LIZARD
Landscape Design and Ecology

PRELIMINARY ROOST ASSESSMENT

Speedwell, Bost Hill, Worthing

On behalf of: Anja Klüver

Client:	Anja Klüver			
Project:	Speedwell, Bost Hill, Worthing			
Reference:	LLD2907-ECO-REP-001-00-PRA			
Revision:	**Date:**	**Author**	**Proof**	**Approved**
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Validity:

This report is valid for 18 months from the date of The Site visit. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified ecologist to assess any changes in the habitats present on site, and to inform a review of the conclusions and recommendations made.

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Contents

		Page No.
SUMMARY		01
1.0	Introduction	02
2.0	Scope of the Survey	03
3.0	Methodology	04
4.0	Results	06
5.0	Evaluation and Recommendations	10
6.0	Opportunities for Ecological Enhancement	11
7.0	Conclusions	12
8.0	References	13

TABLES

Table No. 01 – Bat Roost Suitability Guidelines

Table No. 02 – Statutory Designated Sites

Table No. 03 – Non-Statutory Designated Areas

Table No. 04 – Preliminary Bat Roost Assessment Results

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SUMMARY

Lizard Landscape Design and Ecology has been commissioned by Anja Klüver to undertake a Preliminary Roost Assessment (PRA) of Speedwell, Bost Hill, Worthing (located around central grid reference: TQ 12338 06740 – hereafter referred to as 'The Site'). A site visit was completed on the 21st March 2023 to allow the existing habitats on site to be assessed.

Upon internal inspection of the main residential dwelling (B01), the loft spaces appeared well-sealed and recently re-felted with no obvious gaps or signs of bats inside, however, there was an area to the south of the main loft, past the southern chimney that the surveyor was unable to check for potential bat access points.

During the external assessment of the building B01 a small number of potential access points for crevice dwelling bats were recorded including gaps between the wall and fascia the southern gable end, a small number of lifted roof tiles near both chimneys and a missing hanging tile to the southern dormer window. Also taking into consideration the location with the Gallops local nature reserve, a woodland glade within close proximity which is likely to provide optimal foraging and commuting routes for bats, further bat emergence surveys are required to rule out the presence of a bat roost. Should a roost be found, the survey work will inform any future mitigation scheme and licence requirement.

1.0 INTRODUCTION

1.1 Lizard Landscape Design and Ecology has been commissioned by Anja Klüver to undertake a Preliminary Roost Assessment (PRA) of the property known as Speedwell, Bost Hill, Worthing (located around central grid reference: TQ 12338 06740 – hereafter referred to as 'The Site').

1.2 The purpose of this report is to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use The Site for roosting, foraging or commuting. This has been undertaken with due consideration to the "Bat Surveys for Professional Ecologists — Good Practice Guidelines" publication (Collins, 2016).

Site Information

1.3 The survey area covers c. 800m^2 with the main residential dwelling located centrally. The Site is enclosed by closed board fencing to the east, west and south with the entrance leading in from Bost Hill to the north. Neighbouring residential plots lie on all aspects adjacent to The Site.

Surrounding Landscape

1.4 The Site is located on the northern edge of High Salvington, a neighbourhood of Worthing, in the borough of Worthing in West Sussex. It is centred 2.5 miles northwest of the town centre and is north of the A27. The surrounding habitat is considered to be suitable for a range of UK bat species due to the proximity of nearby woodlands and semi-rural nature. With more open landscape to the north and residential settlement to the south.

Development Proposals

1.5 Alteration and modification to the building that may affect roosting bats include changes to both chimneys, bay and dormer windows and hanging tiles, south and west gable end of roof and eave alterations, removal of small lower floor pitched roof on northwest aspect and the addition of weather boarding.

