



Haycock & Jay Associates Ltd

CONSULTANT ECOLOGISTS

Hall Barns Farm, Hurst Green

Bat Emergence/Re-entry Survey Report

Submitted to:

Stonyhurt College

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CTJ007

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SUMMARY

Haycock and Jay Associates Ltd. was commissioned by Stonyhurst College to undertake a Preliminary Roost Assessment (PRA), followed by bat emergence/re-entry surveys of a farm outbuilding at Hall Barns Farm, Knowles Brow, Hurst Green, BB7 9PT, prior to roof replacement works.

The preliminary Roost Appraisal undertaken in June 2020 identified the building as being of high bat roost suitability. Subsequent dusk emergence and dawn re-entry surveys undertaken in July 2020 recorded bat potential bat roosts, where individual bats were observed entering or emerging from the structure. It was not possible to establish whether bats were roosting within the structure, in the main barn attached or commuting through both parts of the building.

The proposed works may result in the loss or modification of potential roost locations, and potential disturbance to roosting bats. For this reason, a precautionary working methodology will need to be adhered to during the works. This will include a pre-works inspection, restrictions on timing of works; ecological supervision; a toolbox talk and sensitive working practices for bats.

Further recommendations have been made regarding use of appropriate lighting for bats, use of safe roofing membrane for bats and maintaining access points to the main barn via the south-western extension.

The barn on site offers suitable bird nesting habitat and nesting birds were observed within buildings, notably barn swallow and swift. Work should be scheduled to avoid disturbance to breeding birds.

1.0 INTRODUCTION

1.1 Background

- 1.1.1 Haycock and Jay Associates Ltd was commissioned by Stonyhurst College to undertake a Preliminary Roost Assessment (PRA), followed by bat emergence/re-entry surveys of a farm building at Hall Barns Farm, Knowles Brow, Hurst Green, BB7 9PT.
- 1.1.2 The emergence/re-entry surveys focussed on a lean-to extension to a traditional Grade II listed stone barn which currently houses livestock. Repairs are required to the lean-to building which has partially collapsed at one end. The surveys were undertaken to determine the presence or likely absence of roosting bats and where present to characterise the conservation status of the roost/s.
- 1.1.3 This report is written by Ecologist Will Steele BSc (Hons) ACIEEM, and reviewed by Senior Ecologist Karl Harrison BSc (Hons) ACIEEM, with reference to current guidance¹. It outlines the survey methodology, results and conclusions of the surveys undertaken, prior to required repair work. Recommendations for further ecological survey, potential mitigation requirements and opportunities for biodiversity enhancement are provided.

1.2 Site Context

- 1.2.1 Hall Barns Farm is located approximately 1.1km to the north-east of the small village of Hurst Green in the Ribble Valley district of Lancashire. The site lies within the Forest Of Bowland Area of Outstanding Natural Beauty (AONB). The Ordnance Survey National Grid Reference (OS) for the centre of the site is SD 6927 3876.
- 1.2.2 The survey building is a single-storey lean-to/extension to the main barn which is Grade II listed early C19th stone building, within the south-west corner of the farmyard. The barn is bordered to the north, east and west by adjacent farm buildings and hardstanding farm yards, and to the south by fields of pasture.
- 1.2.3 Within 250m of the site there are areas of mature deciduous woodland to the north-east and south-west, Wood-pasture and Parkland to the north-west, sports pitches associated with Stonyhurst College to the west, and farm land to the south.
- 1.2.4 The site is well connected to the wider landscape due to intact hedgerows and tree lines and woodland habitat. The River Ribble is located approx. 1.1km to the east which provides further high value habitat and connectivity to the surrounding area.

¹ Chartered Institute of Ecology and Environmental Management (CIEEM) (2017). 'Guidelines on Ecological Report Writing'. CIEEM, Winchester.

1.3 Proposed Works

- 1.3.1 Proposed work will involve repairs to the roof, solely to the south-west lean-to. This will involve re-roofing this section of roof, replacing any rotten timbers and re-roofing with stone tiles.
- 1.3.2 No work is proposed to the attached, main barn.

2.0 LEGISLATION AND POLICY

2.1 Priority Habitats and Species

2.1.1 The UK Biodiversity Action Plan (BAP) sets out national priority species and habitats for conservation. Although now succeeded by the 'UK Post-2010 Biodiversity Framework', the UKBAP priorities and targets are retained under the Natural Environment and Rural Communities Act 2006 and as such are considered during the planning process. Species and Habitats of Principal Importance are listed in Section 41 of the Natural Environment and Rural Communities Act 2006.

2.1.2 In addition species and habitat action plans and priority species and habitats are set out in Local BAPs. The Local BAP for Ribble Valley is the Lancashire Biodiversity Action Plan (2011) which includes action plans for eleven main habitats, and the following relevant species.

2.2 Bats

2.2.1 All UK species of bat are legally protected, and as such there is a requirement that measures be taken to ensure that contravention of the relevant legislation is avoided. This may include the adoption of mitigation, including a Natural England licence where appropriate.

2.2.2 All UK species of bat are strictly protected and listed on Annex IV of the EC Habitats Directive, with greater horseshoe (*Rhinolophus ferrumequinum*), lesser horseshoe (*Rhinolophus hipposideros*), barbastelle (*Barbastella barbastellus*) and Bechstein's bat (*Myotis bechsteinii*), receiving extra protection under Annex II of the Directive. This enacts the Bern Convention, where all UK bats are listed on Appendix II as receiving strict protection except common pipistrelle (*Pipistrellus pipistrellus*).

2.2.3 Relevant legislation in England is the Wildlife and Countryside Act 1981 (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act 2006; and the Conservation of Habitats and Species Regulations 2017 (as amended).

2.2.4 The law makes it an offence, inter alia, to:

- Disturb a bat or groups of bats in their roost;
- Damage or destroy a bat roosting place, even if there are no bats present at the time;
- Obstruct access to a bat roost; or,

- To capture, injure or kill a bat or possess, advertise, sell or exchange a bat, or part of a bat dead or alive.

2.2.5 Seven species of British bats are listed as priority species in the UKBAP and Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities Act 2006. The species listed are; the barbastelle (*Barbastella barbastellus*), Bechstein's bat (*Myotis bechsteini*), noctule (*Nyctalus noctula*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*) and lesser horseshoe (*Rhinolophus hipposideros*).

2.2.6 A grouped species action plan for bats has been produced as part of the Lancashire Biodiversity Action Plan (BAP), which includes those species present locally: whiskered bat (*Myotis mystacinus*); Brandt's bat (*Myotis brandtii*); Daubenton's bat (*Myotis daubentonii*); Natterer's bat (*Myotis nattereri*); common pipistrelle (*Pipistrellus pipistrellus*); soprano pipistrelle; noctule bat; and brown long-eared bat.

2.3 Nesting Birds

2.3.1 With certain exceptions², all wild birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended). Therefore, it is an offence, inter alia, to:

- Intentionally take, damage or destroy the nest of any wild bird while it is in use of being build; or,
- Take or destroy the egg of any wild bird.

2.3.2 Bird species listed on Schedule 1 of the Act receive a higher level of protection under the Wildlife and Countryside Act 1981 (as amended), which is strengthened by the Countryside and Rights of Way Act 2000 thus for these species it is also an offence to intentionally or recklessly:

- Disturb any bird while it is nest building, or is in, on or near a nest containing eggs or young: or,
- Disturb the dependent young of any such bird.

2.3.3 A number of birds are listed as priority species in the UKBAP and are Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities Act 2006.

2.3.4 The conservation status of bird species in UK is classified in the 'Birds of Conservation Concern (BoCC)' publication as either Red, Amber or Green, based on recent and

² Some species, such as game birds, are exempt in certain circumstances.

historical population decline, breeding status, international importance, status in Europe and other factors.

2.4 National Planning Policy Framework

2.4.1 Section 15 of the National Planning Policy Framework is titled 'Conserving and enhancing the natural environment' and sets out how planning authorities should endeavour to contribute to and enhance the natural and local environment:

2.4.2 *"Planning policies and decisions should contribute to and enhance the natural and local environment by ... minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures"*.

