

Preliminary Ecological Appraisal and Roost Assessment

Survey site:

3 Briar Close, Caversham, Reading, RG4 7QH

Client:

Tom Freeman

Survey date:

15th September 2025

Project:

This report is prepared to inform a planning application with the Reading Borough Council. The proposal is described as:
Conversion of garage and conservatory. Addition of bedroom above garage conversion.

PEA survey methodology and legislation can be found in the Arbtech Supplement: [PEA Methodology and Legislation - 2024.](#)

PRA survey methodology and legislation can be found in the Arbtech Supplement: [PRA Methodology and Legislation - 2024.](#)

Site Location and Context					
The survey site is centred on National Grid Reference SU 71125 76041 and has an area of approximately 0.063ha. The site comprises one dwelling (B1), one associated outbuilding (B2), and a vegetated garden with scattered trees. It is situated within the town of Caversham. Aerial imagery shows the local landscape to have a residential character, with several patches of woodland, and agricultural land, one patch of woodland is located directly northeast and borders the site. The site is located north of Reading town, ~1km north of the A4155. Water bodies can be found nearby, such as the river Thames located ~1.3km south of the site. Such features likely enhance the area for a variety of species, including bats, amphibians and reptiles.					
Survey Details					
The site survey was undertaken by Beth Ellison-Perrett BSc (Hons) MSc, MRSB, Senior Ecologist, an ecologist with four years of experience, and holder of Natural England survey licences for bats [2023-11066-CL17-BAT] and great crested newt [2024-11998-CL08-GCN].					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (mph)	Rain
15/09/2025	15	74	100	24	N/A
Survey limitations					
It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records. A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report.					
Validity					
The survey, results, and recommendations contained within this report are valid for 18 months. An updated site visit may be required if the report is to be used any longer than 18 months after completion.					

Ecological Survey Factor Conclusion, Impact or Recommendations	Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.
Habitats and plants (see habitat map in appendix 1, location plan in appendix 2, proposal plan in appendix 3 and photos in appendix 4). Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).	
<i>Summary of Survey Findings</i> <i>(UKHab codes used)</i>	The site does not contain any habitats listed as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). The habitats within the site are common and widespread and have low ecological value. Notable habitats are present within 1km/2km. On-site habitat descriptions <u>u1b5</u> – Buildings There are two buildings onsite, the main dwelling (B1) and one outbuilding, a garden shed (B2). B1 was assessed for its habitat value for protected species within their relevant sections below. <u>u1b</u> – Developed land/sealed surface There is a patch of hard standing surface located on the west of the site boundary, directly northwest of B1. This also leads to two paths of hard standing, one that runs along the west boundary and one that runs on the east boundary of the site and leads into the centre of the garden. Additionally, there is a hard standing patio on the south boundary of B1 which acts as a front garden patio/drive. <u>u1</u> - Built-up areas and gardens [vegetated garden 828, introduced shrubs 847, Scattered trees [32], flower bed [846]

The garden is located rear of B1 and is comprised of a lawn with introduced shrub borders. There is an additional patch of grass to the front of B1 on the south boundary. On the southern boundary, wildflower seeds have been planted to a small section of from lawn, species include poppies. Grass species listed in the table below.

Species list with abundance

Common name	Scientific name	DAFOR
<i>Perennial ryegrass</i>	<i>Lolium perenne</i>	D
<i>Sedge</i>	<i>Cyperaceae</i>	F
<i>Common dandelion</i>	<i>Taraxacum officinale</i>	
<i>Mint</i>	<i>Mentha</i>	
<i>Buttercup</i>	<i>Ranunculus</i>	O
<i>Creeping speedwell</i>	<i>Veronica filiformis</i>	
<i>Common daisy</i>	<i>Bellis Perennis</i>	
<i>Clover</i>	<i>Trifolium repens</i>	
<i>Plantain</i>	<i>Plantago</i>	
<i>Large leaved avens</i>	<i>Geum macrophyllum</i>	
<i>Cranesbill</i>	<i>Geranium</i>	
<i>Yarrow</i>	<i>Achillea millefolium</i>	R
<i>Primrose</i>	<i>Primula vulgaris</i>	
<i>Creeping cinquefoil</i>	<i>Potentilla reptans</i>	
<i>Ragwort</i>	<i>Jacobaea vulgaris</i>	

