

Preliminary Ecological Appraisal and Roost Assessment

Survey site:

Pinewood House, Nine Mile Ride, Wokingham, Berkshire, RG40 3EA

Client:

Mohamad Salman

Survey date:

11th June 2025

Project:

This report is prepared to inform a planning application with the Wokingham Borough Council. The proposal is described as:
A single storey side extension to existing garage/gym, plus the insertion of a mezzanine to create a study and 3no. roof lights

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 83440 65862 and has an area of approximately 0.556ha. The site comprises three buildings- the main dwelling, the garage and an outbuilding, vegetated garden, woodland, hard standing and scattered trees. Only the garage (B1) was subject to survey as it is the only building being impacted by the plans. There are scattered trees and woodland within the site and extending into the local garden landscape. The site is situated within an area of woodland between the town of Wokingham to the north and the village of Crowthorne to the south. The site is immediately surrounded by woodland with arable fields to the north, urban development to the east and south and plantation woodland interspersed with a solar panel farm to the west. Aerial imagery shows the local landscape to have a woodland character, with several small copses and woodland swathes in close proximity to the site. Water bodies can be found nearby, such as Heath Lake located ~775m to the south-west. 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
11/06/2025	21	66	100	11	None
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	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.
Conclusion, Impact or Recommendations	
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).	
Summary of Survey Findings (UKHab codes used) - Building (u1b5) - Developed land; sealed surface (u1b) - Artificial unvegetated, unsealed surface (u1c) - Built-up areas and gardens- vegetated garden and introduced shrubs (u1 828 847) - Scattered trees (u1 32)	Local notable habitats The site contains deciduous woodland which is listed as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). The site also contains scattered trees which are of good quality and could be of value to local wildlife populations (as detailed in subsequent sections of this table). Other habitats within the site are common and widespread and have low ecological value. Further notable habitats are present within 2km of the site, including ancient woodland (~615m north), woodpasture and parkland (~885m north-east), traditional orchards (~1175m west) and lowland heathland (~1215m east). On-site habitat descriptions <u>u1b5 – Buildings</u> There are three buildings onsite- the main dwelling, the garage and an outbuilding. Only the garage (B1) was subject to survey as it is the only building being impacted by the plans. B1 is a single storey brick-built building with a pitched roof and no loft space. The results of the PRA are shown within the bat section in the table below. <u>u1b – Developed land/sealed surface</u> Throughout the site are areas of developed land; sealed surface which are used as driveways and pathways around the site. The hard standing is comprised of tarmac and concrete slabs and is of negligible habitat value for protected species. <u>u1c - Artificial unvegetated, unsealed surface</u>

- Other woodland – mixed – mainly coniferous (w1h6) - Ornamental pond (r1g 46)	Surrounding B1 and to the east of the main dwelling are areas of artificial unvegetated, unsealed surface. These areas are comprised of shingle and bare ground and are of negligible habitat value for protected species. <u>u1 - Built-up areas and gardens [vegetated garden 828, introduced shrubs 847]</u> Within the centre of the site and towards the southern boundary are areas of vegetated garden, which is subject to management through mowing, resulting in a sward of approximately 3cm in length. Species composition is comprised of perennial ryegrass (D), clover (F), dandelion (F), daisy (F), Yorkshire fog (O), small-flowered cranesbill (O), lesser trefoil (O), mouse-ear hawkweed (O), creeping cinquefoil (O), yarrow (R), chickweed (R), ragwort (R), heath star moss (R) and hairy woodrush (R). Along the borders of the vegetated garden are areas of introduced shrubs. These areas are comprised of Mexican orange blossom, palm and eucalyptus. <u>Scattered trees 32</u> Throughout the site are individual scattered trees which are comprised of spruce, box elder, oak, cypress, holly and chestnut. There are 28 scattered trees, of which 13 are small, 4 are medium, 2 are large and 9 are extra-large in size. The trees are semi-mature to mature in age and represent a fair to good structural condition. Individual trees condition assessment: a) >70% of the trees are native species. b) The tree canopy is predominantly continuous. c) >50% of the trees are mature. 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). e) No ecological niches. f) >20% of the tree canopy is oversailing vegetation beneath.
---	--

