LIZARD
Landscape Design and Ecology

ECOLOGICAL IMPACT ASSESSMENT

Stakers Farm, North End Road, Yapton

On Behalf of: Mr Piers Bucknell

Client:	Mr Piers Bucknell			
Project:	Stakers Farm, North End Road, Yapton			
Reference:	LLD3261-ECO-REP-001-00-EclA			
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.

LIZARD
Landscape Design and Ecology
The Old Bank, 34 South Street, Tarring, Worthing, West Sussex, BN14 7LH
[redacted]

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SUMMARY

Lizard Landscape Design and Ecology has been commissioned by Mr Piers Bucknell to undertake an Ecological Impact Assessment of the proposed development of Stakers Farm, North End Road, Yapton (*Grid Reference: SU 97701 03491 – hereafter referred to as 'the site'*). A Preliminary Ecological Appraisal of the site was undertaken on the 20th of June 2024. Bat Emergence/Re-entry surveys were recommended and subsequently undertaken between June and July 2024. An assessment of the ecological impact of the proposals was then undertaken using this baseline data.

The site comprises habitats of **low** ecological value including species-poor modified grassland with sections of tall forbs surrounding a complex of old farm buildings with an eastern courtyard and driveway. The development seeks to repurpose the site into a series of residential dwellings with associated parking and amenities.

The site was found to support day roosts of individual common pipistrelle and brown long-eared bats. The site was also found to be of **site** value to nesting birds, with evidence of swallows and other small passerines nesting within the buildings while areas of tall forbs in the margins of the buildings and the compost piles may provide some suitable reptile habitat.

A series of mitigation/avoidance measures in relation to the above species have been devised to ensure the development does not contravene any UK or European legislation, or cause harm to bats, reptiles and nesting birds.

Once avoidance and mitigation measures have been taken into account, the impacts of the planned development upon biodiversity will be **negligible**, **non-significant** with proposed ecological enhancements resulting in a **net gain** and a **long-term positive increase** in biodiversity in line with national planning policy guidance.

1.0 INTRODUCTION

1.1 Lizard Landscape Design and Ecology has been commissioned by Mr Piers Bucknell to undertake an Ecological Impact Assessment of the proposed development of Stakers Farm, North End Road, Yapton (*Grid Reference: SU 97701 03491– hereafter referred to as 'the site'*).

1.2 The scope of this assessment has been determined with consideration of best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) and the Biodiversity: Code of practice for planning and development published by the British Standards Institute (BS 42020:2013).

1.3 An updated Preliminary Ecological Appraisal of the site was undertaken on the 20th of June 2024. Subsequent bat emergence surveys were completed in June – August 2024. This work updates previous survey work completed in 2019.

1.4 A summary of the results of these surveys, potential impacts of the proposals, and details of avoidance, mitigation and compensation measures have been detailed within this report. Residual impacts are then discussed once all mitigation and compensation measures have been taken into account.

Site Information

1.5 The site comprises 0.089 hectares (Ha) of 5 former farm buildings and an area of modified grassland to a hardstanding driveway on North End Road, Yapton. The site is bound by residential areas to the North and East with further farm buildings in the West and an open grassland to the South.

Surrounding Landscape

1.6 The site is located within a residential area on the western edge of Yapton. The A27 is located to the North of the site with Worthing and Bognor Regis to the East and West. The wider landscape surrounding Yapton is characterised by arable farmland and paddocks, many of which are tree and hedge-lined but are mostly open with little extensive woodland.

Development Proposals

1.7 The development proposals involve the refurbishment of the current buildings on site and converting the site into a series of residential dwellings with associated parking and amenities. It is assumed that the proposals would involve the refurbishment of all retained buildings.

Report Aims

1.8 The aim of the baseline surveys and Ecological Impact Assessment has been:

- Describe baseline conditions at the site;
- Determine the importance of features which may be impacted by the scheme;
- Identify impacts of the proposed development and set out appropriate avoidance, mitigation and compensation measures;
- To identify any residual impacts;
- To provide details of enhancements to be incorporated into the scheme;
- Provide sufficient information to determine whether the project accords with relevant nature conservation policies and legislation, and where appropriate, to allow conditions or obligations to be proposed by the relevant authority.

2.0 PLANNING POLICY AND LEGISLATION

Legislation

2.1 Legislation relating to wildlife and biodiversity of particular relevance to this EclA 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; and
- The Environment Act 2021.

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*) 2023 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 Policy ENV DM1 – DM5 of The Arun Local Plan 2011 – 2031 states that:

- *Development which will cause harm to designated sites will not normally be permitted unless there is no alternative solution, and there are reasons of overriding public interest, health and safety interest or benefits of primary importance to the environment.*
- *Developments with 5.0km of Pagham harbour will be required to pay developer contributions towards the agreed strategic approach to access management at Pagham Harbour;*

- *Within Biodiversity Opportunity Areas (BOAs) development shall:*
    a. *Retain and sympathetically incorporate locally valued and important habitats, including wildlife corridors and stepping stones*
    b. *Be designed in order to minimise disturbance to habitats*
- *Trees shall be retained and protected;*
- *Development schemes shall seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not).*
- *Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species.*

2.6 The current development proposals comply with all national and local planning policies with regard to biodiversity.

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 has been extended to 12km in accordance with recent guidance (SDNP, 2020).

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 A search for protected and notable species data within 2.0km of the site was conducted as part of the desk study on 10th July 2019; with an update to this search being provided as part of the updated EcIA.

3.1.4 In accordance with Natural England's GCN Mitigation Guidelines (English Nature, 2001) a desktop search was undertaken to identify ponds within 500m and 250m of the site, which may have the potential to support breeding great crested newts (GCN) *Triturus cristatus,* using Ordnance Survey mapping, the *MAGIC* database and aerial photography.

