

ECOLOGICAL IMPACT ASSESSMENT

ALTERATIONS AT PARK HOUSE HOTEL, BEPTON

ON BEHALF OF: THE PARK HOUSE HOTEL

Planning Issue

Prepared by	GS
Checked by	CO
Date	10 th December 2021
Project Reference	LLD2416
Revision	01

Contents

		Page No.
SUMI	MARY	01
1.0	Introduction	02
2.0	Planning Policy and Legislation	04
3.0	Methodology	06
4.0	Baseline Ecological Conditions	13
5.0	Assessment of Effects and Mitigation Measures	23
6.0	Enhancements	30
7.0	Conclusions	31
8.0	References	32

TABLES

Table No. 01 - Categorisation Criteria

Table No. 02 – Bat Emergence / Re-entry Survey Details

Table No. 03 - Statutory Protected Sites

Table No. 04 - Non-statutory Protected Sites

Table No. 05 - Building Assessment

Table No. 05 - Species Lists

APPENDICES:

Appendix A - Site Photographs

Appendix B - Full Bat Survey Results



SUMMARY

Lizard Landscape Design and Ecology has been commissioned by The Park House Hotel to undertake an Ecological Impact Assessment of proposals at The Park House Hotel, Bepton, West Sussex (*Central Grid Reference: SU 86190 18628 – hereafter referred to as 'the site'*). A preliminary ecological appraisal (PEA) and bat roost assessment was undertaken on the 5th August 2021, to appraise the existing ecological resource within the land and the surrounding area. Further bat emergence surveys of buildings were carried out on 18th August and 17th September 2021.

The site is formed of an existing set of hotel and accommodation buildings, surrounded by hard surfaces, amenity grassland and introduced shrubs. The site itself is of **very low ecological value** with no habitats of interest noted, beyond scattered trees of **local value** and a pond.

The emergence surveys undertaken in 2021 identified the main hotel building B01 to be a day roost of a number of common pipistrelle bats, with 10no. bats identified in areas proposed for alteration. Furthermore the laundry room B02 contained a day roost of 1no. soprano pipistrelle. Mitigation and a licence approach is proposed to ensure no harm to bats, contravention of legislation and ongoing favourable conservation status of the local bat population.

No other significant constraints with regards protected species or habitats have been identified.

Once avoidance and mitigation measures have been taken into account, the impacts of the planned development upon biodiversity will be **negligible**. Proposed enhancements will result in a very minor **net gain** in accordance with National and Local Planning Policy.

1.0 INTRODUCTION

- 1.1 Lizard Landscape Design and Ecology has been commissioned by The Park House Hotel to undertake an Ecological Impact Assessment of proposals at The Park House Hotel, Bepton, West Sussex (Central Grid Reference: SU 86190 18628 – hereafter referred to as 'the site').
- 1.2 A preliminary ecological appraisal (PEA) and bat roost assessment were undertaken on the 5th August 2021, to appraise the existing ecological resource within the land and the surrounding area. The *PEA* comprised a baseline survey conforming broadly to the *JNCC Ecology Phase 1 Habitat Survey* protocol, to identify the existing habitats. In addition, a protected species assessment was undertaken to identify the potential for European and nationally protected species within and adjacent to the land. The *PEA* identified the need for Phase 2 bat emergence and re-entry surveys, which were carried out on 18th August and 17th September 2021. A full EcIA was then undertaken using this baseline data.
- 1.3 A summary of the results and potential impacts of the proposals, and details of avoidance, mitigation and compensation measures have been detailed within this report. This report has been prepared by George Sayer (Senior Ecologist; MCIEEM; Lizard Landscape Design and Ecology). The report has been reviewed by Catherine O'Reilly (MICEEM; Senior Ecologist; Lizard Landscape Design and Ecology).

Site Information

- 1.4 The site consists of a country hotel and spa with surrounding grounds. The hotel and grounds cover a large area, but the areas proposed for alterations cover c..2000sqm. The site is within the small village of Bepton, within the South Downs National Park.
- 1.5 The site is located c.68.0 metres above sea level. Soils on site are described as slightly acid loamy and clayey soils with impeded drainage.

Surrounding Landscape

- 1.6 The site sits north of the scarp slopes of the South Downs and is surrounded by arable farmland and areas of woodland.
- 1.7 There is one pond to the east of the site, forming part of the hotel grounds. A further pond sits 55.0 m east within a golf course forming part of the hotel grounds.

Development Proposals

- 1.8 It is understood that the proposals include several alterations to the site, namely:
 - Removal of a pitched roof and replacement with a flat roof and balcony (Building B01 Section 1)
 - Extension of roof to the north of the hotel to create a kitchen area (Building B01 Section 2);
 - Change of a dormer window into a balcony (Building B01 Section 3);
 - Extension to the external laundry building (Building B02).
- 1.9 The above proposals would require removal of roofs, weatherboarding and small sections of wall.

Aims

- 1.10 The aim of this ecological appraisal survey has been:
 - To identify habitats and protected species present, and any other features of ecological value;
 - · Identify any potential ecological constraints;
 - Identify impacts of the proposed development and set out appropriate avoidance, mitigation and compensation measures;
 - To provide suggestions for enhancements to be incorporated into the scheme.

2.0 PLANNING POLICY AND LEGISLATION

Legislation

- 2.1 Legislation relating to wildlife and biodiversity of particular relevance to this EcIA includes:
 - The Conservation of Habitats and Species Regulations 2017;
 - The Wildlife and Countryside Act 1981 (as amended);
 - The Natural Environment and Rural Communities (NERC) Act 2006;
- 2.2 This above legislation has been addressed, as appropriate, in the production of this report.

National Planning Policy

- 2.3 The National Planning Policy Framework (NPPF) 2021 sets out the government planning policies for England and how they should be applied. 'Chapter 15:

 Conserving and Enhancing the Natural Environment' states that development should be 'minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.'
- 2.4 The Government Circular 06/2005, which is referred to by the NPPF, provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

Local Planning Policy

2.5 South Downs National Park's Local Plan (2019) Core Policy SD2: Ecosystem Services states that 'Development proposals will be permitted where they have an overall positive impact on the ability of the natural environment to contribute goods and services.'

