

Standen Hall, Clitheroe, Lancashire BB7 1PR

LICENSED BAT SURVEY AND ASSESSMENT

November 2015

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SUMMARY

Introduction and Scope

- i. ERAP Ltd (Consultant Ecologists) was commissioned by Mr. Martin Aspinall to carry out licensed bat surveys of Standen Hall, Clitheroe (hereafter referred to as the 'site'). The appraisal was requested in connection with a planning application to redesign areas of the Hall to create a modern living space.
- ii. The appraisal presents the results of a desktop study and a licensed bat survey carried out in September 2015. The scope of survey undertaken is appropriate to enable the identification of any potential ecological constraints, the remit of mitigation required and opportunities for biodiversity associated with the development proposals.

Results of Survey and Assessment

- iii. The proposals will have no adverse direct effect on statutory or non-statutory designated sites.
- iv. In total, 11 bat roosts have been detected at the Hall. The Hall supports a maternity colony of Soprano Pipistrelle, and one day roost of Common Pipistrelle has been confirmed. Evidence indicating that Brown Long-eared bats and Whiskered / Brandt's bats also utilise the building was detected during the daylight survey.
- v. Bats and their roosts are protected under the *Wildlife and Countryside Act 1981* (as amended) and *The Conservation of Habitat and Species Regulations 2010* (as amended). The proposals will remove one day roost of a pipistrelle species (Roost 9) and have the potential to impact upon the maternity colony of Soprano Pipistrelle associated with Roost 1, 2, 3, 7 and 8 and the Common Pipistrelle day roost at Roost 11.
- vi. An initial assessment of impacts and recommendations for the protection of bats during works and measures to incorporate into the design of the site to minimise the disturbance to bats both during and post-construction are presented at **Sections 4.2** and **5.2**.
- vii. The building is suitable for use by nesting birds; measures for the protection of nesting birds are recommended at **Section 5.3** of the report.
- viii. No other protected species have been detected.

Recommendations

- ix. The recommendations in **Section 5.0** address all the mandatory measures and ecological recommendations to be applied to ensure compliance with wildlife legislation, the National Planning Policy Framework (NPPF) and best practice.
- x. The final design of the proposals will incorporate measures to ensure roosting bats are not disturbed as a consequence of the proposed development, ensuring lighting does not spill onto areas used by roosting bats and clear flight paths at the rooftop of the building are maintained.

Conclusion

- xi. It is considered that, provided the considerations presented at **Section 5.0** of this report are adhered to, the proposals are feasible and acceptable in accordance with ecological considerations and relevant planning policy.

1.0 INTRODUCTION

Background and Rationale

- 1.1 ERAP Ltd (Consultant Ecologists) was commissioned by Mr. Martin Aspinall to carry out licensed bat surveys of Standen Hall, Clitheroe (hereafter referred to as the 'site'). The Ordnance Survey (OS) grid reference at the centre of the site is SD 747 402.
- 1.2 The appraisal was requested in connection with a planning application to redesign areas of the Hall to create a modern living space.

Scope of Survey

- 1.3 The scope of ecological surveys undertaken in September 2015 comprised:
 - a. A desktop study for known ecological information at the site and the local area;
 - b. A licensed bat survey of the buildings and trees;
 - c. The identification of any potential ecological constraints on the proposals and the specification of the scope of mitigation and ecological enhancement required in accordance with wildlife legislation, planning policy guidance and other relevant guidance; and,
 - d. The identification of any further surveys or precautionary actions that may be required prior to the commencement of any development activities.

2.0 METHOD OF SURVEY

2.1 Desktop Study

- 2.1.1 The following sources of information and ecological records were consulted for information:
 - a. MAgiC: A web-based interactive map which brings together geographic information on key environmental schemes and designations, including details of statutory nature conservation sites; and
 - b. Lancashire Environment Record Network (LERN).

2.2 Animal Life

Bat species

Daylight Survey

Survey personnel

- 2.2.1 The building was assessed for their suitability to support roosting bats by Mr. Brian Robinson B.Sc. (Hons) MCIEEM and Ms. Lorna Bousfield B.Sc. (Hons) MCIEEM. Both surveys hold a Natural England Class Survey Licence WML CL18 (Bat Survey Level 2); Mr Robinson's Registration Number is 2015-13161-CLS-CLS, and Ms. Bousfield's registration number is 2015-13362-CLS-CLS. Both surveyors qualifications and experience meet the criteria as defined in the *Technical Guidance Series Competencies for Species Survey: Bats* (CIEEM, 2013).
- 2.2.2 The surveys were carried in accordance with standard methodology including the *Bat Mitigation Guidelines* (Mitchell-Jones, 2004), the *Bat Workers' Manual 3rd Edition* (Mitchell-Jones & Mcleish, 2004) and the *Bat Surveys: Good Practice Guidelines, 2nd Edition* (Hundt, 2012).

External and Internal Surveys

- 2.2.3 An inspection of the external surfaces, walls and roofs of the buildings was carried out to find potential bat roosting habitat or accesses into internal areas where roosts may be present. Searches for evidence of bat presence in the form of droppings, urine stains, feeding signs, grease marks and other evidence were also carried out. The searches were assisted with the use of a powerful torch (Clulite CB2), binoculars and ladders.
- 2.2.4 The internal survey involved an examination of the accessible internal areas (including roof voids) to find roosting bats or evidence of past use of the buildings by bats such as droppings and prey remains. A list of equipment used is detailed at **Table 2.1**, below:

Table 2.1: Survey Equipment used during Daylight Bat Survey

Ladders
LED Lenser P7 torch & LED Lenser P14 torch
Clulite CB2 hand lamps
Canon Ixus digital camera
8x20 binoculars
Video Borescope

Activity Surveys: Dusk Emergence and Dawn Re-entry Surveys

- 2.2.5 One dusk emergence and one dawn re-entry survey were conducted at the building in September 2015. Surveyors, experienced in conducting bat surveys, were positioned at suitable locations to maximise coverage of the areas of the building to be affected by the proposed development.
- 2.2.6 The surveys were conducted to determine any bat emergence or re-entry into the building. Heterodyne detectors were used to determine any bat detected to species. Anabat SD2 and Anabat Express units were also used to analyse echolocation calls after the survey using AnalookW Bat call analysis software.
- 2.2.7 Night-vision cameras and infra-red lighting were additionally used during the dawn-re-entry survey to determine any bat re-entry into the building when conditions were too dark to reliably determine re-entry by sight alone.
- 2.2.8 The dusk emergence survey was commenced approximately 15 minutes before sunset and continued for approximately one hour after sunset. The dawn re-entry survey was commenced approximately two hours before sunrise, and continued until sunrise (provided all bat activity has ceased by this point).
- 2.2.9 The environmental conditions recorded during the survey and timings were suitable for surveys of this types, and are presented at **Table 2.2**, below.

