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BAT DUSK EMERGENCE SURVEY

Project name: Inglewood Avenue, Huddersfield
Report Reference: BG17.138.1
May 2017

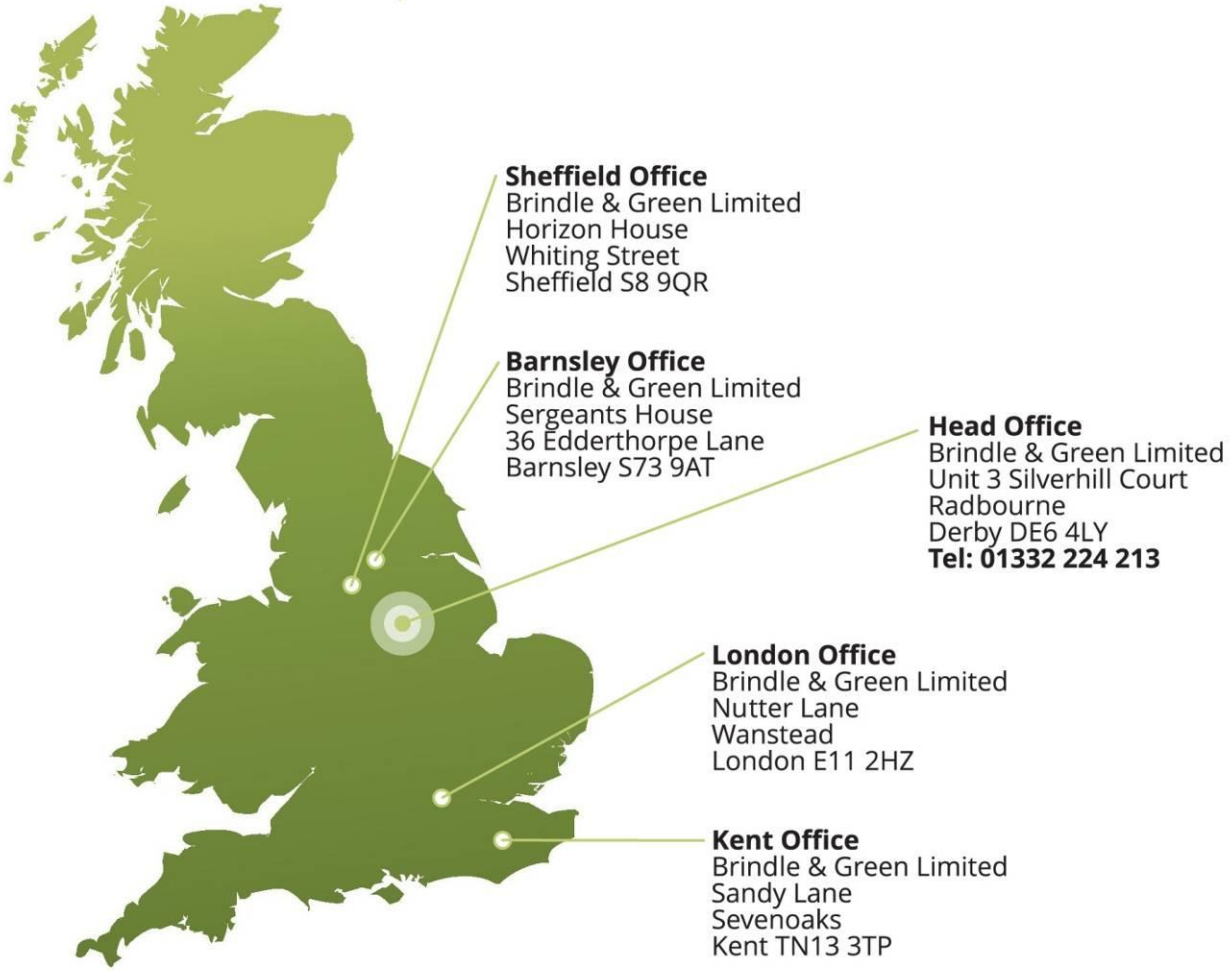
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01332 224213

info@brindlegreen.co.uk

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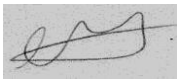
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Document Control