	Score: 5/6 – Good condition <u>w1h6 – Other woodland – mixed – mainly coniferous</u> On-site, there are four areas of mixed, mainly coniferous woodland. The first area is along the northern boundary of the site and is comprised of spruce (A), chestnut (F), oak (F), cypress (O) and holly (R). The second area is located towards the eastern site boundary and is comprised of cypress (D), chestnut (O) and holly (R). The third area is located within the centre of the site and is comprised of spruce (A), chestnut (F), oak (F), and holly (R). The fourth area is located to the west of the site and is comprised of spruce (A), oak (F), chestnut (O) and holly (R). Areas 1, 3 and 4 have an understorey of predominately rhododendron with the occasional bare ground, whereas area two's understorey is comprised of predominately bare ground with the occasional rhododendron. The trees are mature in age and represent a fair to good structural condition. Woodland Condition Assessment: A: Age distribution- Poor B: Wild, domestic and feral herbivore damage- Good C: Invasive plant species- Poor D: Number of native tree species- Moderate E: Cover of native tree and shrub species- Poor F: Open space within woodland- Good G: Woodland regeneration- Poor H: Tree health- Good I: Vegetation and ground flora- Poor J: woodland vertical structure- Moderate K: Veteran trees- Poor L: Amount of deadwood- Poor M: Woodland disturbance- Moderate
--	--

	Score: 22/39 – Poor condition <u>r1g – Ornamental pond [46]</u> There is one manmade pond onsite which is spilt into two levels with a waterfall ledge connecting them. Both sections are concrete made with high, vertical concrete sides. Additionally, the pond is not artificially connected to other waterbodies and contain no submergent vegetation. Pond condition assessment: a) The pond is of poor water quality. b) There is poor semi-natural habitat surrounding the pond from the pond edge for its entire perimeter. c) More than 10% of the water surface is covered with duckweed <i>Lemna</i> spp. or filamentous algae. d) The pond is not artificially connected to other waterbodies, e.g. agricultural ditches or artificial pipework. e) Pond water levels can fluctuate naturally throughout the year. f) There is an absence of listed non-native plant and animal species. g) The pond is not artificially stocked with fish. h) There is no aquatic emergent vegetation within the pond. i) The pond surface is no more than 50% shaded by adjacent trees and scrub. Score: 5/9 – Poor condition
<i>Foreseen Impacts</i>	On-site habitats The proposed development will result in the loss of artificial unvegetated, unsealed surface. This is likely to have a minimal impact on biodiversity due to the low ecological value of this habitat. Notable habitats

	No direct impacts to any notable habitats will occur as a result of the proposed development. However, due to the proximity of the development to deciduous woodland (onsite:10m east, offsite: 3m west), 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 ancient 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 it falls under one of the exemptions (state exemption e.g. self-build, less than 25m² of habitat being impacted etc), 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 three statutory sites within 2km of the site, as detailed below: <u>Heath Lake SSSI and LNR</u> – located 405m south-west Heathlake is an area of woodland and heathland. The shallow 7-acre lake is the only acid lake in Berkshire. This means it has a naturally high pH which supports several rare plants, including the water-millfoil and the 6 stemmed water crowfoot.

	<u>Thames Basin Heaths SPA</u> – located 1825m east The open heathland habitats overlie sand and gravel sediments which give rise to sandy or peaty acidic soils, supporting dry heathy vegetation on well-drained slopes, wet heath on lowlying shallow slopes and bogs in valleys. The site consists of tracts of heathland, scrub and woodland, once almost continuous, but now fragmented into separate blocks by roads, urban development and farmland. Less open habitats of scrub, acidic woodland and conifer plantations dominate, within which are scattered areas of open heath and mire. The site supports important breeding populations of a number of birds of lowland heathland, especially nightjar and woodlark, both of which nest on the ground, often at the woodland/heathland edge, and Dartford warbler, which often nests in gorse <i>Ulex</i> sp. Scattered trees and scrub are used for roosting. <u>Broadmoor to Bagshot Woods and Heaths SSSI</u> – located 1825m east Located within Thames Basin Heaths, Broadmoor to Bagshot Woods and Heaths contains a mosaic of habitats including broadleaved woodland, coniferous plantation, dry and wet heathland and valley mire. These habitats provide suitable conditions for the internationally important bird species nightjar, woodlark and Dartford warbler along with nationally important damselfly and dragonfly species. The site lies within the impact risk zone for Broadmoor to Bagshot Woods and Heaths SSSI and Heath Lake SSSI. 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.
<i>Foreseen Impacts</i>	On-site designations No impacts foreseen. Statutory and non-statutory designated sites