On the western and eastern boundary there is a patch of introduced shrubs, species including evergreen spindle, rhododendron, mint, rose, snowberry, stinking iris, fuchsia, garden zinnia, tomatoes, currant, and hydrangea. Additionally, on the western boundary there are species including evergreen spindle, ivy, greenstem forsythia, holly, lilac and maple saplings.

	There are scattered trees across the garden, consisting of 18 trees in total, comprised of cherry, silver birch, yew, hazel, ash, apple, beech, hawthorn and horse chestnut. All 18 trees were small in size. The trees are early-mature to mature in age and represent a fair to good structural condition. Condition Assessment (assessed using the 'Individual trees' habitat type condition assessment sheet): A. The tree is a native species (or at least 70% within the block are native species). PASS. B. The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion). PASS. C. The tree is mature (or more than 50% within the block are mature). FAIL. D. There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height. PASS. E. Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark. FAIL. F. More than 20% of the tree canopy area is oversailing vegetation beneath. PASS. Passes 4 of 6 criteria therefore achieves MODERATE condition. <u>u1c - Artificial unvegetated, unsealed surface</u> There are two patches of unsealed surface on the north and east boundary of the site, both, made from wood chippings. <u>h2a - Native Hedgerow</u> The native hedgerow is located on the west side of the site boundary, directly north of a patch of introduced shrub. Species consist of ivy, beech, hawthorn, and holly. The hedge was approximately 1m wide and 1.5m tall.
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	Hedgerow Condition Assessment: A1. Above 1.5m in height along length- PASS – 1.5m high A2. Above 1.5m in width along length- FAIL – 1m wide B1. Gap between ground and base of canopy less than 0.5m for at least 90% of the length- PASS B2. Gaps make up less than 10% of length and there are no canopy gaps larger than 5m- PASS C1. At least 1m of undisturbed perennial herbaceous vegetation for at least 90% of the hedgerow- FAIL C2. Plant species indicative of nutrient enrichment dominates less than 20% of the area of undisturbed land- PASS D1. >90% of the hedgerow and undisturbed ground are void of invasive plant species- PASS D2. >90% of the hedgerow and undisturbed ground is free of damage caused by human activities- PASS E1. There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient), and there is on average at least one mature, ancient or veteran tree present per 20 – 50m of hedgerow. - FAIL E2. At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity. -PASS Passes 7 of 10 criteria therefore achieves MODERATE condition <u>h3d – Bramble scrub</u> A small patch of bramble scrub is located on the north boundary of the site. Species consist of predominately bramble with the occasional mint and bindweed. <u>r1g – Other standing water (ponds)</u> The pond is in the centre of the site close to the east boundary and is surrounded by a hard standing path and amenity lawn. Species within the pond consist of lily pads and a high concentration of duckweed. The pond is surrounded by concrete sides and no submerged vegetation.
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Condition Assessment (assessed using the 'Pond' habitat type condition assessment sheet):

- A. The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock. **PASS.**
- B. There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10 m from the pond edge for its entire perimeter. **FAIL.**
- C. Less than 10% of the water surface is covered with duckweed *Lemna* spp. or filamentous algae. **FAIL.**
- D. The pond is not artificially connected to other waterbodies, such as agricultural ditches or artificial pipework. **PASS.**
- E. Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams, pumps or pipework. **PASS.**
- F. There is an absence of listed non-native plant and animal species. **PASS.**
- G. The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities. **PASS.**

Passes 5 of 7 criteria therefore achieves **MODERATE** condition.