Table 2.2: Dusk Emergence and Dawn Re-entry Survey Dates, Weather Conditions and Surveyors

Date	4 th September 2015	11 th September 2015
Sunset/sunrise	Sunset 19:49	Sunrise 06:35
Start time	19:30	04:45
End time	21:15	06:35
Wind	Bft 1 (light air)	Bft 2 (gentle breeze)
Precipitation	Dry	Dry
Air temps	15°C	14°C
Survey Position	Surveyor and Detector ¹	Surveyor and Detector ¹
1	Amy Sharples Batbox III & SD2	Lorna Bousfield Batbox Duet, AE & night-vision camera
2	Tracy Cumberbatch Batbox Duet	David Bennett Batbox Duet, SD2 & night-vision camera
3	Brian Robinson Batbox Duet & SD2	Brian Robinson Batbox Duet & SD2

¹AE = Anabat Express Unit, SD2 = Anabat SD2 unit.

Habitat Assessment

- 2.2.10 Habitats within and adjacent to the site were assessed for their value and suitability for foraging and commuting bats.
- 2.2.11 Features typically considered to be favourable to foraging and commuting bat species include hedgerows, tree lines, broadleaf woodland, unimproved pasture which may support an abundance of invertebrate prey species, waterways and waterbodies.
- 2.2.12 Hedgerows, tree lines and waterways may be used as commuting pathways between foraging areas and roosts, as they provide a combination of foraging habitat, cover from potential predators and landmarks for navigation.

Bird species

- 2.2.13 Bird species observed during the bat surveys were recorded. Habitats throughout the site and immediate surrounding area were assessed for their value for roosting, feeding and nesting birds, as indicated by the amount of shelter, feeding value, woody vegetation structure and species diversity of tree and shrub species in the site.
- 2.2.14 The presence of and any sign of Barn Owl was searched for during the internal inspection of the building conducted on the 4th September 2015. The building was searched for pellets, faecal splashes and feathers which may indicate use by roosting or nesting Barn Owl in accordance with *The Barn Owl Conservation Handbook* (Barn Owl Trust, 2012).

2.3 Survey Limitations

- 2.3.1 The survey was conducted when maternity colonies of bat species may have dispersed; however the location of a maternity colony at the building was readily visible during the internal inspection, and large numbers of bats remained present at the building.
- 2.3.2 Roof Void I1 (refer to **Figure 1**) could not be accessed internally, however an examination of the void could be made via the opening at the void's eastern end. Otherwise the whole building was accessible. No significant survey limitations were experienced.

2.4 Evaluation Methodology

- 2.4.1 Government advice on wildlife, as set out in the *National Planning Policy Framework* (Great Britain Department for Communities and Local Government, 2012) and associated government circulars has been taken into consideration. Legislation relating to protected species, such as those listed under Schedule 1 and Schedule 5 of the *Wildlife and Countryside Act 1981*, (as amended) and *The Conservation of Habitats and Species Regulations 2010* (as amended), is referenced where applicable, and any impacts to protected species are evaluated in accordance with current guidance.
- 2.4.2 The presence of any priority species / species of principal importance for conservation, as listed under Section 41 of the *NERC Act 2006* is noted, and habitats are assessed in terms of their suitability and value for these species.

3.0 SURVEY RESULTS

3.1 Desktop Study

Site Designations

- 3.1.1 The site lies within a Site of Special Scientific Interest (SSSI) Impact Zone for Clitheroe Knoll Reefs SSSI (2.6 kilometres to the north). Little Mearly Clough SSSI (3.47 kilometres north-east) Light Clough SSSI

(2.6 kilometres south) and Hodder River Section (4 kilometres west) additionally lie within 5 kilometres of the site. Salthill and Bellman Park Quarries SSSI and Salthill Quarry Local Nature Reserve (LNR) is located to 2.1 kilometres to the north.

- 3.1.2 The sites are all designated for their geological interest.
- 3.1.3 The SSSI Impact Zone relates to planning applications for quarries; the proposals do not require further assessment in terms of any impacts on statutory designated sites present in the wider area.
- 3.1.4 There are four locally designated sites, named Biological Heritage Sites (BHS's), within two kilometres of the site. Clitheroe Castle Knoll BHS lies 1.3 kilometres to the north and is designated for its species-rich herbs growing on rock outcrops. Primrose Lodge BHS lies one kilometre to the north-west and is designated for its waterbody which is of value to wildfowl, and for its species-rich woodland habitats. Barrow Clough Wood BHS lies 850 metres to the south-west and is designated for its woodland habitats. Pendle Road Verge BHS lies 1.2 kilometres to the east and is designated for its species-rich grassland and scrub.
- 3.1.5 The presence of the four BHS's within the wider area is considered at **Section 4.1**, below.

Protected and Notable species

- 3.1.6 LERN hold no records of protected species for the site. Protected and notable species are reported for wider area, and are summarised at **Table 3.1**, below. Bat records have been taken from the surrounding five kilometres; all other records are from the surrounding two kilometres.

Table 3.1: Protected and Notable Species Present in the Wider Area

Group	Species and Designation ¹	Notes
Terrestrial mammals	Bats: Unidentified bat species (EPS, WCA1981)	52 records from between 2003 and 2011, the closest being 1.7 kilometres north.
	Bats: Pipistrelle bat species (EPS, WCA1981)	52 records, from between 1986 and 2014, the closest being 1.5 kilometres west.
	Bats: Common Pipistrelle (EPS, WCA1981)	110 records, from between 1991 and 2012, the closest being 2.6 kilometres north-east.
	Bats: Soprano Pipistrelle (EPS, WCA1981, UKBAP)	5 records, from between 2010 and 2011, the closest being 2.4 kilometres to the north-west.
	Bats: Daubenton's bat (EPS, WCA1981)	50 records, from between 1988 and 2011, the closest being 2.6 kilometres north-west.
	Bats: Natterer's bat (EPS, WCA1981)	4 records, all from 2000, the closest being 4.8 kilometres to the west.
	Bats: Noctule bat (EPS, WCA1981, UKBAP)	1 record from 2010, 3.1 kilometres north of the site.
	Brown Hare (UKBAP)	One record, 1.7 kilometres south, from 1977
	Hedgehog (UKBAP)	One record, 1.7 kilometres north, from 2010
	Otter (EPS, WCA1981, UKBAP)	One record, 590 metres east, from 2011
	Red Squirrel (WCA1981, UKBAP)	Two records, both from 1997 and 1.3 kilometres east
	Water Vole (WCA1981, UKBAP)	Three records, all from 1977 and 1.8 kilometres south
Bony Fish	Atlantic Salmon UK BAP	One record, 1.3 kilometres west, from 2011.
Birds	<i>UK BAP Bird species</i> Black-headed Gull, Curlew, Dunnock, Grey Partridge, House Sparrow, Lapwing, Lesser Redpoll, Linnet, Song Thrush, Spotted Flycatcher and Starling <i>Bird Species Protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended)</i> Kingfisher	

Continued overleaf

	Table 3.1 continued <i>Other Bird Species</i> Common Sandpiper, House Martin, Little Ringed Plover, Meadow Pipit, Oystercatcher, Pochard, Redshank, Sand Martin, Swallow, Swift, Teal, Wigeon and Willow Warbler.
	¹Notes on designation abbreviations: EPS = European Protected Species under <i>The Conservation of Habitats and Species Regulation 2010</i> (as amended); WCA1981 = Protected species under the <i>Wildlife and Countryside Act 1981</i> (as amended); UK BAP = UK Biodiversity Action Plan Priority Species

- 3.1.7 The presence of the protected and notable species present in the wider area has been considered throughout this report.

