Granham House, Hothersall

Protected Species Survey & Recommendations Report (Bats).

Compiled by Ecology Services Ltd.

Members of the Chartered Institute of Ecology and Environmental Management.

On behalf of

Mr. P. Dunne

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1.0 Introduction

1.1 Ecology Services Limited was commissioned by Mr. P. Dunne in July 2014 to carry out a bat investigation of Granham House Barn, Hothersall, Preston, Lancashire; National Grid Reference; (NGR) 361977, 435241. See Map 1 Showing the location of the site.

1.2 The aim of the survey was to:

- Undertake an inspection and assessment survey of the residential building on site to ascertain if potential or evidence of use existed for any bat species.
- And if found, to determine if more detailed surveys are required.
- Following the initial investigation survey, further activity surveys were recommended, this report also includes the results of the activity survey.

1.3 It is understood that the proposals at the site include external works to the south western section of the roof for the installation of several Velux windows. These works will not affect the ridge or the northwest gable end of the main building nor does it affect the roost located at the soffit on the north eastern elevation. On the northwest elevation, where the single extension joins the main building, there is a glass panel over the external door which goes into the roof line, to allow further light into the building. The proposals also include three new large glass doors which are to be installed with a smaller glass section located on the single storey part of the building, on the southwest external elevation. The plans of which are shown on Map 2.

1.4 As part of the Local Authority's environmental policies, surveys are required to be undertaken on schemes which may have the potential to affect protected species, i.e. bats.

1.5 All survey works were undertaken by suitably experienced ecologists and at a suitable time of year.

2.0 Statutory and Planning Context

Bats and their Requirements

2.1 All British bats and their roosts are afforded protection under the 1981 Wildlife & Countryside Act (as amended) and are listed in Schedule 2 of the Conservation of Habitats & Species Regulations 2010 (as amended).

2.2 When dealing with cases where a European Protected Species (EPS) (all UK bats) may be affected, a Local Authority is a 'competent authority' within the meaning of regulation 7 of the Conservation of Habitats & Species Regulations 2010 (as amended). The Local Authority must therefore exercise their functions under the provisions made within the 2010 Regulations and planning decisions should only be made when European Protected Species are fully taken into account.

2.3 The National Planning Policy Framework (NPPF) places a clear responsibility on Local Planning Authorities to conserve and enhance biodiversity and to encourage on the consideration that should be given to Protected Species where they may be affected by development. The Office of the Deputy Prime Minister (ODPM) Circular 06/2005 provides administrative guidance on the application of the law in relation to planning and nature conservation. This is supported by a guide to good practice entitled 'Planning for Biodiversity and Geological Conservation: Building in Biodiversity' in which paragraphs 5.34 and 5.35 identify that species such as bats are highly dependant upon built structures for survival and that roosts can be easily incorporated into existing and new developments/conversions to benefit these species.

2.4 A Local Planning Authority (LPA) has a duty to ensure that protected species and habitats within the UK are a "material consideration" in the determination of a planning application. Therefore, a LPA is unlikely to determine an application until all relevant information relating to protected species or habitats is submitted in support of the application. Relevant information includes; adequate surveys and a method statement (the latter only if required) for their approval which will need to be submitted along with the planning application.

2.5 Where bats are affected by development then a licence to derogate from the Conservation of Habitats and Species Regulations 2010 (as amended) would be required. European Protected Species (EPS) mitigation licence applications are processed and issued by Natural England and the EPS licence can only be applied for, once planning permission is granted, if planning permission is required.

2.6 Natural England may grant an EPS mitigation licence for the purpose specified in paragraphs 2 of the Regulation. The purposes are:-

- 53(2)e preserving public health or safety or other imperative reason of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment.
- 53(2)f preventing the spread of disease.
- 53(9)a that there is no satisfactory alternative.
- 53(9)b that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable status in their natural range.

2.7 A bat roost may be defined in several ways:

a) Maternity roost
b) Summer roost
c) Mating roost
d) Feeding roost
e) Hibernation roost
f) Transitional or temporary (night/day) roost

2.8 Roost selection is often closely correlated, to suitable foraging habitat within a reasonable commuting distance from the roost. Different sites are used throughout their active season which is dependent upon insect densities and abundance. Climatic conditions can also affect their ability to successfully forage. All British bats are insectivorous.

3.0 Methodology

Inspection & Assessment Survey Method

Buildings / Structures

3.1 The optimum time to investigate buildings for evidence of a bat roost is between May and August. Inspections and assessments may be conducted outside of this time and can often provide conclusive results which can save expense and time for Planning Applicants.