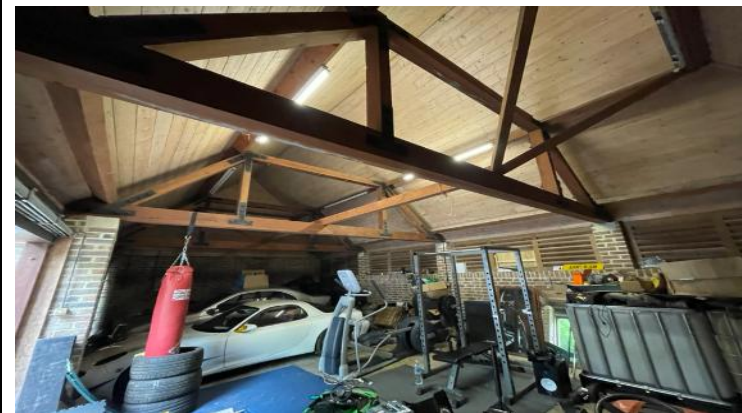
	No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known) as well as the urban location of the site with surrounding physical barriers. The Impact Risk Zones for Sites of Special Scientific Interest (SSSI IRZs) indicate that at the location selected, there is potential for all proposed developments to have a harmful effect on terrestrial Sites of Special Scientific Interest (SSSIs) and those Special Areas of Conservation (SACs), Special Protection Areas (SPAs) or Ramsar sites that they underpin.
<i>Recommendations</i>	On-site designations None required. Statutory and non-statutory designated sites The Local Planning Authority (LPA) may be required to consult with Natural England regarding potential impacts to Broadmoor to Bagshot Woods and Heaths SSSI and Heath Lake SSSI.
Invasive / Non-native species	
<i>Summary of Survey Findings</i>	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.
<i>Foreseen Impacts</i>	Construction could result in the spread of Rhododendron.
<i>Recommendations</i>	Any plants present on Schedule 9 of the Wildlife and Countryside Act 1981 are prohibited from release into the wild due to their capacity to cause ecological, environmental or socio-economic harm. Where Schedule 9 species are grown in private gardens, larger scale gardens, estates and amenity areas reasonable measures will be taken to confine them to the cultivated area so as to prevent their spreading to the wider environment and beyond the landowner's control. As such, not preventing the spread of Rhododendron currently present on site, into the wild (i.e. surrounding areas), this could constitute an offence. As such it is recommended that Rhododendron is dug up, including roots, and disposed of in line with appropriate controlled waste measures, or controlled during construction works to prevent the spread off-site.
Invertebrates	