3.2 Preliminary Ecological Appraisal

3.2.1 The survey was completed on the 20th of June 2024, as an update to work previously completed in 2019.

3.2.2 The field survey comprised a walkover inspection of the site and immediately adjacent land and boundaries features, in which ecological features were noted and mapped in accordance with principles of the UKHabs-Professional Classification System (Butcher *et al*, 2023). A minimum mapping unit of 25m^2 was used and habitats were identified to at least level 4 wherever practicable. Habitat categories were slightly amended to be consistent with those used as part of Biodiversity Net Gain calculations.

3.2.3 A list of plant species was compiled, together with an estimate of abundance. In addition, Target notes were used to provide supplementary information on features which were particularly interesting or significant to specific construction proposals, or too small to map.

3.2.4 The survey methodology was extended to provide more detail in relation to the potential of the site to support rare or protected fauna, as described by the *Chartered Institute of Ecology and Environmental Management's Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017)*. The assessment of habitat suitability for protected, rare or priority species is based on current good practice guidance such as that presented in the *Herpetofauna Workers' Manual (Gent and Gibson, 2003)* and *Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins (ed.), 2023*).

3.3 Preliminary Bat Roost Assessment

3.3.1 A Daytime Bat Walkover (DBW) survey was undertaken in conjunction with the PEA.

3.3.2 The Daytime Bat Walkover (DBW) survey entailed a slow walkover of the site, during which time the surveyor identified any structures, trees and other features that could be suitable for bats to roost in, and any habitats which could be suitable for bats to commute, forage or swarm in.

3.3.3 During this survey any direct evidence of bats was searched for and recorded, such as grease marks, urine stains, bat droppings, feeding remains and dead/live bats. Furthermore, any structures or trees which offered features with the potential to support bats were noted. For trees, this included the identification of features such as, but not limited to, cracks, crevices and holes naturally formed by trees. For structures, this included the identification of features such as, but not limited to, slipped, missing or uneven tiles, gaps around the soffit/barge board, and raised flashing.

3.3.4 All suitable bat habitat was assessed in accordance with best practice criteria (Collins, 2023), which are outlined herein. During the survey, all trees within and immediately adjacent to the site were assessed using the following criteria:

Table No. 01 – Criteria for Assessing the Bat Roosting Suitability of Trees

Suitability	Description
None	Either no potential roosting features in the tree, or highly unlikely to be any.
FAR	Further assessment required to establish if potential roosting features are present in the tree.
PRF	A tree with at least one potential roosting feature present.

3.3.5 Furthermore, all structures were assessed externally, and internally wherever possible for their potential to support bats, using the following criteria:

Table No. 02 – Criteria for Assessing the Bat Roosting Suitability of Structures

Potential Suitability	Description
None	No habitat features on site likely to be used by any roosting bats at any time of year.
Negligible	No obvious habitat features on site likely to be used by roosting bats. However, some small uncertainty remains, as bats can use small and apparently unsuitable features occasionally.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. However, these do not provide enough shelter, space, protection, appropriate conditions or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.
Moderate	A structure with one of more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat, but unlikely to support a roost of high conservation status, irrespective of species conservation status.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat, with the potential to support high conservation status roosts irrespective of species conservation status.
Confirmed	Direct evidence of bats identified.

3.3.6 Finally, an assessment of the winter hibernation potential of the structures was made, in accordance with the following criteria:

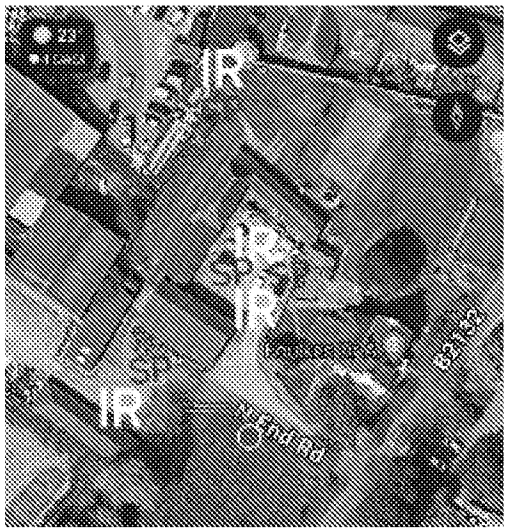
Table No. 03 – Criteria for Assessing the Winter Bat Roosting Suitability of Structures and Trees

Potential Suitability	Description
Low	No or very limited potential winter roosting habitat
Moderate	Non classic site
High	'Classic sites', which offer stable humidity and consistent temperatures throughout the winter period, such as underground sites, cellars, tunnels etc.

3.4 Bat Emergence Surveys

3.4.1 Emergence surveys of the buildings were completed on the 20th of June, 11th of July and 30th of July 2024 in accordance with guidelines outlined in *Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins 2023)*.

3.4.2 4 no. bat surveyors were assigned positions around the building complex to ensure adequate cover of all potential roost features identified during the roost assessment. Additionally, IR cameras were utilised at each survey point to supplement the results.



Location of Bat Surveyors

3.4.3 The survey started 15 minutes before sunset and terminated approximately 1.5 hours after sunset. Data including species, behaviour and general patterns of activity were recorded throughout the surveys. Details of the survey visits can be found in *Table No. 04* below:

Table No. 04 – Bat Survey Details

Date	20/06/2024	11/07/2024	30/07/2024
Surveyors	SH, MD, JP, JT	MD, KB, FB, JT	LB, HS, JT, EH
Weather	17°C, WF1, 1/8 Cloud, Dry	22°C, WF1-2, 7/8 Cloud, Dry	23°C, WF0, 2/8 Cloud, Dry
Sunset	21:20	21:13	20:50
Start	21:05	20:58	20:35
Finish	22:50	22:43	22:20

3.5 Badger Walkover Surveys

3.5.1 [redacted]

3.5.2 [redacted]

3.5.3 [redacted]

3.6 Ecological Impact Assessment

3.6.1 The methodology for Ecological Impact Assessment (EclA) follows best practice guidelines set by the Chartered Institute of Ecology & Environmental Management (CIEEM): 'Guidelines for Ecological Impact Assessment' (CIEEM, 2024). 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.