Report	Name	Signature	Date
Prepared by	Paul Sheridan		31/05/2017
Checked by	Lucinda Sweet		02/06/2017
Finalised by	Emily Major		02/06/2017
Issued by (PDF)	Emily Major		02/06/2017
Rev1			

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Project Details

Project carried out by:

Brindle and Green
Unit 3, Silverhill Court
Radbourne Estate
Derby.
DE6 4LY
Head Office: 0800 222 9105
Email: info@brindlegreen.co.uk
Website: www.brindlegreen.co.uk

Project carried out for:

TRW Property Limited
11 Inglewood Avenue
Huddersfield
HD2 2DS
Tel: 07875 199228
Email: mm4223@outlook.com

Project site:

11 Inglewood Avenue
Huddersfield
HD2 2DS

Grid Ref. SE 12520 18361

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1 Summary

1.1 Brindle and Green Ltd were commissioned by TRW Property Limited to undertake a single bat dusk emergence survey at 11 Inglewood Avenue, Huddersfield. The survey was undertaken during May 2017.

1.2 The residential building on site was gauged to offer Low Suitability to support roosting bats during a Preliminary Ecological Appraisal of the site undertaken in February 2017.

1.3 A single dusk emergence survey was carried out on the building on 22nd May 2017. The survey revealed no evidence of bats roosting within the building. As a result, this report does not set out recommendations relating to mitigation or the need for an EPS development licence prior to the buildings renovation. A low level of bat activity was recorded across the site during the survey.

1.4 The following recommendation is provided to ensure the client works within the law and that any impacts to protected species are minimised:

1.4.1 Bats are highly mobile and can change roost sites throughout the year and from season to season. If the renovation of the site does not begin within twelve months of this initial survey it will be necessary to conduct a re-survey to determine if bats are roosting within the building on site.

2 Introduction

2.1 Brindle and Green Ltd were commissioned by TRW Property Limited to undertake a single bat dusk emergence survey at 11 Inglewood Avenue, Huddersfield (Grid reference SE 12520 18361) to confirm presence / likely absence of this protected species within suitable building features.

2.2 The application site consisted of a single residential building, which is the subject of a full planning application for the extension of the existing two-storey residential property.

2.3 The residential building on site was gauged to offer Low Suitability to support roosting bats during a Preliminary Ecological Appraisal of the site undertaken in February 2017. Recommendations of report BG17.138 stated:

"The building was assessed to provide low potential roosting habitat for crevice dwelling bat species because it contained PRFs within the external construction. According to BCT Guidelines, this means that a single dusk emergence or dawn re-entry survey should be undertaken during the peak activity season. This information is required to understand the implications of the development works on local bat populations, and potentially develop appropriate mitigation and enhancement."

2.4 The purpose of this survey was to establish whether bats were roosting within the PRFs recorded during the appraisal and to provide details on solutions for mitigation if required.

2.5 The legislation relevant to bats within the United Kingdom is summarised within Appendix 2 and Appendix 3.

2.6 Results and recommendations contained within this report have been prepared by an experienced ecologist and are therefore the view of Brindle & Green Limited. The survey is based on information provided by our client, the development proposals, and the results of our survey of the site. This report pertains to this information only.

3 Methodology

3.1 A single dusk emergence survey was undertaken according to methodologies outlined in Collins, J. (ed) (2016) Bat surveys for professional ecologists: Good Practice Guidelines (3rd edn), The Bat Conservation Trust, London. The survey was carried out on the 22nd May 2017. The dusk survey began 15 minutes before sunset and lasted for 2 hours after sunset.

3.2 **Equipment**

Both surveyors with Echo Meter Touch detectors connected to iPads

3.3 Bats encountered during the survey were recorded using full spectrum bat detectors and later bats noted to be emerging or re-entering a building are analysed to species level using sonogram analysis software.

3.4 **Surveyors**

The survey was carried out by Paul Sheridan BSc (Hons) Ecologist and Richard Vernard, Assistant Ecologist. The survey was overseen by Chris Needham MSc, MCIEEM Bat Survey Class Licence Registration Number (2015-10292-CLS-CLS) Ecologist.

