

Preliminary Ecological Assessment

Land Adjacent to Jolesfield Cottages

Jolesfield

Partridge Green

Horsham, RH13 8JT



29th December 2025

Sylvatica Ecology Ltd

Company Registration Number: 07705793

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Limitations and Liabilities

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It should be borne in mind that the behaviour of animals can be unpredictable and may not conform to standard patterns recorded in scientific literature. Therefore, this report cannot predict with absolute certainty that animal species will occur in apparently suitable locations or habitats, or that they will not occur in locations or habitats that appear unsuitable.

In order to minimise the likelihood of adverse effects on protected animal species over time, it is accepted good practice, in accordance with Natural England (NE) (formerly English Nature) guidance for ecological surveys to be repeated should works be deferred for over 12 - 18 months from the date of initial survey.

It is the duty of the landowner, developer and operations managers to act responsibly and to comply with current environmental legislation if protected species are suspected or found prior to, or during works.

The recommendations and information contained within this report are based on the information provided on the development works prior to the surveys being carried out. Should the development proposals change then the findings and recommendations contained within would potentially require revision.

The findings within this report do not constitute legal advice. Should this be required, then a suitably qualified professional practitioner should be contacted.

<i>Approved by</i>	<i>Signed</i>	<i>Contact</i>
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1.0 SUMMARY

- 1.1 The Preliminary Ecological Assessment for land adjacent to Jolesfield Cottages, Jolesfield, Partridge Green, Horsham RH13 8JT provided a comprehensive evaluation of habitats, species and ecological constraints relevant to the proposed development. The site lay within a semi-rural landscape characterised by pasture, hedgerows, gardens and woodland belts. A walkover survey was undertaken on 24th October 2025 following CIEEM guidance and UKHab methodology, supported by a 2.0km desk study search of designated sites and protected and notable species records. No statutory designated sites were found within the search area, although nearby blocks of deciduous woodland and Jolesfield Common contributed ecological connectivity.
- 1.2 The habitats recorded on site included modified grassland, deciduous woodland, native hedgerow, scattered trees, mixed scrub and a semi-natural pond. The grassland was heavily waterlogged, particularly around the central area and pond margins, while woodland and scrub provided more structurally diverse habitat. Biological records highlighted seven species of bat, great crested newt, common reptile species, hedgehog [REDACTED]. Several mature trees displayed features suitable for roosting bats; however, these trees were outside the development footprint and would remain unimpacted. Foraging habitat for bats was present along hedgerows, the pond and the woodland edge. A rapid risk assessment for great crested newt produced an Amber result, reflecting the possible presence of great crested newt on-site.
- 1.3 No invasive species listed under Schedule 9 were found. Any vegetation clearance should be undertaken outside the bird nesting season unless preceded by an ecologist's check. To avoid impacts on dormice and reptiles, buffer zones of 10m to woodland and 5m to hedgerows and scrub were recommended. Any lighting installed should comply with BCT (2023) guidance to minimise disturbance to foraging bats.
- 1.4 Enhancement measures were identified to support biodiversity net gain, including native tree and hedgerow planting and the installation of bat and bird boxes. These actions would provide long-term ecological benefits and improve site connectivity.

2.0 INTRODUCTION

2.1 This report presents the findings of a Preliminary Ecological Assessment survey land adjacent Jolesfield Cottages, Jolesfield, Partridge Green, Horsham RH13 8JT.

2.2 ***Figure 1: Site Survey Location (Red Line Boundary)***



Site Location

2.3 The site was positioned on the southern edge of a village within a semi-rural landscape composed of pasture, gardens and small woodland blocks. It lay just east of a main local road that formed a clear north–south corridor through the settlement, with residential properties and their associated private gardens arranged along both sides of the road. Immediately north of the site, the land was characterised by small fields, tree belts and an area of managed ground likely associated with community or recreational use, while the wider village extended further east with a mixture of detached housing, amenity grassland and scattered mature trees. To the west and south, the landscape opened into larger pastoral fields divided by hedgerows and treelines, creating a patchwork of agricultural land surrounding the settlement.