3.6.2 The CIEEM guidelines (2024) state that ecological features should be considered within a 'defined geographical context'. The geographical frame of reference used to determine ecological importance in this assessment is detailed below:

- International and European;
- National;
- Regional;
- County;
- District;
- Local;
- Site Level;
- Negligible.

3.6.3 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 site's social and economic value.

3.6.4 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, 2024*). When describing impacts the assessment refers to characteristics such as the extent; magnitude; duration; frequency; and, reversibility of the impact in order to provide justification for any conclusions about the nature and likelihood of the impact described.

3.6.5 Where initial impacts have been identified as significant, avoidance, mitigation and compensation measures have been proposed to avoid, prevent or offset such effects. This assessment then 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*". Enhancement has been proposed to ensure that the development represents a net gain in biodiversity in accordance with National Policy.

3.7 Constraints and Limitations

3.7.1 Due to the updated field survey consisting of a single site visit, certain species, particularly some flowering plants present on site, may not have been visible and hence overlooked. These are accepted constraints associated with the standard Survey Methodology.

3.7.2 No other limitations were encountered, or assumptions made during either the desk study or the field survey; it is considered that with the access gained and recording undertaken an accurate assessment of the site's ecological value has been made.

4.0 BASELINE ECOLOGICAL CONDITIONS

4.1 Designated Sites

Statutory Protected Sites

4.1.1 The following statutory protected sites are noted within the likely zone of influence of the proposed site:

Table No. 05 – Statutory Protected Sites

Site	Description	Location
International Statutory Designated Sites within a Potential Zone of Influence		
Duncton to Bignor Escarpment SAC	Annex I habitats that are a primary reason for selection of this site: • ***Asperulo-Fagetum* beech forests** occur here on steep scarp slopes and on more gently-sloping hillsides in mosaic with ash *Fraxinus excelsior* woodland, scrub and grassland.	9.4km N

4.1.2 The site is located within the *Impact Risk Zone* of *Bognor Reef SSSI, Climping Beach SSSI* and *Arundel Park SSSI* however development proposals do not meet the criteria which would require the LPA to consult with Natural England.

Non-Statutory Protected Areas

4.1.3 Local Wildlife Sites (LWSs) are designations applied to the most important non-statutory nature conservation sites and are recognised by the National Planning Policy Framework (2023). There are however now LWS's with the zone of influence of the development.

Pond Study

4.1.4 There are no ponds present within 500m of the site.

Priority Habitat

4.1.5 Within 2.0km of the site the following *Priority Habitats* were present: Coastal and Floodplain Grazing Marsh, Lowland Mixed Deciduous Woodland, Traditional Orchards, and Wood Pasture and Parkland.

4.2 Existing Habitat Assessment

4.2.1 Habitats within and adjacent to the site include:

- Developed Land; Sealed Surface
- Modified Grassland
- Ruderal / Ephemeral

Developed Land; Sealed Surface

4.2.2 The primary composition of the site is the complex of buildings forming an offset horseshoe with hard standing, leading to North End Road. This habitat was assessed to be of **negligible** ecological value; however, the buildings were suitable for supporting protected species, as discussed further below.

Image 01: View of the complex' courtyard and buildings

Modified Grassland

4.2.3 To the north-west of the site was an area dominated by a species-poor modified grassland. The grassland appeared regularly managed with a sward height of less than 10cm at the time of the survey and a species diversity of ~5 per m^2. The area was dominated by creeping bent *Agrostis stolonifera*, with frequent perennial ryegrass *Lolium perenne* and white clover *Trifolium repens* and occasional red fescue *Festuca rubra* and bristly ox tongue *Helminthotheca echioides*. This habitat was of no more than **site** value.

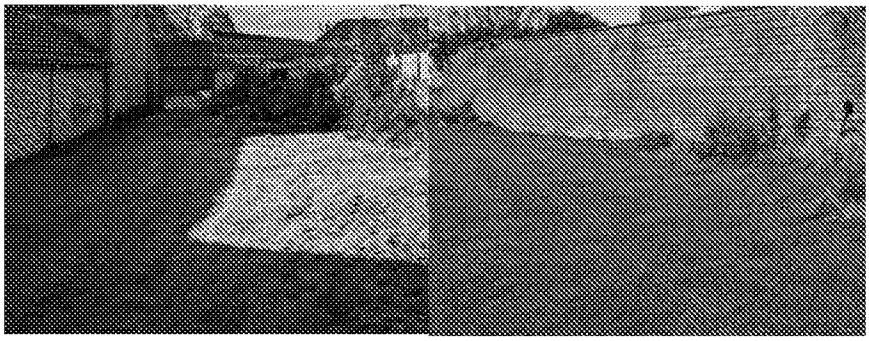
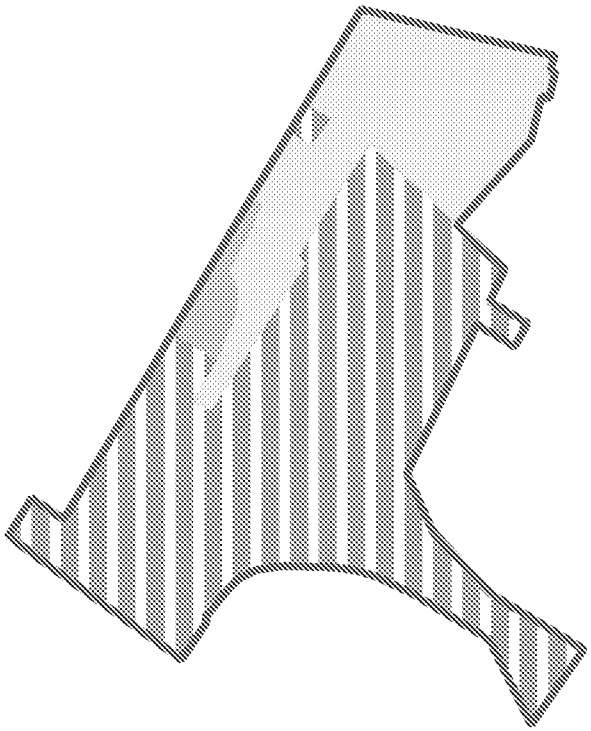


Image 02: View of the modified grassland habitat.