Local notable habitats

A table presenting all notable and priority habitats within 2km of the site is shown below:

Habitat type	Distance of closest parcel from site	Number of parcels within 2km
Deciduous Woodland	~0km northeast	85
Good quality semi-improved grassland	~0.25km	5
Woodpasture and Parkland BAP Priority Habitat	~1km northeast	2
Traditional Orchards	~1km northeast	2
Open mosaic habitat	~1.5km southwest	1
Ancient Woodland	~1.5km northeast	9
Lowland Dry Acid Grassland	~1.6km northeast	1
Lowland Calcareous Grassland	~1.8km north	3

<i>Foreseen Impacts</i>	On-site habitats The habitats on-site are widespread and not notable. The proposed development will result in the loss of a small patch of sealed surface hard standing ground. This is likely to have a minimal impact on biodiversity due to the low ecological value of these habitats. Notable habitats No direct impacts to any notable habitats will occur because of the proposed development. However, due to the proximity of the site to the deciduous woodland located directly northeast of the site (~0km), indirect effects (e.g. pollution, dust, litter, surface run off, etc.) could occur during construction.
<i>Recommendations</i>	On-site habitats Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012). Notable habitats Best practice measures to minimise the possibility of pollution affecting the nearby deciduous woodland must be implemented during construction. A Construction Environment Management Plan (CEMP) may be required for this. Biodiversity net gain The Environment Act (2021) requires all developments (excluding exemptions) to deliver a 10% net gain in biodiversity. This is mandatory for larger developments and comes into force for smaller developments on 2nd April 2024. The project is unlikely to trigger the requirement for a biodiversity net gain assessment as the proposed development is only removing hard standing ground, however the Local Planning Authority may still request a net gain assessment under their own local planning policy.
Locality and Designated Sites	
<i>Summary of Survey Findings</i>	On-site designations The site is not subject to any designation.

	Statutory designated sites (within 2km) There are two statutory sites within 2km of the site, as detailed below: <table><tr><th>Designated site</th><th>Distance from proposed development</th><th>Reason for designation</th></tr><tr><td>Local Nature Reserve (LNR) Clayfield Copse</td><td>~1.4km northeast</td><td>Clayfield Copse is designated as a Local Nature Reserve because of its unique London Clay geology, diverse native flora and fauna, and value as a recreational and educational green space.</td></tr><tr><td>National Landscape - Chilterns</td><td>~1.5km west</td><td>The Chilterns Area of Outstanding Natural Beauty is designated to protect its exceptional chalk hills, diverse wildlife habitats, rich cultural heritage, and scenic landscapes for conservation and public enjoyment.</td></tr></table> Non-statutory designated sites The presence of non-statutory designated sites within 2km of the site cannot be established without data from Thames Valley Environmental Records Centre.	Designated site	Distance from proposed development	Reason for designation	Local Nature Reserve (LNR) Clayfield Copse	~1.4km northeast	Clayfield Copse is designated as a Local Nature Reserve because of its unique London Clay geology, diverse native flora and fauna, and value as a recreational and educational green space.	National Landscape - Chilterns	~1.5km west	The Chilterns Area of Outstanding Natural Beauty is designated to protect its exceptional chalk hills, diverse wildlife habitats, rich cultural heritage, and scenic landscapes for conservation and public enjoyment.
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National Landscape - Chilterns	~1.5km west	The Chilterns Area of Outstanding Natural Beauty is designated to protect its exceptional chalk hills, diverse wildlife habitats, rich cultural heritage, and scenic landscapes for conservation and public enjoyment.								
Foreseen Impacts	On-site designations No impacts foreseen. Statutory and non-statutory designated sites No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known) as well as the urban location of the site with surrounding physical barriers.									
Recommendations	On-site designations None required.									