3.0 METHODOLOGY

Ecological Survey

- 3.1 A preliminary ecological survey walkover was carried out at the Site on the 24th October/2025. The habitats were assessed in accordance with BS 42020 Biodiversity – Code of Practice for Planning and Development and broadly followed the ‘Extended Phase 1’ methodology as set out in the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Baseline Ecological Assessment and the Handbook for Phase 1 Habitat Survey. This method of survey provides information on the habitats in the survey area and assesses the potential for legally protected species to occur on or adjacent to the Site. The habitats were classified according to the UK Habitat Classification system (Butcher *et al.* 2023).
- 3.2 Any faunal species identified during the survey were noted. Any evidence for the presence of, or potential for, protected species was also noted. In particular: amphibians, bats, reptiles, mammals, and birds were included.
- 3.3 A search was carried out for evidence of the presence of invasive plants listed on Schedule 9 of the Wildlife and Countryside Act 1981 which are subject to strict legal control. The list of invasive plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is extensive and these plants are found in a range of different habitats.
- 3.4 An assessment of the potential of the property to support roosting and foraging bats was made and categorised according to **Table 1** (BCT 2023).

3.5 **Table 1: Bat Roost and Foraging Potential of Buildings and Trees (BCT 2023a)**

Category	Roosting Habitat	Commuting and Foraging Habitat
Known Roost	Evidence of bat present (e.g.) droppings, live or dead bats and/ or desk study results	N/A
High/ PRF-M	Building or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and	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,

	potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitats.	streams, hedgerows, lines of trees 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.
Moderate/ PRF-M	Building or tree with one or more potential roosting features that could be used by several bats due to their size, shelter, protection, conditions and surrounding habitats, but unlikely to support a roost of high conservation concern.	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.
		Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
Low/ PRF-I	Building or tree with one of more potential roost features that could be used by individual bats opportunistically. However, there potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/ or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats. (<i>i.e.</i> unlikely to be suitable for maternity or hibernation)	Habitat that could be used by small numbers of commuting bats for example, a fragmented hedgerow or un-vegetated stream, but isolated, <i>i.e.</i> not very well connected to the surrounding landscape by other habitat.
		Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Negligible	Building or tree with no potential to support any bats	Negligible habitat features on site likely to be used by commuting or foraging bats

Designated Sites and Biological Records

- 3.6 A 2.0km radius biological records search was carried out using the National Biodiversity Network. This checked for protected and notable species records within 2.0km of the application site.
- 3.7 Records of internationally designated statutory sites within the 5.0km of the Site and nationally designated sites within 2.0km of the Site were searched for using the Multi-Agency Geographic Information for the Countryside website (MAGIC) <http://www.magic.gov.uk>.
- 3.8 MAGIC was also searched for previously granted Natural England licence applications, which may give an indication of the presence of protected species in the local area.

Habitat Mapping and Condition Assessment Methods

- 3.9 The mapping was carried out using QGIS V 3.22.14-Bailowieza for MacOS 14.1. Habitat areas and pond distances from site were calculated using this QGIS software. A check of historical maps is also made using Google Earth, which gives an indication of the age of the habitats present onsite and surrounding.

Qualification of Author

- 3.10 The survey work and reporting has been led by Richard Law BSc MRes CEnv MCIEEM FLS. Richard has been undertaking ecological survey work within the last 18 years on many different locations throughout the United Kingdom, for a variety of protected species, including bats (Class 2 2015-12576), reptiles, amphibians including great crested newt *Triturus cristatus* (Class 1 2016-20290) and terrestrial mammals including dormice *Muscardinus avellanarius* (Class 1 2015-13188) and birds including barn owl *Tyto alba* licence (CL29/00236). Richard is also qualified in track and sign and trailing *via* an international system of assessment (www.trackercertification.com).

4.0 RESULTS

4.1 This section describes the habitats identified during the habitat survey and biological records search. All the plant species names follow the nomenclature of Stace 1997.

Designated Sites

4.2 There were not any statutory designated sites within the search radius.

Historical Biological Records Search

Bats

4.3 **Table 2: Bat Species Records**

<i>Latin Name</i>	<i>Common Name</i>	<i>Number of Records</i>
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	23
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	25
<i>Eptesicus serotinus</i>	Serotine	11
<i>Nyctalus noctula</i>	Noctule	10
<i>Myotis daubentonii</i>	Daubenton's Bat	1
<i>Pipistrellus nathusii</i>	Nathusius's Pipistrelle	1
<i>Plecotus auritus</i>	Brown Long Eared Bat	9

4.4 The local bat records demonstrated seven species within the surrounding landscape. Common and soprano pipistrelles were the most frequently recorded. Serotine and noctule records reflected the presence of open foraging habitats. Records of brown long-eared bat were noted, while the single records of Daubenton's and Nathusius's pipistrelle indicated use of local waterbodies.

