PHILLIPS ECOLOGY

EXTENDED PHASE 1 ECOLOGICAL ASSESSMENT

BIRD PLACE, HENLEY BRIDGE, HENLEY-ON-THAMES, BERKSHIRE, RG9 2LN

FINAL REPORT

June 2025

Report conditions

Report title	Extended Phase 1 Ecological Assessment – Bird Place, Henley-on-Thames.		
Client	Mr A Fawsitt.		
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Survey date	6th May 2025		
Written by	Connor Hill	*Date*	09/06/2025
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Executive Summary

- This extended phase 1 ecological assessment report has been prepared in order to support a planning application for the proposed demolition, alteration and construction works at Bird Place, Henley-on-Thames.
- An extended phase 1 ecological assessment of the application site was undertaken on the 6th May 2025 by Connor Hill of Phillips Ecology.
- The survey area comprised the entirety of the grade II listed house, the western extension which forms Rose Cottage, the conservatory outbuilding, the area of hardstanding and woodland where the garages are to be constructed and any adjacent site grounds to be impacted by the proposals. A data search extended to a 2km radius for designated sites and a 1km radius for notable habitats and protected species.
- The site is considered to support opportunities for protected and priority species including bats, breeding birds, reptiles, dormice, badgers and hedgehog. The existing house and cottage are considered to support high suitability for roosting bats. This assessment was based on the large number of crevices features recorded on the buildings including lifted tiles and cracks in the elevations. Additionally, evidence of long-eared bats in the form of scattered droppings were recorded inside the roof void of Rose Cottage during the survey.
- In order to confirm the presence/absence of roosting bats, characterise any bat roosts, assess the extent that they may be affected by the proposed works and develop a proportionate and appropriate mitigation strategy, further survey work in accordance with Natural England standing advice and the Bat Conservation Trust's (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition) is required for the house and cottage. The recommended survey effort for structures with high roost suitability is three presence/absence surveys.
- No further surveys are required for the conservatory outbuilding.
- With the implementation of precautionary construction avoidance measures, impacts on designated sites and other protected species will be avoided.
- Information regarding the length of time the findings from this report are valid for can be found in section 13.

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1. Introduction

1.1 Report purpose

This report has been prepared in order to present the extended phase 1 ecological assessment undertaken at Bird Place, Henley-on-Thames (central grid reference: SU 76466 82583).

1.2 Description of proposal

The proposals for the main house include alteration works to the basement to lower the floor, works to the roof to implement a new terrace area and general renovation works. Structural alteration works and extension works are planned for Rose Cottage (the western extension), including the removal of walls and stairs followed by the construction of a single storey extension to the south. The existing conservatory outbuilding is to be demolished to make way for the reinstatement of a boathouse. Lastly, two new garage buildings are to be constructed in the east of the site where the hardstanding parking area currently exists.

1.3 Report context

The Shack Group have prepared a planning application on behalf of their client Mr A Fawsitt (the applicant) for the proposed works at Bird Place, Henley-on-Thames. Phillips Ecology have been instructed by the Applicant to undertake an ecological assessment to support this application, which will be submitted to Wokingham Borough Council.

1.4 Scope of assessment

An extended phase 1 ecological assessment was carried out on the 6th May 2025. The survey comprised a field survey and desktop study in order to identify notable or protected sites, habitats or species potentially affected by the proposal under consideration.

1.5 Survey area

The survey area comprised the grade II listed house, attached Rose Cottage, conservatory outbuilding and the grounds on the property within the redline boundary.

Regarding the bat roost assessment, the survey area extended to all areas of the buildings that will be modified by the proposed works in such a way that bats, or their roosts could be impacted (directly or indirectly). Therefore, the survey included the entirety of all the buildings.

A data search extended to a 2km radius for designated sites and a 1km radius for notable habitats and protected species.

1.6 Limitations

Limitations which are specific to each phase of the assessment are given in the relevant sections, below.

2. Data search

2.1 Methodology

A desk-based assessment was undertaken by Phillips Ecology on the 28th May 2025 with Multi-Agency Geographic Information for the Countryside (MAGIC). The MAGIC database was consulted for records of statutory designated sites within a 2km radius of the site and priority habitats and protected species licenses granted within a 1km radius.

2.2 Limitations

The data search results are bound by the following statement contained within MAGICs general disclaimer: "The materials contained on this website are of a general, informational, nature. We have used reasonable endeavours to ensure the accuracy and completeness of the contents of the pages on this site but the information does not constitute advice and must not be relied on as such."

2.3 Results

2.3.1 *Statutory designated sites*

A total of two Sites of Special Scientific Interest (SSSI), and an AONB are located within a 2km radius of the site. Details for the site designations are detailed in Table 1 below.

Table 1 *Statutory designated sites within 2km of the application site*

Site Name	*Approx. distance and direction from the site*	*Reason for designation*
Temple Island Meadows SSSI	1.5km N	The site consists of multiple parcels of slightly improved, sheep grazed wet meadows. The grasslands lie adjacent to the River Thames and are seasonally flooded and waterlogged. Marshy neutral grassland turns into tall fen vegetation and finally alder carr woodland in the west and south. The meadows are considered to be some of the most species rich which adjoin the Thames. Nationally important and rare species have been recorded onsite including summer snowflake *Leucojum aestivum.* Invertebrate fauna is rife within the site including the nationally rare and endangered marsh fly *Dicheptophora findlandica.* Multiple Dragonfly species are also frequently recorded within the wetlands. The woodland, scrub and meadows on site attract a variety of bird species including lesser spotted woodpecker *Dryobates minor,* woodcock *Scolopax rusticola,* a variety of wetland warblers and a breeding population of common snipe *Gallinago gallinago.*
Harpsden Wood SSSI	1.6km S	This woodland site contains rich floral cover with 40+ species recorded with a long continuity of woodland cover. There is a unique mix of soils in the area with acidic clay adjoining more calcareous soils which are present on the northern slopes of the valley.

		A significant amount of the wood has a high forest structure composed of a mosaic of the acid pedunculate oak *Quercus robur*-ash *Fraxinus excelsior*-beech *Fagus sylvatica* and oak-beech types with variable numbers of oak, ash, cherry *Prunus sp.* and birch *Betula sp.*. It has a sparse understory of shrubs including holly *Ilex aquifolium*, elder *Sambucus nigra* and hazel *Corylus avellana*. In contrast the northern slope supports calcareous pedunculate oak-ash-beech woodland with whitebeam *Sorbus aria* and old maple *Acer sp.* standards and an underwood of hazel coppice, dogwood *Cornus sanguinea*, guelder rose *Viburnum opulus*, wayfaring tree *Viburnum lantana*, spindle *Euonymus europaeus*, privet *Ligustrum sp.*, honeysuckle *Lonicera periclymenum* and, rarely, old coppiced wych elm *Ulmus glabra* stools.
Chilterns AONB	0.6km N (nearest)	The AONB covers 833km^2 of country side from the River Thames in Oxfordshire through Buckinghamshire, Bedfordshire and into Hertfordshire. The Chiltern Hills were designated in 1965 for containing some of the finest landscapes in the country. Farmland forms two-thirds of the site and woodland another one fifth. The hills contain layers of chalk laid down where wildflowers flourish and attach various butterfly species.

