERC) Act

5.6.1 The Natural Environment and Rural Communities (NERC) Act (2006) identifies a list of habitats and species which are of principal importance for the conservation of biodiversity in England. Section 41 (S41) of the Act 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 NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. The UKBAP species list was used to create the S41 list of priority species.

5.7 Legal Implications of Proposed Development

- 5.7.1 The results of the nocturnal surveys indicate the presence of two small, occasionally used bat day roosts for, common pipistrelles, within the main building structure, one within the roof of the building and one within the stonework of the western wall.. All roost sites are protected by law and thus the proposed works would result in an offence being committed under The Conservation of Habitats and Species Regulations 2017 unless a European Protected Species Licence is obtained.
- 5.7.2 All British birds, their nests and eggs are protected in law under Part 1 of the Wildlife and Countryside Act 1981 (WCA 1981) (as amended). Therefore, the proposed works would result in an offence being committed under the Wildlife and Countryside Act 1981 (WCA 1981) (as amended), if nests were destroyed while in use.

6.0 RECOMMENDATIONS AND MITIGATION

6.1 Survey Conclusions

6.1.1 Based upon the building features recorded during the external and internal assessment, and the presence of a live bat and bat droppings, the building was assessed as having high potential to contain roosting bats. The nocturnal survey requirement is determined through reference to the recommended bat survey guidance (BCT, 2016) and based upon the assessed potential of the surveyed buildings to contain roosting bats. Therefore, three nocturnal surveys were recommended, and carried out in June, July and August 2020.

6.1.2 In summary, 79 bat passes were recorded over three surveys covering the building. Activity was similar during most surveys, with a minimum of 18 bat passes recorded, and a maximum of 31. Species recorded are predominantly common pipistrelle and soprano pipistrelle, with regular *Myotis* species, Daubenton's bat, Whiskered bat and Natterer's bat, with very occasional noctule and brown long-eared bat passes. All species were recorded commuting around site with occasional feeding close to the building during surveys. Over the course of the surveys a total of 3 roosts were identified: 2 within the building of interest and one in an adjacent building; one common pipistrelle bat was recorded re-entering a mortar gap in the stonework of the south facing corner of the building, close to a corner quoin stone, during the dawn survey of 25th August 2020 (Photograph 10, Appendix B), the same location as the bat viewed during the initial site risk assessment. 2 common pipistrelles were seen to emerge from under tiles on the northern end of the ridge during the dusk survey carried out on 27th July (Photograph 9, Appendix B), a single common pipistrelle was recorded as returning to roost in the same location on the August 25th dawn survey. During the dawn survey on the 25th August a single common pipistrelle was seen to enter a crevice in the mortar in the wall of an adjacent building close to a doorway quoin stone, approximately 1.2m from ground level (Photograph 11, Appendix B).

6.1.3 Bat survey data indicates the presence of three small, occasionally used common pipistrelle bat roosts, two within the building of interest and an addition roost within an adjacent building. Non-breeding female and male pipistrelle bats are known to utilise a number of such roosting sites throughout the year. As such these roost sites are likely to be part of a larger network of roosting locations. From the results of the survey it is considered that the roost sites are occupied by male and/or non-breeding female bats and not used for breeding purposes with no more than five individuals likely to be present at any one time. It is considered that the level of

survey effort is sufficient to enable an assessment of the bat roost size and status and a proportionate mitigation strategy to minimise any potential impacts of development proposals.

