Bomber Farm, Gisburn

BAT AND BARN OWL REPORT

FINAL REPORT

Date: 25.11.2022

Unit 8, Second Floor
Holmes Mil
Greenacre Street
Clitheroe
Lancashire
BB7 1EB
01200 4467774
www.bowlandecology.co.uk

Document Control

Job number:	BOW17. 1330 Bomber Farm, Gisburn
Title:	Bat and Barn Owl Report
Client:	Janette Pate
Prepared by:	Catrin Scott, *Senior Ecologist* Sarah Birtley, *Principal Ecologist*
Checked by:	Sarah Birtley, *Principal Ecologist*
Date of Issue:	25.11.2022
Version:	2
Revisions:	Paragraph 5.4: roof liner information for bats Paragraphs 5.6 – 5.13: barn owl compensation Appendix G: addition of proposals plan
Status:	Final

Signed (Author)	**Signed (QA)**
	

Contents

1. Introduction

1.1 Bowland Ecology Ltd. was commissioned by Janette Pate to undertake a daytime building inspection for bats and barn owl (*Tyto alba*), followed by a suite of bat emergence/re-entry surveys of a barn at Bomber Farm, Gisburn. The barn is subject to proposals for re-development into a residential building.

1.2 Bomber Farm is located towards the south-east of Gisburn, a small village located within the Ribble Valley borough of Lancashire. The surveys focused on a single barn located towards the south of the farm, centred at SD 83862 48429. The surrounding land is dominated by agricultural fields; a small area of broad-leaved woodland is located approximately 110 m west of the barn, ribbons of hedgerow and scattered trees are also present throughout the surrounding land. Figure 1 shows the location of the barn and the surrounding landscape.

1.3 The purpose of the inspection, surveys and report is to: 1) assess the potential value of the barn for bats and barn owls and determine the presence/likely absence of these species within the barn, with particular reference to legal requirements; and 2) identify potential impacts and provide recommendations pertaining to the proposed works. This report includes a description of survey methods, survey results and outlines recommendations to provide protection, mitigation and enhancements for bats and barn owls.

Figure 1: Location and context of the barn.

2. Methodology

2.1 The building inspection survey, bat emergence/re-entry surveys and report follow the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017 a), the Guidelines for Ecological Report Writing (CIEEM, 2017 b) and the Guidelines for Ecological Impact Assessment (CIEEM, 2018), and are in line with the British Standard BS42020:2013 'Biodiversity – Code of practice for planning and development'.

Desk Study

2.2 The Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) was reviewed for any granted European Protected Species Licences for bats within 2 km of the site.

2.3 Local records of bats within 2 km of the site were obtained from a data search with the Lancashire Environment Record Network (LERN) in July 2022. Species records dated within the last 10 years were then reviewed. In this instance, a 2 km search area was considered adequate due to the small-scale nature of the proposed works.

2.4 Ordnance Survey (OS) maps and aerial photographs (http://maps.google.co.uk/maps) were reviewed to help identify any continuous habitat and any other notable habitats within the surrounding area.

Building Inspection Survey

2.5 A daytime internal and external inspection survey was undertaken on the 4th April 2022 by Catrin Scott MRes, BSc (Hons) (Natural England Class Licence No. 2019-39208-CLS-CLS) and Rhiannon Kamink Msc, Bsc (Hons). The weather during the survey was dry, with 8/8 cloud cover, a moderate breeze (Beaufort Scale F4) and a temperature of approximately 10°C.

2.6 In line with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016) an inspection of buildings for bat roost potential was conducted during daylight hours. A visual assessment of the barn to be impacted upon was undertaken to determine the presence of any Potential Roost Features (PRFs). Examples of PRFs on buildings are listed below:

- Gaps beneath lifted roof tiles;
- Rot holes in roof beams;
- Gaps in walls where dry stone or missing mortar;
- Gaps behind barge boards/gutter boards;
- Gaps into soffit boxes;
- Dark loft spaces with exposed ridge beams;
- Double-ridge beams;
- Open sheltered features for night roosts;
- Basements with external access points;
- Gaps beneath lifted lead flashing;
- Wall cavities with ingress opportunities;
- Gaps between roof frame beams and gable end walls;
- Bat boxes; and
- Other features that offer a place of shelter.

2.7 Any accessible PRFs were inspected using binoculars and a high-power torch for any primary or secondary evidence of possible bat presence such as feeding remains, bat droppings, oil staining and bats themselves. Surfaces beneath PRFs were also subject to a comprehensive search for evidence where possible, such as ledges, walls, doors, windowpanes, roof beams, loft floors and the ground around the building.

2.8 Natural England's Bat Mitigation Guidelines (2004) states that a significant bat roost can normally be determined on a single visit at any time of the year, provided that the entire structure is accessible and that signs of bats have not been removed by others.

2.9 Based on the PRFs present, the barn was assessed using the suitability classes detailed within Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), as detailed in Appendix A.

2.10 An assessment of the suitability of the surrounding habitats for bats was also undertaken, including the identification of potential foraging and roosting areas, potential flight lines and important commuting corridors.

Emergence/Re-entry and Activity Survey

2.11 Dusk emergence/dawn re-entry surveys of the barn were undertaken between May and July 2022. The survey methodology followed the guidelines as described in Collins (2016). The surveys were conducted using electronic bat detectors to facilitate the detection of bats and to aid in the determination of bat species using the site; a thermal imaging camera (Flir A65) was also used during the second and third visit to further facilitate the detection of bats. Details regarding the dates, start times, weather conditions and surveyors is shown in Table 1 below.

Table 1: Date, time, weather conditions and surveyors during bat surveys

Date	Start and end time and time of sunset/ sunrise	Weather Conditions	Surveyors[1]
19/05/2022	Sunset: 21:11 Start time: 20:56 End time: 22:41	Start Temp – 14°C End Temp – 12°C Beaufort wind scale – F1 Precipitation – none Cloud cover – 5/8	CS, VS, JS, MB
17/06/2022	Sunrise: 04:36 Start time: 02:25 End time: 04:51	Start Temp – 15°C End Temp – 15°C Beaufort wind scale – F0 Precipitation – none Cloud cover – 5/8	JT, JS, SR
04/07/2022	Sunset: 21:42 Start time: 21:27 End time: 23:42	Start Temp – 14°C End Temp – 13°C Beaufort wind scale – F2 Precipitation – very light rain for approximately 2 minutes at the start Cloud cover – 8/8	CS, JT, LH

2.12 The survey was completed at an appropriate time of year and the weather conditions were suitable.

[1] CS: Catrin Scott MRes, BSc (Hons) (Natural England Bat Licence No. 2019-39208-CLS-CLS); VS: Vincent Smith BSc (Hons); JS: Jordan Simpson BSc (Hons); MB: Mark Breaks BSc (Hons) (Natural England Class Licence No. 2016-26712-CLS-CLS); JT: Jack Taylor BSc (Hons); SR: Sam Robinson BSc (Hons); LH: Luke Hall BSc (Hons).

2.13 During the survey, surveyors positioned themselves to get the best coverage of the barn and focused in on those areas with the most potential as roosting habitat. Surveyor positions are plotted on the survey plan in Appendix B.

Barn Owl Nest Site Assessment

2.14 A survey was undertaken on the 4th April 2022 by Catrin Scott and Rhiannon Kamink. The Weather during the survey was dry, with 8/8 cloud cover, a moderate breeze (Beaufort Scale F4) and a temperature of approximately 10°C.