Buildings / Structure Roost Criteria

3.2 Roost assessment for buildings/structures follows the below system, which is based upon the Bat Conservation Trust 'Bat Surveys: Good Practice Guidelines' (2012).

"Negligible" No features likely to be used by bats (roosting).

"Low" No features that could be used by bats (roosting).

Small number of potential (opportunistic) roosts, isolated habitat, isolated site that is not connected by suitable linear features.

"Moderate" Several potential roosts, habitat could be used by foraging bats and the site is connected to suitable habitat with the wider survey area.

"High" Significant features for roosting bats, high quality habitat for foraging, site is connected with the wider landscape and is close to known roost sites or bat foraging/commuting.

"Confirmed" Evidence that the building is being used by bats; bats seen roosting, droppings, carcasses, feeding remains, bats are recorded/observed, or bats are heard within the building/structure.

3.3 For this methodology it should be borne in mind that inspections can also be inconclusive and if potential was found or the results of the survey were undetermined, then recommendations would indicate the requirement for further detailed activity surveys. Further activity (dusk emergence/pre dawn re-entry) surveys can only be undertaken at the site, during the breeding season for bats, which is between May and August inclusive. The results, conclusions and recommendations are based upon surveyor experience and knowledge of bat ecology.

3.4 A thorough exterior inspection of the building was undertaken. The interior of the building was inspected, but as no roof void is present and the interior is well sealed, no detailed inspection was possible. Signs surveyed for externally were droppings, dead bats, feeding remains (beetle, moth and butterfly remains), urine staining and grease marks around crevices and down walls, and any noises such as scratching and squeaking. An INOVA T4 torch (303 lumens – 213m beam) and close focussing binoculars were used to check any features of interest not accessible.

3.5 During the survey the surrounding area was assessed in relation to suitable habitat that may be of value to bats.

Activity Survey Methodology

3.6 The activity surveys required two surveyors on any one survey to enable all areas previously identified bat roosting potential to be covered. Surveyors noted any visual observations of bat activity and were aided by the use of the following equipment; Batbox Duet, a heterodyne and frequency division bat detector, used in conjunction with Anabat SD1/2 detectors, which were set to record so that data could be analysed if required.

3.7 A total of three activity surveys were undertaken at the site at an optimal time of year over the active breeding season of bats. These were conducted between the 30th of July 2014 and the 27th of August 2014 inclusive and consisted of two dusk emergence survey and one dawn re-entry survey.

3.8 Surveys were conducted following "The Bat Workers Manual "(JNCC 2004), "The Bat Mitigation Guidelines" (EN 2004) and the Bat Conservation Trust Bat Survey Good Practice Guidelines (2012) recommendations.

Personnel

3.9 All daytime survey works were undertaken by an experienced Chartered Ecologist; Miss V. Webster, who holds a Bat Class Licence (Registration number CLS02606).

3.10 The further activity surveys were conducted by Licensed Principle Ecologist Mrs L Eccles-Sargeant (Registration number CLS00572) and experienced Ecologists who have regularly been involved with activity surveys including; experienced Ecologists Mrs. Z. Foster and Miss. B. Walker.

Timing

3.11 The daytime survey was conducted on the 16th July 2014 when the building that will be affected by the proposed works was inspected for potential places that may be of value to bats and to see if evidence of use was present.

3.12 The daytime survey was conducted at a time when bats are fully active and maternity colonies are in occupation. Females will have given birth and young will be present within the roost. Evidence of bat occupation is likely to be detected, should they be present at the site.

3.13 The activity surveys were undertaken on the 30th of July 2014 and the 27th of August 2014 during the peak activity season.

Constraints

3.14 Although there was access into the building, the building does not have a roof void. The rooms within the building are open to the eaves and the ceiling was well sealed. For this reason it was only possible to undertake a detailed external inspection of the building and access externally was good.

3.15 There are no known constraints that would have adversely affected the inspection or activity surveys completed.

3.16 Overall, there are limitations to the survey undertaken and these have been taken into consideration when conclusions, impacts and recommendations have been made.