- 6.1.4 The building on site is due to be renovated and converted to a holiday let property. The proposals will potentially result in the loss of two common pipistrelle day roosts. These roosts are likely to comprise small numbers of male and/or non-breeding female bats. The Bat Mitigation Guidelines (Natural England, 2004) suggest that the loss of roost sites comprising individual or small numbers of common bat species is likely to result in a low impact on the local population of the species. As such, loss of these roosts is unlikely to have a detrimental impact on the maintenance of the species at a favourable conservation status. It is considered to result in a low impact on population viability in the long term as the affected individuals are likely to have alternate roost sites in the immediate locality. **However, a European Protected Species Licence will be required prior to any work being carried out on the buildings.**
- 6.1.5 Development proposals include; realignment of wall stonework, repointing of the existing stone walls, insertion of new floors, ceilings, windows and doors repointing and repairs of the slate roofs, as well as the addition of a small extension to the northern end of the building, The proposed plan will result in the loss of the two roosts. Given that the roosts have been determined to be occasionally used by no more than five individual common pipistrelle bats at any one time, impacts from the loss of the roosts through the proposed works is considered to be low. Furthermore, with appropriate compensation and mitigation implemented through a European Protected Species Licence, loss of the roosts is unlikely to have a significant effect on the conservation status of the species.
- 6.1.6 The following mitigation strategy has been designed to offset any impacts arising from the loss of two occasionally used bat roosts and is in accordance with Natural England's Bat Mitigation Guidelines. Mitigation and compensation will be provided to maintain the population of bats affected at a favourable conservation status on completion of works with an overall net increase in available roost sites thereby also complying with current planning policy.
- 6.1.7 Should work be required in the future on the small adjacent stone storage shed, care should be taken to ensure that the crevice utilised by bats (Photograph 11, Appendix B) remains unaltered and intact otherwise further surveys and a licence will be required. If maintenance works such as repointing is to be undertaken, the

mortar gap that bats are roosting in care should be taken not to repoint the known access holes. This can be achieved through the temporary insertion of a plasterer's lath, or similar, of up to 20mm and its removal once pointing is complete but before the mortar is set.

6.2 Mitigation and Enhancement Measures

- 6.2.1 The following mitigation strategy has been designed to offset any impacts arising from the loss/ modification of an occasionally used bat roost and is in accordance with Natural England's Bat Mitigation Guidelines. Mitigation and compensation will be provided to maintain the population of bats affected at a favourable conservation status on completion of works with an overall net increase in available roost sites thereby also complying with current planning policy.
- 6.2.2 Replacement bat roosting habitat will be provided prior to the start of any works on site to provide roosting habitat during and after the construction phase. The proposed bat box scheme detailed below will provide roosting habitat greatly in excess of the size of the roosting habitat lost.
- 6.2.3 It is therefore recommended that 2 temporary boxes be added to trees within the boundary of the site, on suitable trees (oak, ash or beech) prior to start of works. If no suitable trees are present within the site, then boxes should be fitted to trees within woodland surrounding site. Suitable bat boxes include 2F Schwegler Bat Boxes. For maximum potential, a box should be at least 4 – 5m off the ground, where bats are known to feed (along tree lines), sheltered from strong winds and exposed to the sun for part of the day (usually south/ south-west elevations). These bat boxes will provide suitable roosting opportunities for bats while the works take place. Suitable bat boxes can be bought from a number of retailers and further advice, if necessary, can be provided by Total Ecology Ltd. on construction details and siting arrangements.
- 6.2.4 Upon completion of the works, the following mitigation and enhancement measures are proposed; 1x slate bat access tiles, such as Habibat bat access slates, are to be installed in both the northern and southern end of the building roof, facing the south-west aspect of the building. Additionally a suitable mortar gap (allows access to the wall cavity) should be maintained on the southern gable end of the building, if no suitable crevice is available a wall mounted crevice bat box, such as the Beaumaris Woodstone Bat Box (midi) should be positioned instead (Figure 7, Appendix A). This mitigation is considered to provide adequate enhancement in terms of potential bat usage of the site.