2.15 The assessment for barn owl adhered to Shawyer (2011). The building was inspected internally for evidence of past and present usage by barns owls and assessed for suitability as a nesting site for this species. Field signs for barn owls include:

- Droppings - white vertical streaks on roof beams and large white splashes on floors;
- Pellets - barn owls generally swallow their prey whole and regurgitate the indigestible parts (bones, fur etc.) as pellets. The colour and condition of pellets can give an indication as to when a site was last used by barn owls;
- Feathers - barn owl nestlings begin their initial moult at 11 months. Adult barn owls tend to shed their primary and secondary wing feathers before and after breeding;
- Nest debris - barn owls do not build nests but nesting areas may contain nestling fluff and pellet debris;
- Suitable entrance points - the minimum entrance hole size required for barn owls to gain access to a building is 7 cm x 7 cm; and
- Suitable nesting platforms - barn owls need a level area to lay eggs usually over 3 m in length and over 3 m off the ground. Typical nesting places include tops of walls, between bales and on attic floors.

Limitations

2.16 It is often not possible to make an accurate assessment of the presence or number of crevice-roosting bats, such as pipistrelles (*Pipistrellus* spp.) and some *Myotis* species, in a building during an inspection. This is due to the bats and their signs (such as droppings) most often remaining hidden from view in deep crevice roosts, for example in crevices between stone walls, or in inaccessible places, such as between roof slates/ridge tiles and roof lining. This is a standard constraint of all building inspections for roosting bats.

2.17 The internal inspection of the building was limited by the presence of dust and debris on the ground and internal surfaces, thereby inhibiting the identification of bat droppings.

2.18 Low light levels within the internal space of the barn during the emergence/re-entry surveys limited the ability of the surveyor positioned within the barn to track the location of bats. As such, this inhibited their ability to identify roost location(s). Recommendations within this report have therefore been developed accordingly.

2.19 A search of features within the eastern elevation was limited due to its height and the presence of the extensions obstructing access.

3. Results

Desk Study

3.1 Two European Protected Species (EPS) Licences for bats were identified by the Magic.gov website within 2 km of the site. The closest relates to soprano pipistrelle (*Pipistrellus pygmaeus*) and brown long-eared bat (*Plecotus auritus*) and is located approximately 1 km north of the barn. The second, which relates to soprano pipistrelle, is located approximately 1.6 km north of the barn.

3.2 The data search returned three records of bats. Two records are for bat (species or record type (activity or roost) not specified), located approximately 0.7 and 0.8 km north of the barn. The third is for a *Pipistrelle* sp. roost located approximately 0.7 km north-west of the barn.

3.3 A review of aerial imagery and Ordnance Survey maps indicates that the surrounding area is dominated by arable land. A broad-leaved woodland, which has been identified as deciduous woodland Habitat of Principal Importance (MAGIC) is located approximately 110 m west of the barn. This small area of woodland appears to be ecologically moderately connected to the barn via a line of trees. A series of smaller woodlands, together with running water, ribbons of hedgerow and scattered trees are also present throughout the surrounding landscape, including two lines of trees within 10 m of the western elevation of the barn and scattered trees immediately surrounding the farm buildings.

Building Inspection

3.4 A detailed description of the barn together with results of the building inspection are included below.

3.5 The barn can be separated into two sections: the first section comprises the western third, where the elevations mostly comprise stone (areas of brick and breeze block are also present); this section is hereafter referred to as the stone barn. The second section comprises the eastern two-thirds and is constructed of timber/corrugated sheets; this section is hereafter referred to as the corrugated/timber barn. Appendix B illustrates the location of both sections, as described above.

External Assessment

Stone Barn

3.6 The stone barn comprises a two-storey outbuilding which is roughly square in in shape; this section can be further separated into three smaller sections; the central section has a stone-tiled pitched roof whereas both the northern and southern sections are catslide extensions with corrugated roofs (Photographs 1 and 2).

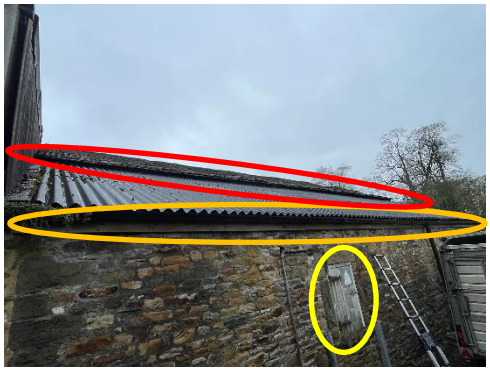
Photograph 1: Western and northern elevations of the stone barn.

Photograph 2: Eastern elevation of the stone barn showing ventilation hole.

3.7 The stone-tiled pitched roof is overall in moderate-poor condition, with some missing, lifted, broken and slipped tiles (Photograph 3). Gaps were also noted at the following locations: beneath the ridge tiles where mortar is missing; surrounding a series of skylights; beneath the lowest row of roof tiles (Photograph 3); and between and beneath the edge tiles on both gable ends (where mortar is crumbling/missing; Photograph 4). The aforementioned features may provide potential roosting features for crevice dwelling bats, and/or ingress opportunities into the internal space. A gap is also present beneath the corrugated roof sheets and beneath the lowest row of stone roof tiles on the northern elevation (Photograph 5). These gaps lead to stone elevations, where potential roosting features suitable for crevice dwelling bats may be present and/or ingress opportunities into the internal space.

Photograph 3: Example of missing, lifted, broken and slipped tiles; gaps beneath ridge tiles; gaps surrounding skylights; and gaps beneath the lowest row of roof tiles.

Photograph 4: Example of gaps between and beneath the edge tiles on the gable end. Loading door present on the second floor of the western elevation.



Photograph 5: Gap beneath the corrugated roof sheets (orange) and beneath the lowest row of stone roof tiles on the northern elevation (red). Small loading hatch (yellow).

3.8 A single doorway, which is permanently open due to the lack of a functioning door, is located on the ground floor of the western elevation (Photograph 1). Also present on this elevation is a loading door on the second floor; narrow gaps were noted between the timber door frame and the door, a single timber panel of the door is also missing (Photograph 4). A small loading hatch is also present on the northern elevation (Photograph 5); narrow gaps were again noted between the timber door frame and door. A single sliding door is located towards the south of the western elevation, which was left ajar at the time of survey. A ventilation hole is also present on the eastern gable end (Photograph 2). There is a series of additional doors and windows throughout the external elevations, the majority of which appear to be well sealed, however some windows have missing panes, including the skylights on the pitched roof. The aforementioned open doors, windows and skylights, together with the ventilation hole, offer access for wildlife into the internal space but at the same time expose the internal space to external environmental conditions.

3.9 A narrow gap, ranging from approximately 1 cm to 4 cm, is present between the timber track of the sliding door (on the western elevation) and the stone which sits behind (Photograph 6), offering a potential roosting feature for crevice dwellings bats. A timber fascia board present along the northern elevation results in a narrow gap, ranging from

0 cm to approximately 3 cm, between the timber and the stone which sits behind (Photograph 7), offering a suitable roosting feature for crevice dwellings bats; a small number of bat droppings were recorded immediately beneath this fascia board, slightly east of the small hatch, indicating the presence of a bat roost (see Appendix D for more information). No fascia board is present along the southern elevation.

Photograph 6: Narrow gap, ranging from approximately 1 cm to 4 cm, between the timber track of the sliding door and the stone elevation.

Photograph 7: Example of narrow gap, ranging from 0 cm to approximately 3 cm, between the timber fascia board and the stone elevation.

Photograph 8: Example of crevices present within the stonework of the external elevations.

Photograph 9: Narrow gap within the breezeblocks.

3.10 Numerous cracks and crevices are present throughout the stonework of the northern, southern and western external elevations of the stone barn as a result of missing mortar (see Photograph 8 for example). A high number of these crevices appear to lead upwards into cavities within the stonework. These features may provide potential roosting features for crevice dwelling bats. A gap is also present within the section of breeze block along the southern elevation, which may provide potential roosting features for crevice dwelling bats, and/or ingress opportunities into the internal space. No crevices were noted within the brickwork of the western elevation or within the stonework of the eastern elevation.