2.0 SCOPE OF THE ASSESSMENT

2.1 In accordance with current guidance (Collins, 2016), the aim of the Preliminary Roost Assessment has been to:

- Identify whether any potential access points exist within the building fabric which could be exploited by bats.
- Assess the building for signs of current or previous bat presence, such as droppings or feeding remains.
- Categorise the building according to best practise guidelines.
- Identify where further survey effort is required to assess the impact of the proposals.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 The Multi-Agency Geographic Information for the Countryside (MAGIC) was consulted for all designated sites within a practicable zone of influence of The Site. This included Local Nature Reserves (LNRs), National Nature reserves (NNR) and Sites of Special Scientific Interest (SSSIs) within a 2.0km radius of The Site, and international statutory designated sites including Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsars (Wetlands of International Importance) within a 10km radius of The Site. Where SAC's designated for their bat interest are present, this ZoI was extended to 12km in accordance with recent guidance (SDNP, 2021).

3.1.2 MAGIC was also used to provide information on all Priority Habitats within a 2.0km radius of The Site, and all records of granted European Protected Species Mitigation licences within a 1.0km radius of The Site.

3.1.3 Given the quantum of development proposed, a local biological records centre search has not been provided. This is an approach in line with current guidance (CIEEM, 2020).

3.2 Field Survey

3.2.1 The field survey was undertaken on 21st March 2023 by an experienced ecologist Louise Barker, accredited agent under Catherine O'Reilly, 2016-20460-CLS-CLS. Weather conditions were mild (c.11°C), with a gentle breeze (Beaufort Scale 02), 90% cloud cover and no rain.

3.2.2 The bat surveyor assessed the trees and buildings visually for direct evidence of bats evidence, such as;

- *Grease Marks;*
- *Urine Stains;*
- *Bat Droppings;*
- *Feeding Remains;*
- *Dead or Live Bats.*

3.2.3 Trees were visually identified from the ground, using binoculars where necessary, for any features that could be used by bats such as:

- *Woodpecker Holes;*
- *Knot Holes;*
- *Tear-outs;*
- *Flush Cuts;*
- *Double Leaders.*

3.2.4 Building were subject to an internal and external inspection for any features that could be used by bats such as:

- *Lifted or slipped roof or hanging tiles;*
- *Raised flashing;*
- *Missing mortar at ridge, hips or verges;*
- *Cracks in brickwork;*
- *Holes or gaps associated with pipes or weep holes;*
- *Areas of raised weatherboarding or other cladding.*

3.3 Evaluation Criteria

3.3.1 Once features had been assessed the trees and buildings were then categorised in accordance with *Table 4.1 of the Bat Conservation Trust's Good Survey Guidelines (2016) (shown below).*

Table No. 01 – Bat Roost Suitability Guidelines (Collins, 2016)

Category	Buildings	Trees
`Negligible`	No suitable features identified.	No suitable features identified.
`Low`	A structure which could be used opportunistically, however, are not likely to be used on a regular basis / by a large number of bats.	Tree of sufficient size / age to support bat roost features; but with none identified from the ground.
`Moderate`	A building with features which, could be used regularly by a small number of bats.	Tree with features which, may support a bat roost of low conservation status.
`High`	A building with features suitable for use by a large number of bats on a regular basis.	A tree with several potential bat roost sites that are suitable for use by a large number of bats.

3.4 Constraints and Limitations

3.4.1 The internal assessment was restricted in the main loft cavity due to the limited crawl space past the southern chimney to the southern gable. During the external assessment, the middle of the roof could not be viewed from the ground.

3.4.2 Biological records centre data has not been provided and therefore it is not possible to rule out the potential that useful information to inform the assessment has been missed. However, the quantum of development proposed is small, and the potential for significant adverse effects is limited. Therefore, the omission of biological records centre data is unlikely to have a significant bearing on the results of this assessment.

4.0 RESULTS

4.1 Desk Study

4.1.1 The following designated sites are not necessarily representative of the existing site's ecology but are indicative of the ecological context of the surrounding area; a factor that may be important when assessing the presence / absence potential of certain species groups. Statutory Designated Sites shown in the table below are identified within a potential zone of influence of The Site.