3.2 Animal Life

Bat species

Daylight Survey: Building

- 3.2.1 Refer to **Photos 1 to 8**, appended at **Table 8.1**, and **Figure 1**. Standen Hall is a detached residential building constructed from mortared stone with stone quoins and a complex of pitched and hipped roofs constructed from stone slates with lead flashing. The earliest areas of the building were constructed in the 1600's, however the majority of the hall was developed in the 1800's.
- 3.2.2 The building is composed of one, two and three storey sections with a substantial basement.
- 3.2.3 Gaps suitable for access by bats are present throughout, under the stone roofing tiles, under lead flashing, at the roof verges and gable apexes, and at gaps in the stonework.
- 3.2.4 Refer to **Figure 1.2**. A total of nine roof voids are present at the building, which are described with photographs at **Table 8.2**, appended. The roofing is typically supported on traditional timber rafters and purlins with traditional timber trusses present at Roof Void D and modern timber rafters present at Roof Void E.
- 3.2.5 The stone roofing slates are typically lined with bitumastic roofing felt; degraded horsehair parging is present at Roof Void A and a modern breathable roofing membrane is present at Roof Void D. With the exception of Roof Voids B4 and D, the roof voids are uninsulated.
- 3.2.6 The roof voids support locations and features favourable for use by both crevice dwelling species (such as Common Pipistrelle) and void-dwelling species (such as Brown Long-eared bats) throughout.
- 3.2.7 Refer to **Figure 1.3**. A total of 10 roosting locations were detected during the daylight survey. Photographs are appended at **Table 8.3**. The roosts are summarised at **Table 3.2**, below.

Table 3.2: Summary of the Results of the Daylight Survey (refer to Figure 1, and Table 8.3)

Reference, Species and Photo reference	Location	Description and Roost Type ¹
Roost 1 Soprano Pipistrelle <i>Photos 24 and 25</i>	Roof Void B1, north-eastern corner, between wall-top and roofing at eaves	1000's of droppings within void. Bats observed and large numbers heard active during survey. <i>Maternity roost.</i>
Roost 2 Soprano Pipistrelle <i>Photo 26</i>	Roof Void B1, north-western corner, between wall-top and roofing at eaves	1000's of droppings within void. Bats observed. <i>Maternity roost.</i>
Roost 3 Soprano Pipistrelle <i>Photo 27</i>	Roof Void B1, south-western corner, between wall-top and roofing at eaves	1000's of droppings within void. <i>Maternity roost</i>
Roost 4 Pipistrelle species	Roof Void B3, over ridge beam (along full length of ridge beam)	100's droppings (indicative of a <i>pipistrelle</i> species) <i>Maternity/day roost.</i>
Roost 5 Pipistrelle species	Roof Void B4, over ridge beam (along full length of ridge beam)	50+ droppings <i>Maternity/day roost.</i>
Roost 6 Pipistrelle species	Roof Void C, over ridge beam (along full length of ridge beam)	1000's droppings (indicative of a <i>pipistrelle</i> species) <i>Maternity roost.</i>
Roost 7 Common Pipistrelle	Roof Void G, over northern ridge beam (along full length of ridge beam)	1000's of droppings are located under the ridgeline along the length of the void, with a cluster (100's) at the south-east facing gable <i>Maternity roost</i>
Roost 8 Soprano Pipistrelle	Roof Void G, over southern ridge beam (along full length of ridge beam)	1000's of droppings are located under the ridgeline along the length of the void, with a cluster (100's) at the south-east facing gable <i>Maternity roost</i>
Roost 9 Pipistrelle species	Roof Void I2, between unlined roofing slates	30+ old droppings, indicative of <i>pipistrelle</i> bats <i>Day roost</i>
Roost 10 Pipistrelle species	Roof Void I4, between unlined roofing slates	30+ old droppings, indicative of <i>pipistrelle</i> bats <i>Day roost</i>

- 3.2.8 The daylight assessment additionally found the presence of three dead juvenile Soprano Pipistrelle¹ bats within the living areas of the Hall and one dead Whiskered / Brandt's bat on an external wall (**Photo 37, Table 8.3**). The bat was in too far an advanced stage of decomposition to reliably determine to species, although the features were most indicative of a Whiskered bat.
- 3.2.9 The building supports a large maternity colony of Soprano Pipistrelle. The colony is spread across several locations within the building. The building is additionally likely to be used by Soprano Pipistrelle (and other bat species) throughout the year, with smaller day roosts present. The building supports features suitable for use by hibernating bats.
- 3.2.10 The results of the two activity surveys are presented below.

Activity Surveys

- 3.2.11 Refer to **Figures 2 and 3**. Both activity surveys concentrated survey effort on the areas of the building which are to be affected by the proposed development, i.e. Roof Voids I1, I, I3, Roof Void H, the eastern elevation of Roof Void G, the northern elevation of Roof Void C and the western elevation of Roof Voids A and Roof Voids B1 and B2. The dusk survey was helped by the additional presence of a groundworker located at the building's south-eastern elevation counting Soprano Pipistrelle emergence from Roost 1.

¹ Both Common and Soprano Pipistrelle bats will frequently wander from the main roosting site, get lost, and struggle to find their way back resulting in their mortality. The presence of dead juvenile Soprano Pipistrelle bats further demonstrates that the building is used by a maternity colony of Soprano Pipistrelle.

Dusk Emergence Survey 4th September 2015

- 3.2.12 Refer to **Photo 38, Table 8.3**. 14 Soprano Pipistrelle were observed emerging from Roosts 1, 2 and 3 between 20:05 and 20:20 from Survey Position 1; the majority of bats emerged from the north-eastern corner of Void B1 at Roost 1 and were not observed from Survey Position 1 (up to 300 were counted by the groundworker from this location).
- 3.2.13 Refer to **Photo 39, Table 8.3**. Five Soprano Pipistrelle bats were observed emerging from the south-eastern gable at Roost 7 between 20:08 and 20:14. No other bat emergence was detected.
- 3.2.14 Bat activity continued over the rooftop throughout the survey. A summary of bat activity detected is presented at **Table 3.3**, below.

Table 3.3: Summary of Anabat SD2 Recordings on 4th September 2015

Anabat Position	Species	No passes recorded and times
Survey Position 1	Soprano Pipistrelle	47 passes between 19:54 and 21:11
	Common Pipistrelle	18 passes between 19:59 and 21:06
	Noctule bat	7 passes between 19:58 and 21:04
	<i>Myotis</i> species	1 pass at 20:33
Survey Position 3	Soprano Pipistrelle	29 passes between 20:05 and 21:06
	Common Pipistrelle	20 passes between 19:57 and 21:09
	Noctule bat	6 passes between and 20:46
	<i>Myotis</i> species	1 pass at 30:34

- 3.2.15 The results of the survey are presented at **Figure 2**.