Corrugated/Timber Barn

3.11 The eastern two-thirds of the barn is an amalgamation of extensions to the stone barn, constructed from a combination of large concrete blocks, corrugated sheets and timber

cladding. This section is considered unsuitable for use by roosting bats due to the lack of potential roosting features: the smooth nature of the corrugated sheets limit the ability for bats to grip; the thermodynamic properties of the corrugated sheets result in temperature fluctuations; no crevices are present within the large concrete blocks; and the timber cladding is only a single layer which does not overlap and therefore provides no suitable crevices. A series of large barn doors together with gaps between the timber beams/corrugated sheets are present across this section of the barn, allowing access for wildlife into the internal space.



Photographs 10 - 12: External elevations of the eastern two-thirds of the barn which are constructed of large concrete blocks, corrugated sheets and timber cladding.

Internal Assessment

Stone Barn

3.12 Internally, the stone barn can be separated into a three main sections; the central section which sits beneath the stone-tiled pitched roof, and two further sections towards the north and south which comprise of the catslide extensions. The sections are all open to one another due to the presence of open doorways and ventilation holes within the internal elevations. Internally, both the northern and southern sections are a single storey, whereas the western quarter of the central section has a timber floor, creating a ledge approximately 5 m wide on the first floor (Photograph 13). A large number of cracks and crevices are present throughout the internal elevations of this barn (Photograph 14) as a result of missing mortar and missing/broken stone/brick/breezeblocks. A high number of these crevices appear to lead upwards into cavities within the stone/brick/breezeblock. A concentration of holes was also recorded in the stonework surrounding the locations where the timber roof beams join the stonework, again likely as a result of missing mortar. A narrow gap was also noted between the external brickwork and internal concrete layer present immediately north of the sliding door located on the western elevation. These features may also provide potential roosting features for crevice dwelling bats.

3.13 No loft space is present within the barn. Numerous areas of light ingress were noted across the roof, mainly due to the presence of skylights, but also as a result of missing, lifted, broken and slipped tiles and the lack of roof lining (Photograph 13). The exposed timber beams could provide roosting opportunities for void-dwelling bats, however the likelihood of such species using this barn as a day roost is considered unlikely due to the bright nature of the internal space. Gaps between the timber beams and the stone tiles may be used by crevice dwelling bats.

Photograph 13: View of the internal space (central section), showing numerous areas of light ingress due to the state of the roof and skylights. Ledge on the first floor towards the west of the barn.

Photograph 14: Example of cracks and crevices present throughout the internal elevations.

3.14 A collection of bat droppings and urination stains were recorded on the roof/windows of a car which was stored within the northern section of the stone barn (Photograph 15). The ceiling of this section is composed of corrugated sheets, which is not considered suitable for use by roosting bats. As such, it is considered likely that these droppings/urination stains are either from bats foraging within the internal space and/or from bats which are roosting within crevices within the stonework. A small collection of old bat droppings were also noted within a sink present towards the south-western corner of the barn; again, it is uncertain if these are from foraging within the internal space and/or from bats which are roosting within crevices within the stonework.

Photograph 15: Collection of bat droppings and urination stains present on a car stored within the barn.

Photograph 16: View of the internal space of the corrugated/timber barn.

Corrugated/Timber Barn

3.15 Internally, the corrugated and timber extensions provide no features considered suitable for use by roosting bats due to the lack of suitable roosting features (Photograph 16).

3.16 Nevertheless, the internal space is considered suitable for use by foraging bats; the presence of two large barn doors, which are permanently open, together with features suitable for access from the stone section, allows for easy access for wildlife into the internal space.

Summary

3.17 Evidence of roosting bats was recorded within the stone barn (behind the fascia board on the northern elevation), as such, this is a **confirmed** roost. A large number of additional features which are also considered suitable for use as roosts by crevice dwelling bats were also recorded within the stone barn. Bat droppings and urination stains could be as a result of roosting bats within the stonework and/or foraging bats, however, the building inspection could not determine their origin.

3.18 No evidence of roosting bats was recorded within the corrugated/timber barn during the survey. No features considered suitable for use by rooting bats were recorded either externally or internally. As such, the corrugated/timber barn is considered to provide **negligible** potential for use by roosting bats.

Emergence/Re-entry Surveys

3.19 A suite of emergence/re-entry surveys were conducted during the 2022 bat active season to assist with roost characterisation and to determine presence of any additional bat roosts within the barn. In line with best practice guidance (Collins, 2016), three emergence/re-entry surveys were required. The corrugated/timber barn was not included within the emergence/re-entry surveys as the building inspection determined it to provide negligible potential for roosting bats.

First survey (dusk emergence)

3.20 The first survey was undertaken on 19th of May 2022. High levels of foraging activity were recorded throughout the survey, predominantly by common pipistrelle (*Pipistrellus pipistrellus*), but also occasionally by soprano pipistrelle (*P. pygmaeus*) and noctule (*Nyctalus noctula*) bats. Externally, most of the bat activity was recorded to the west and north of the barn; a commuting route was noted along the western and northern elevations of the barn (likely from the adjacent line of trees). Low levels of activity were recorded to the south-east of the barn; here a couple of commuting bats were seen, whereas all other activity recorded here was heard and not seen. Foraging activity was also recorded inside the barn; bats were regularly seen flying in and out of windows/doors to forage inside both the stone and corrugated/timber barns, however none were recorded emerging from roosts. Social calling and multiple bat emergences from the adjacent farmhouse were recorded during the survey.

Second survey (dawn re-entry)

3.21 The second survey was undertaken on the 17th of June, 2022. Moderate levels of foraging and commuting activity were recorded during the survey, with common pipistrelle and brown-long eared bats (*Plecotus auritus*) recorded. The commuting route along the western and northern elevations was again well used. Foraging activity was also recorded inside the barns; bats were regularly seen flying in and out of windows/doors to forage. Social calls and multiple re-entries into adjacent farmhouse were recorded. The following re-entries into the stone barn were recorded during the survey (see Appendix D for more information on roost locations):

- Four common pipistrelles re-entered into gaps beneath the ridge tiles where mortar is missing on the western gable end (roost A);
- One common pipistrelle re-entry into a gap behind the timber track of the sliding door on the western elevation, however the thermal imaging camera shows the bats almost immediately fly out and leave. Inspection of the crevice

at the end of the survey identified a section which was clear of cobwebs (Roost B); and

- Thirteen common pipistrelle re-entries into crevice within a section of breezeblock as a result of missing mortar within an internal wall. Social calling was recorded, together with bats emerging, re-entering and re-emerging during the survey, suggesting the presence of young bats (Roost D).

3.22 A single brown long-eared bat was recorded flying within internal space of the barn; the final destination of the bat was not recorded due to low light levels and quiet calls.

Third survey (dusk emergence)

3.23 The third survey was undertaken on the 4th of July, 2022. Moderate levels of foraging activity were recorded throughout the survey, predominantly by common pipistrelle, but also by occasional soprano pipistrelle, noctule and Myotis (*Myotis* sp.) bats. The commuting route along the western and northern elevations was again well used. Foraging activity was also recorded inside the barn; bats were regularly seen flying in and out of windows/doors to forage inside barn. Emergences from the barn recorded during the survey include:

- One common pipistrelle emergence from the gap beneath the ridge tiles where mortar is missing on the western gable end (Roost A); and
- Suspected emergence of three common pipistrelle bats from internal space. Exact emergence point(s) unknown.

3.24 Prior to the survey, an inspection of the fascia board along the northern elevation of the barn determined the presence of a single bat (likely pipistrelle sp.) roosting between the board and the stone elevation (Roost C). This bat was not recorded to emerge during the survey and an inspection of the feature at the end of the survey confirmed that the bat was still roosting. Social calling and multiple bat emergences from the adjacent farmhouse were again recorded during the survey.