4.0 Survey Results

Desktop Study

UK Species of Principal Importance

4.1 Section 41 of the Natural Environmental and Rural Communities Act 2006 (NERC) lists several bat species as UK Species of Principal Importance, as follows:

- Noctule Bat (*Nyctalus noctula*)
- Soprano Pipistrelle Bat (*Pipistrellus pygmaeus*)
- Brown Long-eared Bat (*Plecotus auritus*)
- Lesser Horseshoe Bat (*Rhinolophus hipposideros)*
- Greater Horseshoe Bat (*Rhinolophus ferrumequinum)*
- Barbastelle Bat (*Barbastella barbastellus*)
- Bechstein's Bat (*Myotis bechsteinii*)

National Status

4.2 There are 18 species of bat that are native to the United Kingdom. Little is known about the status of most species although the available evidence suggests a general decline in populations nationally (Harris, S. et al. 1995). The commonest species of bats are the pipistrelle family (*Pipistrellus* sp), although these are also estimated to have declined in numbers by 70% between 1978 and 1993.

Local Biodiversity Action Plan

4.3 Lancashire Biodiversity Action Plans (LBAP) list eight bat species as being present in Lancashire, these are as follows:-

- Brown Long-eared Bat
- Whiskered Bat (*Myotis mystacinus*)
- Brandt's Bat (*Myotis brandtii*)
- Daubenton's Bat (*Myotis daubentonii*)
- Noctule Bat
- Common Pipistrelle Bat (*Pipistrellus pipistrellus*)
- Soprano Pipistrelle Bat
- Natterer's Bat (*Myotis nattereri*)

4.4 Nine species of bat have been regularly recorded in Lancashire, which include the above list, with the addition of Nathusius Pipistrelle Bat (*Pipistrellus nathusii*) and Lesser Horseshoe (*Rhinolophus hipposideros*).

Regional Status

4.5 The north west of England appears to be a stronghold for Whiskered and Brandt's bats, both of which are reasonably rare in southern England.

Local Status

4.6 Populations of bats in many parts of Lancashire are comparable in size and importance to some of the best areas in the country.

4.7 The valleys of the Lune, Wyre, Hodder, Ribble and their tributaries hold substantial populations of Pipistrelle and Daubenton's bats. Many colonies of the latter species roost in bridges over the rivers. There are also good numbers of most of the other listed bat species in this area.

4.8 Clusters of Brown long-eared colonies are known in the Silverdale area, Fylde and West Lancashire and Whiskered and Brandt's bats are probably more common in the north of the county than in southern Lancashire.

4.9 Ponds in the Fylde, mill lodges and reservoirs in eastern Lancashire and other areas provide concentrated feeding areas for many bats.

Inspection & Assessment Survey Results

4.10 The survey site lies in rural Hothersall, approximately 6km northeast of the city of Preston and 1.6km southeast of the town of Longridge.

4.11 The fields immediately surrounding the site are grazed. Beyond Hothersall Lane to the east there is a large plot of woodland, Leece's Wood, an Ancient and Semi-Natural Woodland over 12ha in size, which provides potentially good foraging and roosting habitat for bats. Other near-by woodlands (within 1km) include Hothersall Wood located approximately 700m to the east of the site, King Wood, approximately 650m to the southwest, Stubbins Wood located approximately 750m to the south and College Wood, located approximately 700m to the north of the site, all of which are classified as Ancient Woodland in total or in part. There are many ponds in the surrounding land, 10 within 500m of the survey site. Water is an important resource for bats, especially during the maternity period and a nearby water supply increases the likelihood that bat roosts will be present in the locality.

4.12 The wider landscape surrounding Granham House Barn comprises of mainly grazing pasture, agricultural land and scattered plots of woodland, including additional plots of Ancient and Semi-Natural woodland. A network of tree lines and hedgerows provide good potential habitat corridors for bats moving across the landscape.

4.13 The River Ribble, lies approximately 1.5km to the southeast at the closest point and is an important habitat corridor, facilitating the movement of bats across the wider area. The river and also Alston Reservoir, approximately 1km to the northwest, also provide good potential feeding grounds for bats.

4.14 Overall, the habitats within the immediate and wider survey area are considered to be of high value for bat species and this increases the potential use of the building by bats in the area.