2.5 Local Planning Policy

2.5.1 Relevant Local Development Policies for this site are detailed in Ribble Valley Borough Council Core Strategy 2008 – 2028.

2.5.2 KEY STATEMENT EN2: LANDSCAPE

2.5.3 The landscape and character of the Forest of Bowland Area of Outstanding Natural Beauty will be protected, conserved and enhanced. Any development will need to contribute to the conservation of the natural beauty of the area.

2.5.4 The landscape and character of those areas that contribute to the setting and character of the Forest of Bowland Areas of Outstanding Natural Beauty will be protected and conserved and wherever possible enhanced.

2.5.5 As a principle the Council will expect development to be in keeping with the character of the landscape, reflecting local distinctiveness, vernacular style, scale, style, features and building materials.

2.5.6 KEY STATEMENT EN4: BIODIVERSITY AND GEODIVERSITY

2.5.7 The Council will seek wherever possible to conserve and enhance the area's biodiversity and geodiversity and to avoid the fragmentation and isolation of natural habitats and help develop green corridors. Where appropriate, cross-Local Authority boundary working will continue to take place to achieve this.

2.5.8 Negative impacts on biodiversity through development proposals should be avoided. Development proposals that adversely affect a site of recognised environmental or ecological importance will only be permitted where a developer can demonstrate that

the negative effects of a proposed development can be mitigated, or as a last resort, compensated for. It will be the developer's responsibility to identify and agree an acceptable scheme, accompanied by appropriate survey information, before an application is determined. There should, as a principle, be no net loss of biodiversity.

2.5.9 These sites are as follows:

- Sites of Special Scientific Interest (SSSIs)
- Local Nature Reserves (LNRs)
- Local Biological Heritage sites (CBHs)
- Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)
- Local Geodiversity Heritage Sites
- Ancient Woodlands
- Lancashire Biodiversity Action Plan priority habitats and species
- European Directive on Protected Species and Habitats - Annex 1 Habitats and Annex 2 Species
- Habitats and Species of Principal Importance in England

2.5.10 With respect to sites designated through European legislation the Authority will be bound by the provisions of the relevant Habitats Directives and Regulations.

2.5.11 For those sites that are not statutorily designated and compensation could be managed through a mechanism such as biodiversity off-setting via conservation credits.

3.0 METHODOLOGY

3.1 Desk Study

- 3.1.1 Desk studies are important as they can indicate the presence or potential presence of legally protected and/or other notable species that could occur within a site or the surrounding area.
- 3.1.2 A desk study was undertaken in order to gather information relating to bats, notably including records of bat roosts, activity, sites designated for bats and/or historic Natural England Mitigation Licences for bats. The search was extended to include records within a 2km radius of the site. While all species records were considered, records older than 15 years were, in the main, discounted as being out of date.
- 3.1.3 The following sources/providers of information were consulted:
- Lancashire Environment Record Network (LERN); and,
 - Multi-Agency Geographic Information for the Countryside (MAGIC) (www.magic.gov.uk).

3.2 Preliminary Roost Assessment

- 3.2.1 An inspection of the barn and assessment of its bat roost suitability was undertaken on 16th June 2020 by Ecologist Rachel Midgley BSc (Hons) MCIEEM (Level 2 Class Licence no.: 2015-11726-CLS-CLS). The survey focussed on those areas identified as requiring work, specifically the south-west single storey lean-to extension.
- 3.2.2 The inspection was carried out during daylight hours and in accordance with current published methodology whereby the external inspection was undertaken with the aid of a powerful torch (Cluson Clulite Clubman 1 million candle power) from ground level.
- 3.2.3 Cavities, cracks and crevices which may offer potential emergence points or suitable roosting features for bats were identified and, where accessible, were also searched. In addition, the inspection recorded any evidence of use by bats, including feeding remains, claw marks, staining from urine and fur, droppings or bats themselves.
- 3.2.4 Features with opportunity for roosting were recorded and the buildings were categorised according to their level of suitability, from negligible to high. Suitability is determined by a number of factors including the type, size and location of the feature on the structure, the locality, environmental conditions and proximity to suitable bat foraging habitat.

3.3 Emergence/Re-entry Surveys

- 3.3.1 Following the identification of high bat roost suitability at the main barn and south-western extension, three dusk emergence and dawn re-entry bat surveys were undertaken at the extension building between: 6th to 28th July 2020.
- 3.3.2 Surveys were carried out in accordance with the current methodology³ with the aid of heterodyne Batbox Duet bat detectors. Pettersson M500-384 and Anabat Express detectors to record bats in the field.
- 3.3.3 Surveys were carried out from two surveyor positions (positions 1 & 2) to provide full visual coverage of the buildings, as annotated in Appendix 3. Surveyor Position 1 covered the northern part of the south-western aspect of the building and Surveyor Position 2 covered southern corner of the building.
- 3.3.4 Any sightings of bats emerging from and/or returning to the buildings, bat activity/behaviour (where visible) and targeted bat calls suggesting a particular interest in features at the buildings/walls were recorded during the surveys.
- 3.3.5 Surveys were led by Natural England bat survey licence holder Karl Harrison BSc (Hons) ACIEEM (Class 2 licence no. 2017-29880-CLS-CLS), with support from experienced bat surveyors Will Steele MZool (Hons) ACIEEM (Class 1 licence no. 2019-43393-CLS-CLS), Clare Cashon BSc (Hons) ACIEEM, Rachel Whitaker BSc (Hons).
- 3.3.6 Details of the sunset/sunrise times and weather during the surveys are provided below in Table 3.1.

Table 3.1 - Bat Emergence/re-entry Survey Weather Conditions

Survey Date	Surveyor Positions	Sunset/Sunrise Time	Temperature (start/end, °C)	Weather	Surveyors ⁴
6 th July 2020 (dusk)	1 & 2	21:41	16/16	Dry, 0% cloud cover, 1 BWS (Beaufort Wind Scale).	CC, KH
17 th July 2020 (dawn)	1 & 2	05:01	14/14	Dry, 1 BWS, 80% cloud cover	WS, KH

³ Bat Conservation Trust (BCT) (2016) 'Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd Edition'. BCT, London.

⁴ Karl Harrison (KH); Clare Cashon (CC); Will Steele (WS); Rachel Whitaker (RW).

Survey Date	Surveyor Positions	Sunset/Sunrise Time	Temperature (start/end, °C)	Weather	Surveyors ⁴
28th July 2020 (dusk)	1 & 2	21:13	12/12	Dry, 1-2 BWS, 100% cloud cover	WS, RW

3.4 Incidental Observations

3.4.1 Sightings of notable wildlife observed during the PRA and bat emergence/re-entry surveys were also recorded.

3.5 Constraints

3.5.1 Weather conditions were optimal through the duration of the surveys, except for a brief spell of drizzle at the start of the first survey.

3.5.2 Bats foraging within the main barn were often out of range of the recording bat detector. These were however identified in the field with a heterodyne bat detector.

4.0 RESULTS

4.1 Desk Study

- 4.1.1 The full details of the desk study are provided in Appendix 1. Desk study records provided by Lancashire Environment Record Network (LERN) have returned a total of forty-seven records from a 2km radius of the site and from the last 15 years. This includes twenty-four confirmed roost records; two maternity roost records; four day roosts; one possible roost; one tree roost; and fifteen other records including in-flight only or aural records.
- 4.1.2 Records held by South Lancashire Bat Group (SLBG), also provided by LERN, included a further fourteen records for this area including seven confirmed roosts; one maternity roost; three in-flight records; and three other records including bat casualties and discovery of droppings.
- 4.1.3 Species recorded locally include Brandt's bat; Natterer's bat; noctule; common pipistrelle (*Pipistrellus pipistrellus*); soprano pipistrelle; unidentified *Pipistrellus* sp.; and brown long-eared bat.
- 4.1.4 The closest records include buildings within the adjacent Stonyhurst College site and former Mill to the north-west, all within 400m of the site. The records relate to surveys or visits undertaken between 2011 and 2018, and include the presence of a soprano pipistrelle maternity roost, along with roosts supporting common pipistrelle, Natterer's bat and brown long-eared bat.
- 4.1.5 A review of the MAGIC website did not reveal any European Protected Species Licences for Bats within 2km of the site.