Commuting and Foraging Bats

3.25 Due to the presence of broad-leaved woodland, which is connected to the barn via a line of trees, together with the presence of smaller areas of woodland, running water, ribbons of hedgerow and scattered trees, Bomber Farm is considered to offer **moderate** suitability for commuting and foraging bats.

3.26 The emergence/re-entry surveys confirmed that bats use the farmyard and the internal space of the barns for foraging. Commuting bats were also present; the majority of which were recorded flying along the western and northern elevations of the barn, likely to/from the woodland located to the west of the barn and along the line of trees.

Barn Owls

3.27 Extensive evidence of roosting barn owl was noted during the building inspection within the first floor space located towards the west of the stone barn. Here owl pellets, owl droppings and barn owl feathers were noted (Photograph 17). Owl pellets and droppings were also noted on the ground floor of the barn (Photograph 18), where a second floor is not present, but the timber roof beams provide suitable perching locations. Fresh pellets, along with numerous old pellets were recorded, indicating long-term use of the barn.

Photograph 17: Owl pellets, owl dropping and barn owl feathers were noted on the first floor space located towards the west of the stone barn.

Photograph 18: Owl pellets and droppings located on the ground floor, beneath roof beams.

3.28 During the first emergence survey a single barn owl was recorded flying into the corrugated/timer barn, via the large open barn door situated in the western elevation. Barn owls were not recorded during the second or third re-entry/emergence surveys.

3.29 Grassland immediately bounding the barn is considered unlikely to provide substantial forage for barn owls due to the short sward of the vegetation at the time of survey.

Other Nesting Birds

3.30 Nesting birds were recorded within stone barn. In summary:

- Numerous active and old bird nests (including blackbird) recorded within the internal space of the stone barn. Location of nests include: within crevices in the stone elevations, on ledges and on a fuse box; and
- Nesting birds recorded flying in and out of a crevices within the stonework on the northern external elevation, east of the hatch door.

4. Evaluation and Assessment of Constraints

4.1 An assessment of the potential effects on bats has been made using the available design and survey information and the professional judgement of the ecologist. This includes a consideration of the relevant legislation (see Appendix F) and planning guidance.

4.2 Current proposals include re-developing the barn in order to change its use to a residential building. However, the exact nature of the proposals and construction methods have not been finalised. Based on the current understanding of the proposed works, it is envisaged that all known roosts (roots A to D) will be lost as a result of the proposed works. The evaluation and assessment of potential impacts and the recommendations have therefore been developed accordingly.

Bats

4.3 The building inspection and emergence/re-entry surveys identified a series of common pipistrelle roosts. Roost D is considered likely a satellite roost to the suspected larger maternity roost present within the farmhouse. Roosts A, B and C are considered to be a series of day roosts used by a small number of individuals, possibly males. Although the exact nature of the proposals have not been finalised, if is considered highly likely that works to redevelop the building into a residential property will result in the loss of the aforementioned roost sites. There is a risk of causing harm or disturbance to individual bats during the works in the absence of appropriate mitigation, which would result in an offence (Appendix F). In the absence of compensation, the development will also lead to the loss of bat roosting sites.

4.4 It is considered highly likely that additional bat roosting sites, in addition to known roosts A-D, are present within the stone barn, either within features located internally or externally. This is due to the presence of high numbers of features considered suitable for roosting bats and the known habits of bats to use multiple roosting sites.

4.5 Due to the nature of the features, the absence of hibernating common pipistrelle bats cannot be discounted.

4.6 The presence of a brown-long eared bat roost or feeding perch was not confirmed during the surveys. The brown-long eared bat recorded flying within the internal space of the barn during the second survey was the only bat of this species recorded within the internal space of the stone barn during all three emergence/re-entry surveys. As such, it is considered highly unlikely that a significant roost is present. If a small brown-long eared bat roost is present, this is not considered to change the overall value of the building to roosting bats due to the presence of a common pipistrelle satellite roost and a series of day roosts.

4.7 Re-development of the barn will result in the loss of confirmed foraging space (internal space of the barns). However, due to the presence of well used foraging habitat immediately outside of the barn, together with a line of trees which ecologically connects the site to an area of broad-leaved woodland, the loss of this foraging habitat is not considered to result in significant adverse impacts.

4.8 Any new lighting associated with the development has the potential to impact foraging, commuting and roosting bats utilising the barn and/or surrounding area, in particular the commuting route along the western and northern elevations. An increase in artificial illumination poses a barrier to bat movement and reduces foraging

opportunities by depleting invertebrates from unlit areas, thereby reducing food abundance and can also deter bats from exiting and entering roosts. Unmitigated, potential disturbance to bats could occur through increased lighting of the site at night, particularly if light spillage occurs onto any adjacent roosting features or linear features which could be used for commuting and foraging.

Barn Owl

4.9 Observations during the building inspection and the first bat emergence survey indicate that the barn is used by roosting barn owls. Breeding barn owls were not recorded during the surveys, however, the barn is considered to be suitable for such use. Furthermore, anecdotal evidence suggests that 2022 was a poor year for nesting barn owls in the local area due to low prey availability.

4.10 In the absence of mitigation, re-development of the barn is considered likely to have a significant adverse impact upon barn owls utilising the barn. Barn owls are a Schedule 1 species which means that they are afforded additional protection against disturbance whilst breeding, implemented by a penalty system. If barn owls are found nesting in the barn at the time of the works, the works would cause disturbance to the nesting birds and loss of the nest. The birds are legally protected against disturbance from the time a scrape is made in the nest debris (shortly before egg laying) until the time the last dependent young stops returning to the nest (about three weeks after first flight). Barn owls can nest at any time of year. Roost sites are only protected when occupied and therefore, if the works are undertaken when barn owls are not present, no offence will be committed under the Wildlife and Countryside Act (1981, as amended).

4.11 In the absence of mitigation, re-development of the barn will result in the loss of a suitable barn owl nesting feature.

Nesting Birds

4.12 All nesting birds in England are protected by law (Appendix F). Nesting birds cannot be killed, taken or their eggs/nests damaged.

4.13 Evidence of use of the barn by nesting birds was noted during the survey. As such, building works undertaken during the nesting bird season (March to August, inclusive) has the potential to disturb, kill and injure breeding birds and nestlings. This would constitute an offence and would results in an adverse ecological impact.

4.14 The proposed works will also result in the loss of suitable bird nesting features.

5. Recommendations

5.1 All recommendations provided in this section are based on Bowland Ecology Ltd.'s current understanding of the site proposals (Appendix G). Should the proposals alter, the recommendations made in this report should be reviewed to ensure that they remain appropriate.

5.2 The following recommendations are made to ensure compliance with wildlife legislation and relevant planning guidance.

