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ECOLOGICAL IMPACT ASSESSMENT REPORT

17 DOWN AMPNEY, CIRENCESTER, GL7 5QW

JONATHAN SLATER

DOCUMENT REF: WWE20248 ECIA BATS REV A | 12/07/2021

| | |
|-------------------|--------------------------------------|
| Client: | Jonathan Slater |
| Site/Job: | 17 Down Ampney, Cirencester, GL7 5PQ |
| Report title: | Ecological Impact Assessment Report |
| Report reference: | WWE20248 EcIA BATS Rev A |

| | |
|---------------------|---|
| Grid Reference: | SU 10068 97209 |
| Survey date(s): | Preliminary Roost Assessment: 28th January 2021 Roost characterisation survey: 27 th May 2021 |
| Surveyed by: | Peter Hacker, Richard Dodd, James Cowling |
| Architect/Agent: | Falconer and Gilbert Scott |
| Planning reference: | TBC |

VERSIONING AND QUALITY ASSURANCE

| Rev | Status | Date | Author(s) | Reviewed by | Approved by |
|-----|--------|------------|--|---|----------------------------------|
| A | Final | 12/07/2021 | Laoise Wilder Seasonal Assistant Ecologist | Carolyn Billingsley MCIEEM Senior Ecologist | Peter Hacker ACIEEM Ecologist |

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The evidence which we have prepared and provided is true, and has been prepared and provided in accordance with the guidance of The Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

SUMMARY

| | |
|-----------------|--|
| Purpose | <ul style="list-style-type: none"> Wildwood Ecology was commissioned by Jonathan Slater (the client) to undertake an Ecological Impact Assessment (EcIA) of 17 Down Ampney, Cirencester, GL7 5QW. The site is subject to a planning application for a two-story extension to be built onto the north elevation of the house. |
| Methodology | <ul style="list-style-type: none"> A Preliminary Roost Assessment (PRA) consisting of a desk study and a field survey was undertaken in January 2021. A dusk activity survey was undertaken in May 2021. The PRA and bat survey followed best practice in line with the Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edn (Collins 2016). The desk study and field surveys were used to inform this EcIA following the Chartered Institute of Ecology and Environmental Management (CIEEM) EcIA (2018) Guidelines. |
| Key issues | <ul style="list-style-type: none"> No bats were seen emerging from the building, but the structure may be used opportunistically by crevice dwelling bat species. Moderate levels of bat foraging and commuting activity, associated with the surrounding habitats, was observed during the dusk survey. |
| Recommendations | <ul style="list-style-type: none"> A protected species licence will not be required for the development to proceed. Mitigation/ compensation measures for nesting birds and biodiversity enhancements are also recommended in Section 5. Bat and bird boxes should be installed on the building, or on appropriate nearby trees within the client's ownership, as biodiversity enhancement measures at the site. |
| Conclusions | <ul style="list-style-type: none"> Providing that the recommendations outlined within this report are successfully implemented, it should be possible for the proposed development to proceed and for there to be no long-term impacts upon the key protected species present at the site. This ecological report will remain valid for a period of 18 months from the date of the last survey – i.e. until November 2022 |

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1 INTRODUCTION

1.1 Wildwood Ecology was commissioned by Jonathan Slater (the client) to undertake an Ecological Impact Assessment (EcIA) at 17 Down Ampney, Cirencester, GL7 5QW (the site) centred at grid reference SU 10068 97209.

Site description

1.2 The aerial image of the site (Figure 1) shows the site to consist of a semi-detached Cotswold brick house situated in the village of Down Ampney. The house has a garden at the front that extends towards the main road that runs through the village.

1.3 The wider site consists of residential houses located to the east and west of the site. Immediately north of the site, there is a small area of amenity grassland, the wider landscape consists mainly of agricultural fields. The landscape south of the site consists of a mixture of agricultural fields and amenity grassland with a large block of woodland that is connected to the site by a series of gardens and treelines. The surrounding landscape is well connected through the network of hedgerows.



Figure 1 – Aerial image of the site (red line shows the site boundary). Image used under licence (©2021 Google). Imagery date 05/20/2018.

Proposed development

- 1.4 The site is the subject of a planning application to construct a two-story extension onto the north elevation of the property.

Purpose of this report

- 1.5 This report aims where possible to provide sufficient information for the local planning authority to fully assess the potential ecological impacts of the proposed development, or alternatively, to identify what further information is required to fully inform the scheme.
- 1.6 The results of the EcIA have been used to establish the need for, and extent of, any mitigation or compensation measures required as part of the proposed development.

2 METHODOLOGY

Desk study

2.1 A biodiversity desk study was undertaken in relation to the site in June 2021. The sources consulted and the type of information obtained are summarised in Table 1.

Table 1 – Sources of biodiversity and ecological records.

| Source | Information requested (search buffer from site centre/boundary) |
|--|---|
| Gloucestershire Centre for Environmental Records | <ul style="list-style-type: none"> Protected and priority species (2km) Sites of local importance/ designation (2km) |
| Multi-Agency Geographic Information for the Countryside (MAGIC) ¹ | <ul style="list-style-type: none"> International statutory designations (5km) National statutory designations (2km) Granted European Protected Species Mitigation licences (EPSL) within 5km for bats. |

2.2 The search buffers are considered to be sufficient to cover the potential zone of influence (Zol²) of the proposed development.