	Statutory and non-statutory designated sites			
	None required.			
Invasive / Non-native species				
Summary of Survey Findings	Rhododendron was identified on the site, which is listed as an invasive, non-native species under Schedule 9 of the Wildlife and Countryside Act 1981.			
Foreseen Impacts	None foreseen.			
Recommendations	No further surveys but remain vigilant.			
Invertebrates				
Summary of Survey Findings	The habitats present on-site, including vegetated garden, pond, introduced shrubs, scattered trees, native hedgerows, and non-native hedgerows, are likely provide common invertebrates with opportunities to forage and shelter. The site contains no further notable habitats which may provide niches for specialised or protected invertebrates.			
Foreseen Impacts	The proposed development will result in the loss of a small patch of sealed surface hard standing ground. None foreseen.			
Recommendations	No further surveys.			
Bats				
Summary of Survey Findings	EPSL data			
	A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed. Displaced bats from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licensed site. There are 16 EPSLs within a 2km radius of site as detailed below:			
	EPSL reference	Bat species affected	Distance from site	Impacts allowed by licence
	2018-35917-EPS-MIT	Common pipistrelle	~0.6km northeast	Destruction of a resting place
	EPSM2013-6025	Brown long-eared bat	~0.9km northeast	Destruction of a resting place
	2016-27061-EPS-MIT	Brown long-eared bat, common pipistrelle	~1km southwest	Destruction of a resting place

	EPSM2011-3175	Common pipistrelle	~1.2km southeast	Damage of a resting place
	2014-1343-EPS-BDX	Soprano pipistrelle	~1.2km southeast	N/A
	2014-2980-EPS-MIT	Common pipistrelle, soprano pipistrelle	~1.3km southwest	Destruction of a resting place
	2015-18560-EPS-MIT	Brown long-eared bat, soprano pipistrelle	~1.4km northwest	Destruction of a resting place
	2017-29064-EPS-MIT	Soprano pipistrelle	~1.4km southwest	Destruction of a breeding place
	2014-3600-EPS-MIT	Common pipistrelle	~1.4km west	Damage and destruction of a resting place
	2015-13539-EPS-MIT	Common pipistrelle	~1.5km southwest	Destruction of a resting place
	EPSM2012-4078	Brown long-eared bat, daubentons, natterers	~1.5km northeast	Damage of a resting place
	2018-33476-EPS-MIT	Serotine	~1.6km southeast	Destruction of a resting place
	2015-14137-EPS-MIT	Common pipistrelle, soprano pipistrelle	~1.9km southwest	Destruction of a resting place
	2017-32046-EPS-MIT	Soprano pipistrelle	~1.9km northeast	Destruction of a resting place
	2018-38007-EPS-MIT	Brown long-eared bat, common pipistrelle	~2.0km southeast	Damage of a resting place
	EPSM2012-4292	Brown long-eared bat, common pipistrelle, soprano pipistrelle	~2.0km southeast	Destruction of a resting place
	There are no Special Areas of Conservation designated for bats within 10km of the site.			

	Foraging and commuting habitat Habitats recorded on site are assessed to provide foraging and commuting opportunities for bats in the form of grassland, native hedgerows, introduced shrub and scattered trees. Additionally, the adjacent woodland provides foraging and commuting opportunities for bats. These habitats are likely to provide micro-climatic conditions that support invertebrates that will in turn provide foraging opportunities for local bat populations. Roosting habitat Buildings and trees to be impacted by the proposed development are assessed for their suitability to support roosting bats below. There are a total of 2 buildings on site: the main dwelling (B1), and one outbuilding (B2). Only B1 was surveyed as this will be impacted by the proposed development. No evidence of roosting bats was identified on or within B1 or any of the surveyed trees on-site.
B1 Building description	Photographs
<i>Summary</i> B1 is a main house. The roof is tiled with concrete roof tiles. B1 has a hipped roof and hanging tiles on the gable end dormer, all structures are in good condition. The roof tiles are in a very good condition with no raised tiles under which bats could roost. The doors and windows are UPVC and appear in excellent condition with no suitable bat roosting sites. There is plastic cladding on the gable dormer which is well sealed and in very good condition with no raised or missing boards under which bats could roost. The rear single-story extension is well sealed and in very good condition with no gaps under which bats could roost. The rear conservatory is well sealed and in good condition. There is a single chimney, with led flashing that is well sealed and in very good condition with no gaps under which bats could roost. No evidence of bats was found.	