Summary of Survey Findings	The habitats present on-site, including lawns, ornamental shrubs and trees, 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	Artificial unvegetated, unsealed surface will be removed during construction. The loss of such habitats is likely to be inconsequential to local invertebrate populations owing to their low value and the presence of more extensive habitat locally.			
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 nine EPSLs within a 2km radius of site as detailed below:			
	EPSL reference	Bat species affected	Distance from site	Impacts allowed by licence
	2014-4527-EPS-MIT 2014-4527-EPS-MIT-1	Brandt’s, brown long-eared bat, common pipistrelle, soprano pipistrelle and whiskered	485m north	Destruction of a resting place and breeding site
	EPSM2013-5937	Common pipistrelle and soprano pipistrelle	1155m north	Destruction of a resting place
	EPSM2013-6420	Common pipistrelle, soprano pipistrelle and brown long-eared bat	1485m south-west	Destruction of a resting place
	2016-25037-EPS-MIT	Brown long-eared bat and soprano pipistrelle	1590m south	Destruction of a resting place
	2016-24162-EPS-MIT	Common pipistrelle	1760m south	Destruction of a resting place
	2017-31130-EPS-MIT	Whiskered	1875m south	Destruction of a breeding site
	2015-7775-EPS-MIT	Common pipistrelle	1880m south	Destruction of a resting place
	EPSM2010-2316	Common pipistrelle, soprano pipistrelle and brown long-eared bat	1935m south-west	Destruction of a resting place
	2017-31789-EPS-MIT	Soprano pipistrelle	1945m west	Destruction of a resting place

	Foraging and commuting habitat Habitats recorded on site are assessed to provide foraging and commuting opportunities for bats in the form of mixed woodland, scattered trees and a pond. These habitats are likely to provide micro-climatic conditions that support invertebrates that will in turn provide foraging opportunities for local bat populations. Most notably, the woodland on site is mature and extends beyond the site adding to the continuity of vegetated features present in the wider landscape. Bats are well known to utilise linear features to aid navigation whilst travelling between foraging resources and roost sites. Roosting habitat Buildings to be impacted by the proposed development are assessed for their suitability to support roosting bats below. There are a total of 3 buildings on site; the main dwelling, the garage (B1) and an outbuilding. Only B1 was surveyed as this will be impacted by the proposed development. No evidence of roosting bats was identified on or within B1.
B1 Building description	Photographs
<i>External</i> B1 is a detached single-storey brick-built building with a pitched and Dutch-gabled roof clad in clay roof tiles. The roof tiles are in relatively good condition with no raised tiles under which bats could roost. There are, however, multiple broken tiles on the eastern and western elevations. However, sections of the tile are still located within the hole and therefore, no gaps have been created for bats to roost within. Nevertheless, if the remaining sections of tile should fall, suitable gaps could be created. The apex of the Dutch-gable ends are clad in wooden weatherboarding, which is in very good condition with no raised or missing boards under which bats could roost. The brick gable ends are in very good condition with no gaps around the tops of the gable ends. The doors and windows are wooden framed and appear in excellent condition with no suitable bat roosting sites. The brickwork around the building appears in excellent condition with no gaps or cracks within which crevice-dwelling bats could roost.	

Internal

There is no loft space as the ceiling is vaulted. Internally, the roof is clad in wooden sarking and is in very good condition.

*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. However, should the remaining sections of tiles fall, suitable gaps could be created.

Roosting habitat [Trees]

Trees and woodland onsite will be retained and therefore no impacts to roosting bats are anticipated.