3.5 **Limitations**

It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. The protected and notable species assessment provides a preliminary view of the likelihood of these species occurring on site, based upon the suitability of the habitats and known distribution of the species in the local area.

3.6 Given the transient nature of the subject we would consider the survey results contained to be accurate for 12 months.

4 Site Context

4.1 Site Description

The application site can be found at: Grid Ref. SE 12520 18361. The site is located on a residential street of detached properties, within the north-western outskirts of the town of Huddersfield. Site boundaries to the south, east and west are bordered by residential plots (dwellings and gardens) and the northern boundary is bordered by Inglewood Avenue. The wider environment is generally dominated by residential housing, with some agricultural fields and woodland approximately 500m north, and 1.3km west of the site. The A629 runs south-east into Huddersfield, passing the site approximately 85m to the south-west, the A640 runs east-south-east approximately 1km south of the site, and the A643 runs north-east, approximately 1.2km north-west of the site. In addition, the M62 runs east, approximately 1.5km north-west of the site. These main roads act as barriers to terrestrial species dispersal. However, despite being surrounded by residential development, a network of gardens and mature treelines provide connectivity to the surrounding environment.

4.2 Zone of influence

The zone of Influence is used to describe the geographic extent of potential impacts of a proposed development in relation to the target species, in this case bats and breeding birds. Due to the scale and nature of the proposals, it is not considered that the impacts of the proposed works would extend beyond the scheme footprint and its immediate surroundings

4.3 Bat surveyors with bat detectors were positioned to ensure maximum visual coverage of the building. Surveyor locations can be seen in Figure 2.