4.15 A description of the building at Granham House Barn can be found in Table 1 below.

Table 1: Description of the Building

Building A
Description:
The building can be divided into two areas; the main house (or barn) and the extension. The main house is two-storey, constructed of stone with a pitched, slate roof. The main building is oriented northwest to southeast. The stone and mortar walls of the main house are in good condition. The extension is on the northern half of the southwest elevation. The extension extends from the eaves of the main house and the roof slopes continuously from the original. The extension is single-storey, open to the eaves and constructed of brick. There are 6 sky-lights in the roof. The exterior is painted white and the walls are in good condition. All windows in the building are uPVC as are the soffits and fascias.
Roost potential signs:
Structurally, the house is in good condition. The walls of the building are well maintained and hold few potential roost sites for bats, such as cracks in the stone. The plastic soffits and fascias are well sealed. The slate roof, however, does contain features that may be used by roosting bats. There are many gaps under the slates on the extension and the main house where they are slightly lifted, particularly on the lower extension. There are also gaps under the slates near the ridge, which may provide access into the void under the ridge tiles. The lead flashing on the southern side of the chimney base is also lifted, providing potential bat roost opportunities. These small crevices and gaps provide potential roost space that may be favoured in particular by crevice-dwelling bats, such as pipistrelle species. In addition, that southwest orientation of the sloping extension roof means the slates may be warmed regularly by the sun, a factor favoured by roosting bats. The building is considered to have **moderate** bat roost potential.

4.16 Taking into account the **moderate** bat roost potential contained within Building A, further activity surveys were undertaken. During the first activity survey probable emergence was observed, during the second survey emergence was confirmed, as such the level of survey effort was increased as the building was found to contain a confirmed bat roost. The results of the activity surveys are presented within the following section.

Activity Survey Results

4.17 The raw data from the activity surveys can be found within Appendix 3. An overview of dates, times and the results of the surveys are provided overleaf.

Table 2: Overview of Activity Surveys

Date & Times of survey	Date	Weather Conditions
Dusk Emergence Survey: Start time: 20.38 Finish time: 22.17	30.07.14	Sunset: 21.12 Start Temp: 17°C Finish Temp: 16°C Weather: Dry, calm sunny, slight breeze with 95% cloud cover.
Dawn Re-entry Survey: Start time: 03.45 Finish time: 05:48	15.08.14	Sunrise: 05:48 Start Temp: 12°C Finish Temp: 12°C Weather: Dry, no wind with 100% cloud cover.
Dusk Emergence Survey: Start time: 19.50 Finish time: 21.16	27.08.14	Sunset: 19:14 Start Temp: 16°C Finish Temp: 16°C Weather: Dry, slight breeze, with 100% cloud cover.

Activity Survey No.1

4.18 The first activity survey was undertaken by two surveyors on the 30th of July 2014. A bat was observed that may have exited the roof or flew from over the roof so confirmed bat emergence could not be fully verified. No other evidence of bat emergence was recorded by either of the surveyors.

4.19 Commuting and foraging activity was identified at the site surrounding the surveyed building, mainly located along the northern and eastern elevations of the building. Bat species identified comprised of common pipistrelle and noctule bats.

Activity Survey No.2

4.20 The second activity survey was undertaken by two surveyors on the 15th of August 2014. Bat re-entry was observed on the north eastern elevation at the roof line. The bat did not echolocate as it was daylight when the re-entry occurred.

4.21 Commuting, foraging and feeding activity was identified at the site mainly surrounding the south east of the site along the lane. Bat species identified included common pipistrelle and noctule.

Activity Survey No.3

4.22 The third activity survey was undertaken by two surveyors on the 27th of August 2014. Bat emergence was observed from the upper northwest gable and from the northeast section of soffit on the north east elevation.

4.23 Commuting, foraging and feeding activity was identified at the site surrounding the surveyed building. Bat species identified consisted entirely of common pipistrelle.

5.0 Conclusion

5.1 Building A (Granham House Barn) was found to contain **moderate** bat roost potential when considering the number of crevices and gaps within the roof structure that provide potential bat roosting opportunities. Also due to the good location of the building within a landscape

that provides high value foraging and roosting habitat for bat species with good commuting corridors and habitat links.

5.2 No evidence of past or present use of the building by roosting bats was identified during the initial inspection.

5.3 The Bat Surveys Good Practice Guidelines produced by the Bat Conservation Trust (2012), recommends a minimum number of presence/absence activity surveys which are required to provide confidence in negative preliminary roost assessments results from buildings and built structures in summer. These are determined for each building by the level of potential assigned to the individual structure. See Appendix 1 for the full table.

5.4 For buildings with moderate roost potential, two dusk emergence and/or pre-dawn re-entry surveys are recommended during May to September. The optimum time period is May to August. During the initial activity survey a probably emergence was observed and during the second activity survey re-entry was observed which confirmed roosting at the site. In line with the Bat Conservation Trust (2012) guidelines for buildings that contain bat roosts the surveys were increased to three activity surveys.