2.3 The impact of the proposed development on the biological integrity of any nearby designated protected sites has been fully considered.

2.4 No previous survey information was available for the site itself.

Field surveys

PRA

2.5 A field survey was undertaken on 28 January 2021.

2.6 An assessment of the onsite building was undertaken in accordance with the latest published best practice guidance (Collins, 2016).

2.7 The building was externally inspected for bats and their signs with the aid of high-powered lamps and close-focussing binoculars.

2.8 The suitability of the building to accommodate bats was assessed, along with a systematic search for signs of bats (e.g. droppings, moth wings, scratch marks, staining, etc.) or actual bats that were present. Particular attention was paid to the roof areas, with searches for any crevices or gaps in walls, gaps between beams and joists, droppings stuck to the walls, floors or other surfaces, or feeding remains below beams, in addition to a number of other factors and signs indicative of a bat roost.

2.9 In addition, the building was classified according to its suitability for bats, based on the presence of features within the structure and / or landscape (see Table 2).

¹ <https://magic.defra.gov.uk/MagicMap.aspx>

² Zol definition – ‘the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities’ (CIEEM, 2018).

Table 2 - Summary of guidelines for assessing the potential suitability of proposed development sites for bats (from Collins 2016).

| Suitability | Description of building, tree, or structure | Number of activity survey visits required ³ |
|-----------------|--|--|
| Negligible | Negligible habitat features on site likely to be used by roosting bats. | None |
| Low | A structure or tree with one or more potential roost sites that could be used by individual bats opportunistically. However, potential roost sites not suitable for larger numbers or regular use (i.e. maternity or hibernation). | One |
| Moderate | A structure or tree with one or more potential roost sites that could be used by bats, but unlikely to support a roost of high conservation status. | Two |
| High | A structure or tree with one or more potential roost sites obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time. | Three |
| Confirmed roost | Evidence of bats or use by bats found. | Minimum of two – to characterise the roost |

Bat activity surveys (dusk emergence)

- 2.10 A single bat activity surveys (dusk emergence - 27/05/2021) was undertaken at the onsite buildings.
- 2.11 The dusk emergence surveys commenced approximately 15 minutes before the time of local sunset (source www.sunrisesunsetmap.com) and continued for approximately 1.5 hours after sunset.
- 2.12 Surveyors were equipped with broadband bat detectors (Elekon BatScanner Stereo). Elekon Batloggers was also deployed to record bat activity across the site.
- 2.13 Note was made of all bat activity recorded including (where appropriate) roost access points, species, time of re-entry, direction of flight, behaviour (foraging or commuting) and use of landscape features. Minimal lighting was used during the surveys as this can alter the behaviour of the bats emerging from or entering a roost, or foraging or commuting over a site.

Surveyor information

- 2.14 The PRA was surveyed by Peter Hacker while the dusk survey was led by Richard Dodd, assisted by James Cowling. See Table 3 for further information.

³ To provide confidence that bats are absent from the structure

Table 3 – Surveyor information

| Surveyor | Licences | Ecological experience |
|---|---|--|
| Richard Dodd B.Sc. (Hons.), CEcol, MCIEEM Principal Ecologist | Bat (2015- 11831-CLS- CLS) Dormouse GCN | A Chartered Ecologist with over 10 years of project management experience across the public, private and voluntary sectors. An experienced and licensed bat ecologist. Holds additional licences for dormouse and great crested newt surveying and mitigation. |
| Peter Hacker M.Sc., B.Sc. (Hons) ACIEEM Ecologist | Bat (2019- 43742- CLSCLS) GCN | Holds a 2:1 Honours degree in Ecological Consultancy. Has field and project management experience gained through working at Wildwood Ecology since 2017. Experience of surveying a range of protected species including reptiles, bats, great crested newt, and hazel dormice. Has been an Accredited Agent on a number of bat licences for species including brown long-eared and lesser horseshoe. |
| Survey Assistant James Cowling | - | The survey assistant received training in use of bat detectors and survey methodologies. Deemed competent and confident to use bat detectors to observe bats in flight and conduct an emergence/re-entry survey in conjunction with a licenced ecologist. Assistant backed up by experienced surveyors and/or recording detectors where possible. |

Limitations and assumptions

- 2.15 Many species of bat in the UK are crevice dwelling, and bats or signs of bats can be difficult to find within a building. In addition, there may be areas that are inaccessible to the surveyor.
- 2.16 A full data search for protected species within a 2km radius of the site was not available due to the site being within the boundary of two record centres. Roughly 70% of the search area was covered by the Gloucestershire Centre for Environmental Records, remaining data was not requested by Wiltshire, and Swindon Biological Records Centre as the proposed development was deemed small enough to not significantly impact the wider population of protected species.
- 2.17 No other limitations were encountered, or assumptions made during either the desk study or the field survey and it is considered that with the access gained and recording undertaken an accurate assessment of the site's ecological importance has been made.

3 RESULTS

Desk study

Designated sites (statutory)

- 3.1 There are no international statutory designations within 5km of the site and one national statutory designation within 2km (see Table 4). The closest statutory designated site is the Cotswold Water Park a Site of Special Scientific Interest (SSSI) which is approximately 1.8km south-west of the site.
- 3.2 There are no protected areas (SSSIs or Special Areas of Conservation SAC) designated for their bat populations within 10km of the site.