- 2.6 Strategic Policy SD9 (*South Downs National Park, 2019*) states that planning permission will be granted for development where it can be demonstrated that all the following criteria have been met:
- Development proposals will be permitted where they conserve and enhance biodiversity and geodiversity, giving particular regard to ecological networks and areas with high potential for priority habitat restoration or creation. Prior to determination, up-to-date ecological information should be provided which demonstrates that development proposals:
- Retain, protect and enhance features of biodiversity and geological interest (including supporting habitat and commuting routes through the site and taking due account of any use by migratory species) and ensure appropriate and longterm management of those features;
- b. Identify and incorporate opportunities for net gains in biodiversity;
- Contribute to the restoration and enhancement of existing habitats, the creation
 of wildlife habitats and the creation of linkages between sites to create and
 enhance local and regional ecological networks;
- d. Protect and support recovery of rare, notable and priority species;
- e. Seek to eradicate or control any invasive non-native species present on site;
- f. Contribute to the protection, management and enhancement of biodiversity and geodiversity, for example by supporting the delivery of GI and Biodiversity Action Plan targets and enhance Biodiversity Opportunity Areas (BOA); and
- g. Comply with the mitigation hierarchy as set out in national policy.

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, priority habitats and protected species licence records within 2.0km of the site. The desk search was conducted on 18th November 2021. Due to the small scale of the proposals and lack of ecological features beyond the building, a full data search was not considered proportionate or beneficial to determining ecological impact. This approach is in accordance with guidance provided by CIEEM (2020) where the provision of local records would not have a material impact upon the assessment.

3.2 Field Survey

- 3.2.1 A preliminary ecological appraisal was undertaken on 5th August 2021, and the site subjected to an ecology survey using guidelines set out in the *Handbook for Phase 1 Habitat Survey A Technique for Environmental Audit (JNCC, 2010).*
- 3.2.2 Habitats within the land were classified and the presence, or potential presence, of certain protected and / or notable species of flora and fauna were identified. A summary description of the habitat within the site following the *Phase 1 Habitat Survey Methodology* is presented in Section 4.0. This involved identifying features that may be used by protected species, potential foraging areas and other signs of use. Water bodies were recorded wherever possible, within 500 metres of the proposed development site.
- 3.2.3 The results are summarised and accompanied in large part by photographic evidence contained in *Appendix A Site Photographs*.

3.3 **Preliminary Bat Roost Assessment**

- A Preliminary Bat Roost Assessment was undertaken on 5th August 2021 by an 3.3.1 experienced, licenced bat surveyor (George Sayer MCIEEM, 2018-34434-CLS-CLS) who undertook an internal and external assessment of all buildings and a ground-level assessed of trees within the proposed construction zone. Due to the building being large and complex, and the proposals being related to small discrete areas, some areas of the buildings were not fully assessed. The bat surveyor assessed the existing buildings visually and searched for evidence such as:
 - · Grease Marks;
 - · Urine Stains:
 - · Bat Droppings;
 - Feeding Remains;
 - Dead or Live Bats.
- 3.3.2 Trees were visually identified from the ground, using binoculars where necessary, for features that could be used by bats such as:
 - Woodpecker Holes;
 - Knot Holes;
 - Tear-outs;
 - Flush Cuts:
 - Double Leaders.

3.3.3 Once features had been assessed the trees were then categorised in accordance with *Table 4.1 of the Bat Conservation Trust's Good Survey Guidelines (2016):*

Table No. 01 – Categorisation Criteria

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

3.4 Bat Emergence Survey

- 3.4.1 A bat emergence survey was undertaken on 18th August 2021, with a bat reentry survey undertaken on 17th September 2021. The surveys were undertaken in accordance with the *Bat Conservation Trust's Good Survey Guidelines* (2016). All surveys were designed and led by an experienced, licenced bat surveyor (*George Sayer MCIEEM*, 2018-34434-CLS-CLS).
- 3.4.2 3no. discrete locations were identified which required bat emergence surveys. A single bat surveyor was assigned a point each to adequately cover all three locations. There is no internal connectivity between these areas and other areas of the buildings, and as such full survey of the entire building was not considered necessary.
- 3.4.3 The dusk survey began 15 minutes before sunset and ended 1.5 hours after.

 Dawn survey begin 1.5 hours before sunrise and ended 15 minutes after. Data including species, behaviour and general patterns of activity were recorded throughout the survey. Full results of the surveys can be found in *appendix B*.

PARK HOUSE HOTEL
ALTERATIONS TO THE PARK HOUSE HOTEL
ECOLOGICAL IMPACT ASSESSMENT
LLD2353-ECO-REP-001-01

Date 18.08.2021 17.09.2021 SP1 – SP3 Survey Points **B1** Survey Type Dusk Dawn Surveyors GS, WM, EH GS, GQ, JH Weather 18°C, WF2, Light Cloud 11°C, WF2, Light Cloud Sunset / Sunrise 20:20 06:40 Start 20:05 05:10 Finish 21:50 06:55

Table No. 02 - Bat Emergence / Re-entry Survey Details

3.4.4 Bats were identified using Anabat SD2, Peersonic RPA 3 and Echo Meter Touch Pro 2 bat detectors.

Surveyor Details

- 3.4.5 All surveys were designed by licenced ecologists assisted by experienced field surveyors. The following surveyors were used:
 - George Sayer (GS) NE Class 2 licence holder with 9 years survey experience
 - William Mills (WM) Project Ecologist with 4 years survey experience
 - Joshua Harwood (JH) Assistant Ecologist with 4 years survey experience
 - Eve Hills (EH) Field Assistant with 2 years survey experience
 - Guy Quartermaine (GQ) Field Assistant with 2 years survey experience

Data Analysis

3.4.6 Sonogram analysis was undertaken using the AnalookW and kaleidoscope viewer programmes.

Limitations

- 3.4.7 Given the scale and complexity of the building, and the small and discrete nature of the proposals, a full survey of the entire main hotel building was considered disproportionate. As such a full baseline of the bat use of the entire site was not provided, but sufficient information was gathered to assess the impacts upon bats.
- 3.4.8 One area of the site (B01 section 3) was not fully assessed for bats due to this being either occupied by guests during all visits, or being scoped into the proposals after the bat activity season. In this case, an assessment has been made of the likelihood for bats based on daytime assessment and the results of the other surveys, to extrapolate the likely findings in these areas.

3.5 Ecological Impact Assessment

3.5.1 The methodology for Ecological Impact Assessment (EcIA) follows best practice guidelines set by the Chartered Institute of Ecology & Environmental Management (CIEEM): 'Guidelines for Ecological Impact Assessment' (CIEEM, 2018). This includes identifying the baseline conditions on the site and subsequently rating the potential effects of the development based on the sensitivity and value of the resource affected, combined with the magnitude, duration and scale of the impact (or change). This is initially assessed without mitigation measures, and then assessed again after allowing for the proposed mitigation measures; this provides the residual effects. The assessment is divided into construction effects and longer-term operational effects.