4.2 Preliminary Roost Assessment

- 4.2.1 The early 19th century barn is constructed out of sandstone and has a stone tiled roof supported by large traditional king post-trusses and timbers. The building comprises the central main barn which is two-storey high, with single-storey lean-to extensions to the north-east and south-west elevations (Photo 1 & 2).
- 4.2.2 The building is in a deteriorating condition and there are large masonry crevices (both internally and externally) and part of the roof to one of the side extensions/lean-to has collapsed. Externally, there are also large cracks in the stonework, crevices around window and door frames and lintels, gaps along the ridge and under loose or slipped roofing tiles (Photo 3).

- 4.2.3 The interior to the main barn is open to the roof and there is no upper floor (Photo 4). Large internal masonry crevices are present and there are vent holes higher up and some bricked up window openings. Half of the roof is unlined, half is lined with a modern breathable membrane.
- 4.2.4 A security light is present inside the barn. A low density of scattered bat droppings were seen on the floor and on surfaces, however, debris and manure on the barn floor obscures any further evidence.
- 4.2.5 One of the side rooms to the north-east houses calves and was not accessed.
- 4.2.6 The extension/lean-to to the south-west is in a poorer condition and a section of the roof has recently collapsed and was partially dismantled (Photo 5 & 6). Lead flashing along the top of the roof where it connects with the main building is very loose (Photo 7) creating gaps underneath. Some parts of the roof are lined with breathable membrane, the rest is unlined (Photo 8 & 9).
- 4.2.7 Overall, the building is considered to be of **high bat roost suitability**.

4.3 Bat Emergence/ Re-entry Surveys

- 4.3.1 Two potential bat roosts were identified during the survey. A summary of the roosts identified is provided below in Table 4.1, with photographs and full roost details at Appendices 2 and 3 respectively.

Table 4.1 - Summary of Bat Roosts in Buildings

Building Ref.	Roost Ref.	Species	Count	Roost location	Access point(s)
Barn: South-western extension	PR1	Soprano pipistrelle	1	Within south-western extension	Window on south-eastern side
Main barn	PR2	Common pipistrelle	1	Bat may be roosting in main barn building or have entered the barn through the north entrance.	Emergence from the southern doorway of the barn.
Main barn	PR3	Soprano pipistrelle	1	The western corner of the main barn roof	If emerging it likely accessed via a roof tile
Barn: South-western extension	PR4	Common pipistrelle	1	Unknown, likely just an access route to the main barn.	Barn extension at the area of missing roof.

Survey 1: 6th July 2020 (dusk)

- 4.3.2 Common pipistrelle foraging within the main barn prior to sunset. At 22:32 a soprano pipistrelle emerged from the south-eastern window of the south-western extension (PR1). At 22:38 a common pipistrelle emerged from foraging within the main barn, via the south-western extension entrance (PR2). Other activity comprised up to two common pipistrelle or soprano pipistrelle foraging and commuting around the building, particularly to the south. Occasional noctules and Leisler's bats were also recorded.

Survey 2: 17th July 2020 (dawn)

- 4.3.3 Regular periods of continuous foraging around the barn by up to three common or soprano pipistrelles. Occasional *Myotis* sp. or noctule passes were also recorded. Towards the end of the survey, two common pipistrelles were observed foraging around the northern entrance to the main barn building. It was not confirmed whether they left the barn via the north entrance or roosted inside the main barn building.

Survey 3: 28th July 2020 (dusk)

- 4.3.4 One possible bat emergence from the main barn building at 21:36. One common pipistrelle entered a section of the extension with a missing roof, likely accessing the main barn. Other activity included regular passes and periods of continuous foraging by common pipistrelle and soprano pipistrelle around the farm buildings. Occasional *Myotis* and *Nyctalus* activity was also recorded.

4.4 Incidental Observations

- 4.4.1 During the first survey, 6th July 2020, nesting birds were observed using the main barn. These included swifts (*Apus apus*) using the external stonework close to the lintel of the south-eastern doorway and swallows (*Hirundo rustica*) nesting inside the main barn.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Bats

- 5.1.1 No roosts were confirmed within the south-western barn extension. However, individual bats were identified leaving or entering the western barn entrance (PR1, soprano pipistrelle), the southern window of the extension (PR2, common pipistrelle), and the missing extension roof (PR4, common pipistrelle). In addition to a possible bat emergence from the main barn roof (PR3, soprano pipistrelle).
- 5.1.2 In addition, multiple bats were observed foraging within the main barn, which is open on its north-eastern side. It is therefore likely that bats observed entering or exiting the south-western extension are commuting through this structure and may not be roosting inside the extension. However, the possibility of roosting bats within the extension or within the main barn cannot be ruled out.
- 5.1.3 If roosting, the works have potential to disturb or destroy roosts, resulting in injury to individual bats which may be present during roof repair works. Otherwise, the works may reduce access routes to and from the main barn.
- 5.1.4 Due to the bats accessing the main barn and south-western barn extension, works at the extension should be undertaken following a precautionary working methodology method statement. This shall include the following.
- 5.1.5 Prior to any work commencing on site, a toolbox talk shall be given by a suitably qualified and licensed ecologist (SQLE) to all contractors involved. The talk will set out the methods and ensure that contractors are aware of the detailed method statement and the legal protection afforded to bats, the potential for roosting bats to be present and what measures should be undertaken where roosting bats are identified i.e. stop works immediately and consult the SQLE.
- 5.1.6 Works will be timed for when bats are active but least vulnerable (avoiding the hibernation period which runs from November to March).
- 5.1.7 All works to deconstruct or modify the existing roof of the south-western extension shall be carried out by carefully by hand, and checking crevices with a powerful torch prior to re-pointing under the direct supervision of the SQLE.
- 5.1.8 As no works are proposed to the main building, roosting features throughout the external walls and internally will be retained, as such no loss of roosting features available is anticipated.

- 5.1.9 The works should retain access points which bats may be using the access the main barn via the south-western extension. These include the open window to the south and the barn doorway to the west.
- 5.1.10 Re-roofing work shall use traditional type 1F felt only: there shall be no use of modern breathable roofing membranes (even where advertised as bat safe).
- 5.1.11 Any proposed lighting new design shall be reviewed by the ecologist to ensure that there will be no significant impact on bats or other nocturnal wildlife using the site and surrounding area as a result of increased lighting levels post-development.
- 5.1.12 There shall be no direct illumination of any potential roost entrances or important foraging habitat, including the inside of the barn, and light spillage shall be reduced as much as possible. Lighting should use LEDs with a warm white spectrum (<2700 Kelvin) to minimise blue component and with maximum wavelengths over 550nm.

5.2 Nesting Birds

- 5.2.1 Birds, including swift and swallow, were identified nesting in the main barn structure, and will not be lost as a result of works to the south extension.
- 5.2.2 No nesting birds were identified in the south-western extension. However, if the works are undertaken during the bird breeding season, the possibility for birds to use this structure should be considered.
- 5.2.3 To avoid impact on nesting birds, the construction works should be carried out outside of the nesting bird season (March to August inclusive). Where works must take place within the nesting season a systematic check to determine the presence/absence of nesting birds from structures in the site should be carried out by a qualified Ecologist in advance of the commencement of works. Where bird nesting is identified, works will be delayed until after the bird nesting season, or once any dependent young have fledged.