Amphibians and Reptiles

4.5 **Table 3: Amphibian and Reptile Records**

<i>Latin Name</i>	<i>Common Name</i>	<i>Number of Records</i>
<i>Triturus cristatus</i>	Great Crested Newt	5
<i>Anguis fragilis</i>	Slow Worm	23
<i>Natrix helvetica</i>	Grass Snake	5
<i>Rana temporaria</i>	Common Frog	4
<i>Pelophylax ridibundus</i>	Marsh Frog	1
<i>Pelophylax esculentus</i>	Edible Frog	1
<i>Lissotriton helveticus</i>	Palmate Newt	1
<i>Zootoca vivipara</i>	Common Lizard	18
<i>Lissotriton vulgaris</i>	Smooth Newt	2

4.6 The local records indicated an assemblage of amphibians and reptiles within the surrounding landscape. Reptile records were dominated by slow worm and common lizard, reflecting the presence of well-connected rough grassland, scrub, and woodland edge habitats suitable for basking, foraging, and shelter. Amphibian records included both widespread species such as common frog, smooth newt and palmate newt, as well as protected and non-native species such as great crested newt, marsh frog and edible frog.

Terrestrial and Riparian Mammals

4.7 **Table 4: Terrestrial and Riparian Mammal Records**

<i>Latin Name</i>	<i>Common Name</i>	<i>Number of Records</i>
<i>Erinaceus europaeus</i>	Hedgehog	38

4.8 The local mammal records indicated the presence of two widespread yet notable species within the surrounding landscape. Hedgehog records were numerous, suggesting that the area supported suitable foraging habitats such as gardens, grassland, and hedgerows, as well as potential nesting and hibernation sites.

Granted Mitigation Licences

4.9 **Table 5: Natural England Mitigation Licences**

<i>Licence Number</i>	<i>Distance and Direction</i>	<i>Species</i>	<i>Type</i>	<i>Date</i>	<i>NGR</i>
2015-11579- EPS-MIT	1.9km northeast	Brown Long Eared Bar and Common Pipistrelle	Destruction of a Resting Place and Breeding Site	29/07/2015 to 31/12/2025	TQ 1951 2120
2016-22440- EPS-MIT	0.9km east	Soprano Pipistrelle	Damage and Destruction of a Resting Place and Breeding Site	21/04/2016 to 31/08/2020	TQ 1921 1908
EPSM2013- 6513	1.3km south	Common Pipistrelle, Brown Long Eared, Whiskered Bat and Natterer's Bat	Destruction of a Resting Place and Breeding Site	21/10/2013 to 30/09/2014	TQ 1900 1822

4.10 Three European Protected Species licences had been issued within 2.0km of the site, all relating to bat species. The licences confirmed the presence of a range of roosting species within the surrounding area, including common and soprano pipistrelles, brown long-eared,

whiskered, and Natterer's bats. The proximity of these licences to the site highlighted the likelihood of regular bat activity locally.

Habitat Types

- 4.11 **Modified Grassland** - The majority of the field area comprised of modified grassland with a tussocky, varied sward. It was dominated by perennial rye-grass *Lolium perenne*, Yorkshire fog *Holcus lanatus*, cocksfoot *Dactylis glomerata*, creeping buttercup *Ranunculus repens*, white clover *Trifolium repens*, common sorrel *Rumex acetosa*, red fescue *Festuca rubra* and patches of creeping bent *Agrostis stolonifera*. The grassland was notably heavily waterlogged within the central area and around the pond margins.
- 4.12 **Deciduous Woodland** - The woodland belt forming the boundary was dominated by mature oak *Quercus robur*, with additional birch *Betula pendula*, hazel *Corylus avellana*, hawthorn *Crataegus monogyna* and elder *Sambucus nigra* forming the understorey. The canopy was cohesive and created a shaded interior with abundant leaf litter, occasional coarse grasses, bramble *Rubus fruticosus* agg and young saplings.
- 4.13 **Native Species Hedge** - The site supported an intact, species-rich hedgerow forming a strong linear boundary. This was predominantly composed of hawthorn, blackthorn *Prunus spinosa*, hazel, and dog rose *Rosa canina*, with dense bramble woven through the lower structure. The hedgerow had a well-developed shrub layer 2.0m – 3.0m tall, with an unmanaged base supporting ivy *Hedera helix*, cleavers *Galium aparine*, cow parsley *Anthriscus sylvestris* and coarse tussocky grasses.
- 4.14 **Mixed Scrub** – The western edge, notably around the pond and the southeast corner featured dense scrub, consisting of blackthorn, hawthorn, elder, bramble, and younger oak regeneration. The scrub layer was structurally complex, with dense shading, thorny understory, entwined climbers and localised leaf litter accumulation.
- 4.15 **Pond** – The pond appeared semi-natural with still, shaded water influenced by overhanging vegetation. Marginal flora included bramble, soft rush *Juncus effusus*, water mint *Mentha aquatica*, and reedmace *Typha latifolia*. Shading limited aquatic macrophyte development but the pond still offered habitat for amphibians, aquatic invertebrates and foraging birds.
- 4.16 **Scattered Trees (Three Medium Sized Trees)** – Three medium sized trees were present situated centrally within the northern section of the site survey area. These were two hawthorn and a single pear *Pyrus communis* tree