2.3.2 *Ancient woodlands*

There are two blocks of ancient woodland which are further split into several smaller compartments located within a 1km radius of the site. Details for each woodland block are provided in Table 2, below.

Table 2: *Ancient woodlands within a 1km radius of the application site*

Woodland Name	*Approx. distance and direction from the site*	*Reason for designation*
Park Place	494m E	This 9ha block is split into two sections both designated for their ancient semi-natural woodland.
Remenham Wood	459m NE	This 32.5ha block is divided into eight smaller compartments which are designated for their ancient semi-natural woodland and replanted woodland.

2.3.3 *Priority habitats*

The woodland located in the southern section of the site is designated at priority deciduous woodland. This compartment of woodland continues northwards along the exterior of the eastern redline boundary.

The data search revealed the following priority habitats within 1km of the application site:

- Coastal and floodplain grazing marsh
- Priority deciduous woodland

- Traditional orchards
- Woodpasture and parkland

2.3.4 *Protected Species*

The data search revealed two records of the following protected species with a 1km radius of the site. The records relate to EPSM licences that have been issued by Natural England, the dates between which the licence is active are included in brackets.

- Bat – Soprano pipistrelle *Pipistrellus Pygmaeus* (2018-34200-EPS-MIT-1) – 20m NW (2019-2023).
- Bat – Brown long-eared *Plecotus auratus* (EPSM2010-2337) – 507m W (2010-2012).

3. Habitats

3.1 Methodology

A field survey was carried out on the 6th May 2025 by Connor Hill of Phillips Ecology. During the survey, all broad habitat types were identified, and a list was compiled of characteristic plant species within each habitat type. These habitats are described below in accordance with UKHabs terminology.

3.2 Limitations

No limitations were encountered throughout the duration of the survey.

3.3 Existing records

The data search revealed that priority habitats associated with the local landscape within 1km of the site comprise, coastal and floodplain grazing marsh**,** deciduous woodland, traditional orchards and woodpasture and parkland.

3.4 Results

The site consists of habitats typical of a larger garden environment including a managed lawn, ornamental planting, hedgerows, scattered trees, hardstanding with woodland, scrub and a stream. The house is located towards the northwest of the site with Rose Cottage and the conservatory outbuilding located to the west of the house. A driveway extends from the north-western corner and northern boundary down and around the northern side of the house and terminating under a wooded area along the eastern site boundary. A swimming pool surrounded with hardstanding is located to the south of Rose Cottage in the rear garden. The garden located south of the house in the centre of the site primarily consists of a managed lawn with ornamental planting scattered within it. A line of trees which is wide enough to be considered a small woodland extends around the south-western, southern and eastern site boundaries. The section of woodland in the southern section of the site is designated as priority deciduous woodland. A modified

stream extends onto site from a culvert on the eastern boundary and flows along the southern end of the lawn and into the River Thames to the west. A small footbridge leads over the stream to a lesser managed area of grassland and woodland in the southern tip of the site.

The site is situated in the east of Henley-on-Thames. It lies adjacent to the River Thames which forms the western site boundary. Further afield, across the river is a more urbanised environment with sprawling residential properties and services. White Hill Road (A4130) extends along northern site boundary with a hotel and carpark located beyond it. Other scattered residential properties with their associated gardens are located to the east and south with parkland and managed grassland also present. Remenham Wood is located a short distance to the north-east of the site.

The following UKHabs types were recorded within the application site. See Appendix 2 for the UKHabs habitat map.

3.4.1 *Modified grassland g4*

Most of the grassland on site consists of a well-managed lawn located to the south of the buildings, in the centre of the site (Figures 1 and 2). A typical 1x1m quadrat area of the grassland included, perennial rye-grass *Lolium perenne*, Yorkshire fog *Holcus lanatus,* germander speedwell *Veronica chamaedrys* and field wood-rush *Luzula campestris.*

Other species less frequently recorded within the grassland included, yarrow *Achillea millefolium*, daisy *Bellis perennis*, creeping buttercup *Ranunculus repens*, dandelion sp. *Taraxacum sp.*, thistle sp. *Cirsium sp.*, green alkanet green alkanet *Pentaglottis sempervirens*, common nettle *Urtica Dioica*, red dead-nettle *Lamium purpureum*, ribwort plantain *Plantago lanceolata* and ragwort *Senecio jacobaea*.

Figure 1 – Grassland in the centre of the site.

Figure 2 – Grassland along the western boundary of the site.

3.4.2 *Other neutral grassland g3c*

Beyond the stream in the southern tip of the site, the grassland is less frequently managed and contains greater species diversity within the sward (Figures 3 and 4). A typical 1x1m quadrat area of this grassland included, perennial rye-grass, red fescue *Festuca rubra*, Yorkshire fog*,* creeping buttercup, broad-leaved dock *Rumex obtusifolius,* yarrow, thistle sp. and cinquefoil sp *Potentilla sp.*

Other species scattered within the grassland included, ribwort plantain, ground ivy, corn mint *Mentha arvensis*, sycamore *Acer psuedoplatanus* (shooting), comfrey sp. *Symphytum sp.*, common nettles, pendulous sedge *Carex pendula,* bramble *Rubus fruticosus,* dandelion and a forget-me-not sp. *Myosotis sp*.

Figure 3 – Southern grassland on site with brash and compost pile present.

Figure 4 – Southern grassland on site.

3.4.3 *Other woodland; mixed; mainly broadleaved w1h5*

A small strip of woodland extends around the southern and eastern boundaries of the site (Figures 5 and 6). The woodland in the south is designated as priority deciduous woodland this continues around to the east of the property outside the redline boundary. The eastern section of woodland within the redline boundary is not designated as priority.

The canopy layer primarily consists of broadleaved trees however yew *Taxus baccata* is also interspersed within it. The recorded tree species include sycamore, yew, English oak *Quercus robur,* beech *Fagus sylvatica*, horse-chestnut *Aesculus hippocastanum*, ash *Fraxinus excelsior*, alder *Alnus glutinosa,* bay *Laurus nobilis*. and a willow sp., *Salix sp.*

The understorey comprises a good mix of native scrub species including hazel *Corylus avellana,* elder *Sambucus nigra,* willow sp., ash, common ivy *hedera helix,* common dogwood *Cornus sanguinea,* hornbeam *Carpinus betulus.*

The understory along the eastern site boundary features a much poorer quality species mix. The dominant species recorded in this area was cherry laurel *Prunus laurocerasus*. This species can be highly invasive to woodlands, often spreading and outcompeting the native scrub species present.