6.0

APPENDIX 1

DESK STUDY DATA

(SUPPLIED AS SEPARATE DOCUMENT)

APPENDIX 2

PHOTOGRAPHS

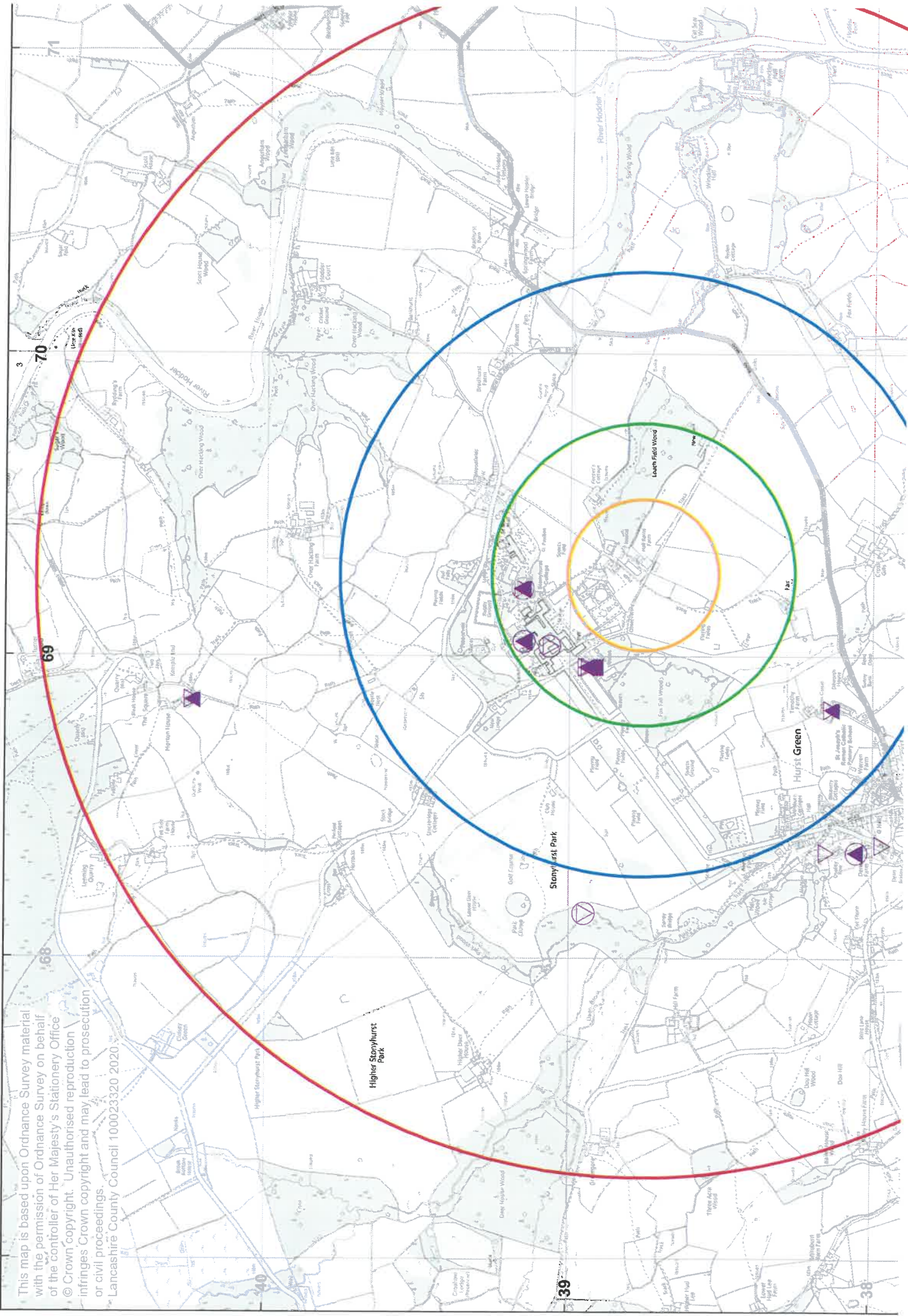
(SUPPLIED AS SEPARATE DOCUMENT)

APPENDIX 3
BAT EMERGENCE/RE-ENTRY SURVEY RESULTS
(SUPPLIED AS SEPARATE DOCUMENT)