-
- 6.2.5 **Use of breathable membrane must be avoided during re-roofing and any future works.**
- 6.2.6 In accordance with The Bat Mitigation Guidelines there are no timing constraints associated with an occasionally used roost and as such the works will be scheduled to commence following granting of the EPSM Licence.
- 6.2.7 Short term mitigation measures will be employed during the works to ensure bats are not harmed during works. Immediately prior to the start of these works an inspection of the known roosting sites will be undertaken, facilitated through the use of a mobile elevation work platform (MEWP), ladder or scaffold to ascertain whether any bats are currently roosting within the building. Should it not be possible to conclusively determine the absence of bats using this method a dawn survey will be undertaken if weather conditions are suitable (ambient nocturnal air temperatures over 8°C, little/no wind/rain). If less than five individual bats are recorded a controlled destructive search of all features considered suitable for use by roosting bats (e.g. roof tiles, stonework, ridge tiles) will be undertaken under the supervision of a licensed bat ecologist. Any bats discovered will be caught and moved to replacement roosting habitat (bat boxes) by the bat ecologist. In the unlikely event more than five individual bats are recorded, the survey will be repeated until such time as there are five or less individuals present. On completion of the destructive search, the remaining works will proceed without the need for further surveys or supervision.
- 6.2.8 New Structures
- Any water tanks in the loft voids should be covered to stop any bats falling in and drowning.
 - Timber treatments that are toxic to mammals will be avoided and any treatments will be carried out in the spring or autumn. Any proposed chemical treatments should be checked prior to administration.
- 6.2.9 In the event that additional evidence of roosting bats were to be discovered at any stage of works, operations would cease in that area immediately and further advice sought from Total Ecology Ltd. (info@totalecology.com / (01434) 622285) and an amendment to the licence sought where required.
- 6.2.10 No foraging or commuting habitat will be lost during the proposed works and consequently no habitat mitigation/ enhancements are proposed.

6.3 Mitigation Licence

- 6.3.1 Bat survey data indicates the presence of two small, occasionally used bat summer roosts for common pipistrelles. All roost sites are protected by law and thus the proposed works would result in an offence being committed under The Conservation of Habitats and Species Regulations 2017 unless a European Protected Species Licence is obtained. Non-breeding female and male pipistrelle bats are known to utilise a number of such roosting sites throughout the year.
- 6.3.2 It is considered that the level of survey effort is sufficient to enable an assessment of the bat roost size and status and a proportionate mitigation strategy to minimise any potential impacts of development proposals.
- 6.3.3 The development proposal will result in the loss of all roost identified on site (2small occasionally used summer roosts). The Bat Mitigation Guidelines (Natural England, 2004) suggests that the loss of such roost sites is likely to result in a low impact on the local population of the species.
- 6.3.4 Loss of a roost of any size requires a European Protected Species licence, which must be obtained prior to the work being carried out on the building. Furthermore, with appropriate compensation and mitigation implemented through this European Protected Species Licence, loss of the roosts is unlikely to have a significant effect on the conservation status of the species. Given the small size of the roosts and the common species recorded within them, the licence application maybe suitable an application under a low impact Bat Mitigation Class Licence.

7.0 REFERENCES

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Joint Nature Conservation Committee, Peterborough.