5.0 POTENTIAL FOR PROTECTED SPECIES

Birds

- 5.1 The survey was conducted outside of the normal bird nesting season. However, some bird species were observed within site and around the periphery of the site boundary. These were robin *Erithacus rubecula*, blackbird *Turdus merula*, wren *Troglodytes troglodytes*, dunnock *Prunella modularis*, blue tit *Cyanistes caeruleus*, great tit *Parus major* and chaffinch *Fringilla coelebs*.

Bats

- 5.2 Several mature and semi-mature trees within the deciduous woodland site contained features typically associated with potential bat roosting habitat, such as fissured bark, occasional cavities, deadwood pockets and ivy-covered stems. These features can provide suitable shelter for crevice-dwelling and cavity-roosting bat species, particularly within broadleaved trees such as oak. However, the proposed works were located entirely within open grassland and did not require any felling, pruning or modification of these trees. As a result, the trees and any potential roost feature that they supported, would remain unimpacted, and no risk to roosting bats was anticipated.
- 5.3 The site provided suitable foraging habitat for a range of bat species due to the presence of grassland, hedgerow, a pond and adjacent woodland edges. These features likely supported a diverse assemblage of nocturnal invertebrates and created sheltered commuting corridors with favourable microclimates. Hedgerows and woodland edges were particularly valuable, as their linear structure guided bat movement across the landscape while offering protection from wind and artificial illumination.

Reptiles and Amphibians

- 5.4 Using the great crested newt risk calculator (**Table 6**) and making an assumption that Pond 1 could potentially support a breeding population of great crested newt, with the size of the proposed development footprint which falls within the 0.1 – 0.5ha lost/ damaged category), the rapid risk assessment result is AMBER: OFFENCE LIKELY.

5.5 **Table 6: Great Crested Newt Impact Risk Calculator (from Natural England)**

<i>Component</i>	<i>Likely Effect</i>	<i>Notional Offence Probability Score</i>
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	0.1ha to 0.5ha lost or damaged	0.5
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
	Maximum:	0.1
Rapid risk assessment result:	AMBER: OFFENCE LIKELY	

5.6 The grassland was heavily waterlogged at the time of the site survey. The seasonal weather conditions were generally wet with periodic rain during October and November. The central area of the site, notably the grassland and areas around the pond were subject to waterlogging. The marginal habitats, along the edge of the woodland to the east and along the hedgerow to the north were much dryer, with a tussocky grassland area. These areas had the potential to support reptile species, but reptiles are not likely to be able to find any suitable shelter/ hibernation habitat in the central and water-logged part of the site.

Terrestrial and Riparian Mammals

5.7 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- 5.8 Records of hedgehog were present within the 2.0km search area although the habitat present within the development site had limited foraging opportunities. The site had a low potential to support hedgehogs.

Invasive and Non-Native Species

- 5.9 No invasive species were noted during the survey.

6.0 DISCUSSION AND RECOMMENDATIONS

Designated Sites and Habitats

- 6.1 There was a block of deciduous woodland to the east and Jolesfield Common was adjacent to the site survey area. This area comprised of sports pitches and local amenity space, with a block of deciduous woodland to its east. These areas are unlikely to be adversely impacted by any proposed development at this location due to the low ecological value of this section of Jolesfield Common.