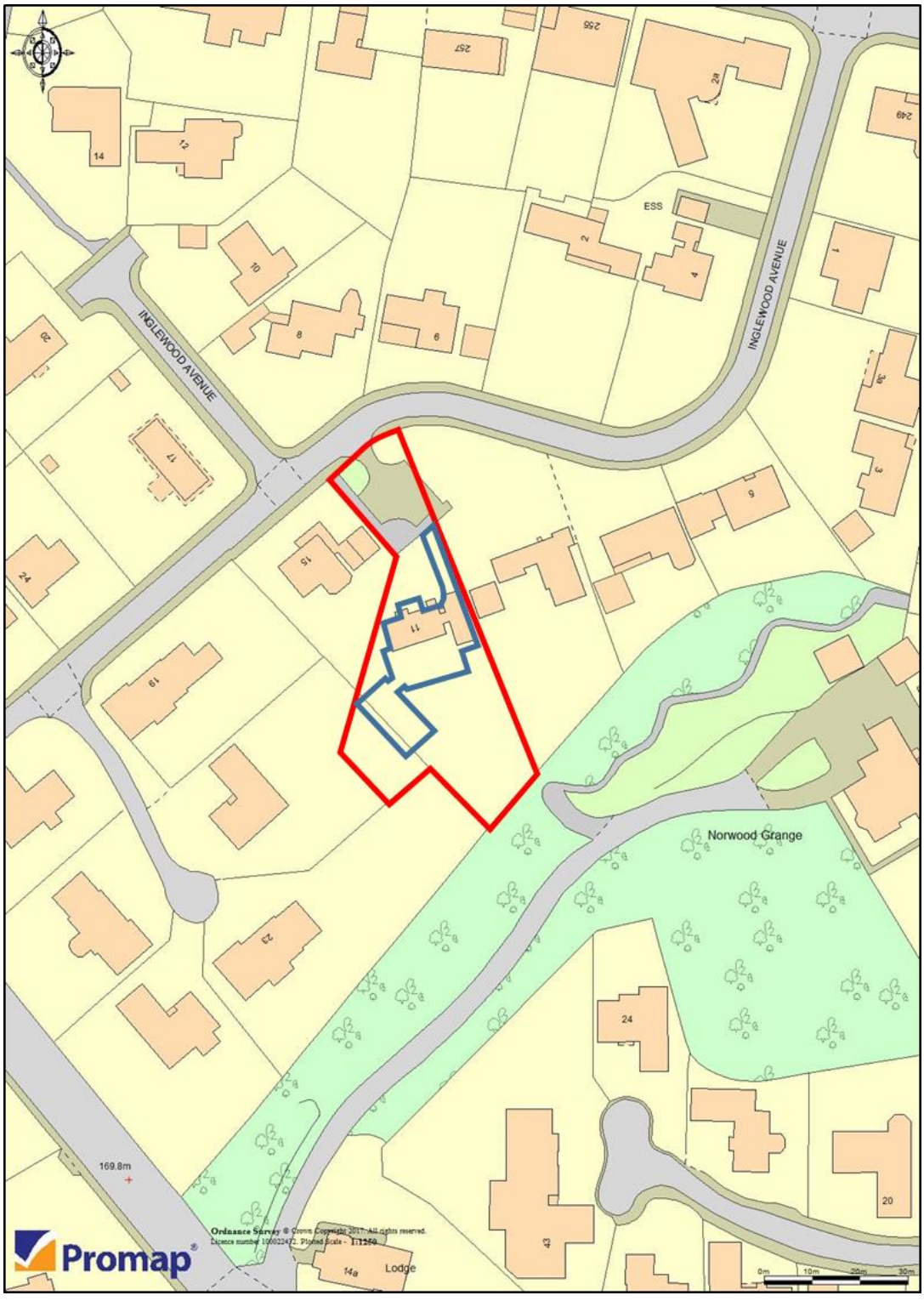


Figure 1. OS Map of the project site and surrounding area – Red line boundary depicts application site. Blue line boundary depicts the area affected by development.

5 Results

5.1 A summary of bat activity during the survey is provided below. For the full raw data set please consult Appendix 4, Table 1.
Figure 2 below depicts surveyor locations during the survey and the primary commuting and foraging areas recorded during the survey.

5.2 **Bat dusk emergence survey – 22nd May 2017**

Sunset time: 21.12
Survey start: 20:50 (6/8 cloud cover, 21.1°C, 55% relative humidity)
Survey finish: 23.10 (4/8 cloud cover, 14.8°C, 70% relative humidity)
Weather conditions: Dry and fine. Light wind.

5.3 Survey effort was focused on determining whether bats were emerging from the building and assessing how bats were using the area within the site boundary.

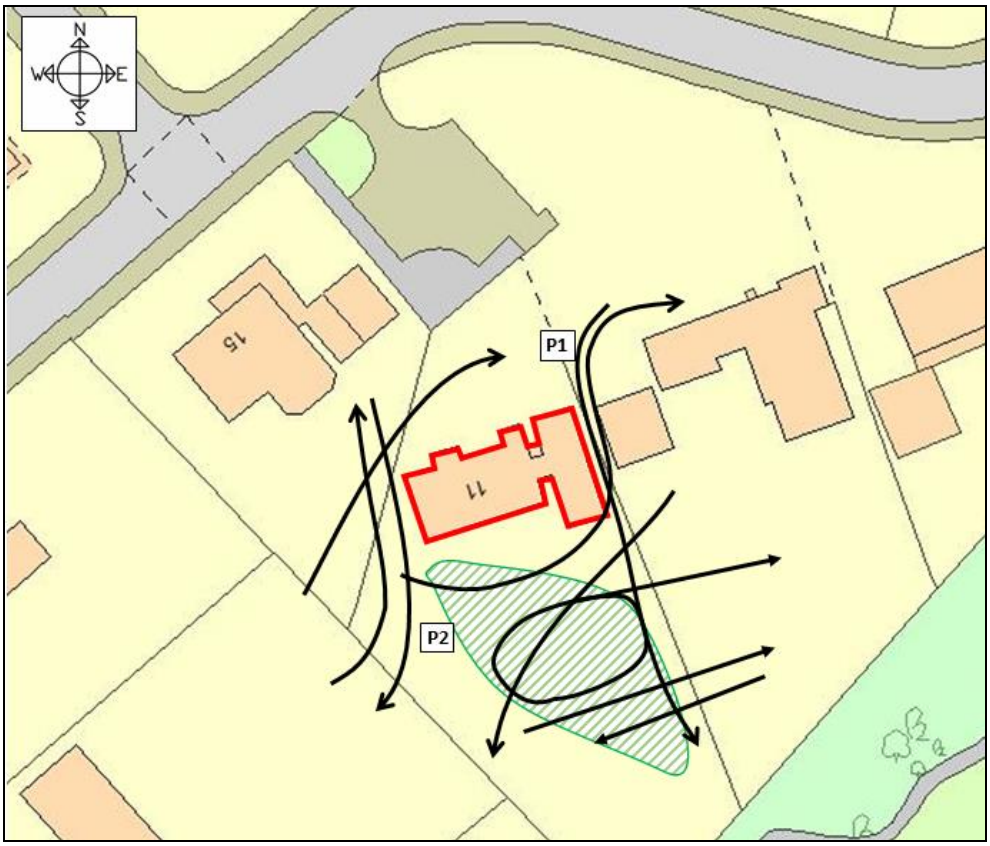
5.4 Two specie of bat, Common pipistrelle (*Pipistrellus pipistrellus*) and Noctule (*Nyctalus noctule*) were recorded during the survey, however the majority of activity pertained to common pipistrelle foraging.