The species recorded within the field layer of the woodland included broad-leaved dock, common nettles, wood avens *Geum urbanum,* cow parsley *Anthriscus sylvestris,* cleavers *Galium aparine, forget-me-not sp.,* lords-and-ladies *Arum maculatum,* daffodil *sp. Narcissus sp.,* pendulous sedge, dock sp. *Rumex sp.,* bramble, ground ivy, ground-elder *Aegopodium podagraria,* rosebay willowherb *Chamaenerion angustifolium* and herb-Robert *Geranium robertainum.*

Figure 5 – South-eastern woodland on site.

Figure 6– South-western woodland understorey on site.

3.4.4 *Scattered trees g4 11*

In addition to the surrounding woodland on site multiple ornamental trees were scattered around the lawn including Leyland cypress *Cupressus x leylandii*, Lawson's cypress *Chamaecyparis lawsoniana,* magnolia sp *Magnolia sp.*

A small cluster of trees, likely self-seeded, have emerged at the end of the boat ramp in the north-western corner of the site where they overhang the river (Figure 7). The trees noted in this group included ash, sycamore, hazel and elm sp. *Ulmus sp.*

A single yew tree is located to the north of the house and is anticipated to be removed as a part of the proposals (Figure 8).

Figure 7 – North-western group of trees on-site.

Figure 8 – Single yew tree to the north of the cottage.

3.4.5 *Other hedgerow h2b and ornamental planting*

Non-native hedgerows are located in the western lawn area and extend around the outdoor pool. Ornamental shrubs have been planted around the hedgerows in these areas including just south of Rose Cottage where a patch of bamboo *Bambusa* is located (Figures 9 and 10). This plant can be invasive quickly spreading throughout an area and can grow underneath building foundations causing structural damage.

Figure 9 – Ornamental bamboo located to the south of the cottage.

Figure 10 – Ornamental planting adjacent to outdoor pool.

3.4.6 *Scattered scrub g4 10*

A localized patch of scrub has established where the boat ramp was previously situated (Figure 11). The species recorded within this area included English oak, burdock *Arctium lappa,* dogwood, bramble, ribwort plantain, pendulous sedge, daffodil, cow parsley, common ivy, dogrose *Rosa canina* and a elm sp.

Scattered areas of scrub can be found throughout the site where it has encroached out from the woodland understorey (Figure 12).

Figure 11 – Encroaching scrub on boat ramp.

Figure 12 – Scrub along southern boundary.

3.4.7 *Buildings u1b5*

The grade II listed house is located to the north in the longitudinal centre of the site. Rose Cottage consists of a two-storey western extension adjoining to the main house. A mono-pitched storage area is located to the northwest and a conservatory outbuilding is located in the north-western corner of the site.

3.4.8 *Other developed land u1b6*

A large driveway extends from both the northwest and northern site boundaries in front of the main house to the north and terminates along the eastern boundary in the woodland understory (Figure 13). A patio area is located to the south of the house and hardstanding surroundings the outdoor pool (Figure 14).

Figure 13 – Hardstanding in understorey of eastern woodland.

Figure 14 – Southern patio on the main house and cottage.

3.4.9 *Other rivers and streams r2b*

A man-made stream enters the site from a culvert along the eastern site boundary, extending westwards to the south of the lawn, through the woodland and into the River Thames (Figures 15 and 16). At the time of the survey the water level was low inside the waterway with no observable flow.

Figure 15 – Stream south of the lawn onsite.

Figure 16 – Stream extending through south-western woodland.

3.5 Assessment

Overall, the woodland and scrub are considered to be of high botanical value within the context of the site. The scattered native trees also are considered to be of value. The remaining non-native trees and hedgerow although of low intrinsic value, do offer some ecological value for breeding birds.

The other neutral grassland in the south of the site does contain a good mix of species so is considered to be of value but would benefit from enhancement measures.

The remaining habitats on site consist of buildings, hardstanding, managed grassland and introduced shrub. These habitats contain no significant assemblages of species that are of high ecological value.

The cherry laurel and bamboo located on site are both highly invasive and can be damaging to both buildings and woodlands if left unmanaged.

4. Protected and notable species assessment

The scope of works, data search and habitat assessment have informed the scope of the protected and notable species assessment. On this basis, the following protected and priority species have been considered further within this report:

- Bats
- Badger
- Hazel dormouse
- Hedgehog
- Reptiles
- Great crested newt
- Breeding birds

The surveyed site has been assessed for its potential to support the above-named protected species based upon the criteria in Table 3.

Table 3 *Protected species grading criteria*

Grading criteria	*Justification*
Negligible	Site is entirely unsuitable for species. Presence of species highly unlikely.
Low Potential	Minimal suitable habitat present or, if present, highly degraded/fragmented. Minimal linkage to suitable habitat beyond site. Presence of species unlikely.
Moderate	Presence of some suitable habitat features for species. Surveyed site within/close to known range or known occurrence but factors such as isolation/fragmentation may reduce potential. Presence of species is more likely than not.
High	Presence of optimal habitat features for species. Surveyed site within known range/close to known occurrence. Excellent connectivity to optimal habitat. No justification for discounting presence of species.
Confirmed presence	Species confirmed on site through direct sighting, presence of field signs (e.g. scat, hair, prints, nest, eggs, habitation etc.) or through desk-based assessment.

5. Bats

5.1 Methodology

The survey did not depart from the Bat Conservation Trust's (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition) which states that "A preliminary roost inspection survey is a detailed inspection of the exterior and interior of a structure to look for features that bats could use for entry/exit and roosting and to search for signs of bats".

The external features of the built structures which will be modified by the proposed works in such a way that bats or their roosts could be impacted (directly or indirectly) if present, were systematically inspected in detail to compile information on potential and actual bat access points and roosting places such as lifted or broken tiles, loose brickwork and open eaves. This included a thorough search for evidence of bat activity such as bat droppings, urine splashes and fur staining.

The interiors of the buildings were inspected in order to identify potential or actual access points and roosting places and to record any evidence of bat activity or bats themselves.

5.2 Survey equipment

Survey equipment comprised:

- High-powered torch
- Camera
- Ladders
- Binoculars

5.3 Limitations

Due to the roof voids inside the main house being unboarded it was not possible to inspected the entirety of the spaces for evidence of roosting bats. No other limitations were encountered throughout the duration of the survey. Despite this limitation it is still believed that a robust assessment of the building's suitability for roosting bats was completed.

5.4 Assessment methodology

The suitability of the buildings for supporting bat roosts will be assessed against the guidelines within Table 4 which have been adapted from the BCT Good Practice Guidelines.

Table 4 *Building suitability assessment guidelines*

Suitability	*Description of Roosting Habitats*
Negligible	Structure has no reasonable likelihood of supporting roosting bats i.e. no suitable roosting features present.
Low	A structure which could be used opportunistically by individual bats i.e. one or more potential roost sites which do not provide sufficient space,

	shelter, protection, appropriate conditions (e.g. temperature, light, humidity) and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.
Moderate	A structure which could be used by bats but is not likely to support a roost of high conservation status (e.g. maternity roost). This structure would support features which exhibit suitable size, shelter, protection, conditions and surrounding habitat for roosting bats.
High	A structure which is obviously suitable for supporting larger numbers of bats, on a regular basis and for longer periods of time.