Designated sites (non-statutory)

- 3.3 There were two international non-statutory designations within 1km of the site (see Table 4). The closest non-statutory designated site was approximately The Folly, which is a local wildlife site (LWS) located 1603m NW from the site.

Table 4 – Summary of designated sites in range of the site.

| Site name | Designation | Description / key reason for designation | Distance & direction |
|---------------------|---|---|-------------------------|
| The Folly | Local Wildlife site (LWS) | An Ancient semi-natural broad-leaved woodland site that is larger than 2ha. | 1603m NW from the site. |
| Down Ampney Pits | LWS | A gravel pit lake that provides an important habitat for scarce bird species and plants. | 1912m SW of the site. |
| Cotswold water park | Special sites of scientific interest (SSSI) | This site covers 117 lakes created from the gravel workings along the upper River Thames. These lakes are nationally important due to their plant and bird populations. The complex of different lake and reed habitats hold scarce bird species such as nightingale, ringed plover, and Cetti's warbler. There has been a record of around 35,000 waterbirds during winter across this site. | 1872m SW of the site. |

Protected species

Table 5 summarises the priority and protected species records found within the local area within the last 10 years

Table 5 – Protected and priority species records found in the vicinity of the site within the last 10 years.

| Protected & priority | | # of records (# species) | | | Further information |
|------------------------|---------------------|--------------------------|-------|---------|---|
| Groups | Species | Onsite | <500m | >500m | |
| Bats | Brown long-eared | - | - | 3 | Nearest roost: 601m SW from the site (2008) |
| | Chiroptera | - | - | 5 | Nearest roost 695m SW of the site (2016) |
| | Common pipistrelle | - | - | 7 | Nearest roost: 695m SW from the site (2008) |
| | Daubenton's | - | - | 1 | Nearest record: 1476m N from the site (2007) |
| | Lesser horseshoe | - | - | 1 | Nearest record: 572m SW from the site (2012) |
| | Long-eared species | - | - | 1 | Nearest roost: 1476m N from the site (2007) |
| | Natterer's | - | - | 2 | Nearest roost: 695m SW of the site (2008) |
| | Noctule | - | - | 1 | Nearest record: 1726m E of the site (2016) |
| | Pipistrelle species | - | - | 2 | Nearest record: 601m SW of the site (2008) |
| | Serotine | - | - | 2 | Nearest roost: 695m SW of the site (2015) |
| | Soprano pipistrelle | - | - | 7 | Nearest roost: 695m SW of the site (2008) |
| | <i>TOTALS</i> | - | - | 32 (12) | |
| Birds (Schedule 1) | | - | 1 (1) | 14 (6) | barn owl, fieldfare, hobby, kingfisher, red kite, redwing Nearest record: Barn owl 383m W of the site |
| Birds (non-Schedule 1) | | - | 2 (2) | 34 (21) | Red listed species: cuckoo, herring gull, lapwing, linnets, marsh tit, mistle thrush, skylark, starling, turtle dove, yellowhammer Amber listed: black-headed gull, bullfinch, dunnock, house martin, house sparrow, kestrel, lesser black-backed gull, mallard, meadow pipit, shoveler, stock dove, tawny owl |

| | | | | | |
|------------|------------------------|---|--------|---|---|
| | | | | | |
| Amphibians | - | - | 10 (1) | common toad: closet record 1117m N of the site (2017) | |
| Mammals | Badger | - | - | 7 (1) | Closest record of an ancillary sett: 520m NW of the site (2016) |
| | Otter | - | - | 48 (1) | Closest record 512m SW of the site (2009) |
| | Water-vole | - | - | 3 (1) | Closest record 684m SW of the site (2016) |
| | West-European Hedgehog | - | 4 (1) | - | Closest record 101m W of the site. |
| | Terrestrial Mammals | - | - | 7 (2) | Brown Hare, Polecat. |

3.4 *Nearby granted EPSL* Nine EPSL have been granted for bat species within 5km of the site. These EPSL licenses were granted for common pipistrelle, soprano pipistrelle and brown long-eared bat, Daubenton's and Natterer's bat. Three of these licences allow the destruction of breeding sites for common pipistrelle, soprano pipistrelle, Daubenton's and Natterer's bats. The closest EPSL is 2.7km away east of the site and was granted for common pipistrelle and Natterer's bat.

Light pollution

3.5 The site is in a rural area with moderate levels of light pollution approximately $0.55 \times 10^{-9} \text{ W cm}^{-2} \text{ sr}$ (VIRS (2020)).