5.5 The first record was taken at 21.32 when P2 heard a common pipistrelle without visual observation. At 21.38 P1 observed a common pipistrelle flying east along the northeast elevation of the building. At 21.40 P2 observed an individual common pipistrelle flying north along the western elevation of the building, while at 21.53 P1 observed two common pipistrelles flying south along the eastern elevation.

5.6 Individual common pipistrelles were observed following the same flight paths repeatedly between 21:40 and 22:18. Between 21.10 and 22.19, individual common pipistrelles were observed repeatedly flying south to north along both the western and eastern elevations of the building. Common pipistrelle foraging activity was observed along the trees and above the garden to the south of the building. At 22.05 both P1 and P2 recorded a commuting

Noctule without visual observation. The final recording of the survey was made by P1 at 22:38 and comprised echolocation calls of a common pipistrelle, without visual observation.

5.7 A low level of bat activity was recorded during the survey, and no bats were observed emerging from the building confirming absence of roosting bats within the target building.



Key	
→	Observed bat commuting routes
⬭	Area of foraging activity
P#	Surveyor location

Figure 2. Observed bat activity.

6 Evaluation

6.1 All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2010 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally or recklessly disturb a bat or intentionally kill, injure or take any bat.

6.2 The dusk emergence survey did not reveal any evidence of bats roosting within the building on site at Inglewood Avenue. Common pipistrelles were recorded on an intermittent basis foraging and commuting and a single commuting Noctule was identified during the dusk survey. As a result, roosting bats are not considered a constraint to the development and this report does not set out recommendations relating to mitigation or the need for an EPS development licence prior to the building's extension.

7 Recommendations

7.1 Design proposals for the development involve the extension of the current two-storey residential property. The dusk emergence bat activity survey did not reveal any evidence of bats roosting within the building. A Natural England bat development licence is not required in order to proceed with the development works. The following recommendations are set out to ensure the client works within the law and that any impacts to protected species are minimised:

7.1.1 Bats are highly mobile and can change roost sites throughout the year and from season to season. If the development of the site does not begin within twelve months of this initial survey it will be necessary to conduct an additional survey to determine if bats are roosting within the buildings on site.

7.1.2 In the unlikely event that bats are found during development works to the building on site, work should cease while the advice of Natural England or a suitably qualified bat ecologist is sought.

7.2 It is recommended that low level outdoor lighting is incorporated into the overall design of the project. A small number of ornamental shrubs within the landscaped garden to the north of the building provide habitat for foraging common pipistrelles, as do the scattered trees adjacent to the southern and western boundaries of the building. Design plans (Appendix 5) show that the ornamental shrubs to the north are to be retained, while the foraging and commuting habitat will be improved through the landscaping of the garden to the south of the building. The extent of disturbance should be minimised in these areas where possible, by employing a sensitive lighting scheme during construction works, and ensuring that artificial security lighting is not installed along the vegetated boundaries of the gardens surrounding the residential development.

Appendices

Appendix 1. General References

Bat Conservation Trust (2014) Artificial lighting and wildlife Interim Guidance: Recommendations to help minimise the impact artificial lighting. Bat Conservation Trust, London.

Bell, S. McGillivary, D. (2006) *Environmental Law*. 6th ed. Oxford University Press.