There is one loft space within the main roof void of B1. The roof structure is built from modern timber beams. The interior of the roof is insulated with Celotex and polystyrene and is well-sealed with bitumen and horsehair and brown paper and is in very good condition with no gaps or tears. There is no ridge beam, and no cobwebs present, and no daylight enters the loft space which indicated that it is well sealed. No evidence of bats was found.

A garage is attached to B1, with no loft space. The roof of the garage is well-sealed with horsehair and brown paper. There is a window and door at the rear of the garage with a constant display of natural light. No evidence of bats was found.

The building has **negligible value**.



Feature	Materials	Condition/description/suitability	Photograph(s)
Walls	Brick	Condition/description Well-sealed, led flashing lining garage and main dwelling which is well sealed. Suitability/access/evidence of bats No gaps or opportunity for roosting bats. No evidence found but recent and current rain would wash this away externally.	

Roof	Concrete	Condition/description Hipped roof and hanging tiles on the gable end dormer, all structures are in good condition. The roof tiles are in a very good condition with no raised tiles under which bats could roost. Suitability/access/evidence of bats No suitability or access for bats. No evidence found but recent and current rain would wash this away externally.	 
Eaves	Overhanging	Condition/description Good condition, no gaps present. Suitability/access/evidence of bats No evidence found but recent and current rain would wash this away externally.	

Window/doors frames and lintels	UPVC	Tight fitting	
Internal voids	Timber rafters. Insulated with Celotex and polystyrene.	Condition/description The internal void is used for storage, no daylight enters the loft space which indicated that it is well sealed. Suitability/access/evidence of bats Well-sealed and no access or evidence of bats.	
Foreseen Impacts		Roosting habitat [Buildings]	

	Bats are very unlikely to be roosting within this building and as such, there are not anticipated to be any impacts on bats in this location as a result of the proposed development. Foraging and commuting habitat The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. However, the proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas. Artificial lighting No new lighting and therefore, no impacts.
<i>Recommendations</i>	Roosting habitat [Buildings] In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice. Foraging and commuting habitat No further surveys are required. Artificial lighting None required. Suggested biodiversity enhancements The installation of one bat box at the site will provide additional roosting habitat for bats. The bat boxes will be incorporated into the fabric of the new extension. They will be suitable for pipistrelles (which have been identified locally through EPSL data). Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light.

Birds	
<i>Summary of Survey Findings</i>	Buildings No evidence of nesting birds was identified on or within B1. B1 is deemed to provide negligible habitat value for nesting birds due to a lack of suitable nesting sites or access points. No evidence of nesting birds was identified on or within B2. B2 is deemed to provide negligible habitat value for nesting birds due to a lack of suitable nesting sites or access points. Trees and vegetation No bird nests were identified within the hedgerows and scattered trees on-site; however, they all offer nesting opportunities and nest-building resources for birds. Barn owls The site does not appear to provide any suitable nesting sites for barn owls. Overwintering birds Due to the small size of the site and the extent and type of the habitats recorded, the site not considered suitable to support a significant assemblage of protected and/or notable birds.
<i>Foreseen Impacts</i>	Buildings/trees No impacts are anticipated on nesting birds as a result of the proposed development. Barn owls None foreseen. Overwintering birds

	None foreseen.
<i>Recommendations</i>	Buildings/trees Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 3-5m buffer should be created between any machinery and active nests until the young have fledged. Barn owls None required. Overwintering birds None required. Suggested biodiversity enhancements The installation of a minimum of one bird box on semi-mature trees around the site boundaries will provide additional nesting habitat for birds e.g. Schwegler 1B Nest Boxes, Schwegler 2H Robin Boxes, Woodstone Nest Box, or a similar alternative brand. Tree boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Small-hole boxes are best placed approximately 1-3m above ground on an area of the tree trunk where foliage will not obscure the entrance hole.
Reptiles	
<i>Summary of Survey Findings</i>	EPSL data A review of the MAGIC database returned no granted EPSL records for protected reptiles within 2km of the site. Habitat suitability Habitats recorded on site are assessed to provide limited foraging, commuting, basking and refuge opportunities for reptiles. The hedgerow and scrub provide elevated value for reptiles as these habitats provide a suitable structure for refuge, whilst