Birds

- 6.2 Breeding birds are protected, making it an offence to intentionally (or recklessly) kill, injure or take any wild bird, and to take, damage or destroy the nest of any wild bird while that nest is in use or being built, or take or destroy an egg of any wild bird. As a result, any vegetation clearance or demolition of the buildings should avoid the breeding season (March to August inclusive). Nests are protected throughout the year, not just within the specified nesting season.
- 6.3 If this were not possible, a suitably experienced ecologist would be required to check areas of vegetation immediately prior to works being carried out (within 24hrs). If birds were found to be breeding at this time in these locations, clearance works would not be permitted to proceed until the young had fledged the nest and at least a 10m works exclusion zone be placed around the nest. If any vegetation is cleared outside of the bird nesting season, then all resultant brash should be removed from site to ensure that it does not provide suitable nesting habitat.

Roosting Bats

- 6.4 There were mature and semi-mature trees within the block of deciduous woodland along the eastern boundary of the site survey area. These could potentially exhibited features that bats would utilise for roosting. These trees and the woodland block is not within the

development footprint. Should this change, then further assessment for the potential presence of roosting bats within the trees located here is recommended.

Bats and Lighting

6.5 Bat species have been recorded within the 2.0km historical records search and the habitats present onsite and in the immediate surroundings can be considered as having moderate foraging habitat. Any lighting installed, as a result, of this development will conform to the specifications which are outlined within BCT Guidance Note (2023). This will reduce any light pollution that could impact nocturnal activity of fauna, namely bat species, some of which are extremely sensitive to light pollution. Light spill into adjacent habitats will be reduced and avoided by the following:

- *All luminaries will lack UV elements; metal halide and fluorescent sources will be avoided,*
- *A warm white light spectrum on external lighting will be adopted (<2700kelvin) to reduce the blue light component,*
- *LED luminaries will be used where a sharp cut off is required to avoid light spill into adjacent habitat,*
- *External luminaries will feature wavelengths higher than 550nm to avoid the component of light most disturbing to bats,*
- *Column heights of external lighting will be limited,*
- *Luminaries will be mounted on the horizontal plane, with no upwards tilt,*
- *Security lighting will be set on motion sensors and on short timers (<1min).*

Terrestrial Mammals

6.6 Hedgehog have seen their number decline significantly over the last 13 years by around 66%. There were records for hedgehog within 2.0km. The habitats present on site were of limited value to hedgehog but they may access the site [REDACTED]

6.7 During the construction phase any deep trenches or excavations should be covered overnight to ensure any animals including hedgehogs, do not become trapped. This measure would also be pertinent for all mammals, [REDACTED]

6.8 To enhance the site for wildlife including hedgehog post-development the planting of native trees, shrubs and hedgerows and the provision of gaps of at least 15cm by 15cm under any new fences or alternatively the use of hedgerows rather than fences will ensure this species continues to have access to the site and can use the site for foraging, commuting and shelter.

Dormice

- 6.9 The potential presence of dormice within the proposed development site has to be considered as dormice are protected under the Wildlife and Countryside Act (WCA) 1981 (as amended). The WCA states that '*a person is guilty of an offence if intentionally or recklessly they disturb [a dormouse] while it is occupying a place which it uses for shelter or protection; or he obstructs access to any place which [a dormouse] uses for shelter or protection*'.
- 6.10 Dormice are also protected under the Conservation of Habitats and Species Regulations 2019. Dormice are listed as European protected species under which it is an offence if;
- *a person deliberately captures, injures or kills any wild animal of a European protected species;*
 - *deliberately disturbs wild animals of any such species;*
 - *damages or destroys a breeding site or resting place of such an animal.*
- 6.11 Disturbances of animals include in particular any disturbance which is likely to impair their ability to;
- *survive, breed or reproduce, or to rear or nurture their young;*
- 6.12 Dormice potential habitat was identified within the site survey area, notably the hedgerows, scrub habitat and woodland. An avoidance strategy is recommended, which will prevent any potential adverse impact on this species. Heras fencing should be installed between the development site and the areas of suitable habitat for this species. A buffer zone of 10.0m should be in place between the deciduous woodland and the development footprint, with a 5.0 buffer zone in place between the hedgerow and scrub habitat and the development footprint.
- 6.13 Should any areas of scrub or hedgerow habitat require removal, then it is recommended to seek advice as to the most suitable way to proceed regarding any potential impacts on this species. This could take the form of a method of works to include a hand search, if any areas of clearance are minimal or if large areas of potential habitat are to be removed, then a survey and potential mitigation licencing would be required. This would be proportionate to any potential impact on this species.