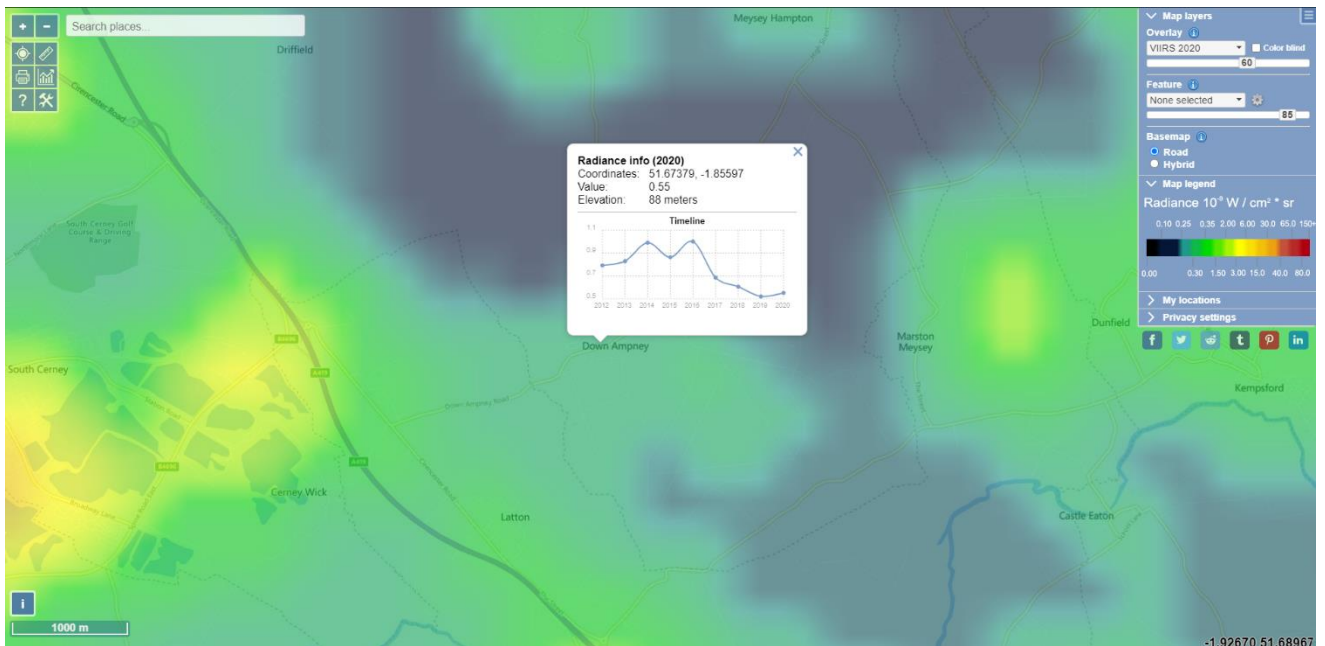


Figure 2 - Radiance level for the site (VIRS Data Base (2020) Online, accessed 24/06/2021 (available at <https://www.lightpollutionmap.info>)

Field surveys

Timing and conditions

3.6 The survey timings and prevailing weather conditions during the PRA and bat activity survey are summarised within Table 6.

Table 6 – Summary of survey timing and conditions during surveys.

| Date | Type | Conditions | | | | | | |
|------------|------------------------------|---------------|---------------------|-----------------------|----------------------|------------------------|------------------------|------|
| | | Temp [°C] | Cloud cover [Oktas] | Wind speed [Beaufort] | Rain | | | |
| 28/01/2021 | Preliminary Roost Assessment | 6 | 7 | 2 | Nil | | | |
| Date | Type | Survey Timing | | | Conditions | | | |
| | | Start | End | Sunset / Sunrise | Temp [°C] | Cloud Cover [Oktas] | Wind Speed [Beaufort] | Rain |
| 27/05/2021 | Dusk emergence | 20:55 | 22:40 | 21:10 | Start: 17 End: 13 | Start: 1/8 End: 1/8 | Start: 0/0 End: 0/0 | Nil |

Preliminary roost assessment (PRA)

3.7 A description of the building inspected during the PRA can be seen in Table 7.

Table 7 – Onsite building information.

| Building reference | Building type / Section Tree species | Description | Development plans |
|--------------------|---|---|-----------------------------------|
| A | Main house | A Cotswold stone brick house with Cotswold stone tiles with timber soffits. The joints, ridge tiles and gable ends are covered in concrete. There are two internal loft spaces that are well sealed with Breathable Roofing Membrane BRM set within timber beams. | Extension on the north elevation. |

3.8 The results of the PRA can be seen in Table 8.

Table 8 – PRA results.

| Building reference | Use by bats | Use by birds | Bat signs and internal and external Potential Roost Features (PRFs) & access points |
|--------------------|-------------|--------------|--|
| A | Low | Low | No signs of access points or use by bats within the loft spaces. However, there is many lifted/shifted tiles on the roof which are suitable for use by crevice dwelling species. |

Links to the surrounding habitat

3.9 The site has moderate connectivity to the surrounding proximal habitats through a network of managed gardens, connectivity to the wider landscape is provided by hedgerows and treelines.