Dawn Re-entry Survey 11th September

- 3.2.16 Refer to **Figure 3**. Soprano Pipistrelles were observed re-entering Roost 1 between 06:04 and 06:18; actual numbers could not be discerned from the survey position, but 10's of bats were observed entering the building constantly throughout this period, and so it is considered (in total) 100's of bats were observed re-entering the building.
- 3.2.17 10 Soprano Pipistrelle re-entered Roost 7 between 05:42 to 06:15.
- 3.2.18 Refer to **Photo 40, Table 8.3**. Two Common Pipistrelle were observed re-entering Roost 11 at 06:00 and 06:09.
- 3.2.19 Bat activity continued over the rooftop from the start of the survey until 06:18. A summary of bat activity detected is presented at **Table 3.4**, below.

Table 3.4: Summary of Anabat Express and Anabat SD2 Recordings on 11th September 2015

Anabat Position	Species	No passes recorded and times
Survey Position 1	Soprano Pipistrelle	186 passes between 04:42 and 06:15
	Common Pipistrelle	60 passes between 04:42 and 06:09
	Noctule bat	10 passes between 05:41 and 06:15
	<i>Myotis</i> species	4 passes between 05:12 and 05:32
	Brown Long-eared	1 pass at 05:24
Survey Position 2	Soprano Pipistrelle	175 passes between and 06:15
	Common Pipistrelle	88 passes between and 06:09
	Noctule bat	8 passes between 05:26 and 06:14
	<i>Myotis</i> species	2 passes at 05:11 and 05:50
Survey Position 3	Soprano Pipistrelle	223 passes between 04:57 and 06:15
	Common Pipistrelle	133 passes between 04:58 and 06:08
	Noctule bat	7 passes between 05:28 and 06:14
	<i>Myotis</i> species	11 passes between 05:08 and 05:51
	Brown Long-eared	1 pass at 05:24

3.2.20 The results of the survey are presented at **Figure 3**.

3.2.21 The presence of roosting bats at the building is considered further at **Section 4.2**.

Bird species

3.2.22 Bird's nests were noted within the building during the internal inspection, including old Starling nests; the building provides suitable nesting habitat for a number of passerine (perching) bird species. Measures for the protection of nesting birds are provided at **Section 5.3** of this Report.

3.2.23 No sign of roosting or nesting Barn Owl was detected during the internal inspection of the building. The presence of roosting or nesting Barn Owl is reasonably discounted.

3.2.24 A Sparrowhawk was observed hunting the emerging and re-entering bats during both activity surveys, and a Kestrel pellet was noted at the south-western elevation of the building.

4.0 EVALUATION AND ASSESSMENT

4.1 Designated Sites

4.1.1 It is considered that the proposed development is sufficiently small and distant from the four Biological Heritage Sites present within the wider area that any impacts of the proposed development can be reasonably discounted.

4.2 Bats

Summary of Results

4.2.1 A total of 11 Roosts have been detected by the daylight and activity surveys, of at least two species. A maternity colony of Soprano Pipistrelle has been detected, with activity centred on Roosts 1, 2 and 3 at Void B1, but with further large amounts of pipistrelle activity also present at Roosts 4, 5, 6, 7 and 8.

4.2.2 One confirmed instance of a day roost of Common Pipistrelle has been detected at Roost 11, and further field signs indicative of a day roost of pipistrelle species has been noted at Roosts 9 and 10.

4.2.3 A dead Whiskered / Brandt's bat, found on an external wall, and large droppings indicative of Brown Long-eared bats (found at Roof Void D) indicate that further species may also roost at the building.

4.2.4 The building is suitable for use by hibernating bats, and it is reasonably likely that the building is used throughout the year by Soprano and Common Pipistrelle, and potentially by Brown Long-eared and *Myotis* species.

4.2.5 The impacts of the proposed development on the identified roosts are considered further below.

Impacts of Proposed Development

4.2.6 The location of the proposed works is presented on **Figures 1, 2 and 3**.

4.2.7 At the time of writing it is proposed to open up the highlighted area (which is currently a network of small rooms internally) to create a more open plan configuration, with a skylight above to allow light into the revised layout.

4.2.8 The proposed works will directly impact upon Roost 9 (where 30+ old droppings indicative of a pipistrelle species were located beneath a gap in the stone roofing slates); this area will be removed completely by the proposed development.

4.2.9 The proposed works have the potential to impact upon Roosts 2, 3, 7 and 8 (Soprano Pipistrelle maternity roosts) and Roost 11 (Common Pipistrelle day roost) by altering the configuration of roofing under these roost's access / egress points and potentially by increasing the amount of artificial illumination at these locations.

4.2.10 It is possible that these roosts will also be temporarily disturbed during the course of works by noise, banging, and dust etc.

Requirement for a European Protected Species Mitigation Licence

4.2.11 All bats and their roosts are protected under the *Wildlife and Countryside Act 1981* (as amended) and are European Protected Species under *The Conservation of Habitats and Species Regulations 2010* (as amended), hereafter referred to as 'the Regulations'.

4.2.12 As the proposals will directly impact a day roost of a pipistrelle species (at Roost 9), and have the potential to impact upon a maternity roost of Soprano Pipistrelle and a day roost of Common Pipistrelle, The development proposals must only be conducted under a suitable European Protected Species Mitigation (EPSM) licence, granted by Natural England.

Consideration of the 'Three Tests'

4.2.13 In determining whether or not to grant a licence Natural England must apply the requirements of Regulation 53 of the Regulations and, in particular, the three tests set out in sub-paragraphs (2)(e), (9)(a) and (9)(b):

(1) Regulation 53(2)(e) states: a licence can be granted for the purposes 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", hereafter referred to as the 'Overriding Public Importance Test';

(2) Regulation 53(9)(a) states: the appropriate authority shall not grant a licence unless they are satisfied "that there is no satisfactory alternative", hereafter referred to as the 'No Satisfactory Alternative Test'; and

(3) Regulation 53(9)(b) states: the appropriate authority shall not grant a licence unless they are satisfied "that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.", hereafter referred to as the 'Favourable Conservation Status Test'.

4.2.14 The proposals are examined in relation to the three tests below:

Overriding Public Importance Test and No Satisfactory Alternative Test

4.2.15 A Reasoned Statement is typically provided as part of an EPSM Licence Application to satisfy the Overriding Public Importance Test and No Satisfactory Alternative Test.

4.2.16 Natural England form 'Protected species licences: when to include a reasoned statement with your application' (16 July 2015) states the following:

You don't need to include a reasoned statement where bats and their roosts will be affected by:

- *repairs and maintenance*
- *roof replacements, loft conversions and extensions*
- *renovations of existing domestic dwellings and associated structures (eg garages)*
- *housing developments less than 1 hectare, including demolition of existing buildings (whether domestic dwellings or other types of buildings) and barn conversions for domestic dwellings*

However if the bat population is of regional or national importance you may still need to submit a reasoned statement.

- 4.2.17 It is considered that the 300+ colony of Soprano Pipistrelle associated with Standen Hall may be considered as being of 'county' importance in accordance with Table 2 of *Valuing Bats in Ecological Impact Assessment* (Wray, et al., 2010)². As such, this development will not require a Reasoned Statement. Natural England are satisfied that small-scale proposals do not require further assessment under Regulation 53(e).
- 4.2.18 Further, bats have been detected early in the design stage of the project, and measures to protect and compensate for the loss of roosting habitat and to protect and reduce impacts to the retained roosts have been incorporated into the design of the site at an early stage; the requirements for assessment under Regulation 53(a) can also be met.