Bats

5.3 Due to the loss of **confirmed bat roosts**, demolition of / any **works to modify or renovate the stone section of the barn will be subject to an appropriate EPS mitigation licence granted by Natural England**. Licences are only issued following granting of full planning permission and discharge of all relevant planning conditions. As part of the licence application, a detailed method statement will outline appropriate mitigation and compensation measures to ensure that the favourable conservation status of local bat populations is maintained. Key measures will comprise:

- Replacement roosts:
  - Bat boxes will be provided (see below);
  - Bat roost features can be designed into new building designs where possible (see below);
- Timing of works:
  - Works to dismantle and/or exclude bats from known or potential roost sites will take place in April or during September to October when bats are least sensitive to disturbance. Between May-August bats are either heavily pregnant or have dependent young. Due to the nature of the features, the absence of hibernating bats cannot be guaranteed, as such, works should not be undertaken November to March (inclusive);
- Ecological Supervision:
  - Prior to any disturbance/works to the stone barn, all contractors and operatives involved will be given a toolbox talk by the scheme ecologist to make them aware of the presence of roosting bats, their legal duties with regards to bats and the bat licence conditions. A copy of the bat licence will also need to be displayed on site;
  - If the dismantling of known or potential roost sites is required:
    - Any dismantling of known or potential roost sites (including within stone/brick/breezeblocks and of the fascia board and timber board behind sliding door) will be conducted under the supervision of an ecologist licenced to handle bats. The ecologist will first inspect relevant areas of the buildings for bats before works commence. Any bats found will be captured by the bat-licenced ecologist by hand (using gloves) or a static net, placed into a cloth bag and relocated to a pre-installed bat box;
    - Under supervision from the ecologist, known or potential bat roosting features will be removed by hand in a vertical rather than horizontal sliding motion. Any bats found will be relocated to the bat boxes using the above method;
  - If roost sites/potential roost sites will not be dismantled but will be blocked:

- Endoscope inspection of any known or potential roost sites will be undertaken before works commence. This is to be undertaken by a suitably licenced and experienced ecologist;
- If the feature(s) can be thoroughly searched and no roosting bats or evidence of roosting bats is recorded, the features are to be sealed immediately to ensure no bats enter the feature(s);
- If any feature(s) cannot be thoroughly searched or the absence of bats cannot be confirmed, bat excluders will be fitted to all bat access points. As bats do not always leave the roost every night to feed (e.g. due to cold temperatures, heavy rain or winds) the bat excluders will be left in place for at least 14 days of suitable weather to be confident that all bats have left the roost before access points are sealed. Features will need to be sealed immediately after the excluder(s) are removed;

- If any bats are discovered during this process, works will stop until the bat(s) vacate the building or the licensed bat handler removes the bat(s) and relocates them to a pre-installed bat box; and

- Post-Development Monitoring:
  - It is unlikely that post-development population monitoring will be required for roosts supporting small numbers of common and widespread bats. However, the named ecologist will visit the site, post-development, to check that compensatory roosts have been provided and submit information to Natural England via a licence return.

5.1 Appropriate compensation will be provided for the loss of known and potential roosting opportunities, in the form of bat boxes to be installed as part of the new development. The locations of bat boxes to be installed will be detailed within the method statement and associated plans, should a licence be sought. Standalone boxes or those mounted on nearby trees/buildings will be provided prior to any removal / disturbance of potential roosting features within the stone section of the barn.

5.2 In order to compensate for the loss of known and potential bat roosing habitat, the following will be installed:

- One 1FQ Schwegler Bat Roost (For External Walls), suitable for use as maternity roost; and
- Three Beaumaris Woodstone Bat Boxes, suitable for crevice dwelling bats such as common pipistrelle.

5.3 Bat roost features can also be designed into the new development, including:

- Installation of Morris bat slates on the roof pitches to replace lifted tiles and provide access points to the space between the slates and roof liner;
- Timber cladding mounted on 20-30 mm counter battens with bat access at the bottom or sides;
- Access to roof void/between the roof covering and liner via bat bricks, gaps in masonry (e.g. creation of gaps in the mortar along gable ends and the ridgeline to allow access into the roof void), soffit gaps, raised lead flashing or purpose-built bat entrances; and
- Access to roof voids over the top of a cavity wall by appropriately constructed gaps.

5.4 Following the release of Natural England's position statement regarding Non-Bitumen Coated Roofing Membranes (NBCRMs) in September 2022, any licence application covering the modification of bat roosts must include a certificate that proves the roofing membrane has passed a 'snagging propensity test'[2]. At the time of writing, TLX 'Bat Safe' is the only NBCRM which has passed this test. Membranes which have not passed this test should not be used as they may cause mortality of bats due to entanglement in long fibres. No certificate is required for the use of bitumen 1F felt that has a non-woven, short fibre construction.

5.5 To avoid disturbance to foraging, commuting and roosting bats, any new lighting schemes (including during the works and upon completion of the works) will be designed in accordance with the appropriate guidance (BCT/ILP, 2018) to minimise the impacts on foraging bats. Examples of low impact lighting schemes include, but are not limited to;

- Switching off lighting at night or using motion sensors;
- Lighting will be directed only to where it is needed and light spillage onto bat foraging/commuting habitats avoided, particularly to the west and north of the barn;
- Luminaires will always be mounted on the horizontal, i.e. no upward tilt;
- Accessories such as baffles, hoods or louvres will be used to reduce light spill and directed only to where it is needed;
- All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources will not be used. LED luminaires will be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability;
- Warm colour temperatures (ideally <2700 Kelvin) will be adopted to reduce the blue light component;
- Luminaires will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats. Column heights will be carefully considered to minimise light spill; and
- Only luminaires with an upward light ratio of 0% and with good optical control will be used.

Barn Owl

5.6 Barn owls are protected against disturbance whilst at or near a nest containing eggs or young. As barn owls can nest at any time of year, the roost will be checked by a licenced surveyor (one who holds a Natural England licence allowing them to disturb nesting barn owls) prior to any works commencing, in order to check for the presence of nesting barn owls. If nesting barn owls are identified, no works will be carried out within an appropriate radius (to be determined by the ecologist) of an identified nest until the young have fledged and are no longer returning to the nest site. Works will be undertaken only when the ecologist has declared the nest to be no longer in use. Barn owls typically incubate their eggs for approximately 32 days, and young typically fledge at 53-61 days old.

5.7 Due to the extensive evidence and the high suitability of the barn to be used by nesting barn owl, barn owls will be permanently accommodated within the site.

[2] A snagging propensity test checks that the membrane can stand the repeated snagging actions of roosting bats. To pass, a membrane must show no change in the average number of loops per cm2 as rotations are increased from 0 to 1000 (Eesha *et al* 2020).

5.8 Suitable compensation for the loss of the barn owl roost site within the stone barn comprises the provision of a dedicated nesting area within the agricultural barn. Guidance on ways of incorporating barn owl roosts into buildings are provided in the publications 'Barn Owls on Site – A Guide for Developers' (The Barn Owl Trust, 2009), and in a series of design and installation guides are available on the Barn Owl Trust website.

5.9 The following details relating to the provision of barn owls has been adapted from Barn Owls on Site – A Guide for Developers' (The Barn Owl Trust, 2009): *There are numerous ways in which provision for barn owls can be incorporated into buildings. As barn owls seem to prefer an enclosed nesting cavity high above the ground, the provision of a nest box can greatly enhance the suitability of the site.*

5.10 *As the young owls develop, they will move around a great deal before they can fly, for this reason it is important to position the entrance/exit hole at least 40 cm above the level of the nest area to prevent nestlings falling out. An adult barn owl needs a minimum of 40 cm headroom and the absolute minimum floor area recommended is 40 x 40 cm.*

5.11 *It is important to incorporate human access (i.e., within reach of a ladder) into the barn owls' nesting area as occasional maintenance may be needed.*

5.12 *Wherever possible the owls' entrance hole should be positioned:*

- *As least 3 meters above ground level;*
- *Avoiding obstructions such as trees and overhead wires;*
- *Facing away from prevailing wind;*
- *On the site of the building which will be the least disturbed after completion of the development; and*
- *Overlooking open countryside and visible to any passing birds.*

5.13 Where indoor boxes are provided in modern agricultural buildings, they are often installed on a gable wall, in view of an opening created in cladding (see photographs 19 and 20 below). Suitable boxes can be sourced from The Barn Owl Trust, and it is recommended to install the box and access point in advance of the development (and loss of their former roost/nest site), to encourage barn owls to discover it.

Photograph 19: Suitable barn owl box positioned in modern agricultural building

Photograph 20: Opening created for barn owls (with clear view of nest box)

Other Nesting Birds

5.14 Any works carried out within the bird nesting season (March to August inclusive) will be subject to a pre-clearance bird survey carried out by a suitably experienced ecologist in order to prevent any impacts upon nesting birds. No works will be carried out within an appropriate radius (to be determined by the ecologist) of an identified nest until the young have fledged and are no longer returning to the nest site. Works will be undertaken only when the ecologist has declared the nest to be no longer in use.