Table No. 02 – Statutory Designated Sites

Site	Description	Location
International Statutory Designated Sites within a Potential Zone of Influence		
Arun Valley SAC	Qualifying species listed in Annex II species that are a primary reason for selection of this site; 4056 Ramshorn snail *Anisus vorticulus*.	*10km NW*
Arun Valley SPA	Qualifying individual species listed in Annex I of the Wild Birds Directive (Article 4.1) A037 Bewick's swan, *Cygnus columbianus bewickii*. Qualifying assemblage of species (Article 4.2); During the non-breeding season the SPA regularly supports an assemblage of waterfowl.	*10km NW*
Arun Valley RAMSAR	Waterbird assemblage – Wintering. Wetland invertebrate assemblage. Wetland plant assemblage.	*10km NW*
National Statutory Designated Sites within 2.0km		
South Downs National Park	Covering over 1700km2 of varied habitats including chalk downland and woodland which supports a range of fauna and flora.	*20m E*
Cissbury Ring SSSI	Areas of unimproved chalk grassland, a habitat type which has become rare nationally through being under constant threat from agricultural improvement. The scrub areas provide important habitats for wintering, breeding and migrant birds and support a varied butterfly fauna.	*1.5km NE*

4.1.2 The site is located within the *Impact Risk Zone* of *Cissbury Ring SSSI* however development proposals are unlikely to meet the criteria which would require consultation with Natural England.

Non-Statutory Designated Areas

4.1.3 The following non-statutory designated areas shown in the table below were identified within 2.0km of The Site:

Table No. 03 – Non-Statutory Designated Areas

Site	Location
The Gallops SNCI	20m E
Worthing & Hill Barn Golf Courses SNCI	1.2km E

Priority Habitats

4.1.4 In accordance with the MAGIC dataset, within 2.0km of The Site there are priority habitats (NERC, 2006) of *Lowland Calcareous Grassland, Deciduous Woodland, Traditional Orchard* and *Woodpasture and Parkland.* Much of the woodland in the surrounding area is classified as *Ancient Semi-Natural Woodland.*

Species Records

4.1.5 Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Long-eared *Plecotus* sp., Serotine *Eptesicus serotinus* bats have been recorded within 2.0km of The Site area.

4.1.6 There is 1no. mitigation licence in relation to bats issued within 2.0km of the site (NE reference 2018-33992-EPS-MIT), located 1.4km north. The licence covers brown long eared and serotine day roosts.

4.2 Survey Results

Trees

4.2.1 During the ground level assessment no trees were identified as offering bat roost suitability within the site area.

Buildings

4.2.2 The main residential dwelling on site called Speedwell was subject to an internal and external bat roost assessment, a summary of findings is contained in the following table.

Table No. 04 – Preliminary Bat Roost Assessment Results - Building

Ref.	Description	Category
B01	While most of the loft spaces appeared well-sealed and recently re-felted with no obvious gaps or signs of bats inside, there was an area to the south of the main loft, past the chimney that was inaccessible. Externally, the southern gable end contains features that bats could potentially roost under, and there are a few lifted roof tiles near both chimneys and a southern dormer window that could also provide a roost for a pipistrelle bat. No direct evidence of bats was recorded during the survey however the potential presence of a small number of crevice dwelling bats could not be ruled out.	Low

Foraging and Commuting Suitability

4.2.3 The Site comprises of a small number of mature trees to the southern boundary and south of the building (B01). With the nearest deciduous woodland sited in proximity (20m east The Gallops SNCI), which provide a linear commuting route and foraging resource for bats. The site and the surroundings are therefore considered to suitable for the majority of UK bat species.

5.0 EVALUATION AND RECOMMENDATIONS

5.3.1 The following section provides recommendations to avoid, mitigate or compensate potential impacts to protected or notable species, in line with the 'Mitigation Hierarchy' (BSI, 2013) (CIEEM, 2018). If potential impacts are anticipated, recommendations for further assessment and or mitigation are provided, to ensure that the presence, or potential presence of these species are adequately considered in the scheme design.