5.5 To conclude, the activity surveys identified two confirmed summer/transitional bat roosts at Building A being used by low numbers of a common bat species (common pipistrelle) at the ridge of the northwest gable and to the northeast elevation at the soffit.

6.0 Implications and Recommendations

6.1 Building A (Granham House Barn) contains two confirmed bat roosts, one located at the top of the northwest gable and the second under the north eastern soffit on the north eastern elevation. The adjacent building also contains a probable bat roost, albeit this building is not being affected.

6.2 The two confirmed summer/transitional roosts found at Granham House Barn, are being utilised by small numbers of a common bat species (common pipistrelle) and are considered to be of relative Low conservation value.

6.3 It is understood that the proposals at the site include external works to the south western section of the roof for the installation of several Velux windows. These works will not affect the ridge or the northwest gable end of the main building nor do they affect the roost at the soffit on the north eastern elevation. On the northwest elevation, where the single extension joins the main building, there is a glass panel over the external door which goes into the roof line, to allow further light into the building. The proposals also includes the installation of three new large glass doors with a smaller glass section located on the single storey section of the building, on the southwest external elevation. The plans of which are shown on Map 2.

6.4 After review of the proposed works it is considered that there is a window of opportunity to undertake the works during the hibernation season, as roofs are typically used for summer roosts by bat species. The external Velux windows and the glass panel works can therefore be undertaken during the winter months when it is considered that bats will not be present.

6.5 The works on the southwest elevation (three glass doors and the smaller glass section) are considered to be a sufficient distance away from the confirmed bat roosts. No bat roost

potential was located on the south western wall. Therefore it is considered unlikely that roosting bat/s will be affected by these works.

6.6 For the external roofing and glass panel works a review of legislation has been undertaken to determine if the works can be undertaken under a Method Statement or require a European Protected Species Mitigation Licence.

6.7 In summary the Law states that it is an offence to:

1. Intentionally or recklessly disturb a bat while it is in its shelter;
2. Sell, transport or have a live or dead bat in their possession;
3. Deliberately damage or destroy a place used by bats for shelter or protection;
4. Damage or destroy a place used by bats for breeding or resting is an absolute offence.

6.8 Item 1 - It is considered unlikely that bats will be intentionally or recklessly disturbed if the works can be undertaken at a time when bats are likely to be absent from the roofline, such as in winter. Buildings are typically used by bats in the summer season and not for hibernation, as they require stable temperatures for hibernation.

6.9 Item 2 – Is not applicable on this occasion.

6.10 Item 3 – The works do not directly affect the roost locations therefore, deliberate damage or destruction of a place used by bats for shelter or protection will be avoided. The entrances to northwest gable roost and the northeast soffit roost will not be affected. The works do not affect the ridge of Granham House Barn and are not in close proximity to the northeast gable roost. The glass panel will affect the single storey roof line at this location the roof line is tight with no potential for roosting bats. Furthermore, it is located a sufficient distance from the roost at the northwest gable to cause any damage or destruction.

6.11 Item 4 – Damage or destroy a place used by bats for breeding or resting (an absolute offence). The works do not directly affect the roosts and therefore damage or destruction shall not occur.

6.12 Therefore it is considered that the roofing works can be undertaken during winter, with the implementation of non-licence avoidance measures, as follows:-

- The roofing works shall be carried out between the months of November to February, inclusive.
- A licensed bat Ecologist shall provide all Contractors with a tool-box talk covering the below points and what to do should a bat/s be found or suspected.
- Scaffold shall be erected in such a manner as to avoid blocking any known roost entrances/exits.
- Careful removal of tiles for the installation of Velux and glass panel of the roof shall be undertaken under the supervision of a licensed bat ecologist.
- Careful removal of stonework (by hand) along the small section of roof line at the single storey extension for the glass panel under the supervision of a licensed bat ecologist.
- Although the works do not affect roost entrances, Contractors shall ensure that the entry holes remain unblocked at all times.

6.13 <u>If at any time a bat/s or evidence of bat/s is/are suspected or found, all works must cease immediately and advice should be sought from either Natural England or the acting Consultant.</u>

6.14 As bats are mobile creatures and can form new roosts at any time if works are not started within one year of this report then it may be necessary to repeat certain surveys.