Favourable Conservation Status Test

- 4.2.19 A full Method Statement for the protection of bats will be completed once the development proposals have been finalised.
- 4.2.20 The measures proposed for the protection of bats during development and the provision of suitable roosting habitat both during and as a consequence of the proposed development are presented at **Section 5.0**, below. In summary, the proposals will seek to:
- Conduct works in manner which ensure the protection of bats;
 - Conduct works to timescales which will avoid disturbance to bats at their most critical times of year;
 - Retain the dark, uncluttered areas beneath the known roosting locations which could otherwise be impacted by the proposed development (i.e. Roosts 2, 3, 7, 8 and 11); and
 - Ensure the safety of bats during the removal of Roost 11.
- 4.2.21 It is considered that, in this instance, compensatory roosting habitat for bats is not required. The single day roost to be lost at the building as a consequence of the proposals is of minor conservation significance; the building supports numerous other similar suitable habitats for use by roosting bats which will be retained throughout the proposed development.

4.3 Other Wildlife

- 4.3.1 The building provides suitable nesting habitat for birds. Recommendations for the protection of breeding birds is presented at **Section 5.3** of this report.

5.0 RECOMMENDATIONS AND ECOLOGICAL ENHANCEMENT

5.1 Introduction

- 5.1.1 The recommendations in **Section 5.0** aim to ensure that the development is implemented in accordance with all wildlife legislation, Natural England guidance, the principles of the National Planning Policy Framework (NPPF), local planning policy and best practice.
- 5.1.2 Where possible, opportunities to enhance the ecological interest and habitat connectivity and seek biodiversity gain through appropriate landscape planting and habitat creation have been identified and recommended in **Section 5.0** (in accordance with the principles of the NPPF and associated documents).

² Soprano Pipistrelles are defined as a common species; Table 2 considers maternity roosts of common species are considered to be of 'county' importance

5.2 Bats

- 5.2.1 As stated above, a Method Statement for the protection of bats during the proposed development may only be completed once the proposals are finalised.
- 5.2.2 The following recommendations (refer to **Figure 4**) present optimal timing measures, measures for the protection of roosting bats, and measures to incorporate into the design of the proposals to ensure no disturbance effects to bats are created as a consequence of the proposed development:
- Aim to conduct works which could potentially disturb Roosts 2, 3, 7, 8 and 11 at a favourable time of year (i.e. 1st October to 1st May) in order to minimise disturbance to the maternity colony of bats present;
 - Remove Roost 9 at a favourable time of year to avoid disturbing both maternity colonies and hibernating bats (i.e. between 1st September and 1st November or between 1st March and 1st May), under the supervision of a licensed bat worker;
 - Conduct any works which could impact upon roosting bats under the supervision of a licensed bat worker;
 - Ensure all workers are aware of the presence of roosting bats at the building, the locations of the roosts, and what to do in case bats are found during the course of works³;
 - Ensure that no internal lighting from the proposed reconfigured building shines upwards onto Roosts 2, 3, 7, 8 and 11 as a consequence of the proposed development; and,
 - Ensure that the proposed re-configured building height allows for a 'drop' from Roosts 2, 3, 7, 8 and 11, and that the roof at this area is not excessively cluttered.
- 5.2.3 Points 'a' to 'c' will ensure that the proposals will be timed at a suitable time of year to avoid impacts to roosting bats. Points 'd' and 'e' seek to ensure that the proposals will retain and maintain the current conditions at the Hall for Roosts 2, 3, 7, 8 and 11.

Consideration of lighting

- 5.2.4 It is recommended that whilst the layout of the proposals is being finalised, a methodology to ensure that the proposals do not cause artificial lighting to shine onto the roost entrance / exit points at Roosts 2, 3, 7, 8 and 11 is agreed with the client, architect and Ecologist.
- 5.2.5 It is considered fundamental to the success of the application to the planning authority (and subsequently Natural England) that it can be demonstrated that operational impacts such as increased artificial lighting have been thoroughly considered with suitable methods utilised to ensure that no artificial lighting shines onto Roosts 2, 3, 7, 8 and 11 as a consequence of the development. LED lighting, baffles to prevent light spill and shuttering are all potential solutions which could be considered.
- 5.2.6 These measure will also ensure that the rooftop (at which bat activity was more-or-less constant throughout the two surveys) remains suitable for foraging and commuting bats, and commuting routes across the rooftop from the roost locations are not severed.

5.3 Birds

Protection of nesting birds

- 5.3.1 All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended) while they are breeding. It is mandatory that advice from an Ecologist is sought to determine whether or not nesting birds are present at the areas of the building to be affected prior to the commencement of works.

³ Standard advice will be followed; if at any time during the works a bat is discovered or suspected all contractors must withdraw from the area and ERAP Ltd (01772 750502) or Natural England must be contacted for further guidance.

- 5.3.2 It may be necessary to carry out a walkover survey to demonstrate satisfactorily that no breeding birds, active nests, eggs or fledglings are present in the area to be cleared.
- 5.3.3 If breeding birds are detected the Ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. This may involve cordoning off an area of the site until the young birds have fledged.

6.0 CONCLUSION

- 6.1.1 This ecological appraisal has demonstrated that the works proposed at Standen Hall are feasible and acceptable in accordance with ecological considerations and the National Planning Policy Framework.
- 6.1.2 Roosting bats are present; the proposals will ensure that the design of the site will not impact upon those roosts which are to be retained, and that bats are protected during the removal of Roost 9 (a *pipistrelle* day roost) and throughout the works.
- 6.1.3 It is possible to implement reasonable actions for the protection of nesting birds and commuting/foraging bats associated with the site.

7.0 REFERENCES

- Barn Owl Trust, 2012. *Barn Owl Conservation Handbook*. Exeter: Pelagic Publishing.
- CIEEM, 2013. *Technical Guidance Series Competencies for Species: Bats*. Winchester: Chartered Institute of Ecology and Environmental Management.
- Great Britain Department for Communities and Local Government, 2012. *National Planning Policy Framework*. London: H.M.S.O.
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- Hundt, L., 2012. *Bat Surveys: Good Practice Guidelines 2nd Edition*. London: Bat Conservation Trust.
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- Wray, S., Wells, D., Long, E. & Mitchell-Jones, T., 2010. Valuing Bats in Ecological Impact Assessment. *In Practice*, pp. 23-25.

8.0 APPENDIX 1: TABLES AND FIGURES

Table 8.1: External Elevations and Rooftop (refer to Figure 1)



Photo 1: South-eastern elevation



Photo 2: Single-storey extension at north-eastern end



Photo 3: Northern elevation



Photo 4: North-western elevation



Photo 5: Complex rooftop, from southern end looking north (view from bat activity survey position 3)



Photo 6: Complex rooftop, from south-eastern end looking north-west (view from bat activity survey position 2)



Photo 7: Complex rooftop, from northern-end looking south



Photo 8: Complex rooftop, from north-western end looking south-east (view from bat activity survey position 1)

Table 8.2: Roof Voids and Results of Internal Survey (refer to Figure 1.2)



Photo 9: Roof Void A

Dimensions:

1.5 metres tall, 6 metres wide and 8 metres long.