	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 The proposed development may lead to an increase in the amount of current lighting of surrounding habitats or the retained building without mitigation. This may disturb commuting bats.
<i>Recommendations</i>	Roosting habitat [Buildings] Owing to the nature of the proposed development and the low potential for impacts to bat roosts, further bat surveys are considered to be disproportionate. It is anticipated that any risk to bats can be reduced to an acceptably low level through the implementation of a precautionary working method during and post-development. This will include the following measures: • Works will be scheduled during the winter months (November to March) when bats are least likely to be present, insofar as is possible. • The potential roost features will be removed by hand prior to any mechanical demolition. • 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 Roosting habitat [Trees] 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 A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors. Parameters can be found on the Bat Conservation Trust website: https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting-2 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). Suitable bat boxes include Habibat Bat Box, Ibstock Enclosed Bat Box or similar alternative brand. 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	
Summary of Survey Findings	Buildings No evidence of nesting birds was identified on or within B1, however the building is considered suitable for nesting for species such as passerines. Trees and vegetation No bird nests were identified within the vegetation 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 The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests. Barn owls None foreseen. Overwintering birds None foreseen.
<i>Recommendations</i>	Buildings/trees Any building removal should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by a qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged. 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 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 and refuge opportunities for reptiles, in the form of mixed woodland. 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. Additionally, the site does not contain any further suitable habitats such as scrub and rank grassland which would offer refuge for these species. Furthermore, the development area is contained to a small area of artificial unvegetated, unsealed surface which is of limited habitat value for reptiles. Wider landscape The adjacent sections of woodland are 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>	Artificial unvegetated, unsealed surface will be removed during construction. The loss of such habitats is likely to be inconsequential to local reptile populations owing to their low value and the presence of more extensive habitat locally. However, site clearance could result in the death or injury of reptiles, if present. The site does not form a connective pathway or stepping stone between areas of suitable reptile habitat in the wider landscape and the development is unlikely to lead to reptile habitat fragmentation.
<i>Recommendations</i>	A precautionary working method will be implemented for widespread reptiles during construction, including the following measures: • Vegetation will be maintained at a short sward (5cm) to discourage reptiles. • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • Best practice pollution prevention measures will be implemented to minimise impacts to nearby habitats. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any reptiles 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 reptile is identified, works must cease and advice must be sought from a suitably qualified ecologist.
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. Further, no positive class survey licence return or DLL historic survey data (2017 – 2019) were present within 2km of 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). P1 is manmade which is spilt into two levels with a waterfall ledge connecting them. Both sections are concrete made with high, vertical concrete sides. Additionally, the pond is not artificially connected to other waterbodies and contain no submergent vegetation. 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	Sometimes dries	0.5
4 – Water Quality	Poor	0.33
5 – Shade	0-60%	1.0
6 – Waterfowl	Absent	1.0
7 – Fish	Absent	1.0
8 – waterbody count in wider landscape within 500m with suitable terrestrial connectivity	3	0.65
9 – Terrestrial Habitat	Poor	0.33
10 – Macrophytes	<1%	0.3
TOTAL	-	0.47
CATEGORY	-	Poor

A review of aerial imagery (MAGIC and OS Maps) indicates the presence of three ponds within 500m of the site, located 90m west (P2), 325m north-west (P3) and 400m east (P4). P2 and P3 are both large ponds with P2 being approximately 2440m² and P3 being 925m² in size. It is considered that Great crested Newts prefer small to medium sized breeding ponds, around 50- 250m², and larger lakes are usually not used (Langton et al, 2001), reducing the viability of P2 and P3 for breeding GCN. P2 and P4 are surrounded by woodland, which provides optimal terrestrial opportunities for amphibians including foraging, commuting, refuge and hibernation opportunities. P3 is located within extensively managed grasslands, which is either grazed or regularly mown/ploughed resulting in a short sward length.