Ruderal / Ephemeral

4.2.4 There was a small area of ruderal / ephemeral along the north-west boundary of the site, adjacent the modified grassland. This area was formed of an abundance of common nettle *Urtica dioica* and bramble *Rubus fruticosus* agg. with occasional thistle *Circium arvense*, cow parsley *Anthriscus sylvestris* and cleavers *Galium aparine*. This habitat was of no more than **site** value.

Image 03: View of ruderal habitat.



Legend

- Red Line Boundary
- Developed land; sealed surface
- Modified grassland
- Ruderal/Ephemeral

25 50 m

1:1,000

N

Figure No. 01 - Site Habitat Plan

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Project Title & Location
Stakers Farm Barns, North End Road, Yapton, West Sussex

Drawn by	Approved by	Rev	Date
HS	C0	00	05/12/24

ARUN DISTRICT COUNCIL Y/15/25/PL

4.3 Invasive Species

4.3.1 No nationally recognised invasive species were identified in or around the site during the visit. Additionally, a search of the assessment's species list concluded that no species present on-site were identified on any invasive non-native species lists relevant to the site's location.

4.4 Protected Species Assessment

Amphibians

Desk Study

4.4.1 A data search within a 2.0km radius of the site revealed 3 no. species, of which 1 no. GCN were recorded along with records of 2 no. common frog *Rana temporaria* and 1 no. smooth newt *Lissotriton vulgaris* were returned. The closest record was GCN c. 1.0km northeast of the site.

4.4.2 No ponds exist within 500m of the site.

Site Assessment

4.4.3 Most of the site consists of hardstanding, providing little to no value to amphibians; the site does contain some minimal areas of suitable habitat in the form of tall forbs and bramble, and the species-poor grassland adjacent to these areas provides some limited foraging opportunities. However, the terrestrial habitats on site are small, isolated from wider habitats and fall outside the 500m range of a pond; as such, the site is of **negligible** value to GCN and other widespread amphibians.

Reptiles

Desk Study

4.4.4 A search returned records of 4 no. reptile species within a 2.0km search radius including 18 no. slow worm *Anguis fragilis*, 5 no. common lizard *Zootoca vivipara* and 4 no. grass snake *Natrix helvetica*. The closest record was slow worm *A. fragilis* c. 490m southeast of the site.

Site Assessment

4.4.5 Reptiles require a mosaic of habitats to persist in a landscape, including vegetative cover for refuge opportunities, open areas for basking and a diverse flora to support viable invertebrate prey throughout the year. The site does provide some opportunities with small areas of scrub and tall ruderal vegetation, however this suitability is negated by the lack of connectivity to the wider habitat and a lack of extensive suitable habitat, leading to the site being assessed as of **negligible / site** value.

Bats

Desk Study

4.4.6 A search returned records of 9 no. bat species within a 5.0km search radius including 74 no. common pipistrelle *Pipistrellus pipistrellus*, 21 no. brown long-eared bat *Plecotus auritus*, and 9 no. Daubenton's bat *Myotis daubentonii*. The closest record was of common pipistrelle c. 371m north of the site.

4.4.7 Buildings B1 – B4 were subject to detailed bat surveys during 2019 which revealed a single common pipistrelle bat roosting beneath roof tiles of Building No. 04, with a single brown long-eared bat utilising Building No. 03 as a feeding perch and night roost.

Preliminary Roost Assessment

4.4.8 All buildings on site were subject to an internal and external assessment, a summary of findings is contained in Table No. 06 below and reference to the building numbers are illustrated in *Figure No. 01 – Site Habitat Plan*.

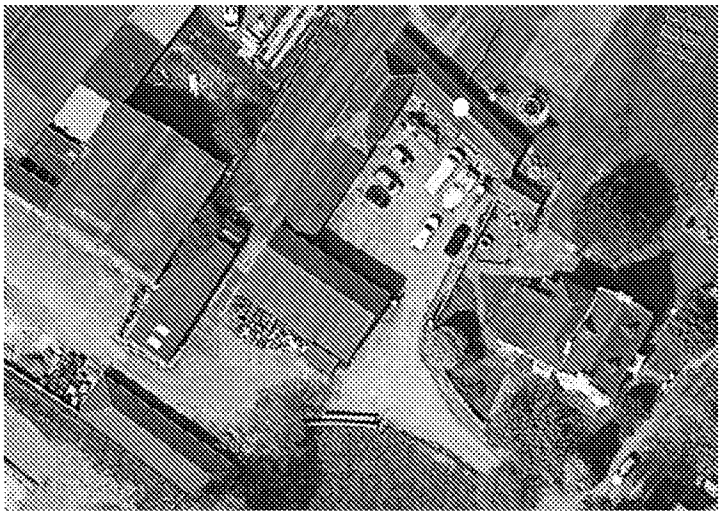
Table No. 06 – Bat Roost Assessment Results - Buildings