5.15 In order to mitigate against the potential loss of suitable nesting features, provision of alternative nesting features will be incorporated into the proposed development. A minimum of two Vivara Pro WoodStone House Sparrow Nest Box, two Vivara Pro Barcelona WoodStone Open Nest Box (suitable for blackbird), one External House Martin Nesting Cups (Double) and one External Sparrow Terrace Box will be erected on the re-developed building. The boxes will be installed upon completion of the works. Nest boxes will be positioned according to manufacturer instruction and should not be placed above window or door openings; they should ideally be located on quieter elevations of the buildings.

Site Re-survey

5.16 If no works are undertaken on site within 12 months of this survey or if any changes to the proposals are made, a further ecological survey may be necessary (because of the mobility of animals and the potential for colonisation of the site).

6. References & Bibliography

Bat Conservation Trust (2022).Things to Consider When Planning Works: Roofing Membranes. Bat Conservation Trust, London.

British Standards Institution (2013). BS 42020:2013 Biodiversity: Code of practice for planning and development. British Standards Institution, London.

Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). The Bat Conservation Trust, London.

Eeshan , E.A., Russell, S.J., Waring, S. (2020) Method for evaluating the snagging propensity of roofing membranes in buildings by roosting bats. Building Research and Information 48 (4).

English Nature (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Joint Nature Conservation Committee (2012). UK Post-2010 Biodiversity Framework. Available:
http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf

Jones, K and Walsh, A (2006). A Guide To British Bats. The Mammal Society, London.

Institute of Lighting Professionals (2018). Bats and artificial lighting in the UK. The Bat Conservation Trust, London

Mitchell-Jones, A.J. & McLeish, A.P. (2004). The Bat Workers' Manual (3nd Ed.). JNCC, Peterborough

Shawyer, C. R. (2011). Barn Owl Tyto alba Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting. IEEM, Winchester.

The Barn Owl Trust. (2009). Barn Owls on Site – A Guide for Developers.

Appendix A – Bat Roost Potential and Habitat Suitability Categories

Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape (Collins, 2016).

Suitability	Description of Roosting Habitat	Commuting & 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	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 habitats to be used on a regular basis or by a larger number of bats (i.e. unlikely to be suitable maternity or hibernation). A tree of sufficient size and age to contain potential roosting features but with none seen from the ground, or feature seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	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.	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. Habitat that is connected to the wider landscape that could be used by bats for foraging, such as trees, scrub, grassland or water.
High	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.	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. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats, such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close and connected to known roosts.

Appendix B – Barn & Emergence/Re-entry Survey Plan

Appendix C – Emergence/Re-entry Survey Results

Visit 1 Results:

Date: 19/05/22, Dusk, Sunset: 21:11 Survey start: 20:56, Survey end: 22:41	
Catrin Scott (Surveyor Location 1)	
Time and description of 1st contact	21:31 Soprano pipistrelle Emergence from adjacent farmhouse, then commuted from north-east to south-west.
Emergence	None recorded from barn.
Summary	Common pipistelle, soprano pipistrelle and noctule bats recorded. High activity levels recorded throughout. Including foraging to the north and west of the barn together with a well-used commuting route along the western and northern elevations of the barn (likely from the adjacent line of trees). Social calls and multiple emergences recorded from adjacent farmhouse.
Jordan Simpson (Surveyor Location 2)	
Time and description of 1st contact	21:45 Common pipistrelle Heard not seen
Emergence	None
Summary	Common and soprano pipistrelles recorded. Moderate activity levels recorded. Including foraging bats, social calls and commuting bats along the western elevation of the barn.
Mark Breaks (Surveyor Location 3)	
Time and description of 1st contact	21:39 Soprano pipistrelle Foraging into and out of building through window past surveyor.
Emergence	None.
Summary	Common pipistrelle, soprano pipistrelles and myotis sp. recorded. Moderate activity levels recorded within barn. Bats regularly seen flying in and out of windows/doors to forage inside barn. Maximum number of bats seen foraging at once = 3 common pipistrelle bats. Two barn owls present within barn – perched on steel beam within corrugated barn, then flew into stone barn.
Vincent Smith (Surveyor Location 4)	
Time and description of 1st contact	21:50 Common pipistrelle Commuting towards the north-east, along the southern elevation of the barn.
Emergence	None
Summary	Common pipistrelle bats recorded. Low levels of activity recorded, with majority of bats heard and not seen. Two commuting bats recorded, one commuting towards the north-east and one commuting south-west over the barn.

Visit 2 Results:

Date: 17/06/2022, Dawn, Sunrise: 04:36, Survey start: 02:25, Survey end: 04:51	
Jack Taylor & Thermal imaging camera (Surveyor Location 1)	
Time and description of 1st contact	02:25 Common and soprano pipistrelle Foraging activity recorded as soon as detector turned on.
Re-entry	**Four common pipistrelles** re-entries into gaps beneath the ridge tiles where mortar is missing on the western gable end. **One common pipistrelle** re-entry into gap behind timber track of the sliding door on the western elevation, however the thermal imaging camera shows the bats almost immediately fly out and leave. Inspection of the crevice at the end of the survey identified a section which was clear of cobwebs.
Summary	Common pipistrelle, soprano pipistrelle and brown long-eared bat recorded. Almost constant levels of activity recorded from start of survey until approximately 3:45, after which moderate levels recorded until approximately 4:15 when activity levels ceased. Including foraging and commuting along the northern and western elevations. Social calls and multiple re-entries recorded into adjacent farmhouse.

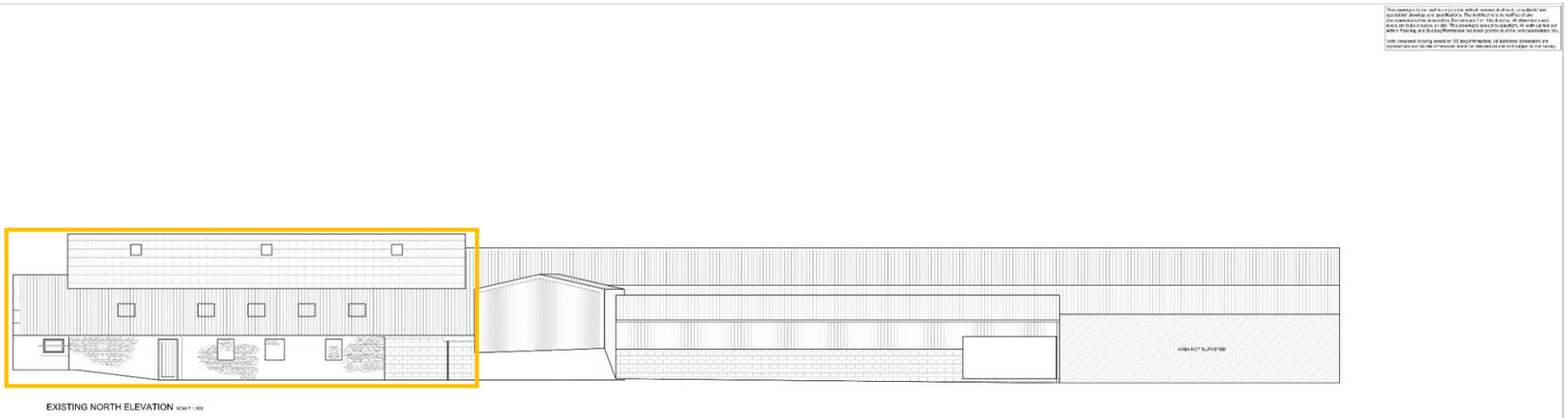
Jordan Simpson (Surveyor Location 2)	
Time and description of 1st contact	02:36 Common pipistrelle Heard, not seen
Re-entry	**As above.**
Summary	Common pipistrelle recorded. Moderate-low activity levels recorded. Foraging and commuting bats recorded along the western elevations.
Sam Robinson (Surveyor Location 3)	
Time and description of 1st contact	02:36 Common pipistrelle Foraging inside barn
Re-entry	**Thirteen common pipistrelle** re-entries into crevice within a section of breezeblock as a result of missing mortar within an internal wall. Social calling recorded, together with bats emerging, re-entering and re-emerging during the survey, suggesting the presence of young.
Summary	Common pipistrelle and brown long-eared bats recorded. Moderate activity levels of common pipistrelle recorded within barn. Bats regularly seen flying in and out of windows/doors to forage inside barn. Single brown long-eared bat recorded flying within the barn, final direction of bat not recorded due to low light levels and quiet calls.