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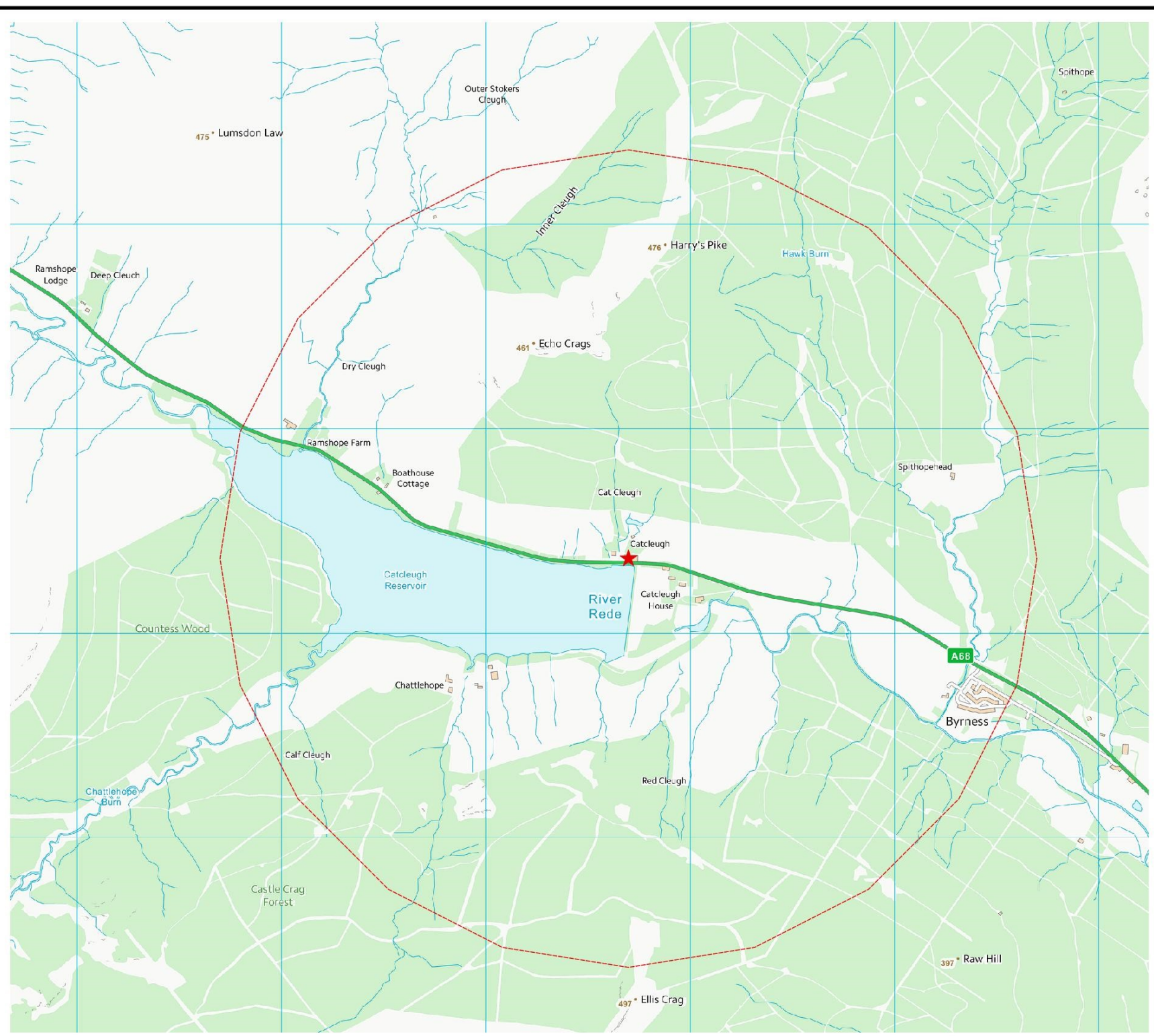
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APPENDIX A
Figures



Legend

- 2km Buffer
- ★ Site Location

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Unit 1, Shawwell Business Centre
 Stagshaw Road
 Corbridge
 Northumberland
 NE45 5PE

info@totalecology.com
 www.totalecology.com

Project	Catcleugh Farm
Title	Site Location
Client	Martin Broadhead
Date	20/09/2020
Ref	Figure 1



Legend

★ Site Centre

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Unit 1, Shawwell Business Centre
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www.totalecology.com

Project	Catcleugh Farm
Title	Aerial Showing Surrounding Habitats
Client	Martin Broadhead
Date	20/09/2020
Ref	Figure 2



Legend

 Site Boundary

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www.totalecology.com

Project	Catcleugh Farm
Title	Building Reference Plan
Client	Martin Broadhead
Date	20/09/2020
Ref	Figure 3



Legend

- Main Flight Lines
- Foraging Area
- Surveyor Location
- Site Boundary

Surveyor ID	Name
RC	Rachel Collier
GB	Glen Brewis

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Project	Catcleugh Farm
Title	Nocturnal Survey 1 (30.06.2020)
Client	Martin Broadhead
Date	20/09/2020
Ref	Figure 4