The site's suitability for supporting commuting and foraging bats will be assessed against the guidelines within Table 5 which have been adapted from the BCT Good Practice Guidelines.

Table 5 *Foraging/commuting suitability assessment guidelines*

Suitability	*Description of Foraging/Commuting Habitats*
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitats. Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such tree, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of tree and woodland edge. High quality habitat that Is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

5.5 Results

5.5.1 *The main house*

The house comprises a three-storey brick-built structure which rises to a multi-pitched and gable end roof design clad with clay and slate roof and ridge tiles (Figures 17 and 18). The house is oriented north to south. A parapet extends around the eastern and northern edges of the roof. Stone copping is present on the western gable end and along the parapet. An open porch extension protrudes from the northern elevation of the house. The eaves along the gable ends of the building are infilled with mortar. There are multiple flat roof extensions clad with hanging tiles on their elevations located on the roof of the building. Three pitched dormer windows are located on the northern roof face. There are two brick-built chimneys surrounded by lead flashing on the east and west of the roof. The window frames and door frames are set in wooden frames which are loose-fitting to the surrounding brickwork where mortar has fallen away.

The main house contains three roof voids:

Void 1 is located in the side eaves of a bathroom and contains a water tank. The space is small, wooden lined on the roof and heavily cobwebbed throughout (Figure 20).

Void 2 is half height and extends along the northern slate roof pitch. The roof is lined with plastic lining and wooden sarking boards. Fibreglass insulation is present on the floor and the space is heavily cobwebbed with a water tank in the centre (Figure 21).

Void 3 extends along the south-eastern roof pitch. The roof is only lined with bitumen felt on the western face with the eastern face remain unlined. Fibreglass insulation is present on the floor and light cobwebbing around the joists (Figure 22).

Void 4 extends along the south-western roof pitch. The roof is bitumen felt lined with fibreglass insulation on the floor. The space is heavily cobwebbed throughout (Figure 23).

The basement area is ¾ height with multiple rooms and light cobwebbing throughout (Figure 19). At the time of the survey the door from the house to the basement was left open allowing continuous access to the buildings interior.

Figure 17 – North-eastern corner of the main house.

Figure 18 – Southern elevations of the main house and western Rose Cottage.

Figure 19 – Basement under the main house.

Figure 20 – Roof void 1 in side eaves of the bathroom.

Figure 21 – Roof void 2 inside northern pitched roof.

Figure 22 – Roof void 3 inside south-eastern roof pitch.

Figure 23 – Roof void 4 inside south-western roof pitch.

An account of suitable access/egress features and recorded evidence of bat activity is given in table 6.

Table 6 *– The house's recorded features and activity*

	Suitability	*Evidence*
Exterior	The following suitable access/egress and roosting features were recorded externally: - Multiple crevices are present under the roof tiles where they	No evidence of roosting activity was recorded on the external elevations of the building during the survey.

	Suitability	*Evidence*
	are either lifted or have slipped away on rear roof faces (Figure 24). - Gaps are located under the hanging tiles on the flat roof extensions on the roof of the house (Figure 24). - Crevices in the brickwork of the building where cracks have formed (Figures 25 and 26). - Crevices around window frames where mortar has fallen away (Figure 27). - Missing mortar under stone copping (Figure 28).	
Interior	The following suitable access/egress and roosting features were recorded internally during the survey: - Roof void 3 has external light spillage the unlined roof tiles and the gaps in the southern elevation's brickwork.	No evidence of roosting activity was recorded internally during the survey.

Figure 24 – lifted roof tiles on the southern roof face and slipped hanging tiles.

Figure 25 – Southern elevation of the main house.

Figure 26 – Cracks in the western elevation of the house.

Figure 27 – Crevices around the window frames where mortar has fallen away.

Figure 28 – Gaps under stone copping where mortar is missing.

5.5.2 *Rose Cottage*

The cottage consists of a two-storey extension which protrudes westwards from the eastern elevation of the main house (Figures 29 and 30). The extension rises to a pitched roof clad with clay roof and ridge tiles. The cottage is oriented north to south. A single-storey lean-to extension protrudes from the southern elevation of the cottage clad with clay roof tiles and lead flashing at the joins. A single dormer window is located on both the northern and southern roof faces. A brick-built chimney is located along the central ridge of the roof with lead flashing at the base. The eaves remain open but are infilled with brick between them. All windows and doors are set in wooden frames.

A single roof void extends along the entire roof pitch of the building (Figures 31 and 32). The roof remains unlined with the underside of the clay tiles exposed. The floor is insulated with fibreglass and partially boarded. Cobwebbing is present around the joists and under the tiles.

Figure 29 – Northern elevation of Rose Cottage.

Figure 30 – Northern elevation of Rose Cottage.

Figure 31 – Interior roof void of the cottage looking west.

Figure 32 – Interior roof void of the cottage looking east.

An account of suitable access/egress features and recorded evidence of bat activity inside the zone of impact is given in table 6.

Table 6 *– The northernmost outbuilding's recorded features and activity*

	Suitability	*Evidence*
Exterior	The following suitable access/egress and roosting features were recorded externally: - Multiple crevices are present under the roof tiles where they are either lifted or have slipped away on rear roof faces (Figure 33). - Gaps are located around the eaves of the building where brick infill is present (Figure 34).	No evidence of roosting activity was recorded on the external elevations of the building during the survey.

	Suitability	*Evidence*
Interior	The following suitable access/egress and roosting features were recorded internally during the survey. N/A	The following evidence of roosting activity was recorded internally during the survey. - Approximately 50 long-eared bat type droppings were recorded scattered around the roof void inside Rose Cottage (Figure 35).

Figure 33 – Southern roof face of Rose Cottage with slipped roof tiles.

Figure 34 – Gap in the eaves above the northern elevation.

Figure 35 – Scattered long-eared bat droppings in the roof void.

5.5.3 *The conservatory outbuilding*

The building is built on a brick plinth with shallow brick walls and a wooden framed structure rising to a hipped and pitched glass roof (Figure 36). The windows and doors are set in wooden frames and uPVC guttering extends around the roof.

Internally, there are no roof voids.

Figure 36 – Conservatory outbuilding.

An account of suitable access/egress features and recorded evidence of bat activity inside the zone of impact is given in table 7.

Table 7 *– The northernmost outbuilding's recorded features and activity*

	Suitability	*Evidence*
Exterior	No suitable access/egress and roosting features were recorded externally.	No evidence of roosting activity was recorded on the external elevations of the building during the survey.
Interior	No suitable access/egress and roosting features were recorded internally during the survey.	No evidence of roosting activity was recorded internally during the survey.