	also providing foraging and commuting opportunities. However, it is important to note that the site is dominated by frequently managed grassland, introduced shrubs, buildings, and hardstanding of limited value to reptiles. These habitats are suboptimal due to an absence of notable habitat structure and diversity, which significantly limits refuge, foraging, and commuting opportunities, albeit they do provide some basking opportunities when located adjacent to potential refugia. The site has good connectivity to further suitable reptile habitat in the wider landscape via woodland. The presence of reptiles on site cannot be discounted, albeit likely limited to low numbers within scrub and hedgerows. Wider landscape The adjacent woodland is of elevated ecological value within the wider landscape and may represent important resources for local reptile populations. These adjacent habitats provide optimal foraging, commuting, and refuge opportunities for reptiles and are well connected to further suitable habitat in the wider landscape. The presence of reptiles utilising these adjacent habitats cannot be discounted.
<i>Foreseen Impacts</i>	The proposed development will result in the loss of a small patch of sealed surface hard standing ground. No impacts are anticipated on reptiles as a result of the proposed development.
<i>Recommendations</i>	None required.
Amphibians	
<i>Summary of Survey Findings</i>	EPSL and survey data A review of the MAGIC database returned no granted EPSL records for great crested newts within 2km of the site. However, the MAGIC database did return evidence indicating the presence of great crested newts resulting from historic pond surveys undertaken in 2018. This record is located 1.82km northeast. Great crested newts exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton <i>et al.</i> 2001). As such, the great crested newt metapopulation known to be present 1.82km northeast are not suitably connected to the site. Aquatic habitat suitability (including ponds within 500m)

Great crested newts (GCN) exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton et al. 2001).

There is one pond present on site (P1). Pond P1 is a man-made pond that measures 3m x 1.5m. The banks are vertical with concrete sides with a liner, some submerged vegetation including lily pads and sedges. The pond is not connected to streams or other waterbodies and is densely vegetated with duckweed. The water was poor quality but clear at the time of the survey, indicating the potential presence of fish. No waterfowl were viewed using the pond during the survey. The pond water quantity fluctuates year-round.

As a result of the HSI, P1 has been assessed to provide **Poor** suitability to support great crested newts. The scores for each HSI parameter can be viewed in the table below:

HSI Index	HSI Index Parameter	HSI Score
1 – Location	Zone A	1.0
2 – Pond Area	<50m ²	0.05
3 – Pond Drying	Never dries	0.9
4 – Water Quality	Poor	0.33
5 – Shade	0-60%	1.0
6 – Waterfowl	Absent	1.0
7 – Fish	Possible	0.7
8 – waterbody count in wider landscape within 500m with suitable terrestrial connectivity	0	0.1
9 – Terrestrial Habitat	Moderate	0.67
10 – Macrophytes	26-30%	0.6

	TOTAL	-	0.457
	CATEGORY	-	Poor
	A review of the Magic.gov.uk database and aerial imagery indicate there are no further ponds located in the wider landscape within 500m. Terrestrial habitat suitability The site provides limited suitable terrestrial habitat for amphibians, areas of scrub, hedgerows and adjacent woodland may provide foraging and sheltering opportunities for amphibians. The areas of hard standing and modified grass offer sub-optimal habitat for terrestrial amphibians. The hedgerows may offer refuge for these species, however given the urban nature of the surrounding landscape (i.e. dominated by roads and hard standing which are sub-optimal for amphibians) it is unlikely that amphibians will migrate on to site.		
<i>Foreseen Impacts</i>	The proposed development is only removing hard standing ground from the site; therefore, it is unlikely that amphibians will be impacted. Given the lack of suitably connected breeding ponds within 500m of the site, the presence of GCN on-site is considered unlikely and therefore impacts to amphibians because of the proposed development are deemed to be acceptably low.		
<i>Recommendations</i>	Owing to the nature of the proposed development and the low potential for impacts to great crested newts, further surveys are considered to be disproportionate. A precautionary working method will be implemented for common amphibians during construction, including the following measures: - Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent amphibians from utilising these areas. - Best practice pollution prevention measures will be implemented to minimise impacts to nearby aquatic habitats that amphibians could use. - Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.		