Bat activity surveys (dusk emergence)

3.10 The results of the bat activity survey dusk emergences are summarised in Table 9.

Table 9 - Bat activity survey results.

| Survey type and date | Roosts and activity/points of particular interest | General observations | Surveyors (licence number) |
|------------------------------|--|---|--|
| Dusk emergence 17/05/2021 | <ul style="list-style-type: none"> o First bats observed was at 21:20 (Common Pipistrelle). o No emergences. | <ul style="list-style-type: none"> o Moderate levels of foraging activity were observed around the site by common pipistrelle. o The main area for foraging was observed to be in the front garden. o High levels of foraging activity were recorded within the surrounding area of the site. o Commuting was observed from the north to the south of the site and from east to west. | <ul style="list-style-type: none"> o RD, JC |

| Survey type and date | Roosts and activity/points of particular interest | General observations | Surveyors (licence number) |
|----------------------|---|--|----------------------------|
| | | <ul style="list-style-type: none">Species observed: brown long eared bat, common pipistrelle, soprano pipistrelle, <i>Myotis</i> sp. and noctule.There was a motion triggered security light positioned on the north elevation of the main house. | |

3.11 Bat flight lines in and around the site can be seen in Appendix III.

4 INTERPRETATION AND ASSESSMENT

4.1 The following interpretation and assessment is provided to ensure full compliance with both UK and European legislation and both local and national planning policy (see Appendix VI).

Designated sites

4.2 There were both statutory and non-statutory designated sites identified within 2km of the site (see Table 4). The closest statutory site is Cotswold water park, a SSSI which is approximately 1.8km south-west of the site.

4.3 There are no protected areas (SSSIs or SACs) designated for their bat populations within 10km of the site.

4.4 Given the scale of the proposed development, and the lack of likely impacts beyond the site boundary, the nearby designated sites are sufficiently well separated so that no impacts on their designated features are anticipated as a result of the works.

Protected and priority species

Bats

4.5 The main house was considered to have low suitability to support roosting bats as there were no potential access points into the building and no evidence was found of the loft space being used by bats. However, several shifted and lifted tiles across on the roof of the building provide Potential Roost Features (PRF) for crevice dwelling bat species.

4.6 No bats were seen to emerge from the building during the bat activity survey, and hence no roosts confirmed within the building at the site.

4.7 Even though there were no emergences identified, the surrounding habitat is considered of high ecological value. It is used by commuting and foraging bats, with at least five bat species recorded during the dusk survey, including 'light sensitive' Myotis species.

4.8 Artificial light levels within the surrounding environment is shown to have moderate to low levels of light pollution (see 3.5) however during the dusk survey the artificial light levels in the garden south the house, and within the proximal habitats, were considered to be low. Following from this, alongside the records of myotis species being heard during the dawn survey it can be considered that the area is suitable foraging and commuting habitat for light adverse bat species such as Myotis species.

4.9 The local records search returned 32 records for 12 bat species in the vicinity of the site, with a further 9 European Protected Species Licences (EPSL) granted for bat species within 5km of the site. For details of protected and priority species in the vicinity refer to Table 5.

4.10 Light adverse species of bats were recorded at the site. The development is likely to result in an increase in artificial light levels which in the absence of mitigation may have an adverse impact on foraging and commuting bats. Artificial light spill results

in the disruption of flight paths and causes habitat fragmentation consequently it has the potential to impact negatively on local bat populations.

Nesting birds

- 4.11 The onsite building have suitability for use by nesting birds with access via the lifted ridge tiles and within the chimneys of the house. However, no signs of nesting behaviour or nesting birds were observed.
- 4.12 The local records search returned 51 records for bird species in the vicinity of the site, including 15 records of for Schedule 1 bird species. For details of protected and priority species in the vicinity refer to Table 5.
- 4.13 As the onsite building are suitable for nesting birds, in the absence of mitigation, there may be a negative impact on nesting birds as a result of the proposed development.

5 CONCLUSIONS AND RECOMMENDATIONS

- 5.1 Wildwood Ecology was commissioned by Jonathan Slater (the client) to undertake an ecological impact assessment (EcIA) for bats and nesting birds at 17 Down Ampney, Cirencester, GL7 5QW.
- 5.2 The site is the subject of a planning application two story extension onto the north elevation of the house.

Designated sites

- 5.3 Designated sites in the vicinity of the site (see Table 4) are sufficiently well separated so that no impacts on their designated features are anticipated because of the proposed development.

Protected species

- 5.4 Recommendations regarding protected species are shown in Table 10.

Table 10 – Recommendations.

| Species | Recommendations |
|---------|--|
| Bats | <p>No bat roosts were confirmed within the main house, however the site has high ecological value with suitable foraging and commuting habitat and with high moderate of bat activity recorded during activity surveys. As a precautionary measure to avoid direct harm to individual bats that may use features opportunistically any roofing and timber cladding should be removed using soft demolition techniques.</p> <p>Light adverse bat species <i>Myotis</i> spp. were recorded foraging and commuting in the area. It is likely that the proposed development will increase the artificial light levels into the area. To prevent additional artificial light spill into the north section due to the proposed development internal lighting should be in-keeping with light levels at the existing property.</p> <p>Suggestions for mitigating the light impact on bats are outlined in Guidance Note 08/18 - 'Bats and artificial lighting in the UK; Bats and the built environment series' (The Bat Conservation Trust, BCT, and the Institution of Lighting Professionals, ILP). These include:</p> <ul style="list-style-type: none"> • Luminaires with no UV elements should be used. Metal halide, fluorescent sources should not be used. • LED luminaires should be used where possible due to their sharp cut-off (i.e. a narrow beam illuminating only what is necessary to reduce light spill), lower intensity, good colour rendition and dimming capability. • A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component. • Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012). |