Ref.	Internal Assessment Results	External Assessment Results	Suitability
B01	*A small number of Pipistrelle sp. droppings internally, suspected to be from internal foraging.*	*Numerous slipped/lifted tiles to the roof.*	*High*
B02	*No internal evidence.*	*A small number of gaps at the side of roof*	*Moderate*

		tiles.	
B03	*Long-eared droppings and feeding remains on the first floor. Long-eared and Pipistrelle sp. droppings elsewhere.*	*Numerous slipped/lifted tiles to the roof. Gaps at the eaves. Gaps around windows/vents.*	*High*
B04	*Long-eared and Pipistrelle sp. droppings were found internally. Live bats were found during previous surveys.*	*Numerous slipped/lifted tiles to the roof.*	*Confirmed*
B05	*No internal evidence.*	*No suitable crevices or access points.*	*Negligible*
B06	*No internal evidence.*	*No gaps between concrete tiles. Open eaves checked throughout; no signs noted.*	*Negligible*

Bat Emergence Surveys

4.4.9 Surveys found 1 no. confirmed emergence of a long-eared bat from the northeast of the site, with a day roost of common pipistrelle also recorded. Survey results were consistent with those recorded during previous surveys.



Location of bat roosts (green = BLE, yellow = common pipistrelle)

4.4.10 Foraging activity from common pipistrelle and soprano pipistrelle was 'moderate' during the surveys, with noctule and long-eared bats also occasionally recorded on site. Several instances of common pipistrelle foraging within the buildings were also recorded during the surveys.

Dormouse

Desk Study

4.4.11 A search returned 2 no. records of hazel dormouse within a 2.0km search radius, the closest record was c. 1.2km northeast of the site.

Site Assessment

4.4.12 Dormice require extents of connected arboreal habitat to exist in a landscape, such as woodland and hedgerows. The habitats found within the site contained small pockets of low-quality dormouse foraging species such as bramble, however, these areas are not extensive enough to support healthy populations and are isolated from any suitable habitats in the wider landscape. The site was therefore assessed as of **negligible** value.

Badger

4.4.13 [redacted]

4.4.14 [redacted]

Desk Study

4.4.15 The desk study returned records of 130 no. bird species within a 2.0km search radius, of those records 19 no. of the species were listed on Schedule 1 (Wildlife and Countryside Act, 1981) (as amended), such as Cetti's warbler *Cettia cetti* with 64 no. records, barn owl *Tyto alba* with 6 no. records and brambling *Fringilla montifringilla* with 2 no. records. A further 31 no. of the species were

listed on the Birds of Conservation Concern (BoCC) Red List including greenfinch *Chloris chloris* with 201 no. records, skylark *Alauda arvensis* with 115 no. records and Corn bunting *Emberiza calandra* with 12 no. records. The closest species recorded was swift *Apus apus* c. 70m southeast of the site.

Site Assessment

4.4.16 The site itself is of **negligible** value to ground nesting birds due to the lack of undisturbed habitats, however, the old farm buildings contain features highly suitable for species such as swallows, with the grasslands in and around the site also providing some limited foraging opportunities for passerines and other widespread species. Due to this the site was assessed as of **site / low local** value to foraging and nesting birds.

4.4.17 During the bat surveys evidence of birds using the buildings was recorded with a swallow seen entering one of the buildings through the gap above a door in the courtyard.

Invertebrates

Desk Study

4.4.18 A data search returned numerous records of invertebrates within a 2.0km search radius, totalling 215 no. species, of that 15 no. are listed as priority species (NERC 2006), such as stag beetle *Lucanus cervus* with 21 no. records, and Galium carpet moth *Epirrhoe galiata* with 2 no. records.

Site Assessment

4.4.19 The site contained limited suitable habitat for invertebrates; diversity within grassland was poor and lacked any structure suited to supporting invertebrates and the areas of building and hard standing offers no suitable habitat. Therefore, the site was assessed as being of **negligible** value.

Others

4.4.20 The compost pile and scrub on site could provide suitable habitat for hedgehogs in limited quantities.

5.0 ASSESSMENT OF EFFECTS AND MITIGATION MEASURES

5.0.1 Using the Guidelines for Ecological Impact Assessment (IEEM, 2006 & updated by CIEEM, 2024), the assessment set out below considers the potential impacts of the scheme prior to mitigation. Detailed avoidance, mitigation and compensation measures are then discussed, with residual impact identified once these measures have been taken into account. Wherever possible mitigation measures have been designed into the scheme as this gives greater certainty over deliverability and ensures the correct application of the 'Mitigation Hierarchy' (as advocated by BS42020:2013, Defra 2019 and CIEEM, CIRIA & IEMA 2016).

5.0.2 Protected species for which the site offers negligible suitability have been scoped out of any further assessment.

5.1 Designated Sites

Potential Impacts

5.1.1 The site is located within the Impact Risk Zone of Bognor Reef SSSI however, development proposals do not meet the criteria which would require the LPA to consult with Natural England.

Mitigation and Compensation

5.1.2 None required; due to the intervening distances and nature of the surrounding protected sites no impacts are predicted.

Residual Impacts

5.1.3 Once mitigation measures have been considered, there shall be **no likely significant effect** upon any designated site as a result of this development.

5.2 Habitats

Potential Impacts

5.2.1 Development proposals will result in the loss of some species-poor modified grassland and small sections of bramble scrub and tall forbs. These habitats are of low ecological value, the loss of which would be of a negligible or minor impact magnitude.

Mitigation and Compensation

5.2.2 Works during the construction phase will be undertaken in accordance with best practice guidelines to control any excess dust creation, vibration and noise disturbance that may impact adjacent habitats. Construction lighting (if required) will be angled down, away from the surrounding vegetation.

5.2.3 The construction compound and any storage of materials/fuel will be kept secure and located away from adjacent trees with appropriate containment procedures in place to prevent fuel spills.