	- If any common amphibians are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. - In the unlikely event that a great crested newt is identified, works must cease and advice must be sought from a suitably qualified ecologist.
Badger	
<i>Summary of Survey Findings</i>	No badger setts were noted on site or within a 30m radius of the site. The vegetated garden habitat provides little to no suitability for badgers and sett excavation areas/ground. However, due to the proximity of the woodland, there is possibility for connectivity to a wider landscape regarding foraging and commuting badgers.
<i>Foreseen Impacts</i>	The proposed development will result in the loss of a small patch of sealed surface hard standing ground. No impacts are anticipated on badgers as a result of the proposed development.
<i>Recommendations</i>	None required.
Riparian animals	
<i>Summary of Survey Findings</i>	A review of the MAGIC database returned no granted EPSL records for otters or water voles within 2km of the site. There are no water courses on or connected to the site. There are also no riparian habitats present on site or within an influencing distance.
<i>Foreseen Impacts</i>	No impacts are anticipated on riparian animals as a result of the proposed development.
<i>Recommendations</i>	None required.
Hazel dormouse	
<i>Summary of Survey Findings</i>	EPSL data A review of the MAGIC database returned no granted EPSL records for hazel dormice within 2km of the site. Habitat suitability Dormice typically utilise a three-dimensional habitat structure as to commute between feeding and breeding sites whilst avoiding predation. As such habitats on site are considered unsuitable for hazel dormice and therefore the likelihood of this