Great Crested Newt

- 6.14 The great crested newt receives full protection under the Wildlife and Countryside Act 1982 (as amended). This prohibits the intentional or reckless killing, injuring or taking (capture, etc); possession; intentional or accidental disturbance whilst occupying a 'place used for shelter or protection' and intentional or reckless destruction of these places; sale, barter, exchange, transporting for sale and advertising to sell or buy.

- 6.15 There was a pond present within the site survey boundary which was adjacent to the development footprint. This pond could potentially support a breeding population of great crested newt, therefore further assessment of this waterbody would be required. This would take the form of an environmental DNA (EDNA) survey. Samples of the water would be taken between mid-April and the end of June in any given year. Should presence of great crested newt be found, then further population estimate surveys would be carried out. These appropriate season for these to be conducted is between March and mid-June in any given year, weather conditions depending.
- 6.16 Should great crested newt be found to be present and impacted by the proposed development works, then licence from Natural England would be required. An alternative would be to seek a District Level Licence, which would be obtained from Nature Space Partnership.

Reptiles

- 6.17 There were areas of habitat present within the site survey area, notably around the edges of the hedgerows, scrub and woodland, that had the potential to support reptile species, mirroring the locations of dormie potential habitat. All reptile species are protected under the Wildlife and Countryside Act 1981 (as amended), which make it an offence to deliberately or recklessly kill, injure or trade these animals. The common reptile species covered by this Act are slow worm, grass snake *Natrix helvetica*, common lizard *Zootoca vivipara* and adder. Other, rarer, native reptile species are offered greater levels of protection, but these are generally found in habitats that were not present within the Site or local surroundings.
- 6.18 An avoidance strategy is recommended that will ensure that any potential impact on reptiles is prevented. This would mirror the recommendations stipulated for the avoidance of any impact on dormice, with the buffer zones in place between the woodland, hedgerows and a scrub. Should any potential impact on these areas be likely, then further consideration as to the most proportionate way to proceed is recommended. This could simply be a method of works and a graded cut of vegetation if the area of impact is minimal, or if the area of impact is large, then surveys and a mitigation plan to include capture and translocation may be required.

7.0 RECOMMENDATIONS FOR BIODIVERSITY ENHANCEMENT AND NET GAIN

- 7.1 Development plans should maximise opportunities for enhancement, in order, to achieve a net increase in biodiversity. The measures outlined below provide the means to achieve this enhancement.
- 7.2 Scrub and tree planting could be carried out to further enhance the scrub and woodland habitat indented within the site survey area. This could be located along the edges of the woodland and scrub habitat to further provide ecologically valuable habitat and incorporate natural buffer zones between any development and ecologically valuable habitat. Species that could be planted include oak, hawthorn, hazel, hornbeam *Carpinus betula*, elder and dog rose.
- 7.3 Planting of hedgerow could be carried out, to further enhance the connectivity of the local landscape. The hedgerow planting would, ideally, conform to the following criteria once the specific length of time for suitable management has passed (5 to 10 years):
- *Height and Width: Greater than 1.5m average height and width along entire length,*
 - *Gap – Hedge Base: Gap between ground and base of canopy less than 0.5m for greater than 90% of the length,*
 - *Gap – Hedge Canopy: Gaps make up less than 10% of total length, and no canopy gaps of greater than 5m.*
 - *Ground Level Vegetation: greater than 1m of undisturbed ground with perennial herbaceous vegetation for greater than 90% of the total length. These would be measured from the outer edge of the hedgerow and would be present on, at least, one side of the hedgerow,*
 - *Nutrient Enrichment: Plant species indicative of nutrient enrichment comprise less than 20% of the area of undisturbed ground,*
 - *Invasive Species: Greater than 90% of the hedgerow and undisturbed ground is free of invasive species and recently introduced species.*
 - *Current Damage: Greater than 90% of the hedgerow or undisturbed ground is free of damage caused by human activities.*
- 7.4 As part of the scheme, it is recommended to install bird and bat boxes. These would provide an ecological enhancement by providing suitable roosting and nesting locations for these protected species. These bat and bird boxes could be installed on any retained mature trees on site or through the use of in-built boxes in any newly built structure.