- 3.5.2 Each ecological feature within the site has been considered within a defined Geographic context such as:
 - International and European
 - National
 - Regional
 - County
 - District
 - Local
 - Site Level
 - Negligible
- 3.5.3 Based upon CIEEM guidance, value was determined with reference to the following factors:
 - Its inclusion as a Designated Site or other protected area;
 - The presence of habitat types of conservation significance, e.g. Habitats of Principal Importance (NERC 2006);
 - The presence (or potential presence) of species of conservation significance e.g. Species of Principal Importance (NERC 2006);
 - The presence of other protected species e.g. those protected under The Wildlife and Countryside Act 1981;
 - The sites social and economic value.
- 3.5.4 The ecological impacts resulting from the proposals were then described according to a defined set of characteristics as defined within 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (CIEEM, 2018). This assessment considers residual impacts (once all mitigation has been taken into account), with any significant effects highlighted. A significant effect is defined as "an effect which either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general".

- 3.5.5 The confidence that a certain activity will result in a significant adverse effect has been ranked as follows:
 - Highly probable;
 - Probable;
 - Unlikely;
 - Highly unlikely.
- 3.5.6 Where initial impacts have been identified as significant, avoidance, mitigation and compensation measures have been proposed to avoid, prevent or offset such effects. Enhancement has been proposed to ensure that the development represents a net gain in biodiversity in accordance with National Policy. Given the scale of the proposals, the gain will be relatively minor.

4.0 **BASELINE ECOLOGICAL CONDITIONS**

4.1 **Designated Sites**

Statutory Protected Sites

4.1.1 MAGIC was consulted for details of ecologically sensitive statutory protected sites (national sites within 2.0km, international sites within 10.0 km) of the proposed development; these are detailed below.

Table No. 03 - Statutory Protected Sites

Site	Description	Location
South Downs	1,600km2 of high-value lowland landscape,	
National Park	including farmland, river valleys, ancient	Site Within
	woodland and lowland heaths containing a	Designation
	number of small villages and market towns.	
Treyford to Bepton	A 121 ha area of calcareous grassland.	960.0 m S
Down, SSSI		
Singleton and	A 1.3 ha area noted for its importance as a	2.0 km SE
Cocking tunnels,	roots for Barbastelle and Bechstein's bats.	
SSSI, SAC		
Rook Clift, SAC,	A 10 ha area of calcareous ancient woodland.	3.8 km W
SSSI,		3.0 KIII VV
Kingley Vale SAC	A 200 Ha area of calcareous dry grassland	
	and scrubland noted for the presence of rare	6.0 km SW
	orchid species.	
Duncton to Bignor	An example of mature beech Fagus sylvatica	
Escarpment SAC,	woodland located on the steep scarp face of	
SSSI	the South Downs. The site has developed	
	over chalk which is overlain in places by a	9.6 km E
	clay-with-flints capping. Beech dominates in a	9.0 KIII E
	mosaic with ash Fraxinus excelsior woodland,	
	scrub and grassland. Much of the beech	
	woodland is high forest but with some old	
	pollards.	

4.1.2 The Site is located within the Impact Risk Zone (IRZ) of Treyford to Bepton Down (SSSI). The LPA does not have to consult with *Natural England* on rural, non-residential applications of this nature. The site is less than 6.5 km from the *Singleton and Cocking Tunnels SAC*, and as such is within the *Core Conservation Area* for bats using the SAC. The potential for impacts upon bats using the SAC is addressed within this report.

Non-Statutory Protected Areas

4.1.3 Sites of Nature Conservation Interest (SNCIs) are designations applied to the most important non-statutory nature conservation sites. They are recognised by the National Planning Policy Framework (2021) and as such are material considerations when assessing planning applications. The following SNCIs were identified within 2.0km of the site:

Table No. 04 - Non-statutory Protected Sites

Site	Location
Paddock Wood	1.15 km NE
Hoe Copse	2.0 km SE

4.2 Habitats

- 4.2.1 Within 2.0km of the site there are *Priority Habitats* of *Woodpasture and Parkland, Deciduous Woodland, Ancient Woodland* and *Lowland Calcareous Grassland.* Large areas of ancient woodland are present c. 1.8 km to the south.
- 4.2.2 Habitats within and adjacent to the land include:
 - Existing Buildings;
 - · Amenity Grassland;
 - · Introduced Shrubs;
 - Hard / Bare Ground;
 - Scattered Trees.

Existing Buildings

4.2.3 The site is dominated by the hotel buildings, which are of a mixture of ages but largely of brick construction with tiles roofs. The buildings are discussed further in the bat roost assessment.

PARK HOUSE HOTEL
ALTERATIONS TO THE PARK HOUSE HOTEL
ECOLOGICAL IMPACT ASSESSMENT
LLD2353-ECO-REP-001-01

Amenity Grassland

4.2.4 A well maintained lawn is present to the north-west of the site, and a small area of grassland to the north-east. The habitat is well-maintained and dominated by perennial rye-grass (*Lolium perenne*). This habitat is assessed as being of **site** value.

Introduced Shrubs

4.2.5 The site contains beds of introduced shrubs and herbaceous planting. These are well maintained and offer limited ecological value. This habitat is assessed as being of at most **site value**.

Hard / Bare Ground

4.2.6 The site is approached through a large gravel parking area, with paved paths and dining/seating areas throughout. These areas offer **negligible value**.

Scattered Trees

4.2.7 Interspersed along the site boundaries are a number of scattered trees. Most are relatively isolated from the proposal areas but several holm oaks (*Quercus ilex*) are noted to the frontage. One large holm oak was recorded as dangerous and has recently been removed.

Intact. Species-poor Hedges

4.2.8 A dense hedge runs along the south-west boundary of the site, which alongside ornamental species such as cherry laurel contains lots of hazel. The hedge ends abruptly at the neighbouring driveway where hedges then become ornamental. A short section of hawthorn hedge also lines the north-western boundary but is very short and becomes an ornamental hedge formed of Red Robin (*Photinia x fraseri*) for a long length. The hedges could technically be considered Priority Habitats but are disconnected and only of **site value**.

4.3 Protected Species Assessment

Amphibians

Desk Study

4.3.1 There are no records of Great Crested Newts (GCN) within the immediate surroundings, nor are there any GCN survey or licence returns (positive or negative). This suggests either limited survey effort due to lack of local development, or lack of suitable ponds due to the chalk geology. Great Crested Newts are protected under *The Conservation of Habitats and Species Regulations 2017*. It is an offence for anyone to intentionally kill, injure or disturb a Great Crested Newt or to damage, destroy or block access to areas of suitable habitat.

Site Assessment

- 4.3.2 There is one pond on the edge of the site, as well as another within the golf course. These ponds were not assessed in detail because of the nature of the proposals. The pond in the golf course appears to be suitable for amphibians being fringed with vegetation and of a suitable size. The pond to the east of the hotel ground is fringed with mature trees to the west, south and east and appears to be an ornamental pond with island. It is not possible to rule out GCN presence in either pond but given the lack of local records their presence is considered unlikely.
- 4.3.3 The site is isolated from either pond by hard surfaces and heavily-maintained amenity grassland. It is considered highly unlikely that any amphibians would cross these habitats to reach the hotel building, which in itself offers no value to amphibians. The proposals site offers **negligible potential** for GCN with the wider grounds offering **moderate potential**.