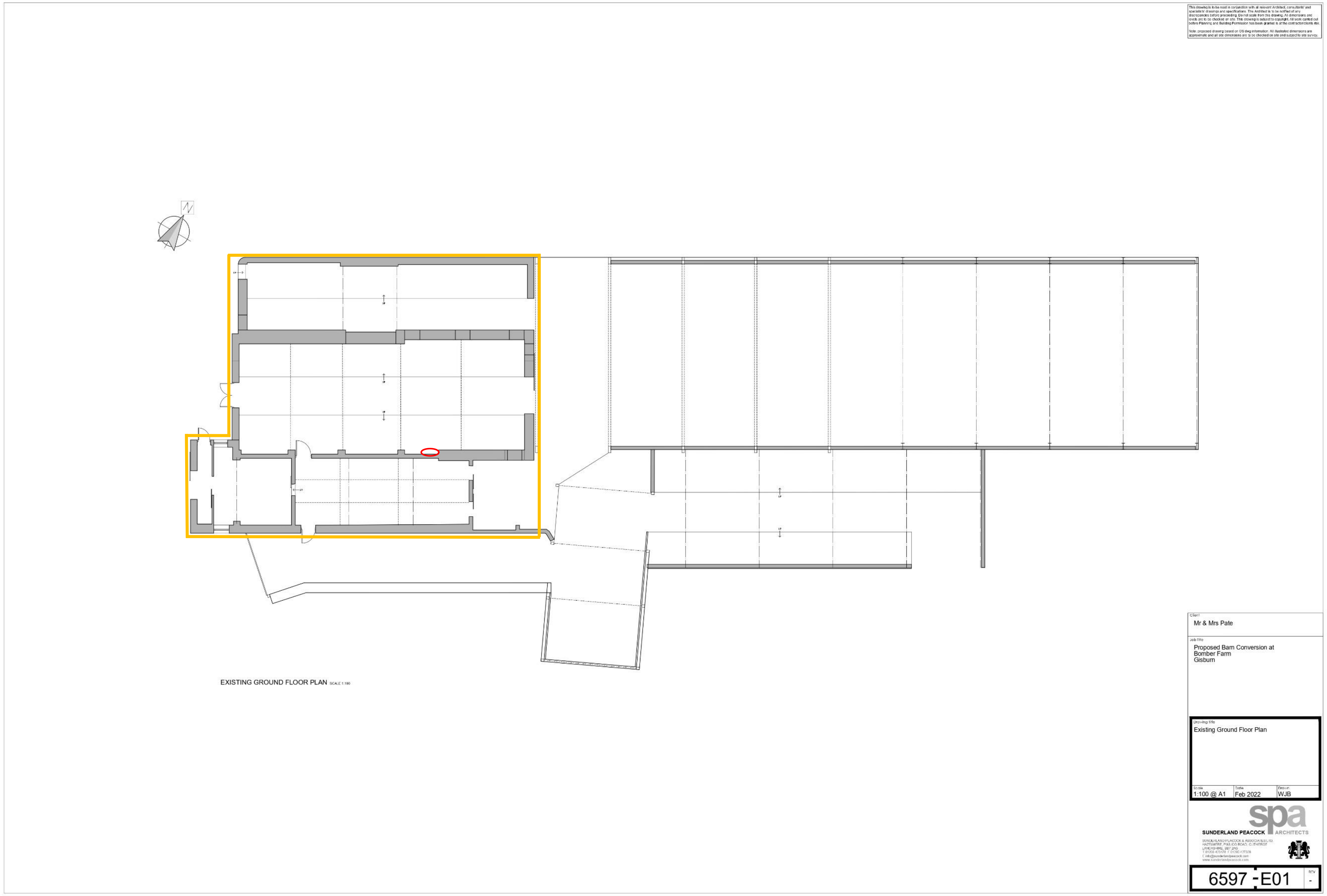
Visit 3 Results:

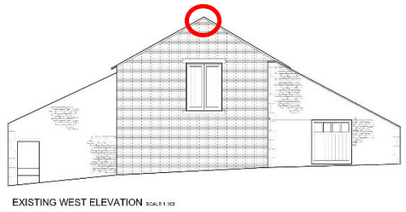
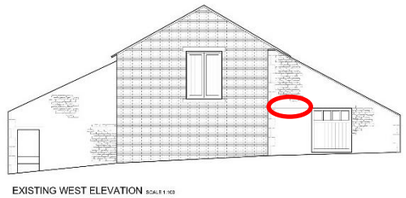
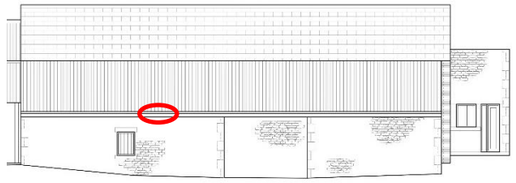
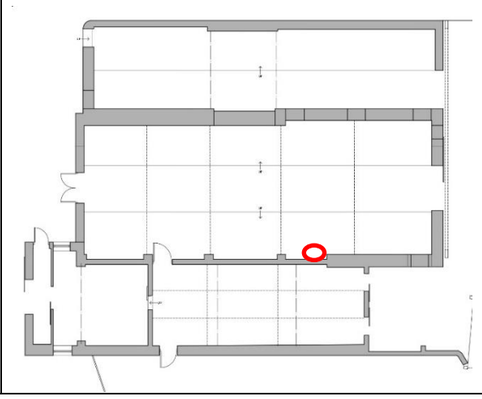
Date: 04/07/2022, Dusk, Sunset: 21:42, Survey start: 21:27, Survey end: 23:42	
Catrin Scott (Surveyor Location 1)	
Time and description of 1st contact	21:56 Soprano pipistrelle Commuting from east to west, along the northern elevation of the barn.
Emergence	**One common pipistrelle** emergence from gap beneath the ridge tiles where mortar is missing on the western gable end. Prior to the survey, an inspection of the fascia board along the northern elevation of the barn determined the presence of a **single bat (likely pipistrelle sp.)** roosting between the board and the stone elevation. This bat was not recorded to emerge during the survey.
Summary	Common pipistrelle, soprano pipistrelle and noctule recorded. Moderate foraging activity recorded. Including foraging to the north and west of the barn. Social calls heard intermittently from the adjacent farmhouse for duration of survey, along with multiple emergences.
Luke Hall (Surveyor Location 2)	
Time and description of 1st contact	21:57 Soprano pipistrelle Faint call, heard and not seen
Emergence	**As above.**
Summary	Common pipistrelle, soprano pipistrelle and myotis sp. recorded. Moderate-low activity levels recorded. Including foraging and commuting activity along the lane to the west of the barn.
Jack Taylor & Thermal imaging camera (Surveyor Location 3)	
Time and description of 1st contact	21:53 Common pipistrelle Heard, not seen
Emergence	**Suspected emergence of three common pipistrelle** bats from internal space. Exact emergence point(s) unknown.
Summary	Common pipistrelle bats recorded. Moderate activity levels recorded within barn, comprising of foraging bats.