FID	Taxon	Common Name	Date	Location	Bat Type	Record Type	GridRef	NEAR DIST
0	<i>Myotis brandtii</i>	Brandt's Bat	21/06/2018	Garnet House, Stonyhurst College	field record	field record	SD68223915	398
1	<i>Myotis brandtii</i>	Brandt's Bat	18/09/2014	Garnet House, Stonyhurst College	Bat roost, building	DNA analysis	SD68223915	398
2	<i>Myotis daubentonii</i>	Daubenton's Bat	1966	Lower Hedder Bridge, Cromwell's Bridge	field record	field record	SD704392	1278
3	<i>Myotis nattereri</i>	Natterer's Bat	29/08/2018	Stonyhurst Old Mill	field record	field record	SD68963893	352
4	<i>Myotis nattereri</i>	Natterer's Bat	17/06/2016	Stonyhurst Old Mill	Maternity roost	Detector & recording	SD68963893	352
5	<i>Myotis nattereri</i>	Natterer's Bat	29/08/2015	Stonyhurst Old Mill	Day Roost	Detector & recording	SD68963893	352
6	<i>Myotis nattereri</i>	Natterer's Bat	2015	Stonyhurst Old Mill	Day Roost	field record	SD68963893	352
7	<i>Myotis noctula</i>	Noctule Bat	08/06/2018	Under bridge on The Dene, along Dean Brook	field record	field record	SD688373796	1197
8	<i>Pipistrellus</i>	Pipistrelle Bat species	12/06/2018	Stonyhurst College	Bat Roost	Bat roost	SD689223915	398
9	<i>Pipistrellus</i>	Pipistrelle Bat species	27/11/2014	Stonyhurst College	Bat roost, tree	Endoscope	SD689223915	398
10	<i>Pipistrellus pipistrellus</i>	Pipistrelle	30/07/2018	Muslin Prayer Room, Lancaster University	field record	field record	SD689223915	398
11	<i>Pipistrellus pipistrellus</i>	Pipistrelle	30/07/2018	Muslin Prayer Room, Lancaster University	Bat Roost	Bat roost	SD689223915	398
12	<i>Pipistrellus pipistrellus</i>	Pipistrelle	30/07/2018	Muslin Prayer Room, Lancaster University	field record	field record	SD689223915	398
13	<i>Pipistrellus pipistrellus</i>	Pipistrelle	29/08/2018	Stonyhurst Old Mill	field record	field record	SD689223915	398
14	<i>Pipistrellus pipistrellus</i>	Pipistrelle	30/07/2018	Muslin Prayer Room, Lancaster University	Bat Roost	Bat roost	SD68963892	347
15	<i>Pipistrellus pipistrellus</i>	Pipistrelle	19/07/2018	Muslin Prayer Room, Lancaster University	field record	field record	SD689223915	398
16	<i>Pipistrellus pipistrellus</i>	Pipistrelle	19/07/2018	Muslin Prayer Room, Lancaster University	Bat Roost	Bat roost	SD689223915	398
17	<i>Pipistrellus pipistrellus</i>	Pipistrelle	06/06/2018	Muslin Prayer Room, Lancaster University	field record	field record	SD689223915	398
18	<i>Pipistrellus pipistrellus</i>	Pipistrelle	06/06/2018	Muslin Prayer Room, Lancaster University	field record	field record	SD689223915	398
19	<i>Pipistrellus pipistrellus</i>	Pipistrelle	06/06/2018	Hurst Green	Bat detector	field record	SD685381	1104
20	<i>Pipistrellus pipistrellus</i>	Pipistrelle	17/08/2016	Morton House Farm, Kemble End, Clitheroe, BB7 9QY	Bat detector	field record	SD685381	1104
21	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	17/08/2016	Morton House Farm, Kemble End, Clitheroe, BB7 9QY	In flight	field record	SD685381	1104
22	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	30/08/2016	Stonyhurst Old Mill	Bat roost, building	Detector & recording	SD68854024	1542
23	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	30/08/2016	Morton House Farm, Kemble End, Clitheroe, BB7 9QY	Bat roost, building	Probably Roost	SD68854024	1542
24	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	27/07/2015	Muslin Prayer Room, Lancaster University	Bat roost, building	Close observation	SD689223915	398
25	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	03/08/2015	Muslin Prayer Room, Lancaster University	Bat roost, building	Close observation	SD689223915	398
26	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	29/04/2015	Muslin Prayer Room, Lancaster University	Bat roost, building	Detector & recording	SD689223915	398
27	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	11/03/2015	Muslin Prayer Room, Lancaster University	Bat roost, building	Close observation	SD689223915	398
28	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	11/03/2015	Muslin Prayer Room, Lancaster University	Bat roost, building	Close observation	SD689223915	398
29	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	11/05/2015	Muslin Prayer Room, Lancaster University	Bat roost, building	Detector & recording	SD689223915	398
30	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	13/02/2015	Muslin Prayer Room, Lancaster University	Bat roost, building	Close observation	SD689223915	398
31	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	29/08/2015	Stonyhurst Old Mill	Bat roost, building	Detector & recording	SD6863892	347
32	<i>Pipistrellus pygmaeus</i>	Sorriano Pipistrelle	2012	Stonyhurst Old Mill	Day Roost	Day Roost	SD6863892	352
33	<i>Pipistrellus pygmaeus</i>	Sorriano Pipistrelle	06/06/2018	Hurst Green	Bat detector	field record	SD685381	1104
34	<i>Pipistrellus pygmaeus</i>	Sorriano Pipistrelle	08/06/2018	Hurst Green, Lancashire	Bat detector	field record	SD685381	1104
35	<i>Pipistrellus pygmaeus</i>	Sorriano Pipistrelle	29/08/2018	Stonyhurst Old Mill	Bat Roost	Bat roost	SD68963891	342
36	<i>Pipistrellus pygmaeus</i>	Sorriano Pipistrelle	29/08/2018	Stonyhurst Cottage adjacent to mill	field record	field record	SD68963894	352
37	<i>Pipistrellus pygmaeus</i>	Sorriano Pipistrelle	17/06/2016	Stonyhurst Old Mill	Possible bat roost, house	Detector & recording	SD6863893	357
38	<i>Pipistrellus pygmaeus</i>	Sorriano Pipistrelle	29/08/2015	Stonyhurst Old Mill	Bat roost, building	Detector & recording	SD68963891	342
39	<i>Pipistrellus pygmaeus</i>	Sorriano Pipistrelle	07/09/2015	Stonyhurst Cottage adjacent to mill	Maternity roost	Detector & recording	SD68963894	357
40	<i>Pipistrellus pygmaeus</i>	Sorriano Pipistrelle	22/06/2011	Stonyhurst Old Mill	Bat roost	field record	SD690391	342
41	<i>Plecotus auritus</i>	Brown Long-eared Bat	2009	Stonyhurst Old Mill	Day Roost	Day Roost	SD68963893	448
42	<i>Plecotus auritus</i>	Brown Long-eared Bat	06/11/2017	St. Joseph's School Hurst Green	Bat Roost	Bat roost	SD68823813	352
43	<i>Plecotus auritus</i>	Brown Long-eared Bat	16/08/2017	St. Joseph's School Hurst Green	Bat detector - Peerasonic	Bat detector - Peerasonic	SD68823813	787
44	<i>Plecotus auritus</i>	Brown Long-eared Bat	17/06/2016	Stonyhurst Old Mill	Bat roost, building	Detector & recording	SD68963894	787
45	<i>Plecotus auritus</i>	Brown Long-eared Bat	26/08/2015	Hurst Green	Bat roost, building	field record	SD68823813	357
46	<i>Plecotus auritus</i>	Brown Long-eared Bat	2015	Stonyhurst Old Mill	Day Roost	Day Roost	SD68963894	787
47	<i>Plecotus auritus</i>	Brown Long-eared Bat	02/10/2015	St. Joseph's School Hurst Green	Bat roost, building	Close observation	SD68823813	357
47	<i>Plecotus auritus</i>	Brown Long-eared Bat	18/05/2014	St. Joseph's School Hurst Green	In flight	Anabat	SD68823813	787

FID	Scientific	CommonName	Date	Location	GridRefers	RecordType	SexStage	Count	NEAR_DIST
0	<i>Myotis noctula</i>	Noctule Bat	29/07/2019	Old Langtho	SD70233712	Survey - post dusk	Not Recorded	present	1930
1	<i>Pipistrellus</i>	Pipistrelle Bat Species	02/07/1995	Hurst Green	SD665379	Bat Casualty - long term captive	Baby Female	1	1084
2	<i>Pipistrellus</i>	Pipistrelle Bat Species	26/08/1993	Stonyhurst	SD681389	Bat Casualty - released	Adult	3	1136
3	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	29/07/2019	Old Langtho	SD70233712	Survey - post dusk	Not Recorded	present	1930
4	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	03/06/2015	North Lances Area	SD69223915	Bat roost	Not Recorded	2	398
5	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	11/05/2015	North Lances Area	SD69223915	Bat roost	Not Recorded	2	398
6	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	29/04/2015	North Lances Area	SD69223915	Bat roost	Not Recorded	2	398
7	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	18/03/2015	North Lances Area	SD69223915	Bat roost	Not Recorded	present	398
8	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	11/03/2015	North Lances Area	SD69223915	Bat roost	Not Recorded	present	398
9	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	13/02/2015	North Lances Area	SD69223915	Bat roost	Not Recorded	present	398
10	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	27/01/2015	North Lances Area	SD69223915	Bat roost	Not Recorded	present	398
11	<i>Pipistrellus pygmaeus</i>	Sorjano Pipistrelle	22/06/2011	Ciltheroe	SD690391	Bat roost - maternity roost	Mixed sex / stave	8	448
12	<i>Pipistrellus pygmaeus</i>	Sorjano Pipistrelle	22/06/2011	Ciltheroe	SD69033906	Bat Casualty - released	Adult female	1	365
13	<i>Pipistrellus pygmaeus</i>	Sorjano Pipistrelle	21/06/2011	Ciltheroe	SD69033906	Bat Casualty - died	Baby Female	1	365
14	<i>Plecotus auritus</i>	Brown Long-eared Bat	29/07/2019	Old Langtho	SD70233712	Survey - post dusk	Not Recorded	present	1930
15	<i>Plecotus auritus</i>	Brown Long-eared Bat	20/11/2013	North Lances Area	SD663380	Bat Roost - droppings/ prey remains	Not Recorded	7	1162

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Higher Stonyhurst Park

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Appendix 2 – Site Photographs (all taken 16/06/2020)



Photo 1 - View of the barn from the south, showing the south-west extension/lean-to.



Photo 2 - North-east elevation.



Photo 3 - Raised and loose stone tiles and gaps along the ridge to the main barn roof.



Photo 4 - Interior and roof structure to the main barn.



Photo 5 - South-west lean-to, showing dismantled roof section.



Photo 6 - southern corner of lean-to which is in a poor condition and is beginning to collapse.



Photo 7 - Dismantled section of roof to south-west lean-to. The lead flashing along the top is loose, creating crevices beneath.



Photo 8 - Lined section of the roof leading into the main barn interior.



Photo 9 - Interior to south-west lean-to (southern half which is not lined).

Appendix 3 – Bat Emergence/Re-entry Survey Results

Survey 1: Hall Barns Farm 6th July 2020 (dusk)

Survey site: Hall Barns Farm Survey 1

Date: 06/07/2020

Sunset/sunrise: 21:41

Start: 21:26

End: 23:11

Weather conditions: light drizzle at start of survey to 21:36, then dry during survey, 2-3 BWS, 100% cloud cover, 16/16°C

Surveyors: Clare Cashion (Surveyor Position 1); Karl Harrison (Surveyor Position 2)

Equipment: BatBox Duet; Pettersson M500-384 & tablet

Survey summary: Common pipistrelle foraging within the main barn prior to sunset. At 22:32 a soprano pipistrelle emerged from the south-eastern window of the south-western extension. At 22:38 a common pipistrelle emerged from foraging within the main barn, via the south-western extension entrance. Other activity comprised up to two common pipistrelle or soprano pipistrelle foraging and commuting around the building, particularly to the south. Occasional noctules and Leisler's bats were also recorded.