5.5.4 *Site grounds relevant to bats*

The site grounds that will be directly impacted by the proposed works include the buildings, hardstanding, limited scattered native trees and scrub. These habitats in isolation offer little in the way of foraging resource for bats, however, in conjunction with the nearby river and woodland habitat are considered to be suitable for foraging and commuting bats. Due to this, it is likely that bats will commute and forage through the site.

Additionally, an EPS licence was previously granted for a building situated adjacent to the current property indicating an established bat presence in the area.

5.6 Assessment

When considered in view of the criteria set out in Table 4, the house and adjoining Rose Cottage are considered to support high suitability for roosting bats - i.e. Structures which are obviously suitable for supporting larger numbers of bats, on a regular basis and for longer periods of time.

The conservatory outbuilding is considered to support negligible suitability for roosting bats i.e. A structure which has no reasonable likelihood of supporting roosting bats.

In the context of the wider landscape, the habitats within the footprint of the proposal are considered unexceptional for foraging and commuting bats. They are, nevertheless, suitable for commuting and foraging bats and it is likely that bats will commute and forage through the site as a compartment of their wider foraging range in the landscape.

6. Bats - trees

6.1 Methodology

The survey did not depart from the Bat Conservation Trust's (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition) which states that "A preliminary ground level roost assessment of a tree is a detailed inspection of the exterior of the tree from ground level to look for features that bats could use for roosting (Potential Roost Features (PRFs)".

The exterior of the trees that could be impacted (directly or indirectly), were systematically inspected in detail to compile information on potential and actual PRFs such as woodpecker holes, rot holes, partially detached bark and partially detached ivy with stem diameters over 50mm. The survey included a thorough search for evidence of bat activity such as bat droppings and fur staining.

6.2 Survey equipment

Survey equipment comprised:

- High-powered torch
- Camera
- Ladder
- Binoculars

6.3 Limitations

Limitations were not encountered during the course of the survey.

6.4 Assessment methodology

The suitability of the trees for supporting bat roosts will be assessed against the guidelines within Table 7 which have been adapted from the BCT Good Practice Guidelines.

Table 7 Suitability assessment guidelines - trees

Suitability	*Description of Roosting Habitats*
Negligible	Tree has no reasonable likelihood of supporting roosting bats i.e. no suitable roosting features present.
Low	A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roost potential.

Moderate	A tree which could be used by bats but is not likely to support a roost of high conservation status (e.g. maternity roost). This structure would support features which exhibit suitable size, shelter, protection, conditions and surrounding habitat for roosting bats.
High	A tree which is obviously suitable for supporting larger numbers of bats, on a regular basis and for longer periods of time.

6.5 Results

A single yew tree to the north of the house and a small group of trees in the north-western corner of the site are expected to be removed as a part of the works. The trees were each visually inspected for any PRFs present. The group of trees were all young with no PRFs identified. The yew tree was more mature but also had not PRFs recorded.

6.6 Assessment

No suitable features were recorded on the yew tree or small group of trees, so they are considered to support negligible suitability for roosting bats.

7. Badgers

7.1 Methodology

The survey involved a detailed investigation of the site to identify evidence of badger residence, foraging or territorial activity. This includes badger setts, latrine sites, dung piles, well-used trails, prints and hairs. Particular emphasis was placed on locating badger setts, paths and signs of territorial activity such as dung piles and latrines.

7.2 Limitations

Limitations were not encountered during the course of the survey.

7.3 Results

No evidence of badger activity was recorded on site where the works are to take place. Although small, the woodland on site is suitable for the formation of a badger sett though no evidence of one was recorded. Access to the site where works are to take place is limited, with a main road to the north, river to the west and stream to the south all acting as physical barriers to entry. Nevertheless, the habitats on site could be used by badgers as a part of their wider foraging range in conjunction with the other nearby gardens.

7.4 Assessment

No evidence of badger residence, i.e., a set, or foraging activity was recorded on the site. When assessed against the criteria in Table 3, the site is considered to offer low suitability for badgers, and in a foraging capacity only.

8. Dormice

8.1 Methodology

An assessment was made of the suitability of habitat on site to support hazel dormice. Key habitats are woodland, scrub and hedgerows, particularly where these offer dense vegetation within which to nest/hibernate and key resources such as hazel nuts, fruiting/nectar-rich plants (e.g. hawthorn, bramble) to provide a continuum of food resources throughout the active season and honeysuckle *Lonicera periclymenum* (for nesting material). Landscape-scale habitat linkages such as hedgerows are fundamental for dormouse presence where small scale or sub-optimal habitats are recorded within a site.

8.2 Limitations

Limitations were not encountered during the course of the survey.

8.3 Results

The woodland and scrub on site do contain a species mix capable of supporting populations of dormice, including foraging and nesting resource. However, when viewed in the context of the wider landscape, this habitat is isolated to the site, which lies in a sub-urban landscape with no surrounding habitat which can be considered functionally linked to the on-site woodland. Due to this, and the limited size of the suitable habitat present, it is unlikely that dormice will be present on-site.

The habitats which form the majority of the application site (managed grassland, ornamental planting, buildings and hardstanding) are considered to be wholly unsuitable for supporting dormice because they do not support resources that would be required to support the species.

8.4 Assessment

Overall, the trees and scrub are considered to support low potential for dormice due to their isolated nature limiting the chance of them sustaining a population. The remaining habitats on site are also considered to support negligible potential for dormice.

9. Hedgehogs

9.1 Methodology

The site was assessed for its suitability to support hedgehogs based on the presence of favoured habitats such as woodland edges, hedgerows, grassland and suburban habitats.

Hedgehogs are most abundant within gardens, parks and amenity land close to or within human settlements. They are generally scarce in areas of coniferous woodland, marshes and moorland, probably because of a lack of suitable sites and materials for the construction of winter nests (Morris, 2006). Any evidence of hedgehog activity such as prints or droppings was recorded.

9.2 Limitations

Low detections rates are associated with evidence of hedgehog activity; therefore, absence of evidence does not confirm the absence of hedgehogs. For this reason, the

assessment of the likely presence/absence of hedgehogs has largely been informed by the species' local distribution and the habitats within the site and local area.

9.3 Results

The areas of planting and the lawns within the site have the potential to support foraging hedgehog although no direct evidence was noted.

The habitats which are located beyond the stream within the southern tip of the site are less frequently managed and provided better sheltering opportunities for the species.

9.4 Assessment

There is considered to be high potential for hedgehog to occur on site.

10. Reptiles

10.1 Methodology

An assessment was made of the site's suitability to support reptile populations. Key habitat features include: tussocky/patchy grassland; scrub edge; linear watercourses; ponds; compost heaps; brash piles and rubble/soil heaps. Linkage to suitable habitat within the surrounding landscape will increase the potential for reptiles to occur, although populations can occur within isolated/fragmented habitats even within urban areas.

10.2 Limitations

Limitations were not encountered during the course of the survey.