5.2.4 The post-development landscape scheme will follow current biodiversity gain legislation, replacing or enhancing habitat on-site (where possible) to offset the loss incurred resulting from the development.

Residual Impacts

5.2.5 Provided mitigation and protection measures are followed, no priority or other important habitats or plant species will be affected by this development, the impact of which is **not significant.**

5.3 Reptiles

Potential Impacts

5.3.1 In the absence of mitigation, works could result in the killing or injuring of common, widespread reptiles. Given the generally low suitability of the site, the impact would be minor at the site level and may result in a breach of the Wildlife and Countryside Act (as amended) 1981.

Mitigation and Compensation

5.3.2 As a precautionary approach, areas identified as suitable for reptiles such as compost piles shall be removed with caution and due care; such removal must take place within appropriate conditions (+9°C, sunny, dry), following a check conducted by a suitably qualified ecologist.

Residual Impacts

5.3.3 Once mitigation measures are taken into account, the impact of the scheme shall be **negligible** and shall result in minimal impact on suitable reptile habitats in the long term.

5.4 Bats

Potential Impacts

5.4.1 In the absence of mitigation impacts would include the destruction of day roosts of brown long-eared and common pipistrelle bats as well as potentially the killing or injuring of a small number of bats. Impacts could also include the disruption of commuting corridors and foraging habitat through inappropriate lighting.

Mitigation and Compensation

5.4.2 Mitigation shall include:

- Once planning permission is obtained, a licence shall be sought from Natural England to destroy the roosts;
- Temporary roost features (2no. bat boxes) shall be installed to a nearby tree at the same height and aspect as the roosts;
- The roof tiles in the location of the roost shall be hand-stripped under the supervision of a licenced bat surveyor;
- Any bats found shall be caught by hand and relocated to the bat boxes.
- The bat boxes shall be retained in perpetuity as roost compensation.

5.4.3 All light spill upon adjacent trees, grassland and new roost entrance points will be avoided. All valuable foraging habitat will be retained within the scheme.

Residual Impacts

5.4.4 Residual impacts after mitigation will be minor adverse in the short-term, with a positive increase in the long-term once new vegetation has been established and roosting opportunities are provided.

5.5 Breeding Birds

Potential Impacts

5.5.1 In the absence of avoidance/mitigation, the development could result in the damage/destruction of a bird nest.

Mitigation and Compensation

5.5.2 Buildings scheduled for removal will be removed outside the nesting season *(season: March-August, although pigeons may nest all year)* or shall be checked prior to removal by a suitably qualified ecologist. Works shall proceed with caution with a suitable buffer left around any active bird nests. To compensate for the loss of small areas of suitable nesting habitat bird boxes shall be fitted to the northern side of trees and the northern aspect of buildings. Swallow re-provision shall be provided in the form of new nest cups below eaves and within the proposed garage building to the north of the site.

Residual Impacts

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

5.6 Badgers and Other Mammals

5.6.1 [redacted]

5.6.2 [redacted]

5.6.3

5.6.4

5.7 Others

5.7.1 No impacts upon any other protected species including GCN or water voles are foreseen; there is no suitable habitat on or within range of the site for these species.

5.8 Future Baseline

5.8.1 The site is subject to active management. Therefore, general habitat and building maintenance works are likely to continue to keep the site in a managed state, similar to that found during the initial habitat assessment.

6.0 ECOLOGICAL ENHANCEMENTS

6.1 The design of the proposed development includes ecological enhancements for the benefit of wildlife to ensure compliance with *Local Planning Policy* and the *Environment Act 2021* which mandates a minimum 10% net gain in biodiversity across all development sites. Ecological enhancements which will be included as part of development proposals, in addition to the compensatory measures outlined above include:

- Seeding areas of grassland to the site frontage with a low-flowering lawn mix to provide a pollinator resource.
- Planting of 7no. new native trees.
- The use of flowering shrubs as listed within the RHS 'Plants for Pollinators' plant list within new planting to the gardens;
- Installation of bird boxes either to the dwellings or to a nearby tree;

7.0 CONCLUSIONS

7.1 The site comprises habitats of **low ecological value** including species-poor modified grassland with sections of tall forbs surrounding a complex of old farm buildings with an eastern courtyard and driveway.

7.2 The site holds no value for dormice, amphibians, invertebrates, water voles, otters, and crayfish, as no suitable habitats exist on or in range of the site.

7.3 The site was found to be of **site** value to roosting bats, with a small bat roost noted within 2 no. of the barns and moderate numbers of bats foraging over the buildings and grassland. The site was also found to be of **site** value to nesting birds, with evidence of swallows and other small passerines nesting within the buildings while areas of tall forbs in the margins of the buildings and the compost piles may provide some suitable reptile habitat.

7.4 A series of mitigation/avoidance measures have been devised to ensure the development does not contravene any UK or European legislation, or cause harm to bats, reptiles and nesting birds.

7.5 Once avoidance and mitigation measures have been taken into account, the impacts of the planned development upon biodiversity will be **negligible**, **non-significant** with proposed ecological enhancements resulting in a **net gain** and a **long-term positive increase** in biodiversity in line with national planning policy guidance.