| | |
|--|--|
| | <ul style="list-style-type: none"> • Internal luminaires can be recessed (rather than choosing a pendant fitting) where installed in proximity to windows to reduce glare and light spill. • The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered. However, this often comes at a cost of unacceptable glare, poor illumination efficiency, a high upward light component and poor facial recognition, and their use should only be as directed by a lighting professional. • Column heights should be carefully considered to minimise light spill. • Only luminaires with an upward light ratio of 0% and with good optical control should be used – see ILP Guidance for the Reduction of Obtrusive Light. • Luminaires should always be mounted on the horizontal, i.e., no upward tilt. • Any external security lighting should be set on motion sensors and short (1min) timers. • As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. |
| <p style="text-align: center;">Nesting birds</p> | <p>As the building has potential to provide nesting habitat for breeding bird the work should take place outside the bird nesting season. If work has to be undertaken during the nesting season (generally from 1st March until 31st August, although birds are known to nest outside of these dates in suitable conditions), a breeding bird survey will be required and must be carried out by a suitably qualified person. Any active nests identified should be protected until the young have fledged. Where a Schedule 1 species (as defined in the Wildlife and Countryside Act - http://www.jncc.gov.uk/page-3614 is involved, compensation for impacts, e.g., loss of nesting sites, should be devised and implemented.</p> |

Biodiversity enhancement

- 5.5 Local Authorities have a duty to seek to maintain **and enhance** biodiversity in the exercise of their functions.
- 5.6 Where possible the existing onsite habitats will be retained to ensure that species are not adversely affected by the development. Native species of local provenance will be used for any new planting on the site.
- 5.7 One bird nesting box and bat roosting box should be incorporated within any newly constructed buildings and boundary features. Bat access tiles with associated slits into the roofing felt could also be introduced into the extension as well as bat box into the outside garden space. A range of types should be used in order to cover a variety of species. Many designs are available and we would initially recommend the following for this site:
 - Bats - <https://www.nhbs.com/2f-schwegler-bat-box-general-purpose>

- One common garden bird nest box - (<https://www.nhbs.com/traditional-wooden-bird-nest-box>) (or similar).

Overall conclusion

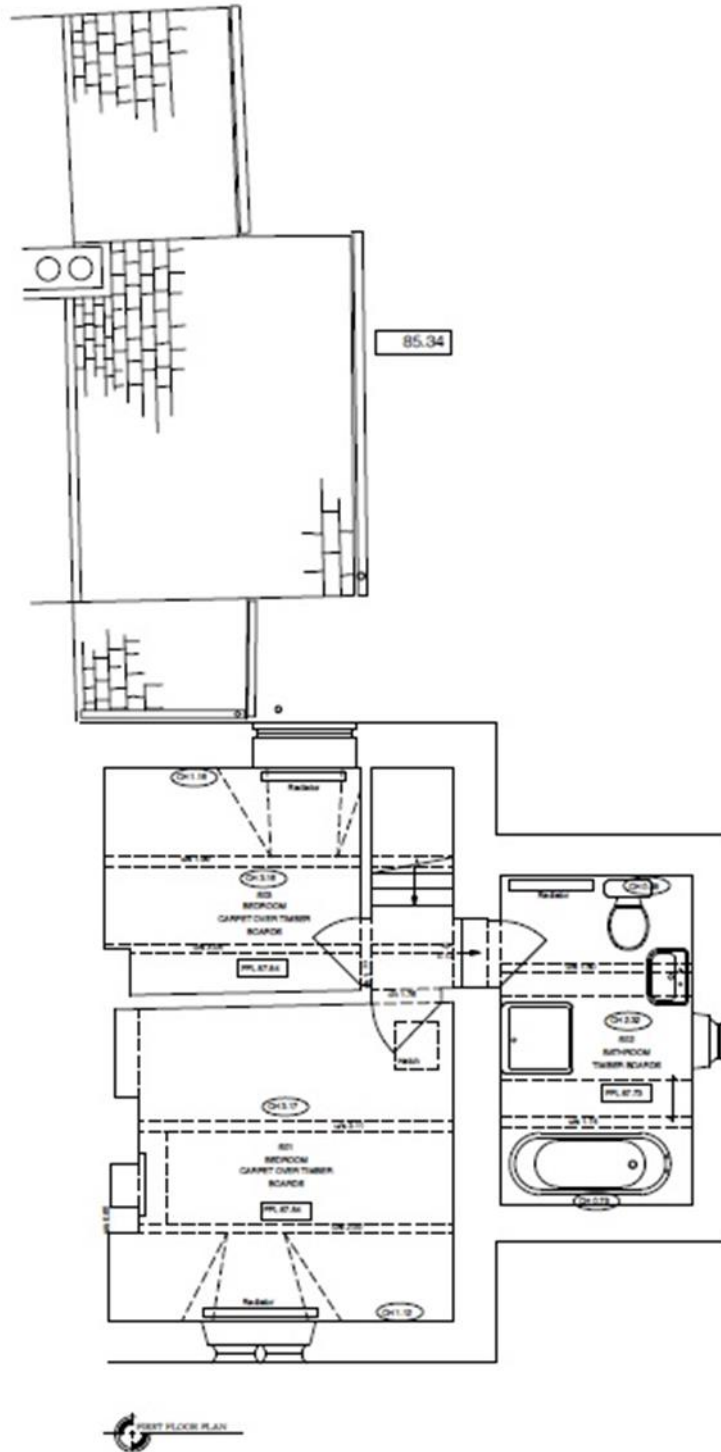
- 5.8 Providing that the recommendations outlined within this report are successfully implemented, it should be possible for the proposed development to proceed and for there to be no long-term impacts upon the key protected species present at the site.