10.3 Results

Mature garden sites can support more widespread reptile species, such as slow-worm. The majority of the site is well managed with the grassland kept to a short sward. This reduces the likelihood of reptile presence in this area due to the increased exposure and risk of predation whilst basking in the open.

The meadow area and woodland edge in the southern tip of the site where the habitats are less intensively managed provide greater suitability for reptiles. Additionally, a brash pile was recorded in this area which could act as a hibernaculum or location for grass snakes to lay their eggs.

10.4 Assessment

There is considered to be low potential for small numbers of widespread reptiles to occur on site to the north of the stream. The grassland and woodland to the south of the stream where works are not anticipated to impact offers moderate suitability for reptiles although still remains rather isolated within the wider landscape.

11. Great Crested Newts

11.1 Methodology

Great crested newts are only present in their breeding ponds during the spring and early summer – for the rest of the year, they will be dispersed across the surrounding area, generally in grassland, scrub, woodland and hedgerows, although they may be found in gardens and brownfield sites. They can travel some distance from their breeding ponds, and as a general rule, developments within 500m of such a pond may have the potential to have an impact on GCN, although to a certain extent, this does depend on any intervening habitat or barriers to dispersal.

An assessment was made of any waterbodies and terrestrial habitat within the site for their suitability to support populations of amphibians. Suitable waterbodies will generally be characterised by the presence of good quality water, diverse macrophyte cover and an absence of fish. For the European-protected great crested newt, each waterbody is normally assessed using the Habitat Suitability Index (HSI) system (Oldham et al., 2000) and assigned a grading score between zero (poor suitability) and 1 (excellent suitability).

11.2 Limitations

The HSI for great crested newts is a measure of habitat suitability. In general, ponds with high HSI scores are more likely to support great crested newts than those with low scores. However, in isolation, the system is not sufficiently precise to allow the conclusion that any particular pond with a high score will support newts, or that any pond with a low score will not do so (Oldham et al., 2000).

11.3 Results

There are no ponds located within the grounds of the application site. Although the stream on site has a low flow rate, it is closely connected to the River Thames with fish present and a constant underwater current. As such it is considered to be unsuitable for breeding GCN populations.

The habitats on site to be directly impacted by the proposals are mostly unsuitable for GCN to reside (managed grassland, ornamental planting, buildings and hardstanding). The scattered scrub on the boat ramp to the northwest offers limited suitability but has established on a surface of sealed hardstanding limiting sheltering opportunities for the species. The habitats within the south of the site offer slightly better potential for GCN to reside but are still isolated from any surrounding waterbodies.

Outside of the application site, there is a single waterbody located within a 500m radius of the site, located 266m southeast. After reviewing aerial imagery, the waterbody appears to be a pond with a thin perimeter of suitable habitat located within a well-managed lawn. Although the pond appears to have potential for GCN it is disconnected from the site via extensive physical barriers including Wargrave Road (a well-used two-lane road) and multiple residential properties.

11.1 Assessment

Due to the identified waterbodies limited potential to support GCN in conjunction with the extensive physical barriers and sub-optimal habitats on site to be impacted, there is

considered to be negligible potential for GCN to be present on site where works are to commence.

12. Breeding Birds

12.1 Methodology

An assessment was made of the site's suitability to support breeding bird species. Nesting birds will utilise a broad range of habitats, including: built structures, trees, scrub, isolated shrubs, dense herbaceous vegetation (terrestrial and aquatic) and open grassland. All bird species and evidence of breeding activity (active or inactive) observed on site were recorded.

12.2 Limitations

Limitations were not encountered during the course of the survey.

12.3 Results

The hedgerows, trees, scrub, buildings and ornamental planting present within the site are considered to support nesting opportunities for breeding birds.

During the survey, a pair of blue tits *Cyanistes caeruleus,* were recorded bringing nesting material and food into a gap above a southern window frame where mortar had dropped away on the main house. A pair of great tits *Parus major* were recorded carrying out similar behaviour under a section of lead flashing on a southern section of roof on the main house. It is highly likely that both of these pairs were using the building for breeding.

Multiple Canada geese *Branta canadensis* with young were recorded roosting on both the lawn and southern grassland areas of the site during the phase 1 survey.

12.4 Assessment

The site is considered to support moderate potential for breeding birds. With a pair of blue tits and great tits likely present on the southern side of the main house.

13. Discussion and Assessment of Impacts

13.1 Relevant legislation and policy

Circular 06/2005 identifies that applicants should not be required to provide information on protected species unless there is a reasonable likelihood that they will be present and affected by the proposed development. The site is considered to support habitats with suitability and potential for protected species and these may be affected by the proposed development. Therefore, the proposal triggers 'reasonable likelihood' under the Circular.

The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (commonly referred to as the Habitats Regulations) may apply should protected species be confirmed on site.

In the case that a European protected species (bats in this case) is found to be present and impacted by the proposal, the local planning authority will be required to engage with the Habitat Regulations. Permission will be granted unless:

a) the development is likely to result in a breach of the Habitats Regulations, and

b) is unlikely to be granted an EPS licence from Natural England to allow the development to proceed under a derogation from the law (under licence).

When considering whether Natural England would not be unlikely to grant a licence for the identified impact, the local planning authority must consider the three tests which are set out in the Habitat Regulations:

1. the consented operation must be for 'preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'; (Regulation 53(2)(e))

2. there must be 'no satisfactory alternative' (Regulation 53(9)(a)); and

3. the action authorised 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range' (Regulation 53(9)(b)).

Natural England will grant a licence if the development proposal is able to meet the three tests.

Case-law (Morge vs. Hampshire County Council) has clarified that planning authorities are able to grant permission for developments that would cause a breach of the Regulations is likely (i.e. in the case of this proposal, destruction of a bat roost), provided that sufficient information is provided to give the planning authority assurance that the relevant EPSM licence is not unlikely to be granted - i.e. planning authorities also have a duty to assess planning applications against these tests.

13.2 Designated sites

The proposed development will not result in the direct loss of any designated sites.

Given the small scale of the scheme no impacts on designated sites associated with the development of the site are anticipated.

13.3 Habitats

The habitats which will be lost to the development comprise mostly buildings, hardstanding, modified grassland and ornamental planting. These habitats are easily replicable and of low botanical value, therefore it is considered that there will be no impact to habitats of ecological importance such as priority habitats as a result of their loss.

The two garage buildings to be constructed in the eastern side of the site are primarily going to be built on existing hardstanding with minimal encroachment into the woodland understorey. Where encroachment may occur the dominant species to be impacted is cherry laurel an invasive species which would be actively beneficial the remaining woodland if it was to be removed and replaced with native scrub. No encroachment into the adjacent eastern priority deciduous woodland habitat is anticipated.

In the current proposals it is anticipated that a small number of native trees and scrub are to be removed where the boathouse is to be reinstated. The uncompensated removal of any native trees or hedgerows would result in a net loss of biodiversity at the site which would be contrary to NPPF.