7.0 References

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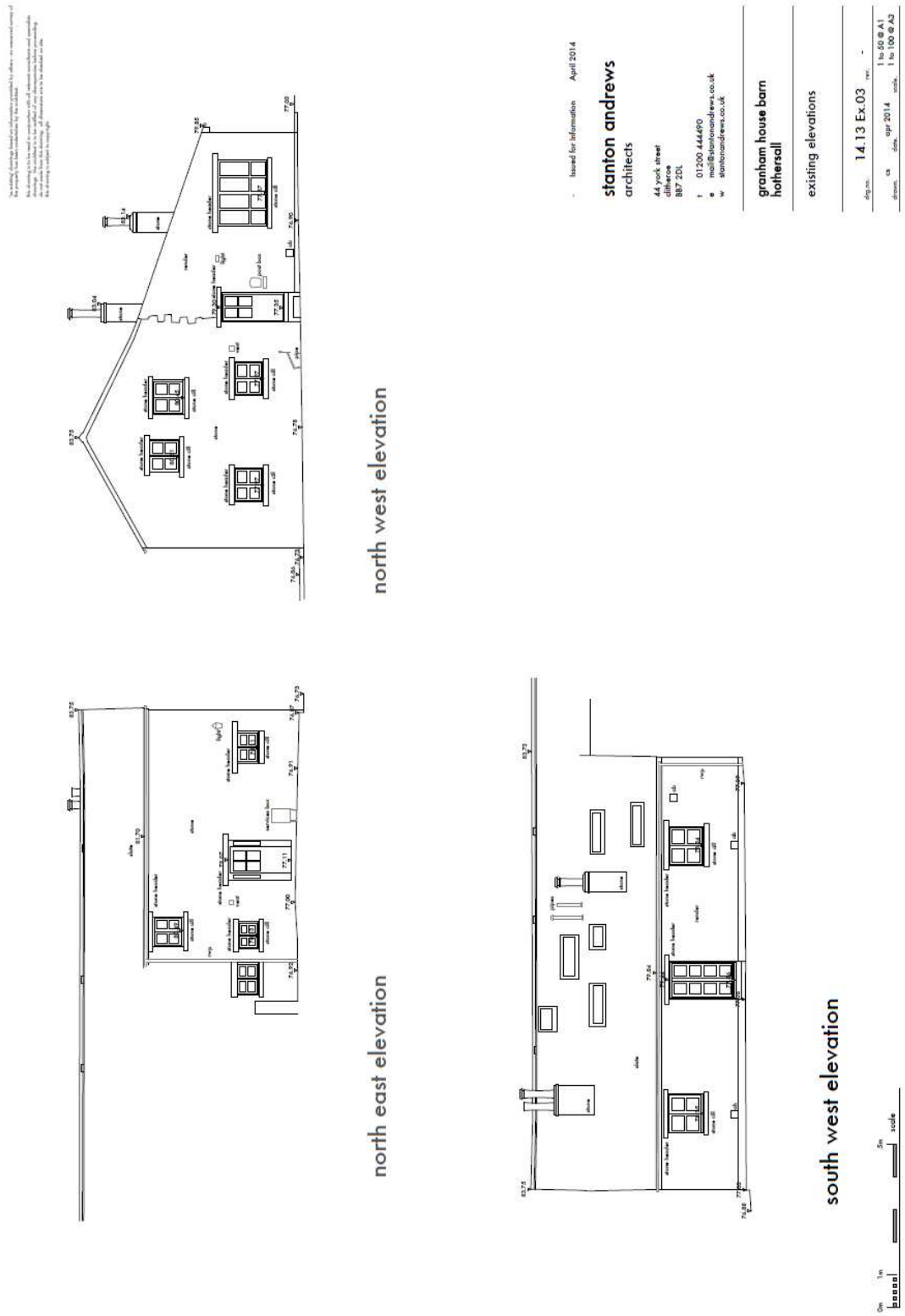
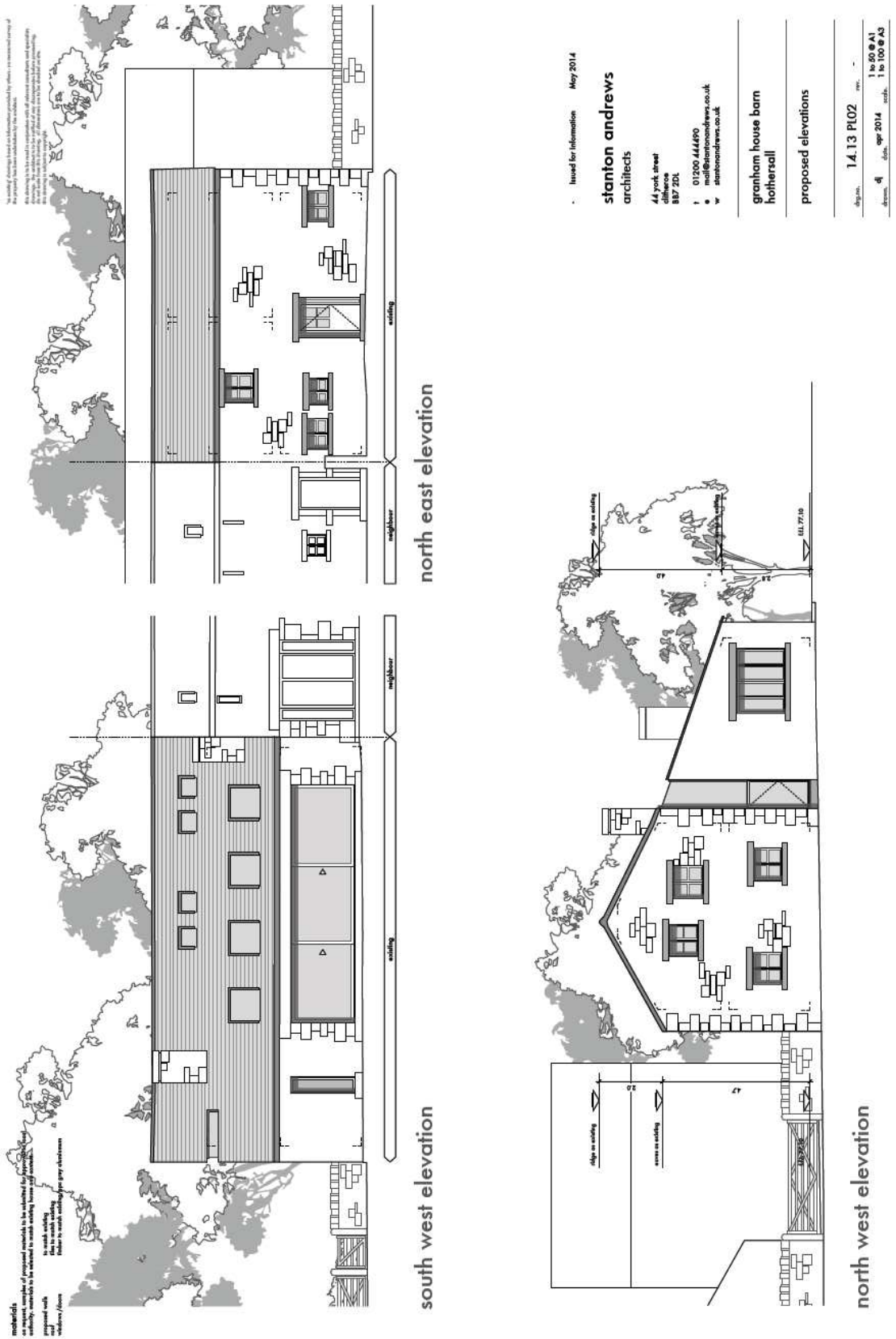
Map 1:
Existing Site Plan