This ecological report will remain valid for a period of 18 months from the date of the last survey – i.e. until November 2022. Further surveys may be required to update the site information if planning is not obtained, or works do not commence within that time period.

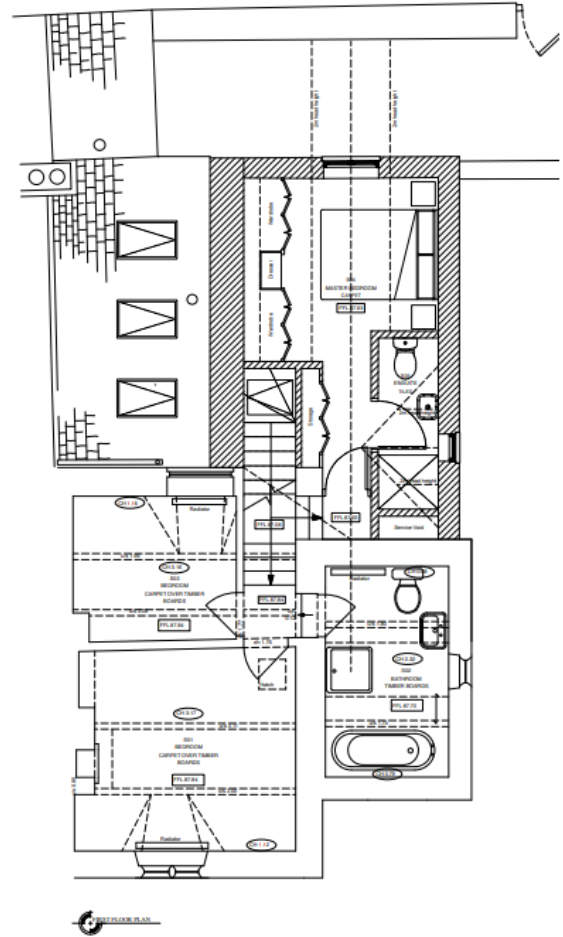
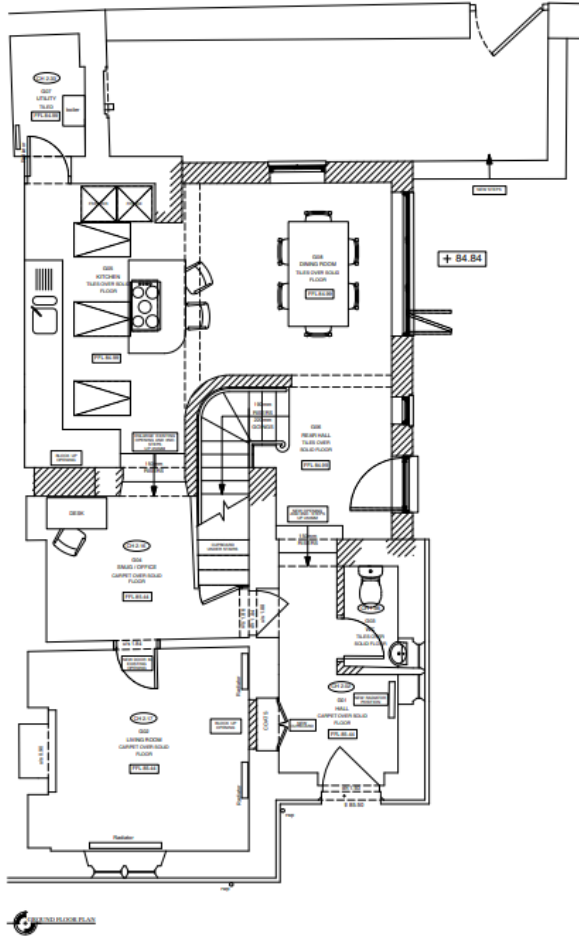
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APPENDIX I: Site plan



APPENDIX II: Proposed plan



APPENDIX III: BAT COMMUTING ROUTES



Key

➔ Flight Lines ● surveyor position □ bound



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APPENDIX IV: SURVEY IMAGES



Figure 3 - Internal loft space



Figure 4 - Internal loft space



Figure 5 - Internal loft space



Figure 6 - North elevation of the house



Figure 7 - East elevation of the house



Figure 8 - South elevation of the house

APPENDIX V: SPECIES LIST

To be submitted to the appropriate Local Records Centre

Site Name: 17 Down Ampney, Cirencester, **Provided by:** Wildwood Ecology
GL7 5QW

Grid ref: SU 10068 97209 **Verified by:**

| Common name | Scientific Name (if known) | Number | Comment | Survey date |
|----------------------|----------------------------------|--------|-----------------------------|-------------|
| Brown Long-eared bat | <i>Plecotus auritus</i> | | Observed commuting | |
| Common Pipistrelle | <i>Pipistrellus pipistrellus</i> | | Observed foraging/communing | |
| Soprano Pipistrelle | <i>Pipistrellus pygmaeus</i> | | Observed foraging/communing | |
| Myotis species | <i>Myotis sp.</i> | | Heard not seen | |
| Noctule | <i>Nyctalus noctula</i> | | Heard not seen | |

APPENDIX VI: PLANNING POLICY AND LEGISLATION

The following local and national planning policy and both primary and European legislation relating to nature conservation and biodiversity status are considered of relevance to the current proposal.