A tributary stream is located in the south of the site and the River Thames lies adjacent to the western boundary of the site. Even though the construction works will mainly take place on the northern and eastern ends of the site, when works to the existing conservatory and the construction of the new boat house take place, it is possible that water pollution could occur if an appropriate avoidance strategy is not implemented.

13.4 Bats

The house and cottage are considered to support high roost suitability i.e. A structure which is obviously suitable for supporting larger numbers of bats, on a regular basis and for longer periods of time.

On the basis that the house and attached cottage supports high suitability for roosting bats, there is considered to be a reasonable likelihood that bats will be present and affected by the proposed alteration and construction works which will impact the features detailed in Tables 6 & 7, however, the full extent of the impact is not yet known as any roosts have not been characterised.

In the absence of avoidance measures, if bats are present then works to the house and cottage are likely to result in the destruction of any roosts present at that location, possible damage / modification to any roosts present elsewhere, and possible killing, injury or disturbance of any bats present.

The conservatory outbuilding is considered to support negligible suitability for roosting bats.

The application site is considered to support suitability for foraging bats and commuting bats leaving or returning to roost. Increasing lighting could impact this behaviour which would indirectly impact roosts.

13.5 **Badgers**

The site supports low suitability for badger. Therefore, impacts to badgers could occur during construction if trenches are left open. Impacts on badgers associated with loss or damage of setts or loss of foraging habitat are not anticipated.

13.6 **Hazel dormouse**

The current proposals will predominantly impact habitats (grassland, hardstanding, buildings) which are considered to have negligible suitability for dormice. Where the south-eastern garage is to be constructed, there is a possibility that limited sections of cherry laurel understorey might be removed. There is considered to be low potential for dormice to be present in this habitat due to the isolated nature of the woodland.

13.7 **Hedgehog**

Impacts on hedgehogs are likely to occur if trenches are left open during the construction phase of the development.

13.8 **Reptiles**

The proposal will result in the loss of habitat which is considered to support low potential for populations of reptiles. Due to this, precautionary avoidance measures are proposed for the clearance and construction phase given the proximity to suitable habitat in the south of the site which will not be impacted.

13.9 **Great crested newts**

The proposal will not result in the loss of habitat which is considered to support potential for GCN. Therefore, no impacts on the species are anticipated.

13.10 **Breeding birds**

The development of the site will likely result in the loss of suitable breeding bird habitat. The removal of this habitat has the potential to damage or destroy active bird nests if carried out during the breeding bird season which is generally seen as extending from March to the end of August, although may extend longer depending on local conditions.

14. Requirement for further surveys

Further surveys are required where there is a reasonable likelihood that a protected species will be present and impacted by the proposed development. An assessment into the requirement for further surveys is presented below, however in summary, further surveys are considered necessary for bats.

It is important that planning decisions are informed by current ecological survey data. Due to this, there is a limited time frame that phase 1 and phase 2 surveys are valid before becoming outdated. This time frame can vary depending on any changes in project circumstances or plans but it is generally considered that phase 1 ecological surveys are valid for a period of 18 months (CIEEM, 2019). Projects that take place over periods longer than 18 months might be required to carry out further ecological surveys to ensure planning authorities have the necessary up-to-date information to make well informed, evidence-based decisions.

14.1 Designated sites

No further surveys are considered necessary.

14.2 Habitats

If the woodland trees on site are to be impacted during the works, a further ground level roost assessment will be needed to identify any potential roosting features on the trees that could be used by bats. If these trees are not to be impacted as it is currently anticipated, no further surveys in relation to trees are considered necessary.

Subject to the precautionary mitigation measures set out in Section 14, no further surveys are considered necessary.

14.3 Bats

In order to provide robust confirmation of the status of bat roosts at the site and the extent that they may be affected by the proposed development as required by Circular 06/2005, further survey work in accordance with Natural England standing advice and the BCT Good Practice Guidelines is required for the house and attached cottage. This same survey work will be used to inform the third test of the Habitat Regulations.

In accordance with these guidelines, further survey effort will take the form of dusk emergence presence/absence surveys undertaken during the bat active season. The recommended minimum number of presence/absence surveys for a building with high roost suitability is three. Surveyors will be equipped with high- specification time expansion or full spectrum bat detectors with digital recording capability.

The surveyors will remain in place monitoring and recording bat activity from 15 minutes before sunset to up to 1.5 - 2 hours after sunset for a dusk visit. There needs to be a minimum of three weeks between the visits.

The bat active season extends from April until October. However, for a buildings with high suitability, it is recommended that all surveys are undertaken between May and

September with at least two surveys undertaken during the peak period (May to August, inclusive).

No further survey work is required for the conservatory.

The affected areas of habitat within the site are not of significant value as a foraging or commuting resource. Therefore, further survey effort is considered unnecessary for understanding impacts on foraging and commuting bats, beyond the presence/absence surveys, subject to precautionary avoidance measures including a sensitive lighting scheme.

14.4 **Badgers**

Subject to the precautionary mitigation measures set out in Section 15, no further surveys are considered necessary.

14.5 **Hazel dormice**

Subject to the precautionary mitigation measures set out in Section 14, no further surveys are considered necessary.

14.6 **Hedgehog**

Subject to the precautionary mitigation measures set out in Section 15, no further surveys are considered necessary.

14.7 **Reptiles**

Subject to the precautionary mitigation measures set out in Section 15, no further surveys are considered necessary.

14.8 **Great crested newts**

As no impact to GCN are anticipated, no further recommendations in relation to the species are considered necessary.

14.9 **Breeding birds**

Subject to the precautionary mitigation measures set out in Section 15, no further surveys are considered necessary.

15. Mitigation recommendations

15.1 Habitats

Invasive species removal

New scrub planting is suggested below in accordance with the necessary enhancement measures resulting from the section of scrub being removed to make way for the new boathouse. Due to the limited available space on site to plant the new scrub it would be beneficial to removal the cherry laurel from the east of the site and use the space to plant the suggested native species. This can be done by cutting down the cherry laurel and treating the roots to avoid regrowth. It is important to follow the mitigation measures outlined in section 15.6 when carrying out this work.

Native scrub/hedgerow planting

Compensation for any loss of native scrub is required. A mix of native species including hazel, hawthorn, dogwood and field maple will be planted on site in place of the existing cherry laurel or within the woodland understorey.

Native tree planting

Compensation for the loss of native trees is required only if they are to be removed during the works. A mix of native tree species can be planted along the south-western woodland edge to increase the size of the existing woodland. These will comprise species which are suitable for the setting including: silver birch, field maple, elder, hazel, hawthorn, rowan and English oak trees.

Water pollution

In order to ensure that adverse effects on the Thames waterway are avoided, the following measures are proposed during the construction phase of the development:

- The key factor is safeguarding against water pollution during the construction phase will be the diligence of the site manager and operatives. Therefore, the site manager and all site operatives should be made aware of the presence and location of the watercourses and should understand the requirement to ensure that construction works do not encroach towards the watercourses. All pollution prevention measures will be in line with the requirements set out within the Environment Agency's General Guide to Prevention of Pollution (PPG 1), works and maintenance in or near water (PPG5) and maintenance of structures over water (PPG23) and Control of water pollution from construction sites CIRIA 5321.