5.1 Potential Impacts

5.1.1 Building B01 has been assessed as offering low bat roost suitability. As this building is proposed for alterations, impacts in the absence of mitigation could include killing or injuring of individual bats and permanent loss of the roost.

5.2 Recommendations

5.2.1 Building B01 shall require 1no. bat emergence / re-entry survey to be undertaken during the optimal survey season of May to August. This shall allow the presence or absence of a bat roost to be established. Where an active bat roost is found, further surveys may be required to confidently categorise the roost. This survey information would also be required to inform a European Protected Species Derogation Licence from Natural England which would be necessary to allow works to progress. Any mitigation measures required as part of any such licence would be determined by the results of the survey work.

5.2.2 Proposals should be mindful of the potential for bats to occur in the area by ensuring that boundary vegetation and habitat creation areas are protected from inappropriate nocturnal lighting, and by limiting the need for nocturnal lighting in the first instance. Any external lighting designs should conform to best practice standards in regard to external lighting and bats (BCT & ILP, 2018) wherever possible.

6.0 OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENT

6.1 Opportunities for ecological enhancements which could be incorporated into the scheme design to support Biodiversity Net Gain are provided below:

- The use of seed and fruit bearing species of tree such as cherry, rowan, birch, hawthorn and crab apple to provide a foraging resource for birds and insects.
- Installation of integrated bird and bat boxes into building.
- Installation of bat boxes to the southern aspect of mature trees.
- Pale and night-scented species to be used to increase the bat foraging resource.
- Creation of permanent waterbodies within the scheme. A wildlife pond should have an area of shallow water which is favoured by invertebrates. Native plants should be used within the pond, with non-native invasive species avoided. Fish stocking should be avoided.
- The use of flowering lawn in areas which require regular mowing rather than a standard amenity mix.

7.0 CONCLUSIONS

7.1 The site consists of a detached residential dwelling surrounded by hard standing, regularly mown modified grassland, ornamental shrubs and scattered trees. The greatest ecological interest at the site is associated with the trees which should be retained and protected throughout proposals, wherever practicable.

7.2 The Building B01 has been identified as offering 'low' potential for roosting bats, 1no. bat emergence / re-entry survey is therefore required to rule out the presence of a bat roost. These surveys should be completed during the optimal survey season of May to August.

7.3 Opportunities for ecological enhancement are provided herein, to provide proposals with net gains for biodiversity. A series of recommendations are provided to ensure the scheme accords with best practice in regards to bats, and complies with all local and national planning policy guidance and legislation.