Reptiles

Desk Study

4.3.4 There are limited records of widespread reptiles within 2.0km of the site, mostly associated with Copthorne Common. All species of UK reptile are protected against reckless or intentional killing or injuring under *The Wildlife and Countryside Act 1981 (as amended)*.

PARK HOUSE HOTEL
ALTERATIONS TO THE PARK HOUSE HOTEL
ECOLOGICAL IMPACT ASSESSMENT
LLD2353-ECO-REP-001-01

Site Assessment

4.3.5 The is very limited suitable habitat for reptiles within the proposal area, with the grassland being well-maintained. Low numbers of reptiles may persist in marginal habitats and are likely to occur on the wider site. The proposal site is considered to offer **negligible** potential for reptiles.

Bats

Desk Study

4.3.6 There are 16 species of bat present within 5.0 km of the site; Barbastelle, Serotine, Alcathoe, Bechstein's, Brandt's, Daubenton's, Mouse-eared, Whiskered, Natterer's, Noctule, Brown Long-eared (BLE), Common, Soprano and Nathusius' Pipistrelle, Noctule and Greater Horseshoe Bat. Several NE licences have been granted for bats in the surroundings, with the nearest being for common pipistrelle, 1.75 km east. A NE licence c.2.8 km north-east in southern Midhurst was granted in 2010 for Greater Horseshoe, BLE; Whiskered; Brandt's; Bechstein's; Daubenton's; Natterer's Bat.

Preliminary Roost Assessment

4.3.7 The existing buildings proposed for alteration were assessed for their potential to support roosting bats, a summary of the assessment is shown below. Discrete Sections of Buildings have been discussed separately:

Table No. 05 – Building Assessment

Ref.	Description	Category
B01 –	Section of roof proposed for alteration to the south of the	Low-
Section	building, consisting of a large, pitched roof with a	Moderate
1 of	smaller hipped roof emerging from the centre. Externally	
Main	the roofs were clay tiled with a number of small crevices	
Hotel	and potential roost/access points noted. Within the	
	hipped roof was a small loft void. This was found to be	
	used for water tanks, and was heavily sealed with BRM	
	membranes and timber sarking. No access into the loft	
	for bats was found and no evidence of bats was	
	recorded.	
B01 –	A small internal area of roof, consisting of two half-	Low-
Section	hipped roofs, proposed for extension and removal of the	Moderate

2 of	dormer. Externally one section of wall is covered in	
Main	hanging clay tile, with another covered in wooden	
Hotel	weatherboarding. Loose tiles and boards to the edges	
	appeared suitable for bats. No loft spaces were found;	
	roof tiles were flat clay and generally tightly-fitting with	
	only 2-3 noticeable gaps. All ridge and hip tiles were	
	tightly sealed.	
B01 –	A dormer window of timber frame with timber fascias	Low
Section	and leaded roof and sides, proposed for removal and	
3 of	replacement with balcony. No internal access was	
Main	available and the dormer opens into a bedroom. A small	
Hotel	void may be present above the window but was not	
	accessed at the time. Beneath the dormer are rows of	
	clay roof tiles which would be removed for alterations.	
B02	A laundry building formed of block and timber, covered	Low-
(Laundry	to all aspects with wooden weatherboarding with a	Moderate
Building)	pitched clay tile roof. Several slipped tiles were noted to	
	the roof. Internally, the loft space was tightly felted and	
	well-sealed, heavily cobwebbed with no evidence of	
	bats noted. The weatherboarding and slipped tiles might	
	support individual bats.	
B03	A Detached, single-storey cottage of stone and brick	Moderate
(Baytree	with wooden weatherboarding to several aspects and a	
Cottage)	pitched, clay tile roof with one gable end and several	
	hipped ends. The weatherboarding was largely too well-	
	sealed for bat access, and most of the roof tiles were	
	well-sealed, but with several gaps at valleys and slightly	
	raised tiles noted. The soffits were of timber and mostly	
	meshed against bird ingress, however several small	
	gaps remained which might allow bat access. No	
	internal access was possible due to guests being	
	present, but the building is likely to contain a small roof	
	void.	
	Building not proposed for alteration as part of this	
	application.	
	l .	1

Preliminary Roost Assessment of Trees

4.3.8 An early-mature holm oak close to the laundry building contains a shallow knot hole, conferring 'low' bat roost potential. Otherwise, no significant vegetation is impacted by the proposals. The boundary of the hotel property contains mature oaks and other trees which may support roosting bats, but which will be unaffected and are well distanced from the proposals.

Bat Emergence Survey, 18th August 2021

- 4.3.9 8no. common pipistrelle emerged from varying areas of the southern (Section 1) roof of B01 between 20:30 and 20:41. Apart from this a small number of common pipistrelles were heard but no other bat activity recorded.
- 4.3.10 A common pipistrelle emerged from the weatherboarding at Section 2 of B01 at 20:33, followed by another possible common pipistrelle emergence from the eaves of the adjacent roof at 20:34. Activity consisted of low levels of foraging common pipistrelle, as well as a single soprano pipistrelle and Myotis sp. call.
- 4.3.11 A soprano pipistrelle emerged from the weatherboarding to the rear (west) of the laundry building (B03) at 20:44. No other bats were seen to emerge from this building although a soprano pipistrelle was seen to likely emerge from the nearby South Downs Cottage. Common and soprano pipistrelle were recorded, as were serotine and BLE foraging and commuting along the road to the west of the hotel.

Bat Re-entry Survey, 17th September 2021

- 4.3.12 A total of 4no. common pipistrelle re-entries were confirmed into varying areas of the southern (Section 1) roof of B01 between 06:08 06:10, with other common pipistrelle re-entries possible due to a number of bats recorded circling but not entering, which may have re-entered unseen. Activity was otherwise low and consisted of re-entry activity by common pipistrelles and a single noctule pass overhead.
- 4.3.13 A common pipistrelle was recorded flying back and forth over the ridgeline of Section 2 of B01 between 06:02 06:07 and is considered to be a possible unseen re-entry into the building. Otherwise bat activity was very low and consisted of common pipistrelle only.

PARK HOUSE HOTEL
ALTERATIONS TO THE PARK HOUSE HOTEL
ECOLOGICAL IMPACT ASSESSMENT
LLD2353-ECO-REP-001-01

4.3.14 A silent bat flew west past the north of the laundry building at 06:07, which may constitute a re-entry into the weatherboarding to west but cannot be confirmed. A BLE was recorded circling the South Downs Cottage to north and single BLE and noctule calls were recorded.