Butterfly Conservation trust (2014) Nectar Plants, *http://mothscount.org/text/64/nectar_plants.html*

Hundt L (2012) Bat Surveys: Good Practice Guidelines, 2nd edition, Bat Conservation Trust.

Mitchell-Jones A.J. *Bat Mitigation Guidelines* 2004. English Nature.

Mitchell-Jones A.J. McLeish, A.P. (2004) *Bat Workers Manual* (3rd Edition). Joint Nature Conservation Committee.

Appendix 2. Legislation and Guidance Sources

Articles of British wildlife and countryside legislation, policy guidance and both Local and National Biodiversity Action Plans (BAPs) are referred to. The articles of legislation are:

- The Wildlife and Countryside Act 1981 (as amended)
- The Conservation of Habitats and Species Regulations 2010
- Department for Communities and Local Government. National Planning Policy Framework. March 2012
- EC Council Directive on the Conservation of Wild Birds 79/409/EEC
- National Parks and Access to the Countryside Act 1949
- The Protection of Badgers Act 1992
- Land Drainage Act 1991
- The Countryside and Rights of Way Act 2000
- The Natural Environment and Rural Communities Act 2006
- The United Kingdom Biodiversity Action Plan 2006
- Hedgerow Regulations 1997
- Town and Country Planning Act 1990
- Local Biodiversity Action Plan (LBAP).

Appendix 3. Relevant Ecology and Legislation

(Please note that this is for information purposes only. Clients should seek further legal advice where necessary).

There are 17 species of bats that occur in Britain. Dramatic declines in population numbers initiated the introduction of European and UK legislative protection. British bats and their roosts are fully protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Additional protection is offered under Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994.

Buildings and structures which offer roosting potential to bats can be impacted by development and this can result in disturbance to potential roost sites. Bats occupy different roost sites during the year depending on species-specific summer roost and hibernation roost requirements. Bats usually re-use the same roosts, therefore the legal opinion is that the roost is protected whether or not the bats are present at the time.

In the case of development work, activities involving the capture, disturbance and/or relocation of bats are subject to a licence from Natural England. Such licences are only granted:
"*For the purpose of preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment, to allow people to carry out activities which would otherwise be illegal."*
Under the *Conservation (Natural Habitats &c.) Regulations 1994*, licences can only be issued if Natural England are satisfied that:

- there is no satisfactory alternative; and
- the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.

Undertaking work to a bat roost without following appropriate recommendations from Natural England and/or DEFRA could lead to prosecution resulting in imprisonment, fines and confiscation of vehicles/equipment used.

Appendix 4. Raw data

Table 1. Dusk Emergence Survey – 22nd May 2017

Time	Species	Surveyor	Activity
21:32	Common pipistrelle	P2	Heard Not Seen. Continuous until 21.54.
21:38	Common pipistrelle	P1	Flew along the front of building west to east foraging.
21:40	Common pipistrelle	P2	Flew southwest to north (foraging).
21:45	Common pipistrelle	P2	Flew west to east.
21:52	Common pipistrelle	P2	Flew east to west.
21:53	Common pipistrelle	P1	2 common pipistrelles flew north to south and foraged over garden south of the building.
21:53	Common pipistrelle	P2	Flew east to south.
21:57	Common pipistrelle	P1	Flew northeast to southwest foraging over garden south of the building.
21:57	Common pipistrelle	P2	Flew south to northwest
22:01	Common pipistrelle	P1	Flew from garden south of the building to the northeast. Continuous activity until 22.19.
22:01	Common pipistrelle	P2	Flew north to southwest (foraging).
22:02	Common pipistrelle	P1	Single common pipistrelle flew north to south foraging over garden south of the building. Continuous until 22:18.
22:04	Common pipistrelle	P2	Flew north to south then east to west then south to north.
22:04	Common pipistrelle	P2	Heard Not Seen.
22:05	Noctule	P1	Commuting. Heard not seen.
22:05	Noctule	P2	Heard Not Seen.
22:32	Common pipistrelle	P1	Heard Not Seen. Continuous until 22:38.

Appendix 5. Proposed Layout and Design Plans