Legend

- Main Flight Lines
- ★ Roost
- Surveyor Location
- Site Boundary

Surveyor ID	Name
FT	Fay Taylor
RG	Rachel Galler

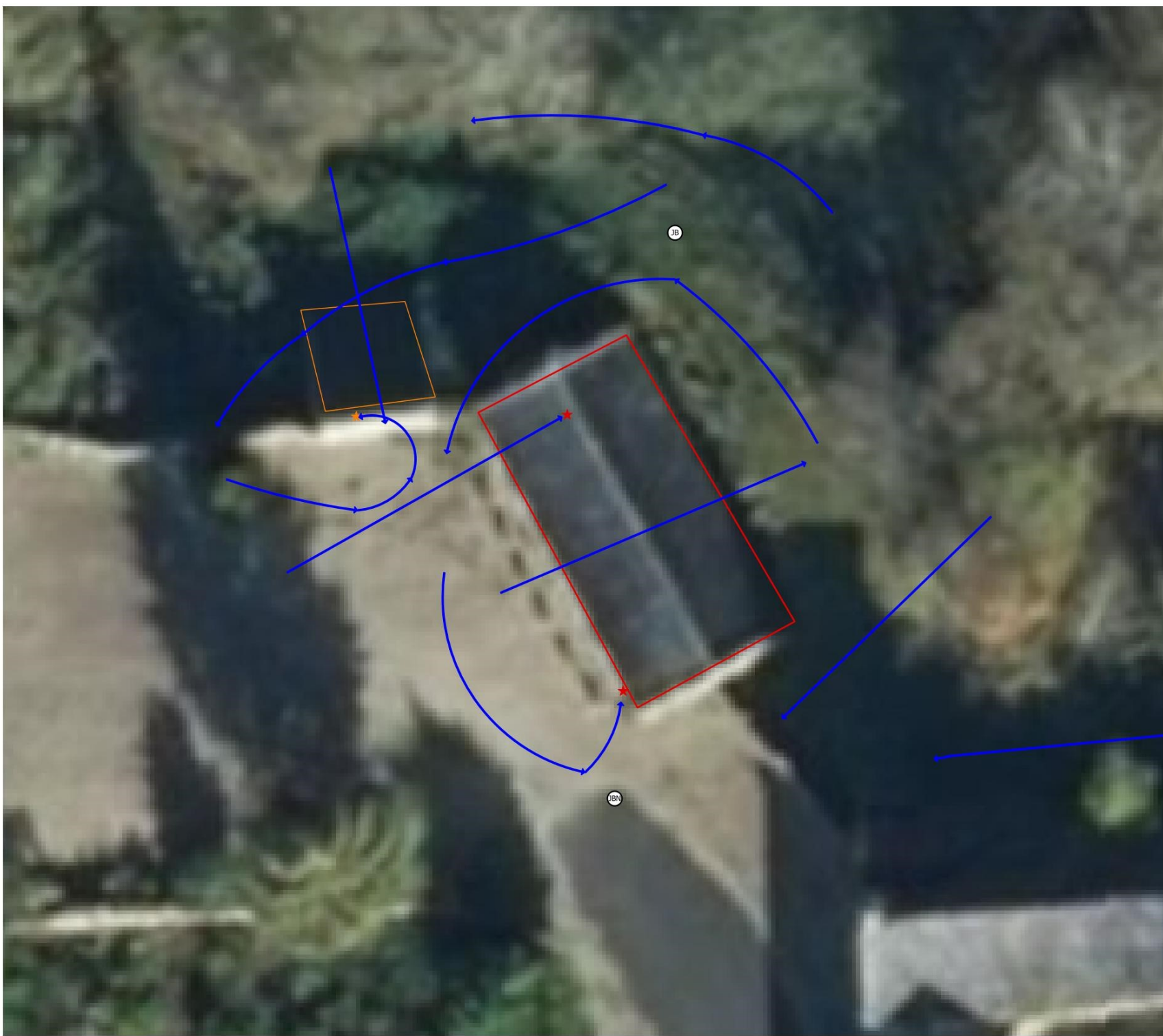
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Project	Catcleugh Farm
Title	Nocturnal Survey 2 (27.07.2020)
Client	Martin Broadhead
Date	20/09/2020
Ref	Figure 5