Bat Foraging and Commuting Assessment

- 4.3.15 The surrounding trees, hedge and shrubs likely form part of the foraging and commuting habitat of the local bat population, which includes a number of rare and notable species. The site is relatively open, formed of buildings and grassland and as such some of the rarer woodland specialists such as Bechstein's bat are unlikely to use the site in any regular capacity. The bat emergence and re-entry surveys recorded the following bats using the site, with low numbers BLE bats and serotine recorded flying along the road outside the hotel. Bat activity in general was noted to be low, with pipistrelles roosting at the site but little other activity:
 - Common pipistrelle
 - Soprano pipistrelle
 - BLE
 - Serotine
 - Noctule
 - Myotis sp.
- 4.3.16 The value of the construction area is unlikely to extend beyond **site value**, being dominated by buildings and hard/bare ground.

Dormouse

Desk Study

4.3.17 There are limited records of dormice in the immediate vicinity, with numerous records from the monitoring at West Dean Woods and single records south of Cocking and 1.5 km north-east. Suitable habitats within this area of the South Downs are likely to support dormice which are probably under-recorded due to lack of development surveys.

Site Assessment

4.3.18 The wider hotel site is bounded by a mature hedge with trees to the north-east, but this is isolated from the proposal areas. The vegetation within the immediate grounds of the hotel consists mostly of unsuitable ornamental shrubs and isolated ornamental hedges. A dense hedge runs along the south-west boundary of the site, which alongside ornamental species such as cherry laurel contains lots of hazel. The hedge ends abruptly at the neighbouring driveway where hedges then become ornamental. A short section of hawthorn hedge also lines the north-western boundary but is very short and becomes an ornamental hedge formed of Red Robin (*Photinia x fraseri*) for a long length. The proposal area offers negligible value to dormice which will not be considered further in this assessment

Badger

Desk Study

4.3.19 Most badger records are confidential, and as such available data on badger likely underestimates their prevalence. Badgers are recorded and likely to be prevalent locally.

Site Assessment

4.3.20 No evidence of badger was recorded within the site, and the proposal site's habitats, regular maintenance and use would prevent it being of any significant value to commuting or foraging badgers. The proposal site is of negligible value to badgers which shall not be considered further within this assessment. The wider hotel site offers **moderate potential** but is unaffected by proposals.

Other Mammals

4.3.21 Numerous records of common mammals including hedgehogs exist within 2.0km of the site. The grassland surrounding the site is suitable for hedgehogs.

Birds

Desk Study

4.3.22 A number of bird species have been returned within 2.0km of the site, including relevant birds such as swift, swallow and house martin.

Site Assessment

4.3.23 The majority of the proposal area consists of well-maintained amenity grassland and hard surfacing offering **negligible** potential for birds. The amenity grassland likely supports limited foraging by common birds such as blackbird only. The buildings would be suitable for nesting sparrows and house martins, but most gaps have been meshed; no evidence of nesting birds was noted to B01 whilst a small nest indicative of wren is noted to the Baytree cottage B03. The hedge and shrubs are highly suitable for birds such as robins and blackbirds to nest in, and probably provide some foraging potential. Overall the habitats are likely of value at the site level only.

Invertebrates

Desk Study

4.3.24 The data search returned records of numerous species of invertebrates within 2.0km.

Site Assessment

4.3.25 Suitable habitat for invertebrates is limited within the site to trees, hedges shrubs and amenity grassland. The site in general lacks the floral diversity to support a good range of invertebrates and is likely to be of value within the site area only.

Others

No suitable habitat for any other protected species was recorded on site. 4.3.26

4.4 **Survey Constraints / Considerations**

4.4.1 Constraints with regards bats have been discussed above. No other constraints which would cast doubt on these results were encountered.

5.0 ASSESSMENT OF EFFECTS AND MITIGATION MEASURES

Designated Sites 5.1

Potential Impacts

- 5.1.1 The Site is located within the Impact Risk Zone (IRZ) of Treyford to Bepton Down (SSSI). The LPA does not have to consult with Natural England on rural, non-residential applications of this nature and the impacts upon this SSSI are considered to be negligible given it is almost 1.0 km away and the proposals are relatively minor.
- 5.1.2 The site is less than 6.5 km from the Singleton and Cocking Tunnels SAC, and therefore is within the Core Conservation Area for bats using the SAC. As such all impacts upon bats must be considered. In the absence of mitigation, proposals would harm bats roosting at the site, and may disturb low numbers of foraging and commuting bats. Being 2.0 km from the SAC it is possible the bats roosting, foraging and commuting on-site hibernate there. The survey results suggest that any significant impacts upon rarer bats which hibernate there are highly unlikely.

Mitigation and Compensation

5.1.3 It is likely that a Habitats Regulations Assessment is required to fully assess any potential for significant effects upon the SAC, although this is considered unlikely. Mitigation to avoid harm to bats is addressed separately below. All lighting will be designed to accord with the South Downs National Park: Dark Skies Technical Advice Note (V2 2021, including the Appendix on Internal Light Spill) and the BCT/ILP Guidance Note 08/18.

Residual Impacts

5.1.4 No likely significant effect upon surrounding European designated sites will arise from the proposed development.

5.2 Habitats

Potential Impacts

5.2.1 Development proposals largely consist of building alterations which will have no impacts on habitats. The extensions to the Laundry B02 and Baytree House B03 will remove very small areas of introduced shrubs and hard surface only, which will be replaced elsewhere on-site post-construction. In the absence of mitigation, construction works might result in noise, light and dust pollution, and soil compaction which could harm the surrounding amenity grassland, shrubs and a single tree. The impacts would be of site scale and low impact.

Mitigation and Compensation

5.2.2 All construction will be undertaken in accordance with best practise guidelines with regards to control of dust, noise and emissions. All light spill onto surrounding vegetation will be avoided in accordance with BCT/ILP Guidance Note 08/18. Storage of fuel etc will be avoided adjacent to vegetation. All trees shall be protected in accordance with BS5837:2012 'Trees in Relation to Design, Demolition and Construction - Recommendatons'. Any trees removed shall be replaced with suitable replacements.

Residual Impacts

5.2.3 Once mitigation is taken into account, the impacts will be **negligible**.

5.3 Amphibians

Potential Impacts

5.3.1 None predicted, the proposal area is of negligible value to protected amphibians. The proposals focus on the buildings only and do not significantly alter habitats other than a very small section of introduced shrubs and hard surface. In the absence of mitigation, inappropriate storage of materials and construction activities close to the pond may result in harm to amphibians.

Mitigation and Compensation

5.3.2 In the highly unlikely event that GCN are found on site, all works will cease until a suitably qualified ecologist has been contacted for advice. All materials storage and vehicular access will be undertaken on existing hard surfaces or well-maintained grassland. No works will be undertaken at night when GCN are most active terrestrially.