- Any site compound set out for the storage of equipment, materials or machinery and cutting or mixing materials associated with the demolition/construction works should be located as far from the water as possible and not within 15m of the watercourses. All stockpiles of loose material should be covered to prevent run-off during periods of rain or wind dispersal of dust.

- Heras fencing or equivalent with dust sheeting to provide an adequate visual and dust boundary between the site and watercourse must be erected between the construction zone and watercourse prior to commencement of construction activities.
- If possible, store fuel and oils off site. If this is not possible then a proprietary bunded storage facility of the smallest practicable size located as far from the watercourse as possible and in all cases at least 15m from the stream and river.
- If possible, undertake refuelling off site. If this is not possible refuelling should take place as far from the watercourse as possible on an impermeable surface. In practice this is likely to comprise a hardstand portion of the driveway.
- A spill kit must be maintained on site.
- Any construction lighting must be directed away from the watercourses at all times.
- Riparian zones adjacent to the watercourses in the scheme footprint shall be protected and vegetation retained.

15.2 Bats

Further survey work is required to determine the impact of the scheme on bats and ensure that any mitigation is fit for purpose. If bats roosts are confirmed on site, a EPSM licence will be required in accordance with section 13.1 prior to any works which will impact roosting bats. Mitigation is likely to entail the provision of alternative roosts which are proportionate to the status of any identified roost, supervised removal of any identified roost features, exclusion of bats from crevice features and timing constraints on these works to minimise impacts on bats as necessary.

In order to limit any effects on foraging and commuting bats, external lighting should be limited to only that which is absolutely necessary for safety purposes, both during the construction phase and once the proposals are complete. The following lighting measures are required:

- Lighting to the completed dwellings should be as low brightness as possible, kept at a low level and directed away from all structures, boundaries and the designated site. Lighting on sensors should not be so sensitive that foraging bats trigger them.
- All lighting must follow the Bat Conservation Trusts and Institute of Lighting Professionals guidance on bats and artificial lighting (BCT, 2023).

15.3 Badgers

In order to avoid harm to badgers during the construction works, any trenches will either be covered at night or fitted with a soil or plank ramp to enable any badgers which fall in to leave on their own accord.

15.4 **Dormice**

Where the understorey of the eastern woodland on site may be impacted by the works. In order to avoid harm to hazel dormice, the following precautionary measures will be employed:

- The clearance works should take place between November to March to avoid both impacts to breeding birds and reduce the likelihood that dormice will still be nesting above ground.
- The scrub and trees must be visually inspected before its removal to ensure no dormouse nests are present.
- The clearance should be completed by hand in a sensitive manner to minimise the chance of disturbing/killing dormice.
- The removal of any cut material must also be done by hand in a sensitive manner to avoid impacts to dormice hibernating on the ground.

15.5 **Hedgehogs**

In order to avoid harm to hedgehogs during construction works the following precautionary measures will be employed:

- Any trenches will either be covered at night or fitted with a soil or plank ramp to enable any hedgehogs that fall in to leave of their own accord.
- Any leaf litter or garden waste piles will be dismantled by hand in a sensitive and careful manner.
- No bonfires will be made or lit on sit during the development.

15.6 **Reptiles**

Given the low potential for low populations reptiles to be present within the habitats that will be impacted by the proposal it is not considered necessary to carry out further detailed surveys. It is important that a precautionary approach to the construction phase is adopted by abiding by the following measures:

- All waste shall be placed directly into a skip so that rubble piles and therefore potential hibernation or terrestrial resting areas are not created in areas which will subsequently be disturbed by site works.
- All construction related materials and equipment will be stored on areas of hardstanding or gravel to ensure that habitats outside the works area are not disturbed or damaged.
- Piles of loose sand or other granular materials into which reptiles could bury are not to be left around the site. All such materials will ideally be delivered in bags and kept in such bags until required for use. Bags should be stored on pallets. If it is essential that they are delivered loose, they should only be dug into by hand.
- Any accumulations of brash will be removed by hand in a sensitive and careful

manner.

- All trenches will be left covered at night. They must be checked in the morning before they are filled in.

15.7 Breeding birds

Care should be taken that development does not impact breeding birds. The bird nesting season is taken to be March to August, inclusive. Any removal of suitable nest habitat including any trees, scrub or hedgerows will to be removed will either need to be undertaken outside of this period or else checked by an experienced ecologist to ensure that no nesting birds are present. If occupied nests are present, then the nest must not be removed and works around the nest can only recommence once the nest becomes unoccupied of its own accord.

16. Enhancements

The delivery of biodiversity enhancement on development sites is promoted by the National Planning Policy Framework (NPPF) and Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006.

Where opportunities exist it is best practice to provide enhancement features which encourage greater biodiversity within development sites in accordance with the NPPF and Local Planning Authority's responsibilities under the NERC Act.

Opportunities for enhancement which are proportionate to the scale of the development include:

- Habitat enhancements are set out within section 15.1.
- The provision of new bat roosting opportunities in the form of three bat boxes. These should be installed as high as possible, at least 3m above ground on the existing dwelling or nearby trees within the woodland.
- The provision of additional bird nesting opportunities. These could be external swift boxes located on the walls of the dwelling or owl boxes that can be erected in the woodland. A total of two swift/owl boxes would be appropriate.

17. Conclusion

The extended phase 1 ecological assessment has confirmed that the site supports opportunities for a range of protected species including bats, reptiles, dormice, hedgehogs and breeding birds.

The preliminary roost assessment has confirmed that the house and attached cottage support high suitability for roosting bats. Therefore, further survey effort is recommended to confirm the presence/absence of roosts, characterise any bat roost/s, assess the extent bats may be affected by the proposed alteration and construction works and devise an appropriate mitigation strategy to support the proposed works and address any breaches in the legislation. In accordance with Natural England standing advice and BCT Good Practice Guidelines, three presence/absence surveys for the house and cottage should be undertaken between May and September. No further survey work is required for the conservatory outbuilding.

Given the scale of the proposal, it is possible to deliver the scheme with a range of measures which avoid impacts on the majority of the other identified protected and priority species. These include sensitive timing of the works, careful vegetation removal and sensitive lighting.

Opportunities for ecological enhancement have been suggested for the site.

18. References

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Appendix 1 – Proposed Site Plan

Proposed Masterplan - Zones.

Appendix 2 – UKHabs Map

Bird Place - Baseline Habitats

KEY

Red Line Boundary

INDIVIDUAL TREES

Large Urban Tree

Medium Urban Tree

WATERCOURSES

Other rivers and streams

HABITATS

Bramble scrub

Developed land; sealed surface

Introduced shrub

Modified grassland

Other neutral grassland

Other woodland; broadleaved

Map contains Google imagery

Scale 1:1000

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