Map 2:
Proposal Development Plan



Map 3:
Activity Survey Results and Surveyors' Locations

KEY:

S1 Surveyors' positions

Exit/entry points to bat roosts

Probably entry point on adjacent property

Bat activity

Property boundary

Appendix 1:

Table 8.5 Minimum Number of Presence/Absence survey visits required to provide confidence in negative preliminary roost assessment results for buildings, built structures and trees in summer. (Taken from the Bat Conservation Trust Bat Survey Good Practice Guidelines (2012)

High roost potential	Low to moderate roost potential	Low roost potential
3 dusk emergence and/or pre-dawn re-entry surveys during May to September. Optimum period May to August.	2 dusk emergence and/or pre dawn re-entry surveys during May to September. Optimum period May to August.	1 dusk emergence and/or pre-dawn re-entry survey during May to September. Optimum period May to August.
If bats are discovered emerging from any of the buildings during the surveys, the survey schedule should be appropriately adjusted to increase the survey effort so that sufficient information can be collected. **Note: two surveys carried out within the same 24 hours period constitutes as 1 survey.**		

The information within the above Table 8.5 is guidance and it is up to the acting consultant to determine in their expert judgement the overall level of survey that is required, this is based upon their knowledge, experience and is site specific i.e. taking into account the site conditions.

Appendix 2:
Site Photographs

Southwest elevation of the property (the extension)

Southwest elevation of the property (continuation of the extension)

Lifted slate and crevices under slates on the south-west extension of the building.