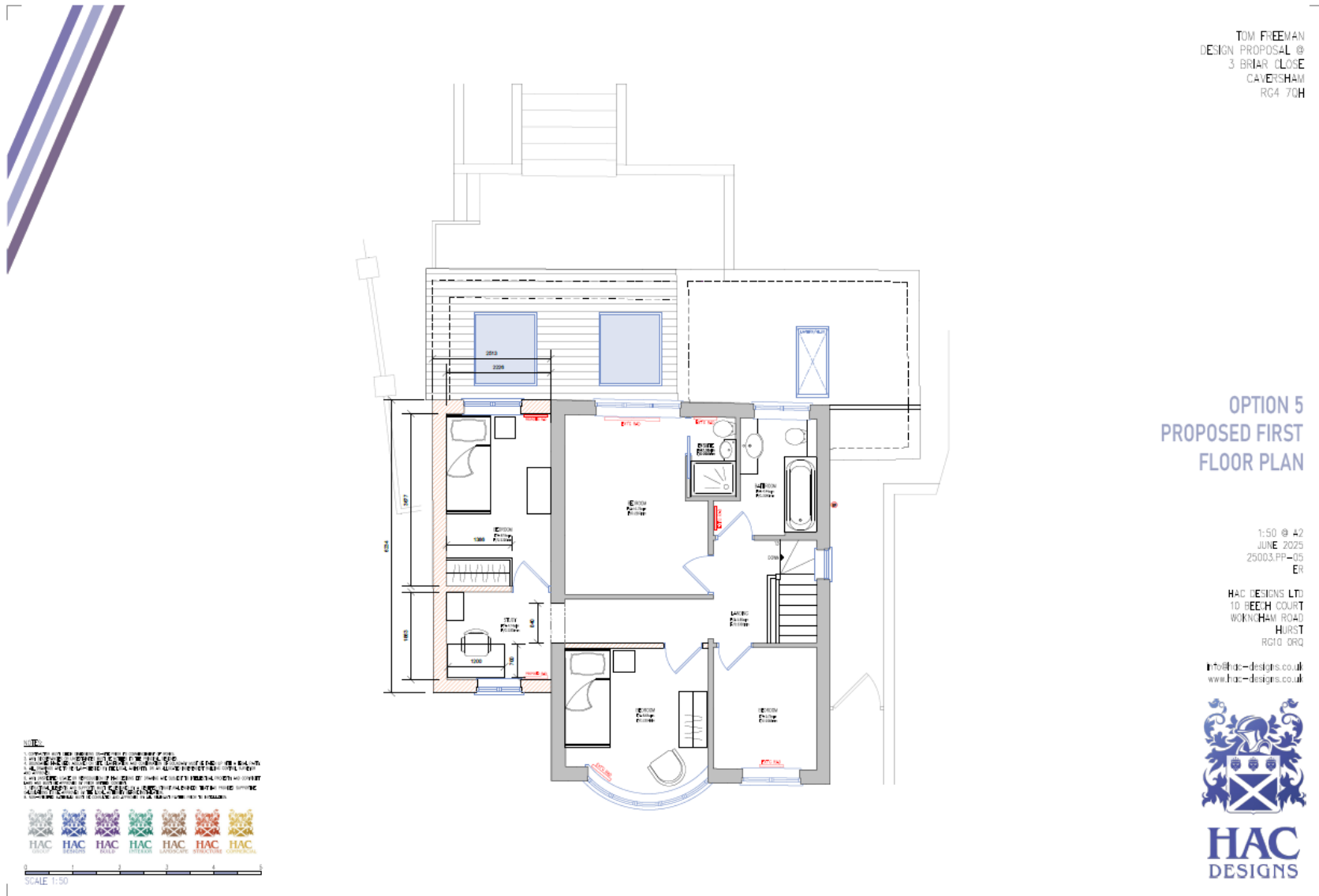
	species being present on site is considered acceptably low. Additionally, the site is enclosed by urban infrastructure including roads and significant residential development. These landscape features fragment suitable dormice habitat in the wider landscape and are likely to limit dispersal opportunities to the site.
<i>Foreseen Impacts</i>	The proposed development will result in the loss of a small patch of sealed surface hard standing ground. No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	None foreseen.
Other e.g. hedgehog	
<i>Summary of Survey Findings</i>	The vegetated garden onsite and adjacent deciduous woodland provides potential foraging and commuting opportunities for hedgehogs.
<i>Foreseen Impacts</i>	The proposed development will result in the loss of a small patch of sealed surface hard standing ground. No impacts are anticipated on hedgehogs as a result of the proposed development.
<i>Recommendations</i>	None required. Suggested biodiversity enhancements The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: • Planting fruit bearing trees and species-rich grassland to increase foraging opportunities. • Creation of brash piles or installation of hedgehog houses in shady areas. • Installation of gaps under boundary fencing to enable hedgehogs to move freely through the site.

Appendix 1: Survey/Habitat map



Appendix 2: Location map





Appendix 4: Habitat Photos

Buildings	
Photograph	Description
	Figure 1: Main dwelling (B1) on site
Modified grassland	
Photograph	Description
	Figure 2: vegetated garden on site (to rear of B1)
Introduced shrubs	
Photograph	Description

	Figure 3: Introduced shrubs on site (along eastern site boundary)
Scattered trees	
Photograph	Description
	Figure 4: Scattered trees present on site (along eastern site boundary)
Native hedgerow	
Photograph	Description

	Figure 5: Beech and other species hedgerow along western site boundary
Sealed surface	
Photograph	Description
	Figure 7: Hard standing patio
Unsealed surface	
Photograph	Description

		Figure 8: Wood chipping flower bed	
Bramble scrub			
Photograph		Description	
		Figure 9: Bramble, mind and bindweed scrub along the northern boundary	
Pond			
Photograph		Description	



Figure 10: Pond along the eastern boundary consisting of lily pads and duckweed

Flower bed**Photograph****Description**

Figure 11: Scattered wildflowers planted in a patch in the front lawn along the southern boundary

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