Incidental observations: Swifts nesting in external stonework close to the lintel of the main barn south-eastern doorway. Swallows nesting inside the main barn

Survey constraints: Bats foraging within the barn were out of range of the recording bat detector

Table 1 - All Bat Activity Recorded During Survey 1 06/07/2020

Time (24 Hrs)	Surveyor ¹	Species ²	No. bats	Notes	Map Annotation
21:39	CC	Pip	1	HNS.	
21:39-22:14	CC	Ppip	1	Continuous foraging within barn, with a bat occasionally visible in the doorway.	
22:00	CC	Nnoc	1	Passes overhead, HNS.	
22:01	KH	Nnoc	1	Commuting north to south	
22:06	KH	Ppip	1	HNS, very faint	
22:07	CC	Nnoc	1	Passes overhead, HNS.	
22:14	KH	Ppip	1	HNS, very faint	
22:15	CC	Ppip	1	After a brief pause, the continuous foraging within the barn resumes	
22:17	KH	Ppip	1	Foraging around north eastern corner of barn	
22:17-22:20	CC	Ppip	1	Continuous foraging within barn, with a bat occasionally visible in the doorway.	
22:18	CC	Nnoc	1	Passes overhead, HNS.	
22:20	CC	Ppip	1	Bat heard on south-east side near KH, HNS.	
22:20	KH	Ppip	1	Foraging along eastern side of barn	
22:21	CC	Ppip	2	Still a bat in the barn occasionally foraging, as well as a bat on the south-east side of the barn	

¹ Karl Harrison (KH); Clare Cashion (CC); Will Steele (WS); Rachel Whitaker (RW).

² HNS - Heard not seen, Unk - unknown species; Nnoc - noctule (*Nyctalus noctula*); Nlei (*Nyctalus leisleri*) Pip - *Pipistrellus* sp., Ppip - common pipistrelle (*Pipistrellus pipistrellus*), Ppyg - soprano pipistrelle (*Pipistrellus pygmaeus*), Myo – *Myotis* sp, Mdau – Daubenton's Bat, Nyc - *Nyctalus* sp.

Hall Barns Farm Bat Survey Report
Appendix 3 - Emergence/Re-entry Results
Carter Jonas

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August 2020

Time (24 Hrs)	Surveyor ¹	Species ²	No. bats	Notes	Map Annotation
22:22	CC	Ppip	2	A bat in the barn intermittently foraging.	
22:23	KH	Ppip	1	Foraging along eastern side of barn	
22:23-22:26	CC	Ppip	1	A bat in the barn intermittently foraging.	
22:25	KH	Ppip	1	Foraging along eastern side of barn	
22:25	KH	Ppyg	1	Commuting north to south	
22:27	CC	Ppip	1	Foraging on south-east side.	
22:27	KH	Ppip	1	Foraging along eastern side of barn	
22:27	KH	Ppyg	1	HNS, brief pass	
22:29	CC	Nnoc	1	Passes overhead, HNS.	
22:30	CC	Ppip	2	Flew from south-east side near KH to south-west, then another flew over the roof from south to north.	
22:30	CC	Nnoc	1	Flew high overhead, HNS.	
22:31	CC	Ppyg, Ppip	2	HNS on south-east side, then flew towards south-west, while another is still continuously foraging in the barn.	
22:31	KH	Ppip	1	Foraging along eastern side of barn	
22:31	KH	Nnoc	1	Briefly foraging overhead	
22:32	KH	Ppyg	1	Appeared to emerge from window on eastern gable and flew to the south	PR1
22:34	CC	Ppip, Ppyg	2	One bat from south-east side to south-west; other HNS.	
22:35	CC	Ppip	1	From south-west behind surveyor towards the south-east.	
22:35	KH	Ppip	1	Foraging along eastern side of barn	
22:36	CC	Ppip	2	Still occasionally foraging in barn, as well as another foraging on the south-east side.	
22:36	KH	Ppip	1	Foraging along eastern side of barn	
22:36	KH	Ppyg	1	HNS	
22:37	CC	Ppip	2	Still foraging in barn, as well as a pass to the south-west, HNS.	
22:38	CC	Ppip	1	A bat finally flew out of the barn door on the south-west side.	PR2
22:39	KH	Ppip	1	Foraging along eastern side of barn	
22:39-22:42	CC	Ppip	1	Intermittent passes at south-east side and behind to the south-west.	
22:42-22:44	CC	Ppip	2	Briefly two bats, then back to one bat intermittently foraging on south-east side of building.	
22:43	KH	Ppip	1	Foraging along eastern side of barn	
22:44-22:45	CC	Ppip	2	Flew from south-east to south-west overhead, then two bats chasing each other round the yard south-west of the building. Social calls.	
22:45	KH	Ppip	1	Passing up and down the lane, south of the barn	
22:45-22:48	CC	Nlei	1	Several passes overhead, HNS.	
22:46	CC	Ppip	1	Foraging on south-east side of building.	
22:47	CC	Nnoc	1	One pass overhead, HNS.	
22:47-22:51	KH	Ppip	1	Foraging around building	
22:48	CC	Ppip	1	From south-west to south-east, then foraging around the yard.	
22:49	CC	Ppip	1	Continuous foraging round the yard to the south-west of the building.	
22:49	CC	Unk	1	Pass, HNS.	
22:50	CC	Nlei	1	HNS.	
22:50	CC	Unk	1	Pass, HNS.	

Hall Barns Farm Bat Survey Report
 Appendix 3 - Emergence/Re-entry Results
 Carter Jonas

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August 2020

Time (24 Hrs)	Surveyor ¹	Species ²	No. bats	Notes	Map Annotation
22:50	CC	Ppip	1	Continuous foraging round the yard to the south-west of the building.	
22:51	CC	Nlei	1	One pass overhead, HNS.	
22:51	CC	Ppip	1	Continuous foraging round the yard to the south-west of the building.	
22:52	CC	Nlei	1	One pass overhead, HNS.	
22:53	CC	Ppip	2	Chasing each other round and continuously foraging overhead.	
22:54	CC	Nlei	1	HNS.	
22:54	KH	Ppip	1	Foraging around building	
22:54	KH	Ppyg	1	HNS, brief pass	
22:55	CC	Ppip	1	Foraging overhead.	
22:56	CC	Ppip	1	Same foraging resumes over the yard.	
22:56	CC	Nnoc	1	Quick quiet pass, HNS.	
22:57	KH	Ppip	1	Foraging around building	
22:58	CC	Nlei	1	Quick quiet pass, HNS.	
23:01	CC	Ppip	1	Intermittent foraging then around yard south of building.	
23:02	CC	Nlei	1	Quick quiet pass, HNS.	
23:02	CC	Ppip	1	One pass HNS.	
23:03	CC	Ppip	2	From south-west to south-east, then two bats foraging over the yard.	
23:05	CC	Ppip	1	Flew from west end of roof towards south-west behind surveyor.	
23:07	CC	Ppip	1	Foraging over yard.	
23:07	KH	Ppip	2	Foraging around building	
23:07	KH	Ppip	1	Foraging around building	
23:08	CC	Ppip	2	Foraging over yard.	

Table 2 - Summary of Potential Roosts Identified 06/07/2020

Building Ref.	Roost Ref.	Species	Count	Roost location	Access point(s)
Barn: South-western extension	PR1	Soprano pipistrelle	1	Within south-western extension	Window on south-eastern side
Main barn	PR2	Common pipistrelle	1	Bat may be roosting in main barn building or have entered the barn through the north entrance.	Emergence from the southern doorway of the barn.