Residual Impacts

5.3.3 The impacts will be negligible and non-significant.

5.4 Reptiles

Potential Impacts

5.4.1 None predicted, the site is of negligible-low value to reptiles.

Mitigation and Compensation

5.4.2 In the highly unlikely event that reptiles are found on site, all works will cease until a suitably qualified ecologist has been contacted for advice. All materials storage and vehicular access will be undertaken on existing hard surfaces or well-maintained grassland.

Residual Impacts

5.4.3 The impacts will be negligible and non-significant.

5.5 **Bats**

Potential Impacts

5.5.1 In the absence of mitigation impacts would include possible damage or destruction of 2no. day roosts, one of up to two common pipistrelles at section 2 and another of up to 8no. common pipistrelles at section 1 within B01 and a further day roost of one soprano pipistrelle within B02, a major impact at the site level. In addition, the works at section 2 of B02 would remove a small number of tiles which might result in blocking of an access point or removal of a roost feature for pipistrelle bats. Most of the roost locations will not be directly impacted or removed but would be subject to noise and vibration damage.

- 5.5.2 B03 Baytree house is not proposed for alteration or disturbance.
- Indirect impacts may include such as minor habitat fragmentation and loss of 5.5.3 foraging areas by inappropriate lighting or damage to boundary trees and hedges. Impacts would be of minor impact magnitude but potentially a significant effect upon the local Singleton and Cocking Tunnels SAC.

Mitigation and Compensation

- 5.5.4 A mitigation licence from Natural England will be required prior to works to building B01 and B02. Mitigation will be as follows:
 - Apply for a Mitigation Licence from Natural England once full planning permission is received;
 - No works to the building are to take place until the licence is received.
 - Install suitable bat boxes 2 *x timber bat box and 1 x large multi-chamber* bat box) to the southern aspect of nearby mature trees;
 - Once the licence is received, soft strip all areas of interest, most importantly the southern aspect of B01 but also suitable hanging tiles and weatherboarding in the areas of particular interest of B01 and B02 by hand under ecological supervision;
 - Any bats found will be caught by hand and moved to adjacent bat boxes;
 - Conversion and alteration works may only begin once the sections of building have been declared free of bats by the supervising ecologist;
 - Permanent roosting provision is to be provided through integrated bat boxes and bat tiles to the southern aspects of the building. No Breathable Roofing Membranes (BRM) to be used in areas accessible to bats, IF hessian felt only.

5.5.5 All light spill onto surrounding vegetation will be avoided in accordance with BCT/ILP Guidance Note 08/18, to allow trees to continue functioning as commuting and foraging habitats. Works at night and external construction lighting shall not be permitted. Trees and the hedge shall be fully protected in accordance with BS:5837:2012.

Residual Impacts

5.5.6 The overall impact of the scheme will be minor adverse in the short-term, with a negligible impact once the new bat roost features are established.

5.6 **Dormouse**

Potential Impacts

5.6.1 None anticipated, no suitable habitat exists on site or will be impacted.

Mitigation and Compensation

5.6.2 None required. All hedges on the site shall be maintained and protected in any case.

Residual Impacts

5.6.3 The overall impact of the scheme will be **negligible**.

5.7 **Badgers**

Potential Impacts

5.7.1 None predicted, the site is of negligible value to badgers.

Mitigation and Compensation

5.7.2 None required. All footings shall be checked each morning for widespread mammals and hedgehogs. In the highly unlikely event that an injured badger, fox, rabbit or hedgehog is found in a footing, a local animal rescue centre shall be called for assistance.

Residual Impacts

5.7.3 The overall impact of the scheme will be **negligible**.

5.8 **Breeding Birds**

Potential Impacts

5.8.1 In the absence of avoidance / mitigation, the development could result in the damage / destruction of a bird nest within a tree, shrub or building. Impacts would be of moderate impact magnitude, and moderately unlikely to occur.

Mitigation and Compensation

5.8.2 Commencement of woks will be undertaken outside the bird nesting season (season: March-August inclusive) or following a check for nests by a suitable qualified ecologist. Any nests found must be allowed to fledge before works continue.

Residual Impacts

5.8.3 The overall impact of the scheme will be **negligible**, **non-significant**.

5.9 **Invertebrates**

Potential Impacts

5.9.1 None predicted, current land-use is unsuitable for rare or diverse invertebrates.

Mitigation and Compensation

Any habitats lost shall be replaced post-construction. 5.9.2

Residual Impacts

5.9.3 The overall impact of the scheme will be **negligible**.

6.0 ECOLOGICAL ENHANCEMENTS

- 6.1 The design of any proposed development should consider ecological enhancements for the benefit of wildlife in line with the *National Planning Policy Framework* and *Local Planning Policy*. Given the scale of proposals, significant enhancement is considered disproportionate and unfeasible. Ecological enhancements which will be included as part of development proposals include;
 - The provision of nesting boxes integrated into the buildings to provide new bird nesting features;
 - Installation of a hedgehog box and insect boxes to corners of the site, to increase opportunities for hedgehogs and invertebrates;
 - Use of plants from the RHS 'Plants for Pollinators' list within new shrub planters to provide new habitats for invertebrates.

7.0 **CONCLUSIONS**

- 7.1 The existing site is formed of an existing buildings surrounded by hard surfaces, amenity grassland and introduced shrubs. The site itself is of very low ecological value with no habitats of interest noted.
- 7.2 The site offers very limited potential for protected species. The building B01 is used as a day roost by a total of 10no. common pipistrelle bats whilst B02 is used as a day roost by 1no. soprano pipistrelle bat. The works shall require a **licence to proceed post-planning**. Mitigation protocols are recommended to minimise impacts on habitats and species to a 'negligible' significance.
- 7.3 Once avoidance and mitigation measures have been taken into account, the impacts of the planned development upon biodiversity will be negligible.

8.0 REFERENCES

Bat Conservation Trust and Institution for Lighting Professionals (2018). Bats and artificial lighting guidance note. Available online: https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting

CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition.

Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2018) Guidelines for Ecological Impact Assessment, 1st edition.

Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2021). Bat Mitigation Guidelines: A guide to impact assessment, mitigation and compensation for developments affecting bats, Beta Version 1.0. Chartered Institute of Ecology and Environmental Management, Winchester.

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

JNCC: Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit; (2010);

MAGIC Interactive Map Tool (Accessed 22nd November 2021): www.magic.gov.uk

Mitchell-Jones and McLeish: Bat Workers Manual; JNCC, 3rd Edition (2004);

South Downs National Park: Dark Skies Technical Advice Note (V2 2021).