Construction type and materials:

Constructed from traditional timber purlins and rafters.

Slates are lined with degraded horsehair parging. Floor is uninsulated.

Signs of roosting bats

No bats or signs of bats detected within void.



Photo 10: Roof Void B1 (northern end)

Dimensions:

2.5 metres tall, 7.5 metres wide by 5 metres long.

Construction type and materials:

Constructed from traditional timber purlins and rafters. Hipped end to the void.

Slates are lined with bitumastic roofing felt. Floor is uninsulated.

Signs of roosting bats

1000's of droppings at three distinct locations.

Pipistrelle bat species observed roosting at crevice between internal 0.3 metre high mortared stone wall and roof (see arrow).

Roosts 1, 2 and 3. Refer to Photos 24 to 27 Table 8.3.



Photo 11: Roof Void B2 (middle/northern end)
Separated from Roof Void B1 via plastic sheeting.
Dimensions:
2.5 metres tall, 7.5 metres wide by 5 metres long.
Construction type and materials:
As per B1. Covered water tanks are present. The roofing is lined by timber planks.
Signs of roosting bats
Occasional scattered droppings, indicative of bats in flight present. No bats or signs of roosting bats present.



Photo 12: Roof Void B3 (middle/southern end)
Dimensions:
2.5 metres tall, 7.5 metres wide by 5 metres long.
Construction type and materials:
Constructed from traditional timber purlins and rafters.
Roofing slates lined with bitumastic roofing felt.
Floor is uninsulated.
Signs of roosting bats
100's of droppings (of a size and shape indicative of *pipistrelle* species) distributed under the ridge line.
No bats detected.
Roost 4, refer to Photo 28, Table 8.3.



Photo 13: Roof Void B4 (southern end)
Dimensions:
2.5 metres tall, 7.5 metres wide by 5 metres long.
Construction type and materials:
Hipped end. Constructed from traditional timber purlins and rafters.
Roofing slates lined with bitumastic roofing felt.
Fibreglass insulation present at floor.
Signs of roosting bats
10's of droppings detected scattered within void, indicative of bats in flight. Cluster of 50+ droppings present under ridge-line.
Roost 5, refer to Photo 29, Table 8.3.



Photo 14: Roof void C

Dimensions:

4 metres tall. Maximum 13 metres long and 7.5 metres wide.

Construction type and materials:

Mixture of old and new timber purlins and rafters. Roofing slates lined with bitumastic roofing felt. No insulation is present.

Signs of roosting bats

1000's droppings (indicative of a pipistrelle species) under ridge beam

(Roost 6, refer to Photo 30, Table 8.3).



Photo 15: Roof Void D

Dimensions:

4 metres tall, 9 metres long and 9 metres wide.

Construction type and materials:

Traditional timber trusses, purlins and rafters. Slates lined with modern breathable roofing membrane (no signs of furring present) and fibreglass insulation present on floor.

Signs of roosting bats

Droppings scattered throughout, more indicative of bats in flight than in specific clusters which could indicate a roost. Droppings a mixture of smaller, thinner droppings indicative of a pipistrelle species and larger droppings split into three clear sections, indicative of Brown Long-eared bats.



Photo 16: Roof void E

Dimensions:

1.5 metres tall by 1 metre wide and 4.5 metres long.

Construction type and materials:

Modern timber rafters are present. The void is uninsulated. Bitumastic roofing felt lines the slates.

Signs of roosting bats

No bats or signs of bats were detected within the void.



Photo 17: Roof void F

Dimensions:

2 metres tall, 2.5 metres long and 3 metres wide.

Construction type and materials:

Traditional timber purlins and rafters.

Bitumastic roofing felt lines the slates. Floor of void is uninsulated.

Signs of roosting bats

No bats or signs of bats.



Photo 18: Roof void G

Dimensions:

Varying in height between 3 and 1.5 metres, the 'u' shaped void is a maximum of 7 metres wide at any one point, and 21 metres in length.

Construction type and materials:

Traditional timber trusses (with metal supports), timber purlins and rafters.

Degraded horse-hair parging is present under the roofing slates. No insulation is present.

Signs of roosting bats

1000's of droppings are located under the two ridgeline along the length of the void, with clusters (100's) at the two south-east facing gables.

Roosts 7 (north) and Roost 8 (south), refer to Photos 31 to 33, Table 8.3



Photo 19: Roof void H

Dimensions:

1 metre tall by 0.5 to 1 metre wide, the void is located along the north-western edge of the central courtyard area and allows light from the skylights into the corridor below.

Construction type and materials:

The roof is supported on traditional timber rafters.

The slates are unlined and the void is uninsulated.

The whole void could not be accessed as it is too small and narrow, however the void was regularly accessed along its length via the skylights.

Signs of roosting bats

No bats or signs of bats were detected.

	Photo 20: Roof void I1, (south-western end) inaccessible <i>Dimensions:</i> 2.5 to 3 metres tall, 3 metres long and 4 metres wide with a hipped end at the north-western elevation. <i>Construction type and materials:</i> The void is supported on traditional timber purlins and rafters. The roofing slates are unlined and the void is uninsulated. <i>Signs of roosting bats</i> No access could be gained directly into the void, however examination from the narrow opening between the chimney wall and roof did not reveal any clusters of bat droppings; no bats or signs of bats were detected via the examination which was possible.
	Photo 21: Roof void I2 (southern middle), <i>Dimensions:</i> 1.5 metres high by a maximum of 5.5 wide and 4 long. <i>Construction type and materials:</i> Supported on traditional timber purlins and rafters. The roofing slates are unlined and the void is uninsulated. <i>Signs of roosting bats</i> A cluster of 30 old droppings, indicative of a pipistrelle bats are present at the southern end of the void Roost 9, refer to <i>Photos 34 and 35, Table 8.3.</i>
	Photo 22: Roof void I3 (northern middle) <i>Dimensions:</i> 1.5 metres high by a maximum of 7 wide and 9 long. <i>Construction type and materials:</i> Supported on traditional timber purlins and rafters. The roofing slates are unlined and the void is uninsulated. <i>Signs of roosting bats</i> No bats or signs of bats were detected.



Photo 23: Roof void I4, north-western end

Dimensions:

1.5 metres high, 6 metres long and 6 metres wide with a hipped roof at its north-wester elevation.

Construction type and materials:

Supported on traditional timber purlins and rafters. The roofing slates are unlined and the void is uninsulated.

Signs of roosting bats

A cluster of 30 old droppings, indicative of a pipistrelle bats are present at the southern end of the void.

Roost 10, refer to Photo 36, Table 8.3.

Table 8.3: Photographs of Roosts Detected During Daylight Bat Survey



Photo 24: Roost 1 location, as indicated by orange arrow. Roost located at south-eastern of Roof Void B1. 1000's of droppings and bats were present



Photo 25: Roost 1 roosting location at eaves.