Planning and biodiversity

Local Authorities have a requirement to consider biodiversity and geological conservation issues when determining planning applications under the following planning policies.

National Planning Policy Framework 2019

The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2019) states: "*Planning policies and decisions should contribute to and enhance the natural and local environment by: protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; maintaining the character of the undeveloped coast, while improving public access to it where appropriate; minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*

Legislation and biodiversity

Certain species of animals and plants found in the wild in the UK are legally protected from being harmed or disturbed. These species are listed in the Wildlife and Countryside Act 1981 (as amended) or are named as European Protected Species (EPS) in the Conservation of Habitats and Species Regulations 2017 (as amended). These two main pieces of legislation have been consulted when writing this report and are therefore described in detail within this section.

Other relevant legislation and policy documents that have been consulted include – The Countryside and Rights of Way Act 2000; The Hedgerow Regulations 1997; Biodiversity Action Plans, both UK-wide (UKBAP) and Local plans (LBAPs), and The National Planning Policy Framework (NPPF).

There is also legislation that legally protects certain animals - for example, the Protection of Badgers Act (1992) protects badgers and their setts, and the Deer Act (1991) places restrictions on actions that can be taken against deer species.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife & Countryside Act 1981 (as amended) [WCA] is the primary legislation for England and Wales for the protection of flora, fauna and the countryside. Part I within the Act deals with the protection of wildlife.

Most European Protected Species offences are now covered under the Conservation of Habitats and Species Regulations (see below), but some 'intentional' acts are still covered under the WCA, such as obstructing access to a bat roost.

The WCA prohibits the release to the wild of non-native animal species listed on Schedule 9 (e.g. Signal Crayfish and American Mink). It also prohibits planting in the wild of plants listed in Schedule 9 (e.g. Japanese Knotweed and *Rhododendron ponticum*) or otherwise deliberately causing them to grow in the wild. This is to prevent the release of invasive non-native species that could threaten our native wildlife.

The provisions relating to animals in the Act only apply to 'wild animals'; these are defined as those that are living wild or were living wild before being captured or killed. It does not apply to captive bred animals being held in captivity.

There are 'defences' provided by the WCA. These are cases where acts that would otherwise be prohibited by the legislation are permitted, such as the incidental result of a lawful operation which could not be reasonably avoided, or actions within the living areas of a dwelling house.

Licensing: certain prohibited actions under the Wildlife and Countryside Act may be undertaken under licence by the proper authority. For example scientific study that requires capturing or disturbing protected animals can be allowed by obtaining a licence – e.g. bat surveys.

Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (which are the principal means by which the EC Habitats Directive is transposed in England and Wales) update the legislation and consolidate all the many amendments which have been made to the Regulations since they were first made in 1994.

These regulations provide for the:

- protection of European Protected Species [EPS] (animals and plants listed in Annex IV Habitats Directive which are resident in the wild in Great Britain) including bats, dormice, great crested newts, and otters;
- designation and protection of domestic and European Sites - e.g. Site of Special Scientific Interest [SSSI] and Special Area of Conservation [SAC]; and
- adaptation of planning controls for the protection of such sites and species.

Public bodies (including the Local Planning Authority) have a duty to have regard to the requirements of the Habitats Directive in exercising their function – i.e. when determining a planning application.

There is no defence that an act was the incidental and unavoidable result of a lawful activity.

Licensing: it is possible for actions which would otherwise be an offence under the Regulations to be undertaken under licence issued by the proper authority. For example, where a European Protected Species has been identified and the development risks deliberately affecting an EPS, then a 'development licence' may be required.

Species protection

The following protected species information is relevant to this report. Legislation is only discussed in relation to planning and development; other offences may exist.

Bats

All British bats are classed as European Protected Species and therefore receive protection under the Conservation of Habitats and Species Regulations 2017 (as amended), making it an offence inter alia to:

- Deliberately kill, injure or capture a bat;
- Deliberately disturb bats;
- Damage or destroy a breeding site or resting place of a bat.

In addition, all British bats are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which contains further provisions making it an offence to intentionally or recklessly:

- Obstruct access to any structure or place which any bat uses for shelter or protection; or
- Disturb any bat while occupying a structure or place which it uses for that purpose.

If proposed development work is likely to destroy or disturb bats or their roosts, then a licence will need to be obtained from Natural England, which would be subject to appropriate measures to safeguard bats.

Birds

In the UK, the provisions of the Birds Directive are implemented through the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2017 (as amended). All wild birds, their nests and eggs are protected it an offence to:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any such bird whilst it is in use or being built; or
- take or destroying an egg of any such wild bird.

The law covers all species of wild birds including common, pest or opportunistic species. Special protection against disturbance during the breeding season is also afforded to those species listed on Schedule 1 of the Act.