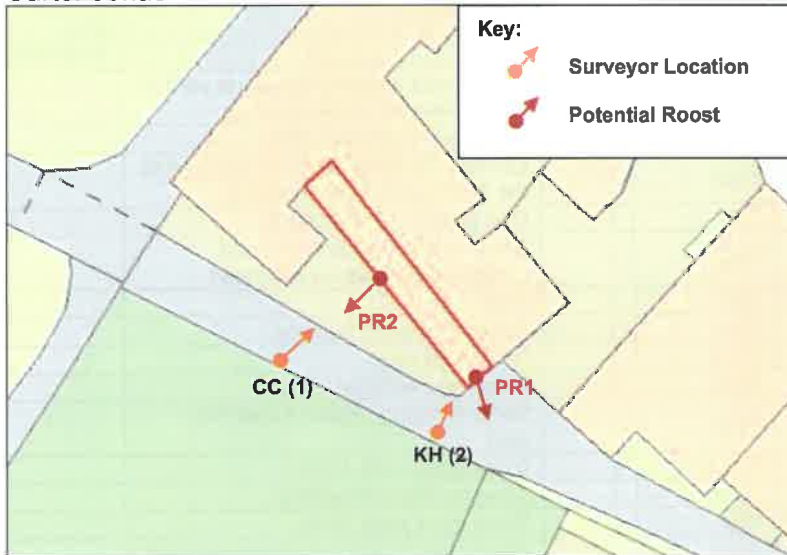


Figure 1 - Surveyor Positions and Potential Roost Locations during the dusk emergence survey (Survey 1) on 06/07/2020.

Potential Roost Photographs:



Photo 1 - Locations of potential roost access points during Survey 1

Survey 2: Hall Barns Farm 17th July 2020 (dawn)

Survey site: Hall Barns Farm Survey 2

Date: 17/07/2020

Sunrise: 5:01

Start: 3:26

End: 5:01

Weather conditions: Dry, 1 BWS, 80% cloud cover, 14/14°C

Surveyors: Will Steele (Surveyor Position 1); Karl Harrison (Surveyor Position 2)

Equipment: BatBox Duet; Petterson M500-384 & tablet

Survey summary: Regular periods of continuous foraging around the barn by up to three common or soprano pipistrelles. Occasional *Myotis* sp. or noctule passes were also recorded. Towards the end of the survey, two common pipistrelles were observed foraging around the northern entrance to the main barn building. It was not confirmed whether they left the barn to roost elsewhere or roosted inside the main barn building.

Incidental observations: n/a

Survey constraints: n/a

Table 3 - All Bat Activity Recorded During Survey 2 17/07/2020

Time (24 Hrs)	Surveyor	Species	No. bats	Notes	Map Annotation
3:27	KH	Ppip & Ppyg	2+	Continuous foraging around building	
3:28-3:42	WS	Ppip & Ppyg	1-3	HNS, near continuous foraging nearby, predominantly Ppip with occasional Ppyg	
3:29	WS	Ppip	1	Foraging pass east to west to east in front of building	
3:32	KH	Ppip	1	Still foraging to the south of the building	
3:32	KH	Unk	2	Foraging to the north of the building	
3:38	KH	Ppip & Ppyg	2+	Still continuous foraging around building	
3:42	WS	Pip	1	Commuting east to west, south of building	
3:43-3:44	WS	Ppip	1	Frequent nearby foraging passes	
3:45	WS	Ppip	2	Foraging at south-eastern corner of the building	
3:47-3:56	WS	Ppip & Ppyg	1-2	Continuous distant foraging with regular nearby passes	
3:48	KH	Ppip & Ppyg	2+	Continuous foraging around building	
3:48	KH	Myo	1	HNS	
3:49	KH	Ppip	2	Foraging at south-eastern corner of building	
3:54	KH	Myo	1	One pass	
3:54-3:59	KH	Ppip & Ppyg	2+	Continuous foraging around building	
3:55	KH	Myo	1	HNS	
3:56	WS	Ppip	2	Foraging at south-eastern corner of the building	
3:57	KH	Myo	1	HNS	
3:58	WS	Nnoc	1	HNS, distant	
3:59	WS	Ppip	1	HNS	
3:59	KH	Nnoc	1	HNS	
4:00	WS	Ppyg and Myo	2	HNS	
4:00	WS	Ppip	2	HNS	

Hall Barns Farm Bat Survey Report
Appendix 3 - Emergence/Re-entry Results
Carter Jonas

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August 2020

Time (24 Hrs)	Surveyor	Species	No. bats	Notes	Map Annotation
4:01	WS	Ppip	1	Foraging at south-eastern corner of the building	
4:05	WS	Ppyg	1	HNS	
4:06	KH	Ppip & Ppyg	2+	Intermittent foraging around building	
4:07	WS	Pip	1	HNS	
4:07	KH	Nnoc	1	HNS	
4:09	KH	Ppip & Ppyg	2+	Intermittent foraging around building	
4:09	KH	Nnoc	1	HNS	
4:10-4:13	WS	Ppyg	1	HNS	
4:13	WS	Nnoc	1	HNS	
4:14	KH	Ppip & Ppyg	2	Intermittent foraging around building	
4:14	KH	Nnoc	1	Commuting west to east	
4:14-4:17	WS	Ppyg	1	HNS, frequent distant foraging passes	
4:18	WS	Ppip	1	Foraging at south-eastern corner of the building	
4:20	KH	Ppip & Ppyg	2+	Reduction in foraging levels	
4:20-4:26	WS	Ppip & Ppyg	2	HNS, frequent distant foraging passes	
4:22	WS	Ppyg	1	HNS, nearby pass	
4:22	KH	Ppip	1	DNS	
4:22	KH	Ppyg	1	Foraging in field to south	
4:22	KH	Nnoc	1	DNS	
4:24	WS	Nnoc	1	HNS	
4:25	KH	Nnoc	1	DNS	
4:26	WS	Ppip & Ppyg	2	Foraging around the sound of the building	
4:27	KH	Ppip & Ppyg	2+	Foraging around building	
4:27	KH	Nnoc	1	HNS	
4:27-4:31	WS	Ppip	1	HNS, distant intermittent foraging	
4:29	KH	Ppip	1	Foraging nearby, HNS	
4:31	WS	Nnoc	1	HNS	
4:32	KH	Nnoc	1	HNS	
4:32	KH	Ppyg	1	HNS	
4:33	KH	Ppip & Ppyg	2+	Foraging around south-eastern corner of building	
4:34-4:36	WS	Ppip	1	HNS, foraging	
4:37-4:39	WS	Ppip	2	Foraging inside main barn building and around northern barn entrance	
4:40	WS	Nnoc	1	HNS	
4:41	KH	Nnoc	1	HNS	

Survey 3: Hall Barns Farm 28th July 2020 (dusk)

Survey site: Hall Barns Farm Survey 3

Date: 28/07/2020

Sunset: 21:13

Start: 20:55

End: 22:43

Weather conditions: Dry, 1-2 BWS, 100% cloud cover, 12/12°C

Surveyors: Will Steele (Surveyor Position 1); Rachel Whitaker (Surveyor Position 2)

Equipment: BatBox Duet; Petterson M500-384 & tablet

Survey summary: One possible bat emergence from the main barn building at 21:36. One common pipistrelle entered a section of the extension with a missing roof, likely accessing the main barn. Other activity included regular passes and periods of continuous foraging by common pipistrelle and soprano pipistrelle around the farm buildings. Occasional *Myotis* and *Nyctalus* activity was also recorded.

Incidental observations: n/a

Survey constraints: Inside barn was illuminated and the eastern barn door was closed, unlike in previous surveys.