Photo 26: Roost 2, 1000's droppings present at north-western corner of Roof Void B1



Photo 27: Roost 3, 1000's droppings present at south-western corner of Roof Void B1



Photo 28: Roost 4, 100's of droppings indicative of a *pipistrelle* species along length of ridge beam of Roof Void B3



Photo 29: Roost 5, 50+ droppings along length of ridge beam of Roof Void B4



Photo 30: Roost 6, 1000's of droppings along the length of the ridgeline



Photo 31: Roost 7, 1000's droppings under the ridgeline, with clusters of droppings located at the south-east facing gable



Photo 32: Roost 7, Soprano Pipistrelle roosting above ridge beam



Photo 33: Roost 8, 1000's droppings under the ridgeline, with clusters of droppings located at the south-east facing gable



Photo 34: Roost 9, 30+ droppings indicative of a *pipistrelle* species, located within Roof Void I2



Photo 35: Roost 9, gap in stone slates through which droppings have fallen (directly above droppings)



Photo 36: Roost 10 as indicated by the orange arrow, 30+ old droppings, indicative of pipistrelle bats, located within Roof Void I4.



Photo 37: Dead Whiskered / Brandt's bat

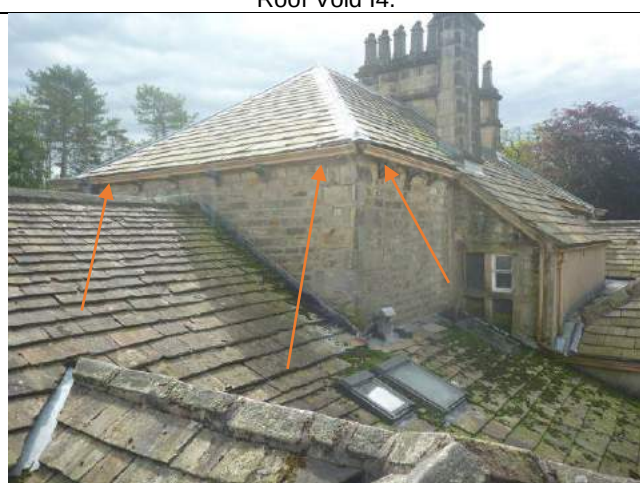


Photo 38: Roost 1, 2 and 3 emergence and re-entry locations



Photo 39: Roost 7 emergence and re-entry location



Photo 40: Roost 11 re-entry location

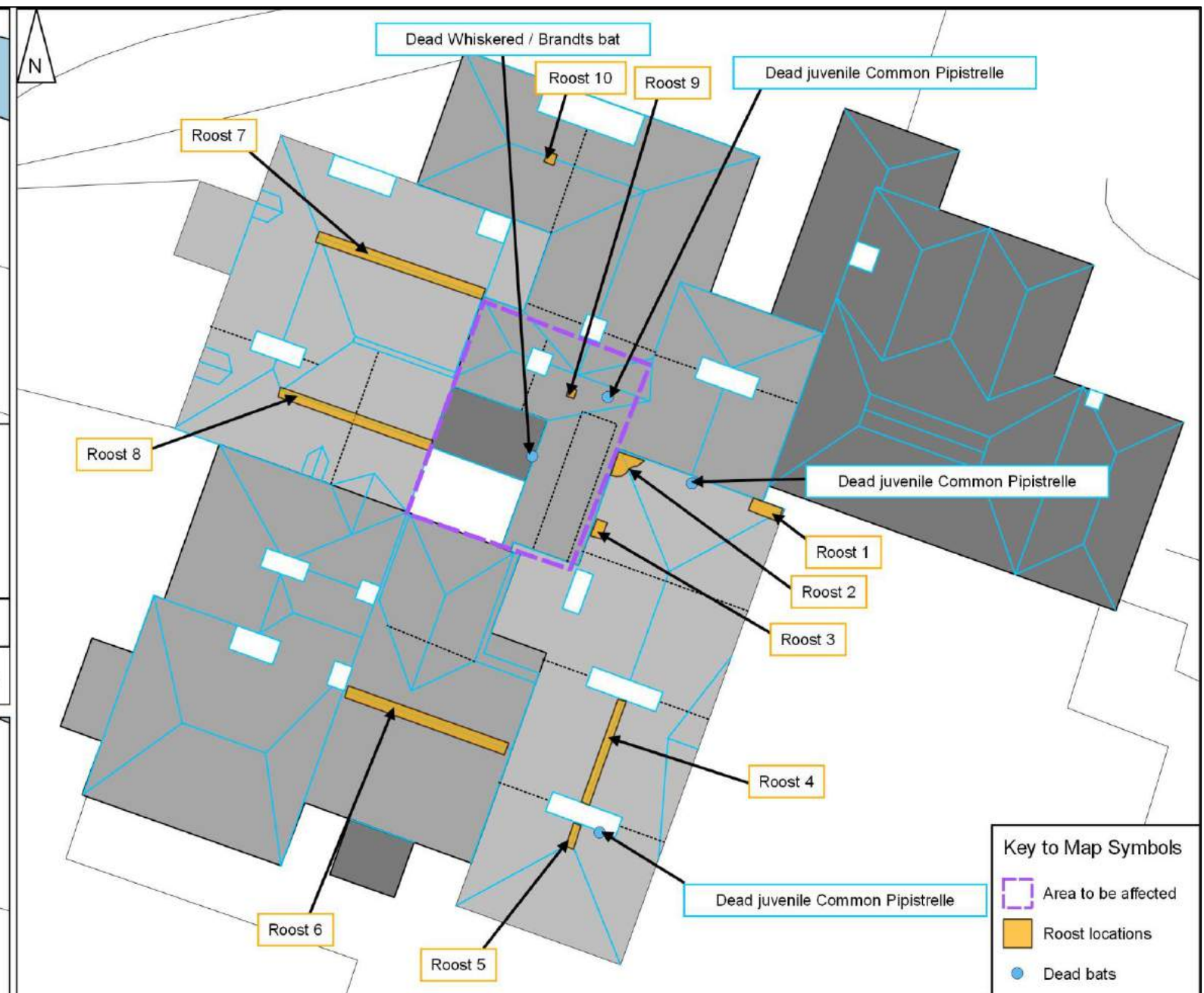
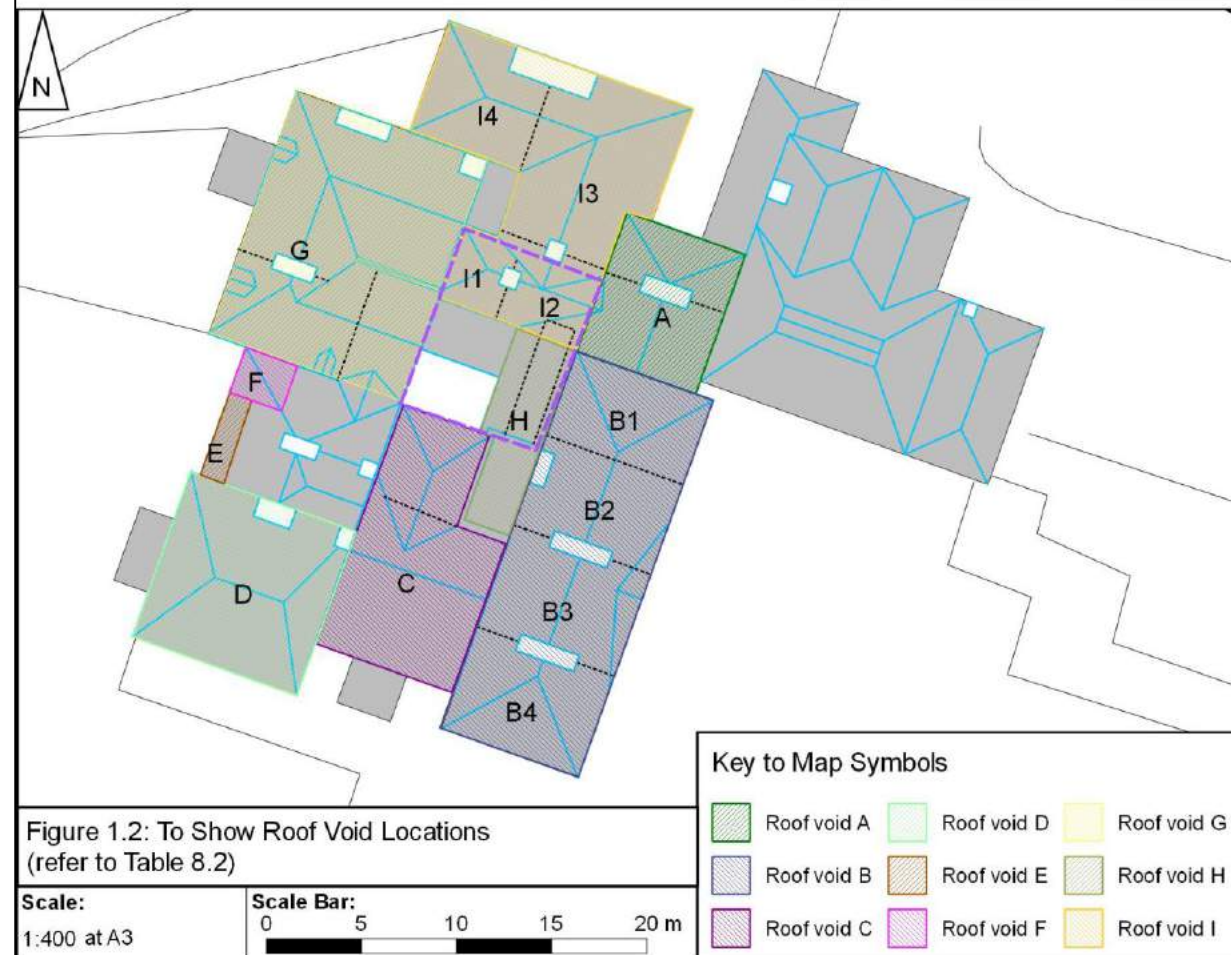
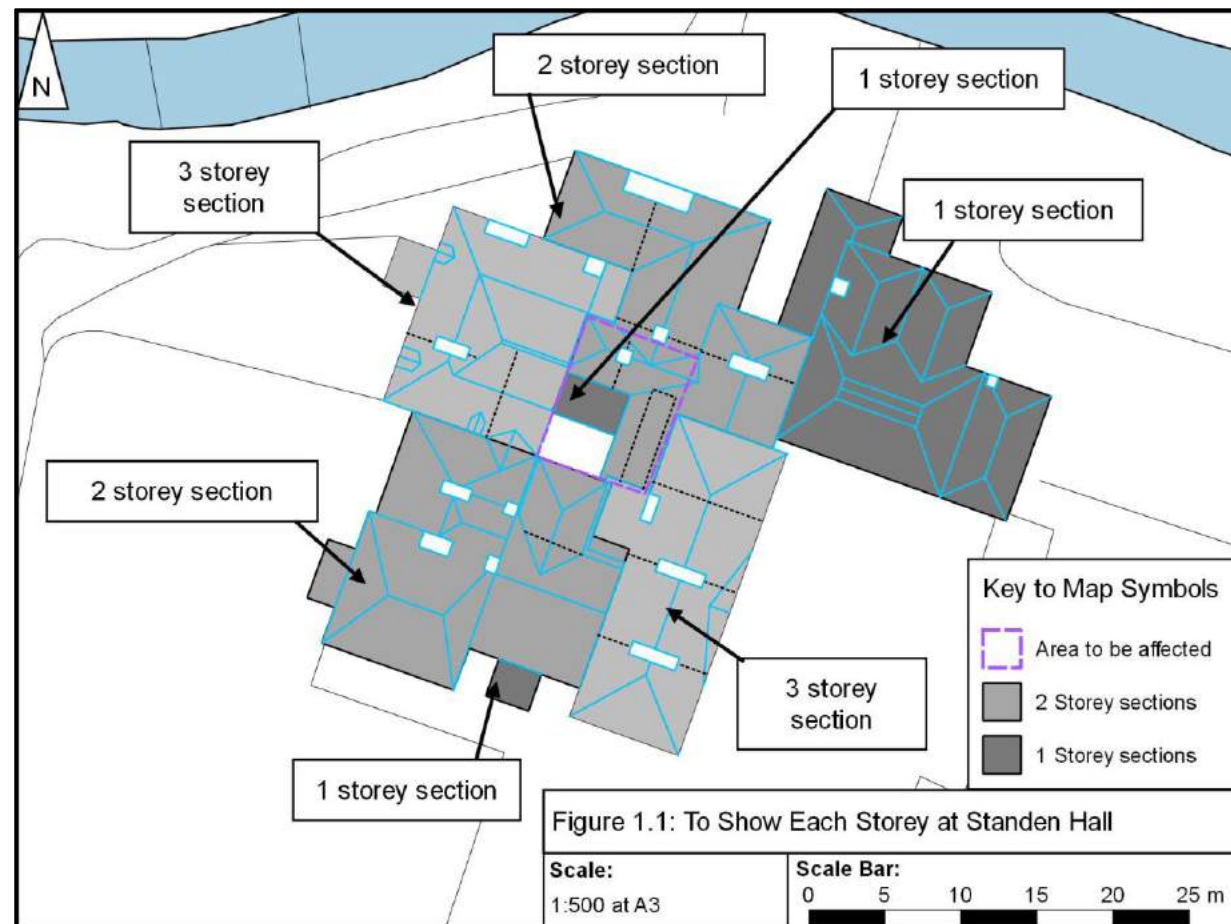


Figure 1.3: To Show Results of Daylight Survey (refer to Table 8.3)

Scale:
1:250 at A3

Scale Bar:
0 5 10 15 20 25 m

Project Name:
Standen Hall, Clitheroe

Title: Figure 1
Plan to Show Building and Results of Daylight Survey

Central Grid Ref:
SD 7474 4028

Version:
v1 (BR) 16/11/2015

Date:
November 2015

Reference No.
ERAP Ltd. 2015/228

Key to Map Symbols: All Plans

- Area to be affected
- Chimneys
- Walls within roof voids
- Roof pitches
- Building

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