8.0 REFERENCES

BCT & ILP. (2023). *Guidance Note 08/23. Bats and artificial lighting At Night.* Institution of Lighting Professionals, Warwickshire

Bright. P., Morris., P & Mitchell-Jones. T. (2006). *The Dormouse Conservation Handbook.* Second edition. Published by English Nature. ISBN: 1 85716219 6

British Standards Institution. (2012). *BS 5837:2012 Trees in relation to design, demolition and construction: Recommendations.* London: BSI

British Standards Institution. (2013). *BS 42020:2013 Biodiversity – Code of practice for planning and development.* London: BSI

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2023). *The UK Habitat Classification User Manual.* Version 2.0 at http://www.ukhab.org/

Buxton., A.S. & Griffiths., R.A. (2022). *A revised system for interpreting great crested newt habitat suitability indices. Herpetological Journal.* Volume 32 (July 2022), 114-119. Available online: https://doi.org/10.33256/32.3.114119

CIEEM. (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition.* Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM. (2024) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3.* Chartered Institute of Ecology and Environmental Management, Winchester

CIEEM. (2020). *Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK.* 2nd Edition. Chartered Institute of Ecology and Environmental Management. Winchester, UK

Collins., J. (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th ed.) The Bat Conservation Trust

English Nature. (2001). *Great Crested Newt Mitigation Guidelines.* Peterborough: EN

Gent, T. & Gibson, S. (eds). (2003). *Herpetofauna Workers' Manual (revised reprint)*, JNCC, Peterborough, ISBN 1 86107 450 6.

Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001), *Great Crested Newt Conservation Handbook*, Froglife, Halesworth.

Ministry of Housing, Communities & Local Government. (2023). *National Planning Policy Framework*. Fry Building, 2 Marsham Street, London. This publication is available [online] at www.gov.uk/government/publications

Multi-Agency Geographic Information for the Countryside (MAGIC). (2013). *Interactive Map.* [online]. Available at http://www.magic.gov.uk/Magicmap.aspx

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

Oldham, R.S., Keeble, J., Swan, M.J.S. & Jeffcote, M. (2000). *Evaluating the suitability of habitat for the great crested newt (Triturus cristatus).* Herpetological Journal, 10, 143–155

Rose, F., (2006). *The Wild Flower Key. How to Identify wild flowers, trees and shrubs in Britain and Ireland.* Revised and updated by Clare O'Reilly. ISBN: 978-0-7232-5175-0

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds* 114: 723-747. Available online at https://britishbirds.co.uk/content/status-our-bird-populations.

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

Table No. 07 – Species List for Habitat Parcels

Modified Grassland and Tall Forbs

Common Name	***Scientific Name***	***DAFOR***
Bramble	*Rubus spp.*	***F***
Bristly Oxtongue	*Helminthotheca echioides*	***O***
Cleavers	*Galium aparine*	***R***
Cocksfoot Grass	*Dactylis glomerata*	***O***
Common Fleabane	*Pulicaria dysenterica*	***O***
Common Nettle	*Urtica dioica*	***A***
Common Yarrow	*Achillea millefolium*	***O***
Creeping Bentgrass	*Agrostis stolonifera*	***D***
Creeping Buttercup	*Ranunculus repens*	***F***
Doves-Foot Cranesbill	*Geranium molle*	***R***
Oxeye Daisy	*Leucanthemum vulgare*	***O***
Perennial Ryegrass	*Lolium perenne*	***F***
Sorrel	*Rumex acetosa*	***R***
Red Fescue	*Festuca rubra*	***O***
Ribwort Plantain	*Plantago lanceolata*	***O***
Self-heal	*Prunella vulgaris*	***R***
Spear Thistle	*Cirsium vulgare*	***O***
White Clover	*Trifolium repens*	***A***
Wild Basil	*Clinopodium vulgare*	***R***

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

Table No. 08 – Target Notes

Target Note	*Feature*	*Description*
TN01	Compost	1 no. large pile of compost located within the Tall Forbs to the northwest of the site. Comprised of arisings from site management.
TN02	Log Piles	1 no. log pile located in the north corner of the site, on the edge of the modified grassland and contained within a small patch of bramble.
TN03	Rubble	2 no. piles of rubble and unused construction materials located on the western hardstanding driveway. These areas are overtaken by bramble and tall forbs.

Appendix A – Full Bat Survey Results

Survey 1/3

Date	20/06/24
Survey Type	Dusk
Sunrise / Sunset	21:20
Start Time	21:05
End Time	22:50
Start Temp	17ºC
Wind (Beaufort)	1
Cloud Cover	1/8
Rain	None

Surveyor	SH	
Point	Exterior Northwest Aspect	
Time	**Species**	**Notes**
22:04	C.pip	Commuting W overhead - didn't see where from
22:20	Serotine	Heard but not seen (HNS)
22:22	S.pip	HNS
22:22	Noctule	HNS
22:28	C.pip	HNS
22:31 – 40	C.pip	Consistent foraging overhead and over barn
22:47	C.pip	HNS

Surveyor	JP	
Point	Interior West/Northwest Aspect	
Time	**Species**	**Notes**
22:03	C.pip	Flew from South heading North towards building
22:15	C.pip	Heard but not seen (HNS)
22:20	Ser	Flew from South to North
20:23	C.pip	HNS
20:23	Noct	HNS
22:34	C.pip	Flew from North around the courtyard
22:35	C.pip	Flew West to East out of sight
22:38	C.pip	HNS
22:40 - 41	C.pip	HNS, then briefly in view in courtyard
22:40	Noct	HNS
22:44 - 45	C.pip	HNS
22:47 - 50	C.pip	HNS, then briefly seen flying towards barn

Surveyor	MD	
Point	Exterior North Aspect	
Time	Species	Notes
22:03 - 15	C.pip	Heard but not seen (HNS)
22:15	C.pip	Bat move up from E on N side then flew NW
22:15	Pip	Second bat flew from apex of roof, not echo worth check
22:20	Ser	HNS
22:21 - 22	C.pip	HNS
22:23	Noct	HNS
22:25 - 28	C.pip	Foraging to N of building
22:28	C.pip	Flew from S to N along W side of building
22:28 - 41	C.pip	Few passes HNS, then persistent foraging along W edge of building
22:40	Noct	HNS
22:43	C.pip	HNS