South Downs National Park Authority, Midhurst West Sussex. Available online: https://www.southdowns.gov.uk/wp-content/uploads/2021/11/DNS-TAN-2021-accessibility.pdf

South Downs National Park Authority (2019). South Downs Local Plan 2014 -2033. Available online: southdowns.gov.uk/wpcontent/uploads/2019/07/SD_LocalPlan_2019_17Wb.pdf

South Downs National Park Authority / Natural England: Sussex Bat Special Area of Conservation Planning and Landscape Scale Enhancement Protocol (2018). Available online: https://www.southdowns.gov.uk/wpcontent/uploads/2018/04/TLL-15-Draft-Sussex-Bat-SAC-Protocol.pdf

Streeter, D.: The Most Complete Guide to the Flowers of Britain and Ireland; Harper Collins, London (2010);

Table No. 06 - Species Lists

Amenity Grassland

Common Name	Scientific Name	DAFOR
Annual Meadow Grass	Poa annua	LF
Chickweed	Stellaria media	0
Creeping Bent	Agrostis stolonifera	0
Creeping Buttercup	Ranunculus repens	R
Creeping Thistle	Cirsium arvense	
Daisy	Bellis perennis	0
Dandelion	Taraxacum agg.	R
Perennial Rye-grass	Lolium perenne	D
White Clover	Trifolium repens	0

Introduced Shrubs

Common Name	Scientific Name	DAFOR
Shrub Honeysuckle	Lonicera nitida	
Bay Laurel	Laurus nobilis	
Hydrangea	Hydrangea paniculate	
Star Jasmine	Trachelospermum jasminoides	
Red Robin	Photinia x fraseri	
Cherry Laurel	Prunus laurocerasus	
Portuguese Laurel	Prunus Iusitanica	
Butterfly Bush	Buddleia davidii	
Box	Buxus sempervirens	
Holly	llex aquifolium	
Himalayan Honeysuckle	Leycesteria formosa	
Rose	Rosa sp.	
Hellebore	Helleborus sp.	

Trees and Hedges

Trees and Treages		
Common Name	Scientific Name	DAFOR
Holm Oak	Quercus ilex	LD
Pedunculate Oak	Quercus robur	F
Cherry Laurel	Prunus laurocerasus	LA
Yew	Taxus baccata	F
Hazel	Corylus avellana	LD
Hawthorn	Crataegus monogyna	LD

D – Dominant; A – Abundant; F – Frequent; O – Occasional; R – Rare; L – Locally

Appendix A – Site Photos

Photograph No. 01 – View of the maint hotel B01 from the access drive.

Photograph No. 02 - View of Section 1 of B01, a day roost of 8no. common pipistrelles inhabit this roof area.



Photograph No. 03 – View of loft of small roof of section 1 of B01.

Photograph No. 04 – View of section 2 of B01 which contains a day roost of up to 2no. common pipistrelles, one of which emerged from the weatherboarding.



Photograph No. 05 – View down on section 2 of B01 from a window above.



Photograph No. 06 - View of section 2 of B01, window proposed for new balcony



Photograph No. 07 - View of B02 laundry from the south, which contains a single soprano pipistrelle day roost

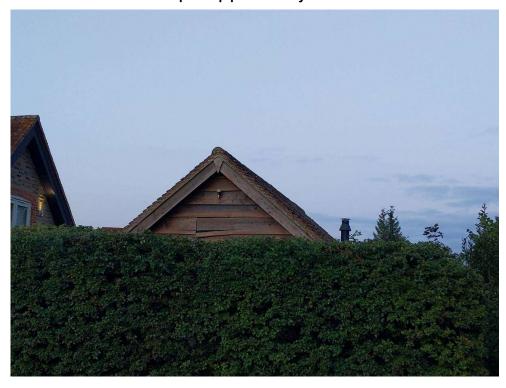


Photograph No. 08 – Cobwebbed loft of B02.



PARK HOUSE HOTEL ALTERATIONS TO THE PARK HOUSE HOTEL ECOLOGICAL IMPACT ASSESSMENT LLD2353-ECO-REP-001-01

Photograph No. 09 – The western weatherboarding of B02 which contains a single soprano pipistrelle day roost.



Photograph No. 10 – View towards B02 from the south showing the introduced shrubs proposed for removal to accommodate an extension.



Photograph No. 11 – B03 Baytree cottage, which offers 'moderate' bat roost potential.

The building is not proposed for alteration or disturbance.



Photograph No. 12 – Lifted tiles to B03 Baytree cottage.



PARK HOUSE HOTEL
ALTERATIONS TO THE PARK HOUSE HOTEL
ECOLOGICAL IMPACT ASSESSMENT
LLD2353-ECO-REP-001-01



Photograph No. 13 – Bird nesting material and gaps in soffit of B03.

Photograph No. 10 - Surrounding habitats are very well-maintained and offer no significant potential for protected species.



Appendix B - Full Bat Survey Results

Date	18.08.21	
Survey Type	Dusk	
Sunrise / Sunset	20:20	
Start Time	20:05	
End Time	21:50	
Temperature	18 °C	
Wind	2	
Weather	Light Cloud	