Legend

- Main Flight Lines
- ★ Roost
- Surveyor Location
- Site Boundary
- Stone Shed Building
- ★ Off Site Roost

Surveyor ID	Name
JB	Jodi Bell
JBN	Jeanette Bryden

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Project	Catcleugh Farm
Title	Nocturnal Survey 3 (25.08.2020)
Client	Martin Broadhead
Date	20/09/2020
Ref	Figure 6



Legend

Recommended Bat Box Location

 Bat Slate Access Tile

 Wall Mounted Crevice Box

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Project	Catcleugh Farm
Title	Bat Mitigation Plan
Client	Martin Broadhead
Date	20/09/2020
Ref	Figure 7

APPENDIX B
Selected Photographs

Photograph 1 – Western elevation of building.



Photograph 2 – Adjacent wall of stone storage shed



Photograph 3 – South-eastern elevation



Photograph 4 – Northern elevation



Photograph 5 – Example of loose roof slates



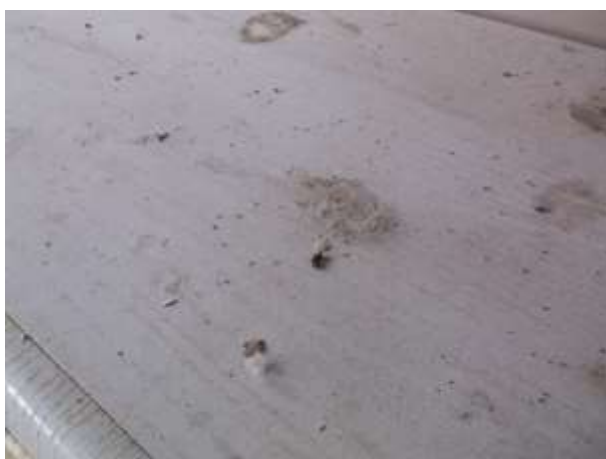
Photograph 6 – Misaligned quoin stones of western elevation.



Photograph 7 – Example of roof void.



Photograph 8 – Bat dropping found internally



Photograph 9 – Roost Location under Ridge tile



Photograph 10 – Roost within gap in stonework (also location of bat found during BRA survey)



Photograph 11 – Location of roost within wall of stone storage shed.



APPENDIX C
Report Conditions

TOTAL ECOLOGY LTD

REPORT CONDITIONS Catcleugh Farm, Byrness. Northumberland

This report is produced solely for the benefit of Martin Broadhead and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

Unless otherwise instructed any records collected will be submitted to the body holding environmental records for the area.

This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to Total Ecology Ltd. In time improved practices, fresh information or amended legislation may necessitate a re-assessment. Opinions and information provided in this report are on the basis of Total Ecology Ltd using due skill and care in the preparation of the report.

This report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times.

This report is limited to those aspects reported on, within the scope and limits agreed with the client under our appointment. It is necessarily restricted and no liability is accepted for any other aspect. It is based on the information sources indicated in the report. Some of the opinions are based on unconfirmed data and information and are presented as the best obtained within the scope for this report.

Reliance has been placed on the documents and information supplied to Total Ecology Ltd by others but no independent verification of these has been made and no warranty is given on them. No liability is accepted or warranty given in relation to the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report.

Whilst skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather related conditions.

Although care is taken to select monitoring and survey periods that are typical of the environmental conditions being measured, within the overall reporting programme constraints, measured conditions may not be fully representative of the actual conditions. Any predictive or modelling work, undertaken as part of the commission will be subject to limitations including the representativeness of data used by the model and the assumptions inherent within the approach used. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions.

The potential influence of our assessment and report on other aspects of any development or future planning requires evaluation by other involved parties.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Total Ecology Ltd accept no liability for issues with performance arising from such factors

February 2008