Surveyor	JT	
Point	Interior South/Southwest Aspect	
Time	Species	Notes
22:03	C.pip	Came from S flew overhead N
22:15	C.pip	Heard but not seen (HNS)
22:20	Ser	Flying NW
22:23	C.pip	HNS
22:23	Noct	HNS
22:27	C.pip	HNS
22:34	C.pip	HNS
22:36 - 38	C.pip	HNS
22:40	C.pip	HNS
22:41	Noct	HNS
22:44	C.pip	HNS
22:47 - 49	C.pip	HNS

Survey 2/3

Date	11/07/24
Survey Type	Dusk
Sunrise / Sunset	21:13
Start Time	20:58
End Time	22:25
Start Temp	22ºC
End Temp	16ºC
Wind (Beaufort)	1-2
Cloud Cover	7/8
Rain	None

Surveyor	FB	
Point	Exterior Northeast Aspect	
Time	**Species**	**Notes**
21:47	**C.pip**	**Emerged from north-east barn**
21:51	S.pip	Foraging to the East of the building
21:58	C.pip	Commuting West to East
21:59	C.pip	Heard but not seen (HNS)
22:00	Noctule	HNS
22:04	C.pip	HNS
22:06	Noctule	HNS
22:07	C.pip	HNS
22:10	C.pip	HNS
22:23	C.pip	HNS
22:33	C.pip	HNS
22:38	S.pip	HNS
22:40	C.pip	HNS

Surveyor	MD	
Point	Interior South/Southwest Aspect	
Time	**Species**	**Notes**
21:00	Swift	Swift flew into building, through gap over door - likely nesting birds
21:38	**BLE**	**Emergence from N corner**
21:41	Noct/Leis	Commute S to N along W side of building
21:52 - 53	C.pip	Flew from S to W then HNS
21:56	C.pip	Occasional passes
22:00	Noct	Heard but not seen (HNS)
22:05 - 07	C.pip	HNS - occasional passes
22:08	C.pip	Flew N along E roof aspect of courtyard
22:10 - 13	C.pip	HNS
22:20 - 22	C.pip	HNS - occasional passes
22:30 - 36	C.pip	HNS
22:38 - 40	S.pip	HNS

Surveyor	KB	
Point	Exterior Southeast Aspect	
Time	**Species**	**Notes**
21.41	Noct	Heard but not seen (HNS)
21.50	C.pip	Faint call – HNS
21.55	C.pip	Foraging overhead
21.57	C.pip	HNS - strong call, maybe in gardens to the East
22.01	C.pip	Flying around the SE corner
22.05	C.pip	Commuting along the edge of the building S to N
22.07	C.pip	Commuting N to S along edge of building
22.13	C.pip	Commuting N to S along edge of building
22.21	C.pip	HNS
22.3	C.pip	HNS
22.35	C.pip	Commuting N to S along the edge of the building

Surveyor	JT	
Point	Interior North West Aspect	
Time	Species	Notes
21:41	L.Noct	Flying S to N
21:51 - 53	C.pip	Flew from S - went into open barn
21:56	C.pip	Passes overhead
22:01	L.Noct	Heard but not seen (HNS)
22:05	C.pip	Flew over from W - pass into open barn and flew E overhead
22:07	C.pip	Pass from E to W
22:10	C.pip	HNS
22:14	C.pip	HNS
22:20	S.pip	Flying S
22:36	C.pip	HNS
22:39	S.pip	HNS

Survey 3/3

Date	30/07/24
Survey Type	Dusk
Sunrise / Sunset	20:50
Start Time	20:35
End Time	22:20
Start Temp	23ºC
End Temp	20ºC
Wind (Beaufort)	0
Cloud Cover	2/8
Rain	None

Surveyor	LB	
Point	Exterior South Aspect	
Time	Species	Notes
21:23	Noct	High up – Heard but not seen (HNS)
21:34	**BLE**	**Emerged from N barn, Flew W round building**
21:36	C.pip	HNS
21:45	S.pip	Flew W
21:46	Leisler	HNS
21:49	C.pip	HNS
22:02	C.pip	Foraging/feeding buzz - HNS
22:08	C.pip	HNS

Surveyor	EH	
Point	Interior Southeast Aspect	
Time	Species	Notes
21:23	Noct	Heard but not seen (HNS)
21:35	S.pip	HNS - quite faint
21:36	S.pip	Flew from Northwest over stable roof
21:36	**C.pip**	**Emerged from NE**
21:41	LE	Foraging around East aspect of barn
21:43	C.pip	HNS
21:45	L.Noct	HNS
21:48	C.pip	HNS - very faint
21:49	C.pip	Flew from North side of stables commuting Southeast
21:51	C.pip	Flew from West side of building foraging in courtyard headed South
22:07	C.pip	HNS

Surveyor	HS	
Point	Interior Northwest Aspect	
Time	Species	Notes
21:24	Noctule	Flying high overhead
21:35	S.pip	Flew from South of large barn NE over building
21:36	S.pip	Clear social call – Heard but not seen (HNS)
21:44	C.pip	Foraging in courtyard
21:45	Leisler	Clear HNS
21:49	C.pip	Flying from North over stable block, flew West

21:50	C.pip	Foraging in courtyard
21:52	C.pip	As above
22:01	C.pip	Faint HNS
22:08	C.pip	Foraging in the courtyard
22:16	Noctule	Faint HNS

Surveyor	JT	
Point	Exterior North Aspect	
Time	**Species**	**Notes**
21:23	Noct	Heard but not seen (HNS)
21:25	S.pip	HNS
21:27	C.pip	HNS
21:34	C.pip	HNS
21:35	S.pip	HNS
21:37	BLE	HNS
21:46	L.Noct	HNS
21:49	C.pip	HNS
21:52	C.pip	HNS
21:56	C pip	HNS
22:02	C.pip	HNS
22:08	C.pip	HNS
22:17	Noct	HNS