Surveyor		Gs		
Bat Detector		Peersonic RPA	3	
Point		SP3 - W of laundry		
Time		Species	Notes	
	20:33		Flew s along road	
	20:33	4 3 3 3 3 3	Fround Holm gaks	
	20:38		2 flew from n, one went s one w	
	20:39		Flew s, one flew round South downs building likely em	
	20:41	25.575.500	Fround Holm oaks	
	20:43		2 f along road	
		0.00	f from weatherboarding	
	20:44	0.000000	[[[[[[[[[[[[[[[[[[[
			flying along road	
	20:37	0.00	Hns	
	20:56	0.000	Flew s along road	
	20:59		Ins	
	21:00	1111111	Falong road	
	21:05		Hns	
	21:13		fhns	
	21:15		hns	
	21:15		Hns	
	21:17		Hns	
	21:17	11000000	hns	
	21:19		hns	
	21:22	ble	hns	
	21:24	Cpip	Flew s to n	
Surveyor		Wm		
Bat Detector		Echo Meter To	ouch 2 Pro	
Point		SP1 - South of	Section 1 of B01	
Time		Species	Notes	
	20:30	C.pip	emegence from the eastern side of the gable	
	20:33	C.pip	of the window on the west side of the smaller roof	
	20:34	C.pip	emerged from somewhere between the gable and the east window	
	20:35	15110000	2 bats emergered from the eastern side of the gable	
	20:36		HNS	
	20:37		emerged from the apex of the gable	
		C.pip	2 bats emerged from the apex of the gable	
		perpe		
	21:18 21:26	C.pip	HNS HNS quite active	
	21:18	C.pip C.pip	HNS	
-	21:18	C.pip C.pip	HNS quite active	
Bat Detector	21:18	C.pip C.pip EH Echo Meter To	HNS HNS quite active	
Bat Detector Point	21:18	C.pip C.pip EH Echo Meter To SP2 - East of S	HNS HNS quite active ouch 2 Pro ection 2 of B01	
Bat Detector Point	21:18 21:26	C.pip C.pip EH Echo Meter To SP2 - East of S Species	HNS HNS quite active ouch 2 Pro ection 2 of 801	
Bat Detector Point	21:18 21:26 20:33	C.pip C.pip EH Echo Meter To SP2 - East of S Species C.pip	HNS HNS quite active ouch 2 Pro ection 2 of 801 Notes Headed west from weatherboarding - possible emergence	
Bat Detector Point	21:18 21:26 20:33 20:34	C.pip C.pip EH Echo Meter To SP2 - East of S Species C.pip C.pip	HNS HNS quite active buch 2 Pro ection 2 of 801 Notes Headed west from weatherboarding - possible emergence Headed west from eaves - possible emergence	
Bat Detector Point	21:18 21:26 20:33 20:34 20:36	C.pip C.pip EH Echo Meter To SP2 - East of S Species C.pip C.pip C.pip	HNS HNS quite active buch 2 Pro ection 2 of 801 Notes Headed west from weatherboarding - possible emergence Headed west from eaves - possible emergence HNS	
Bat Detector Point	21:18 21:26 20:33 20:34	C.pip C.pip EH Echo Meter To SP2 - East of S Species C.pip C.pip C.pip	HNS HNS quite active buch 2 Pro ection 2 of 801 Notes Headed west from weatherboarding - possible emergence Headed west from eaves - possible emergence HNS Fiew east to west over building	
Bat Detector Point	21:18 21:26 20:33 20:34 20:36	C.pip C.pip EH Echo Meter To SP2 - East of S Species C.pip C.pip C.pip C.pip C.pip	HNS HNS quite active buch 2 Pro ection 2 of 801 Notes Headed west from weatherboarding - possible emergence Headed west from eaves - possible emergence HNS	
Bat Detector Point	21:18 21:26 20:33 20:34 20:36 20:37	C.pip C.pip EH Echo Meter To SP2 - East of S Species C.pip C.pip C.pip C.pip C.pip C.pip C.pip C.pip	HNS HNS quite active buch 2 Pro ection 2 of 801 Notes Headed west from weatherboarding - possible emergence Headed west from eaves - possible emergence HNS Fiew east to west over building	
Bat Detector Point	20:33 20:34 20:36 20:37 20:38 20:41	C.pip C.pip EH Echo Meter To SP2 - East of S Species C.pip C.pip C.pip C.pip C.pip C.pip C.pip C.pip	HNS HNS quite active buch 2 Pro ection 2 of 801 Notes Headed west from weatherboarding - possible emergence Headed west from eaves - possible emergence HNS Fiew east to west over building Fiew west over main building	
Bat Detector Point	20:33 20:34 20:36 20:37 20:38 20:41	C.pip C.pip EH Echo Meter To SP2 - East of S Species C.pip C.pip C.pip C.pip C.pip C.pip C.pip C.pip Myotis	HNS HNS quite active buch 2 Pro ection 2 of B01 Notes Headed west from weatherboarding - possible emergence Headed west from eaves - possible emergence HNS Flew east to west over building Flew west over main building Flew in from west and behind building	
Bat Detector Point	20:33 20:34 20:36 20:37 20:38 20:41 21:15	C.pip C.pip EH Echo Meter To SP2 - East of S Species C.pip C.pip C.pip C.pip C.pip C.pip C.pip C.pip Myotis C.pip	HNS HNS quite active buch 2 Pro ection 2 of B01 Notes Headed west from weatherboarding - possible emergence Headed west from eaves - possible emergence HNS Flew east to west over building Flew west over main building Flew in from west and behind building HNS	
Bat Detector Point	20:33 20:34 20:36 20:37 20:38 20:41 21:15 21:16	C.pip C.pip EH Echo Meter To SP2 - East of S Species C.pip C.pip C.pip C.pip C.pip C.pip C.pip C.pip Myotis C.pip	HNS HNS quite active buch 2 Pro ection 2 of 801 Notes Headed west from weatherboarding - possible emergence Headed west from eaves - possible emergence HNS Flew east to west over building Flew west over main building Flew in from west and behind building HNS HNS	
Surveyor Bat Detector Point Time	20:33 20:34 20:36 20:37 20:38 20:41 21:15 21:16 21:18	C.pip C.pip EH Echo Meter To SP2 - East of S Species C.pip C.pip C.pip C.pip C.pip C.pip C.pip Myotis C.pip	HNS HNS quite active buch 2 Pro ection 2 of B01 Notes Headed west from weatherboarding - possible emergence Headed west from eaves - possible emergence HNS Flew east to west over building Flew west over main building Flew in from west and behind building HNS HNS HNS HNS	

Date	17.09.21	2
Survey Type	Dawn	
Sunrise / Sunset	06:40	
Start Time	05:10	
End Time	06:55	
Temperature	11 ºC	
Wind	2	
Weather	Light Cloud	

J.	JH			
	Echo Meter To	ouch 2 Pro		
Point		SP3 - W of laundry		
*	Species	Notes		
05:36	C.pip	Hns		
		"-possible social call?		
05:40	n	Hns		
05:42	n			
05:45		1.0		
05:49	W.			
77 77 77		in front of N aspect. Not seen beyond building to the east		
		Hns		
700000		Hns		
7.50		Circling the main hotel north of laundry room.		
00.12	UIL.	Carcing the monitorer north of leading room.		
1	GQ			
	Echo Meter To	ouch 2 Pro		
)	SP2 - East of S	ection 2 of B01		
	Species	Notes		
	Cpip	HnS		
05:44	cpip	HnS		
05:48	Cpip	Flying from west to east over building		
05:51	Cpip	HnS		
06:02	Cpip	Flying back nd forth over ridge line with clock tower.		
06:05	Cpip	Same as above		
06:07	Cpip	Same above		
	GS			
	Echo Meter To	ouch 2 Pro		
	SP1 - South of	Section 1 of B01		
	Species	Notes		
05:45	Cpip	Hns		
05:47	Cpip	Hns		
05:52	Cpip	Hns		
05:57	Cpip	Circling right dormer		
05:58	Cpip	Circled right gable		
05:59	Cpip	flew in from right		
05:59	noct	Hns		
06:04	Cpip	Flew over roof to right and away along rear		
06:06	Cpip	Circled roof		
	11.01.5	4 circling roof		
	157155	Likely re entries east of ridge, to east gable, and east dormer window.		
	05:38 05:40 05:42 05:45 05:47 06:07 06:10 06:12 05:44 05:48 05:51 06:02 06:05 06:07 05:45 05:47 05:45 05:47 05:52 05:57 05:58 05:59 06:04 06:06	Echo Meter To SP3 - W of late Species 05:36		