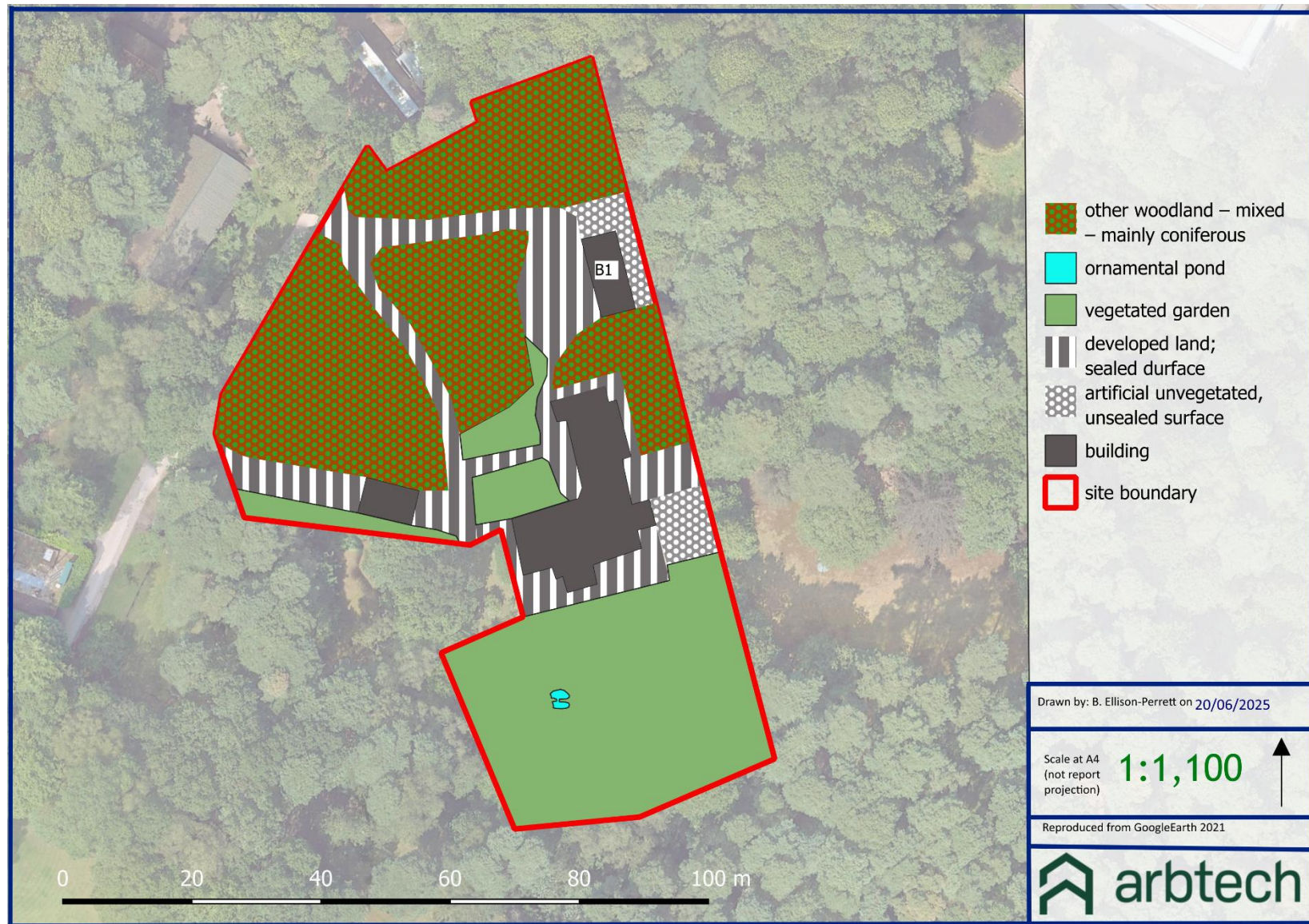
	These landscape features are suboptimal for great crested newts due to a lack of refuge from predation. However, all three ponds have potential terrestrial connectivity to the site due to an absence of definitive barriers to dispersal via tree lined boundaries and woodland. Terrestrial habitat suitability The site provides limited suitable terrestrial habitat for amphibians given the lack of optimal habitat (i.e. scrub, rank grassland). The areas of hard standing and amenity grass offer sub-optimal habitat for terrestrial amphibians. The mixed woodland may offer refuge for these species. However, given the nature of the proposed development (i.e. only Artificial unvegetated, unsealed surface is being impacted) the likelihood of GCN being present within the development area is extremely low.																								
Foreseen Impacts	When georeferencing the proposed development plans over scaled mapping of the site, it is noted that the development area is likely to result in the loss or significant disturbance of 0.0029ha of artificial unvegetated, unsealed surface which is classed as a sub-optimal habitat for amphibians. When completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces a Green risk score, which states: Offence Highly Unlikely (see Figure 1 below). <table><tr><th>Component</th><th>Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)</th><th>Notional offence probability score</th></tr><tr><td>Great crested newt breeding pond(s)</td><td>No effect</td><td>0</td></tr><tr><td>Land within 100m of any breeding pond(s)</td><td>0.001 - 0.01 ha lost or damaged</td><td>0.05</td></tr><tr><td>Land 100-250m from any breeding pond(s)</td><td>No effect</td><td>0</td></tr><tr><td>Land >250m from any breeding pond(s)</td><td>0.001 - 0.01 ha lost or damaged</td><td>0.0005</td></tr><tr><td>Individual great crested newts</td><td>No effect</td><td>0</td></tr><tr><td colspan="2">Maximum:</td><td>0.05</td></tr><tr><td colspan="2">Rapid risk assessment result:</td><td>GREEN: OFFENCE HIGHLY UNLIKELY</td></tr></table> Figure 1: Screenshot of Natural England GCN rapid Risk Assessment completed in accordance with the proposed development plans.	Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score	Great crested newt breeding pond(s)	No effect	0	Land within 100m of any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.05	Land 100-250m from any breeding pond(s)	No effect	0	Land >250m from any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.0005	Individual great crested newts	No effect	0	Maximum:		0.05	Rapid risk assessment result:		GREEN: OFFENCE HIGHLY UNLIKELY
Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score																							
Great crested newt breeding pond(s)	No effect	0																							
Land within 100m of any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.05																							
Land 100-250m from any breeding pond(s)	No effect	0																							
Land >250m from any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.0005																							
Individual great crested newts	No effect	0																							
Maximum:		0.05																							
Rapid risk assessment result:		GREEN: OFFENCE HIGHLY UNLIKELY																							
Recommendations	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 evidence of badgers was found on site including latrines, setts or hairs of badgers. No badger setts were noted on site or within a 30m radius of the site. The site is flat and contains vegetated garden and hard standing, leaving little opportunity for sett-making. However, the woodland could be utilised by foraging and commuting badgers, although no evidence of badgers was noted within the woodlands onsite. Further, there is limited suitable badger foraging habitat on site given the lack of fruiting trees/scrub. Additionally, given the extent of habitats present on site and the presence of more extensive habitat coverage locally, the site is unlikely to represent a significant resource for badgers in the context of the wider landscape. Although no evidence indicating the presence of badgers was recorded during the site survey, the future presence of badgers foraging and commuting on site cannot be discounted.
<i>Foreseen Impacts</i>	Artificial unvegetated, unsealed surface will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of badgers, if present.