Appendix D – Roost Locations

Orange = Stone Barn; Red = known roost sites




EXISTING GROUND FLOOR PLAN
Client
Mr & Mrs Pate
Job Title
Proposed Barn Conversion at
Bomber Farm
Gisburn
Drawing title
Existing Ground Floor Plan
Scale
1:100 @ A1
Date
Feb 2022
Drawn
WJB
spa
SUNDERLAND PEACOCK ARCHITECTS
6597 - E01
REV
-

Roost Entrance ID	Description	Location	Photograph
A	Common pipistrelle roost beneath the ridge tiles where mortar is missing on the western gable end. Visit 1: None Visit 2: Four common pipistrelles re-entries Visit 3: One common pipistrelle emergence		
B	Common pipistrelle roost behind timber track of the sliding door on the western elevation. Visit 1: None Visit 2: One common pipistrelle re-entry, however the thermal imaging camera shows the bats almost immediately fly out and leave. Visit 3: None		
C	Roost (likely common pipistrelle) behind fascia board along the northern elevation of the barn. Visit 1: None Visit 2: None Visit 3: One individual present prior to the start of survey (*Pipistrelle* sp.).		
D	Crevice within breezeblock in internal space of barn, towards the south. Visit 1: None Visit 2: Thirteen common pipistrelle re-entries. Social calling recorded, together with bats emerging, re-entering and re-emerging during the survey, suggesting the presence of young. Visit 3: None		

Appendix E – Information Sheet for Contractors on Bats

BATS

Information, legal responsibilities and best practice for the construction industry

bowland ecology

Legal Protection

All UK Bat species are protected by European and UK law, in practical terms this means it is an offence to:

- Deliberately capture, injure or kill a bat;
- Deliberately disturb bats;
- Damage or destroy a breeding site or resting place (even if bats are not occupying the roost at the time);
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place;
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat.

Penalties on conviction: the maximum fine is £5,000 per incident or per bat (some roosts contain several hundred bats), up to six months in prison, and forfeiture of items used to commit the offence, e.g. vehicles, plant, machinery.

Defences include:

1. Tending/caring for a bat solely for the purpose of restoring it to health and subsequent release.
2. Mercy killing where there is no reasonable hope of recovery (provided that person did not cause the injury in the first place – in which case the illegal act has already taken place).

Found a bat during unsupervised works?

Is the bat in immediate danger of injury?

YES

Using gloves or other protection place bat carefully in a lidded ventilated box with a piece of clean cloth and a small shallow container of water.

Call scheme ecologist Bowland Ecology: 01200 446 777.

Keep box in a safe, quiet location until scheme ecologist arrives.

NO

Stop work immediately and inform Site Manager.

Contact scheme ecologist - Bowland Ecology: 01200 446 777.

Do not expose bat or cause it to fly away.

The scheme ecologist will assess the situation and advise what needs to happen next. Works may need to stop until a licence has been obtained.

A written record should be kept and made available to Natural England or any police officer on request.

Field signs of bat presence:

- Live or dead bats: the smallest UK bat species, the pipistrelle is only 3.5-4.5cm long.
- Droppings: bat droppings look like mouse droppings but will crumble between your fingers (they are dry and made entirely of insects).
- Feeding remains: piles of butterfly/moth wings are often left below bat feeding perches.

Schematic from www.bats.org.uk

Bats can roost in the following places:

- The top of gable end or dividing wall;
- The top of chimney breasts;
- Ridge and hip beams and other roof beams;
- Mortise and tension joints;
- All beams/ceilings/pipework (free hanging bats);
- The junction of roof timbers, especially where ridge and hip beams meet;
- Behind purlins;
- Between tiles and the roof lining;
- Under flat felt roofs;
- Under barge boards;
- In cavity walls;
- In cracks in stone or concrete;
- Behind peeling paint/wall coverings;
- Gaps behind window and door frames;
- Between window panes and timber boarding.
- In trees (cracks/holes/ivy cladding).

Why wear gloves?

There is a small risk that some bats carry a rabies virus – European Bat Lyssavirus. The purpose of wearing gloves is to reduce the chance of being bitten, as the virus is transmitted via bat saliva. Thick leather gloves are appropriate for removing a bat from imminent danger but these should be clean.

In the event that you are bitten, wash the wound, gently but thoroughly, with soap and water. Speak to a health professional immediately, advising them that you have been bitten by a bat.

References:
Bat Conservation Trust. August 2016. Why wear gloves when handling bats?
BCT Bat Surveys for Professional Ecologists, Good Practice Guidelines, 3rd Edition, 2016

version 1 August 2017

Appendix F – Legal Information

This report provides guidance of potential offences as part of the impact assessment. This report does not provide detailed legal advice and for full details of potential offences against protected species the relevant acts should be consulted in their original forms i.e. 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.

Species	Legislation	Offences	Notes on licensing procedures and further advice
Bats *European protected species*	Conservation of Habitats and Species Regulations 2017 Reg 41	Deliberately[1] capture, injure or kill a bat; Deliberate disturbance[2] of bats; Damage or destroy a breeding site or resting place used by a bat. The protection of bat roosts is considered to apply regardless of whether bats are present.	An NE licence in respect of development is required in England. https://www.gov.uk/bats-protection-surveys-and-licences *European Protected Species: Mitigation Licensing- How to get a licence* (NE 2010) *Bat Mitigation Guidelines* (English Nature 2004) *Bat Workers Manual* (JNCC 2004) *BS8596:2015 Surveying for bats in trees and woodland* (BSI, 2015)
	Wildlife and Countryside Act 1981 (as amended)[4] S.9	Intentionally or recklessly[3] obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place.	Licence from NE is required for surveys (scientific purposes) that would involve disturbance of bats or entering a known or suspected roost site.

Species	Legislation	Offences	Notes on licensing procedures and further advice
Birds	Conservation of Habitats and Species (Amendment) Regulations 2012	N/A	Authorities are required to take steps to ensure the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat. This includes activities in relation to town and country planning functions.
	Wildlife and Countryside Act 1981 (as amended)[4] S.1	Intentionally kill, injure or take any wild bird; Intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; Intentionally take or destroy the nest or eggs of any wild bird. **Schedule 1 species** Special penalties are liable for these offences involving birds on Schedule 1 (e.g. most birds of prey, kingfisher, barn owl, black redstart, little ringed plover). Intentionally or recklessly[3] disturb a Schedule 1 species while it is building a nest or is in, on or near a nest containing eggs or young; intentionally or recklessly disturb dependent young of such a species.	No licences are available to disturb any birds in regard to development. Licences are available in certain circumstances to damage or destroy nests, but these only apply to the list of licensable activities in the Act and do not cover development. General licences are available in respect of 'pest species' but only for certain very specific purposes e.g. public health, public safety, air safety. https://www.gov.uk/wild-birds-protection-surveys-and-licences https://www.gov.uk/prevent-wild-birds-damaging-your-land-farm-or-business

[1] Deliberate capture or killing is taken to include "accepting the possibility" of such capture or killing [2] Deliberate 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 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. Lower levels of disturbance not covered by the Conservation of Habitats and Species Regulations 2017 remain an offence under the Wildlife and Countryside Act 1981 although a defence is available where such actions are the incidental result of a lawful activity that could not reasonably be avoided. Thus deliberate disturbance that does not result in either (a) or (b) above would be classed as a lower level of disturbance. [3] The term 'reckless' is defined by the case of Regina versus Caldwell 1982. The prosecution has to show that a person deliberately took an unacceptable risk, or failed to notice or consider an obvious risk. [4] The Wildlife and Countryside Act (1981) has been updated by various amendments, including the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006. A full list of amendments can be found at https://jncc.gov.uk/our-work/wildlife-countryside-act/

Appendix G – Development Proposals