8.0 REFERENCES

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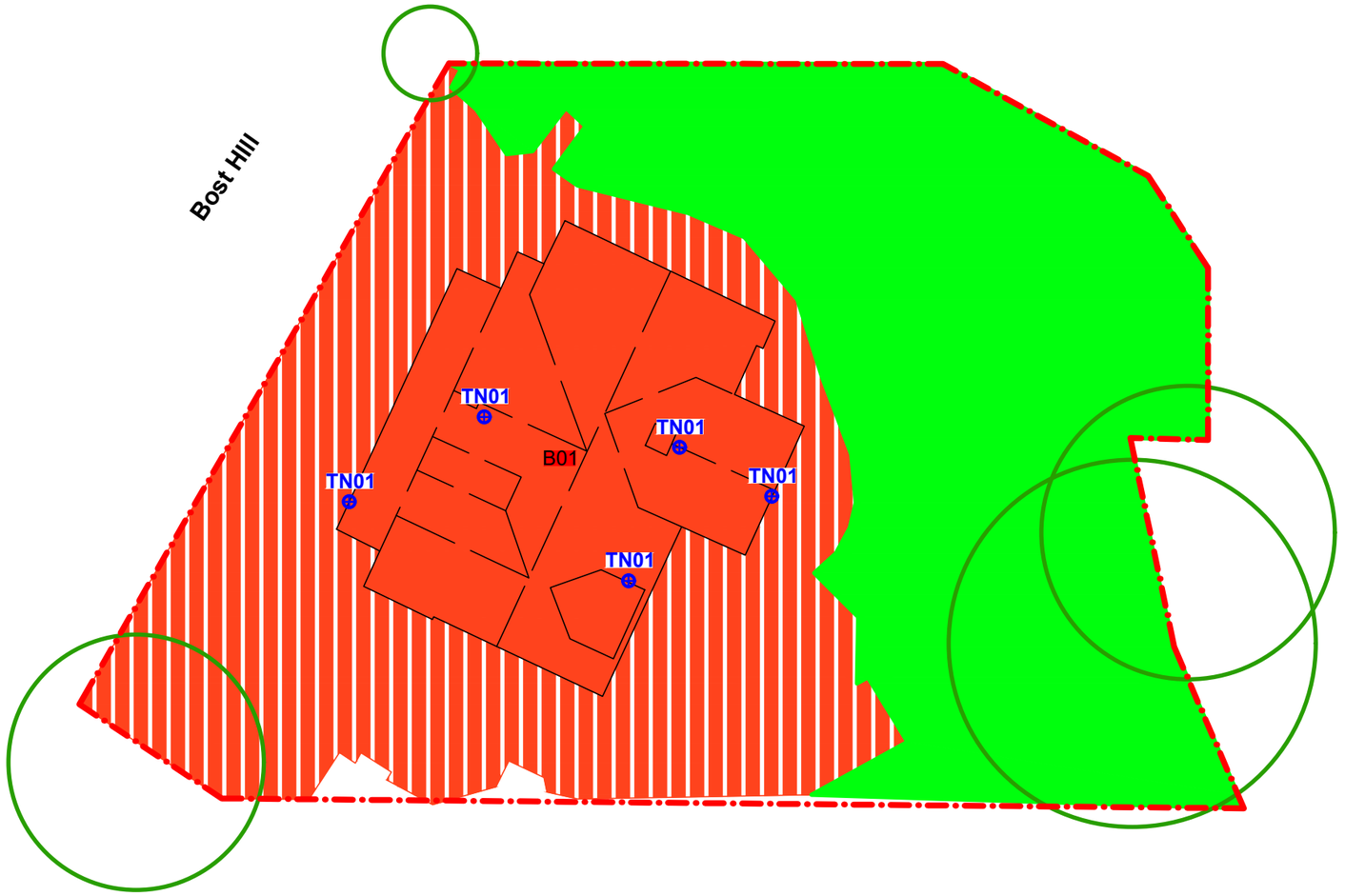
Figure No. 01 – Site Plan



N

0 1 2.5 5 10 m

Scale 1:200

Site Habitat Plan
Speedwell, Bost Hill

Legend

- **Survey area.**
- **u1b5 - Buildings.**
- **g4 - Modified Grassland.**
- **11 Scattered Tree.**
- **u1b - Developed Land. Sealed Surface.**
- **TN01** **Target Note.**

Notes: *The original of this drawing was produced in colour - a monochrome copy should not be relied upon.*

Habitat areas are indicative and for information only - please do not scale from this drawing.

PLANNING ISSUE

Rev	Description	Date	Initials
00	Planning Issue	23.03.23	LB

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Client
Anja Kluver

Project Title and Location
Speedwell
Bost HIll, Worthing

Drawing Title
Site Habitat Plan

Scale	*Drawn*	*Approved*	*Date*
1:200@A3	LB	CO'R	23.03.2023

Drawing No **LLD2907-ECO-FIG-01**

Revision 00

Appendix A – Site Photographs

Image No. 01 – Northeast corner of the site, looking southwest.



Image No. 02 – Northwest corner of the site, looking southeast.



Image No. 03 – Southwest corner of the site, looking northeast.



Image No. 04 – Southeast corner of the site, looking northwest.



PRFs - Southern dormer window, showing missing hanging tile.



PRFs - North chimney stack lifted tiles at base.



PRFs - Southern gable end with gaps.



PRFs - South chimney stack, gap near base.