Example of lifted lead flashing

Northwest gable, there is a small gap at ridge that is a confirmed bat roost.

North eastern elevation showing bat re-entry point (05:29 (red arrow)) and probable re-entry (05:11 (blue arrow)) location on adjacent property.

Appendix 3:
Raw Survey Data

Type of Survey:		Dusk emergence survey		**Start Time:**	20:38	**Finish Time:**	22:17
Date:	30/07/14	**Sunset:**	21:12	**Start °C:**	17	**Finish °C:**	16
Weather conditions:	Dry, calm and sunny.			**Cloud cover (%):**	95	**Wind strength:**	(2) Light breeze.
Surveyor Position 1:		**Zoe Foster**					
Time:	**Activity:**						
21:41	Bat – not echo-locating came from east, down side of house on surveyors 2 side.						
21:46	Bat – not echo-locating may have come out of the roof or over the roof near the raised air vent on the main house.						
21:51	Common pipistrelle commuting - came from south, the right of the extension in front on surveyor and towards surveyor 2.						
21:56	Noctule (HNS).						
22:09	Common pipistrelle from area to left of house over garden						
22:11	Common pipistrelle commuting.						
22:14	Common pipistrelle heard not seen (HNS).						
22:17	Common pipistrelle commuting.						
Surveyor Position 2:		**Bethany Walker**					
Time:	**Activity:**						
21:50	Common pipistrelle commuting from south to north.						
21:51	Pipistrelle sp. seen not heard, to the east and north of the house. .						
21:54	Pipistrelle sp. seen not heard.						
21:56	Pipistrelle sp. seen not heard.						
21:57	Bat HNS commuting.						
21:58	Pipistrelle sp. seen not heard.						
22:00	Bat HNS commuting.						
22:05	Bat – seen not heard.						
22:10	Common pipistrelle foraging HNS.						
22:14	Common pipistrelle commuting HNS.						
22:15	Common pipistrelle commuting, heard and seen, from west to east.						
22:17	Bat – HNS.						
22:20	Noctule HNS.						

Type of Survey:		Dawn re-entry survey		**Start Time:**	03.45	**Finish Time:**	05.48
Date:	15/08/14	**Sunrise:**	05:48	**Start °C:**	12°C	**Finish °C:**	12°C
Weather conditions:	Dry.			**Cloud cover (%):**	100%	**Wind strength:**	0
Surveyor Position 1:		**Zoe Foster**					
Time:	**Activity:**						
04:46	Common pipistrelle HNS.						

Surveyor Position 2:	**Lyn Eccles-Sargeant**
Time:	**Activity:**
03:57	Faint bat call HNS.
04:25	Faint bat call HNS.
04:27	Common pipistrelle HNS.
04:30	Noctule HNS, brief pass.
04:42	Common pipistrelle HNS.
04:45	Noctule HNS.
04:48	Common pipistrelle HNS.
04:57	Common pipistrelle HNS.
05:11	Common pipistrelle feeding very close to roof over barn ridge probably entry on adjacent property (close to 2nd roof vent along roof).
05:17	Barn owl
05:29	Bat, not echo locating (daylight), re-entry under soffit (above darker brown brick).

Type of Survey:		Dusk emergence survey		**Start Time:**	19:50	**Finish Time:**	21:16
Date:	27/08/14	**Sunset:**	19:14	**Start °C:**	16°C	**Finish °C:**	16°C
Weather conditions:	Dry			**Cloud cover (%):**	100%	**Wind strength:**	2

Surveyor Position 1:	**Zoe Foster**
Time:	**Activity:**
20:25	Bat emerged out of the northwest gable apex seen not heard.
20:33	Bat emerged out of the northwest gable apex seen not heard.
20:45	Bat not echo-locating, surveyor thinks it came along the roofline.
20:45	Common pipistrelle emerged out of left hand side of north west gable apex.
21:09	Common pipistrelle came over/along roof line.
Surveyor Position 2:	**Lyn Eccles-Sargeant**
Time:	**Activity:**
20:22	Bat emerged from the north eastern corner of building probably at the soffits.
20:24	Common pipistrelle emerged out of northwest gable flew to east
20:27	Common pipistrelle commuting along lane.
20:33	Common pipistrelle possible emergence from gable.
20:41	Bat flew over roof of adjacent property.
20:43	Distant bat heard not seen.
20:45	Bat HNS, over to Surveyor 1.
20:47	Bat HNS.
20:49	Bat seen not herd flew over adjacent property to east.
21:54	Losing light
21:09	Common pipistrelle feeding HNS.