Table 4 - All Bat Activity Recorded During Survey 3 28/07/2020

Time (24 Hrs)	Surveyor	Species	No. bats	Notes	Map Annotation
21:36	WS	Ppyg	1	Bat seen briefly at the western corner of the main barn roof.	PR3
21:36	WS	Ppyg	1	HNS	
21:38	WS	Ppyg	1	Commuting in front of building from north-west to south-west	
21:38	WS	Ppip	1	HNS	
21:42	WS	Ppip	1	Commuting from north-west and into barn extension at the area of missing roof. Likely accessing main barn.	PR4
21:42	WS	Nnoc	1	HNS	
21:54	WS	Ppyg	1	Two passes, one HNS and one commuting to the south-west	
22:01	WS	Myo	1	Commuting east to west over southern portion of building	
22:01	WS	Ppip	1	HNS	
22:01	RW	Myo	1	Commuting between the building from the north east to south west.	
22:05-22:07	RW	Ppip	1	Foraging between the building in the south east	
22:07	WS	Ppip	1	Nearby, HNS	
22:07	RW	Ppyg	1	HNS	
22:09-22:12	RW	Ppip	1	Foraging between the building in the south east	
22:10	WS	Ppyg	1	Distant, HNS	
22:10	RW	Ppyg	1	HNS	
22:13	RW	Ppyg	1	HNS	
22:14	WS	Unk	1	Brief, HNS	
22:14	RW	Mdau	1	HNS	
22:14-22:16	RW	Ppip	1	Foraging between the building in the south east	
22:15	WS	Ppip	1	HNS	
22:16	WS	Ppip	1	HNS	
22:17	RW	Nlei	1	HNS	
22:18	WS	Nnoc	1	HNS	
22:18	RW	Nyc	1	HNS	
22:19	RW	Ppip	1	HNS	
22:20	WS	Ppip	1	HNS, brief	

Hall Barns Farm Bat Survey Report
 Appendix 3 - Emergence/Re-entry Results
 Carter Jonas

CTJ007.01

August 2020

Time (24 Hrs)	Surveyor	Species	No. bats	Notes	Map Annotation
22:20	RW	Nlei	1	HNS	
22:21-22:25	WS	Nnoc	1	HNS	
22:21-22:25	RW	Ppyg, Ppip & Nyc	1	Foraging between the building in the south east and around my head, with social call	
22:27	RW	Ppyg	1	HNS, briefly	
22:29	WS	Nnoc	1	HNS	
22:29-22:33	RW	Noc	1	HNS	
22:30	WS	Nnoc	1	HNS	
22:30	RW	Myo	1	HNS, faintly	
22:31	WS	Nnoc	1	HNS	
22:32	RW	Mdau	1	HNS	
22:33	WS	Nnoc	1	HNS, several distant passes	
22:35-22:36	RW	Ppip	1	HNS foraging	
22:39	WS	Ppip	1	HNS	
22:39	RW	Ppip	1	Foraging back and forth along the lane north-east to south-east.	
22:40	WS	Ppip	1	HNS	
22:41	WS	Ppip	1	HNS, 5 passes	
22:41-22:44	RW	Ppip, Nyc & Myo	1	Foraging back and forth along the lane north-east to south-east. With social calls and foraging	
22:42	WS	Ppip	1	HNS	
22:42	WS	Nnoc	1	HNS	
22:42	RW	Unk	1	Flew from south-east to north-west towards surveyor position 1.	
22:43	WS	Ppip	1	HNS	
22:05-22:07	RW	Ppip	1	Foraging between the building in the south east	

Table 5 - Summary of Potential Roosts Identified 06/07/2020

Building Ref.	Roost Ref.	Species	Count	Roost location	Access point(s)
Main barn	PR3	Soprano pipistrelle	1	The western corner of the main barn roof	If emerging it likely accessed via a roof tile
Barn: South-western extension	PR4	Common pipistrelle	1	Unknown, likely just an access route to the main barn.	Barn extension at the area of missing roof.

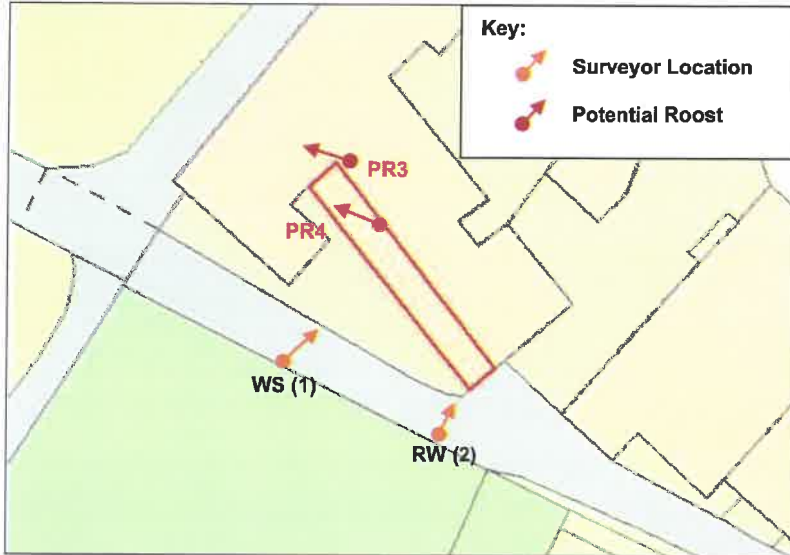


Figure 2 - Surveyor Positions and Potential Roost Locations during the dusk emergence survey (Survey 3) on 28/07/2020.

Potential Roost Photographs:

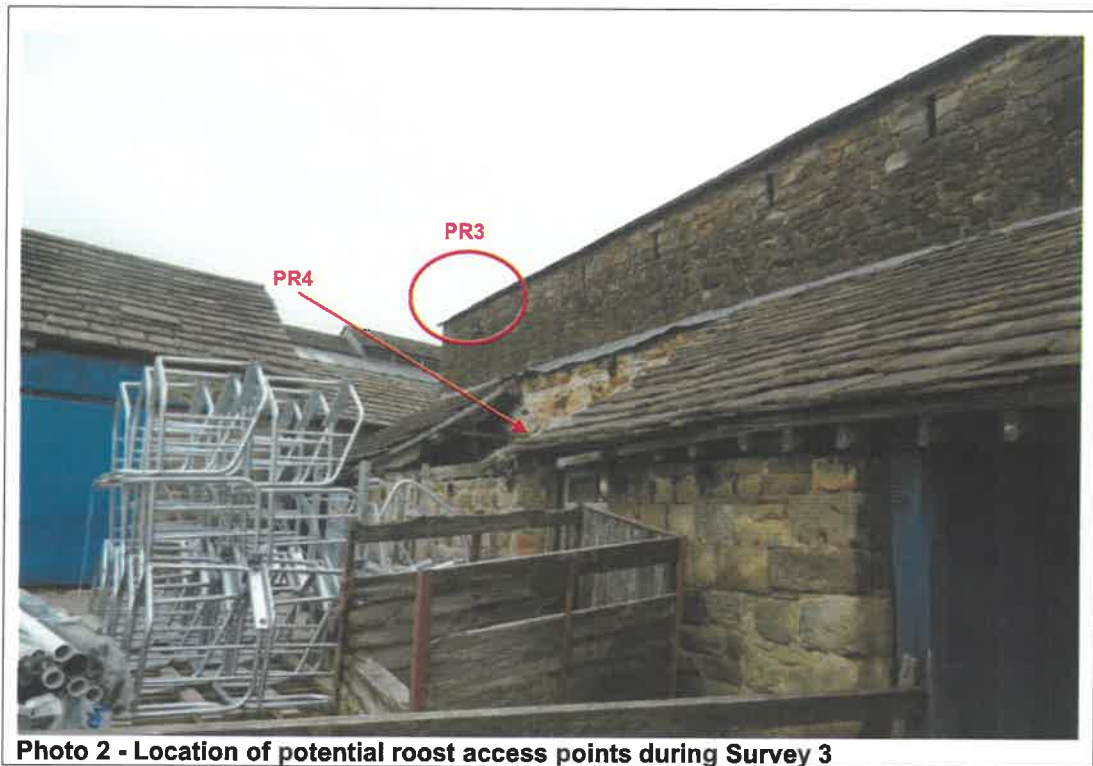


Photo 2 - Location of potential roost access points during Survey 3