<i>Recommendations</i>	Owing to the nature of the proposed development and the low potential for impacts to bat roosts, further badger surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures: - Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. - The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which badgers could use. - Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. In the unlikely event that a badger sett is identified, works must cease and advice must be sought from a suitably qualified ecologist.
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.
<i>Foreseen Impacts</i>	Artificial unvegetated, unsealed surface will be removed during construction. The loss of such habitats is likely to be inconsequential to local dormouse populations owing to their low value. 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>	Habitats recorded on site are assessed to provide foraging, and refuge opportunities for hedgehogs, in the form of grassland and woodland. However, given the limited extent of habitats present on site and the presence of more extensive habitat coverage locally, the site is unlikely to represent a significant resource for hedgehogs in the context of the wider landscape. No evidence indicating the presence of hedgehogs was recorded. Although no evidence indicating the presence of hedgehogs was recorded during the site survey, the future presence of hedgehogs foraging and commuting on site cannot be discounted.
<i>Foreseen Impacts</i>	Artificial unvegetated, unsealed surface will be removed during construction. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present.
<i>Recommendations</i>	Similar to the badgers, a precautionary working method will be implemented during construction, including the following measures: - Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. - The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs 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 hedgehogs 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. 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.

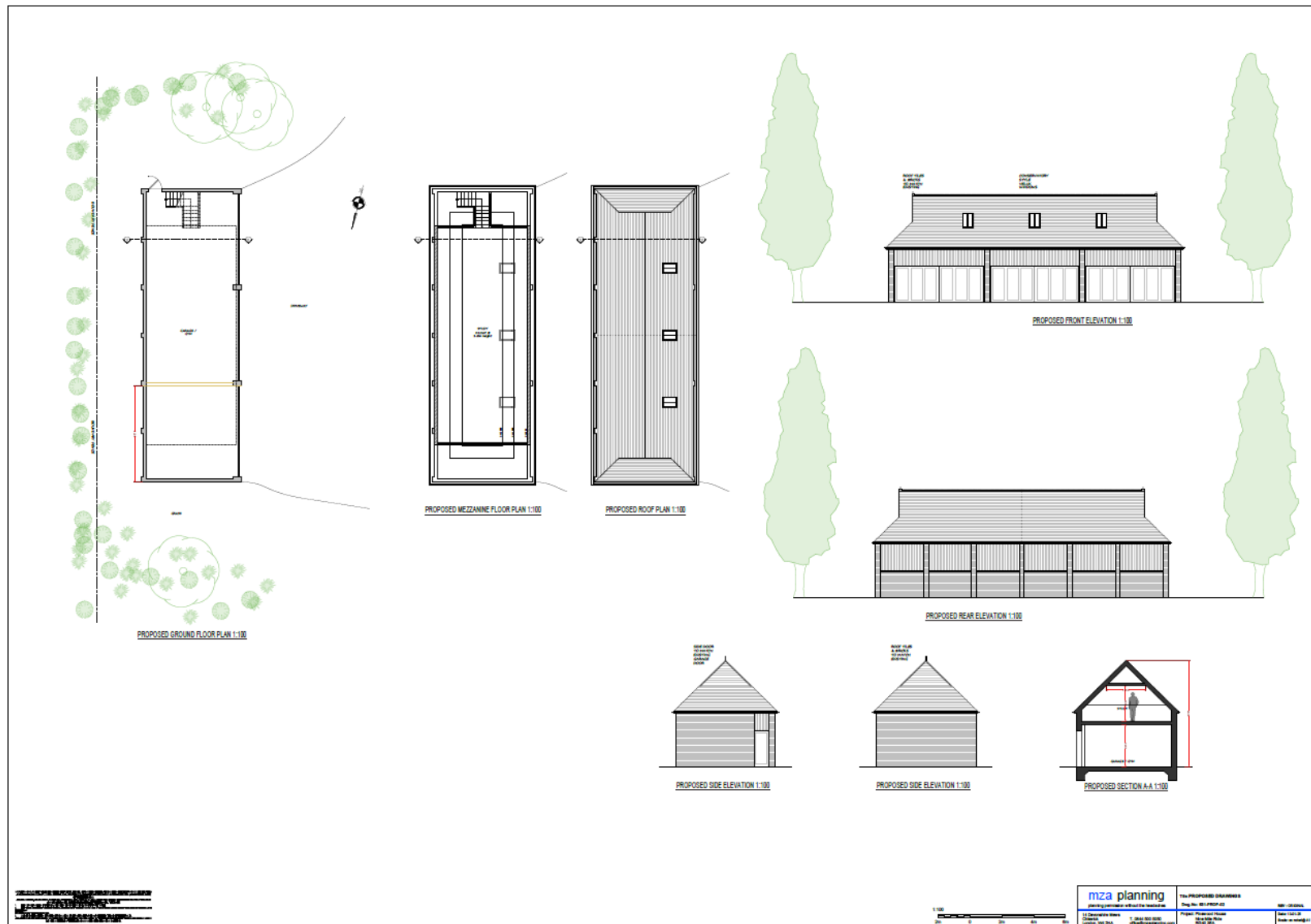
Appendix 1: Survey/Habitat map



Appendix 2: Location map



Appendix 3: Proposed plan



Appendix 4: Habitat Photos

Developed land; sealed surface	
Photograph	Description
	Hard standing onsite
Vegetated garden	
Photograph	Description
	Amenity grass lawn on site (to south of the site)
Introduced shrubs	

Photograph	Description
	Figure 3: Introduced shrubs on site (scattered within the vegetated garden)
Scattered trees	
Photograph	Description
	Figure 4: Scattered trees present on site

Mixed woodland; mainly coniferous	
Photograph	Description
	Mixed, mainly coniferous woodland onsite
Ornamental pond	
Photograph	Description
	Ornamental pond within the vegetated garden
Artificial unvegetated, unsealed surface	

Photograph	Description
	Artificial unvegetated, unsealed surface onsite

Limitations and Copyright

Legal

Arbtech Consulting Limited has prepared this report for the sole use of the above-named client or their agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

© This report is the copyright of Arbtech Consulting Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.