8.0 REFERENCES

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BCT & ILP, B. C. (2023). Bats and artificial lighting in the UK: Guidance Note GN08/23. London: Institution of Lighting Professionals.

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2023) The UK Habitat Classification User Manual version 2.1 at <https://ukhab.org/>

JNCC (2016) Handbook for Phase 1 Habitat Survey: A technique for environmental audit. Joint Nature Conservation Committee, Peterborough.

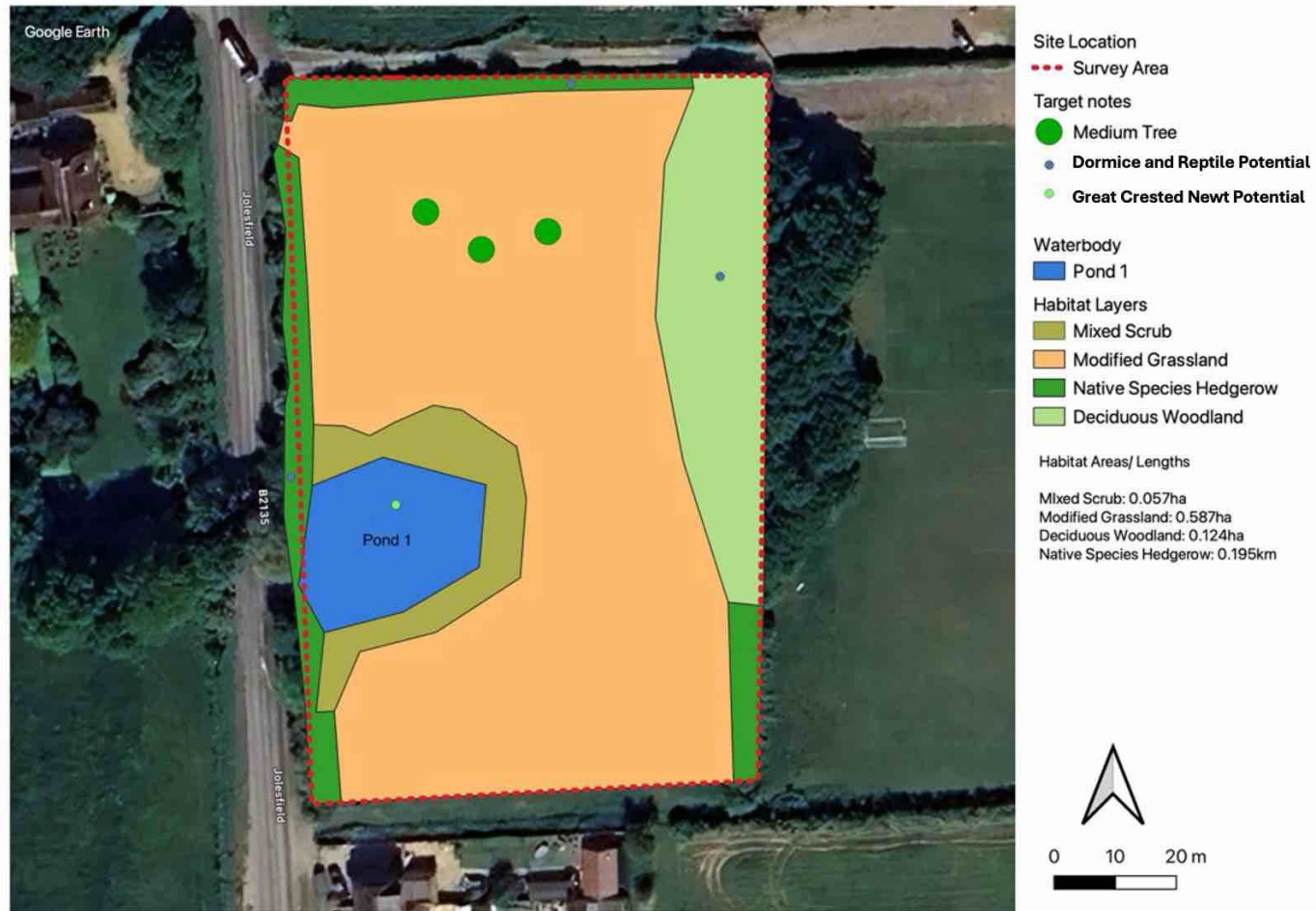
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Stace C. (1997) New Flora of the British Isles (2nd edition). Cambridge University Press.

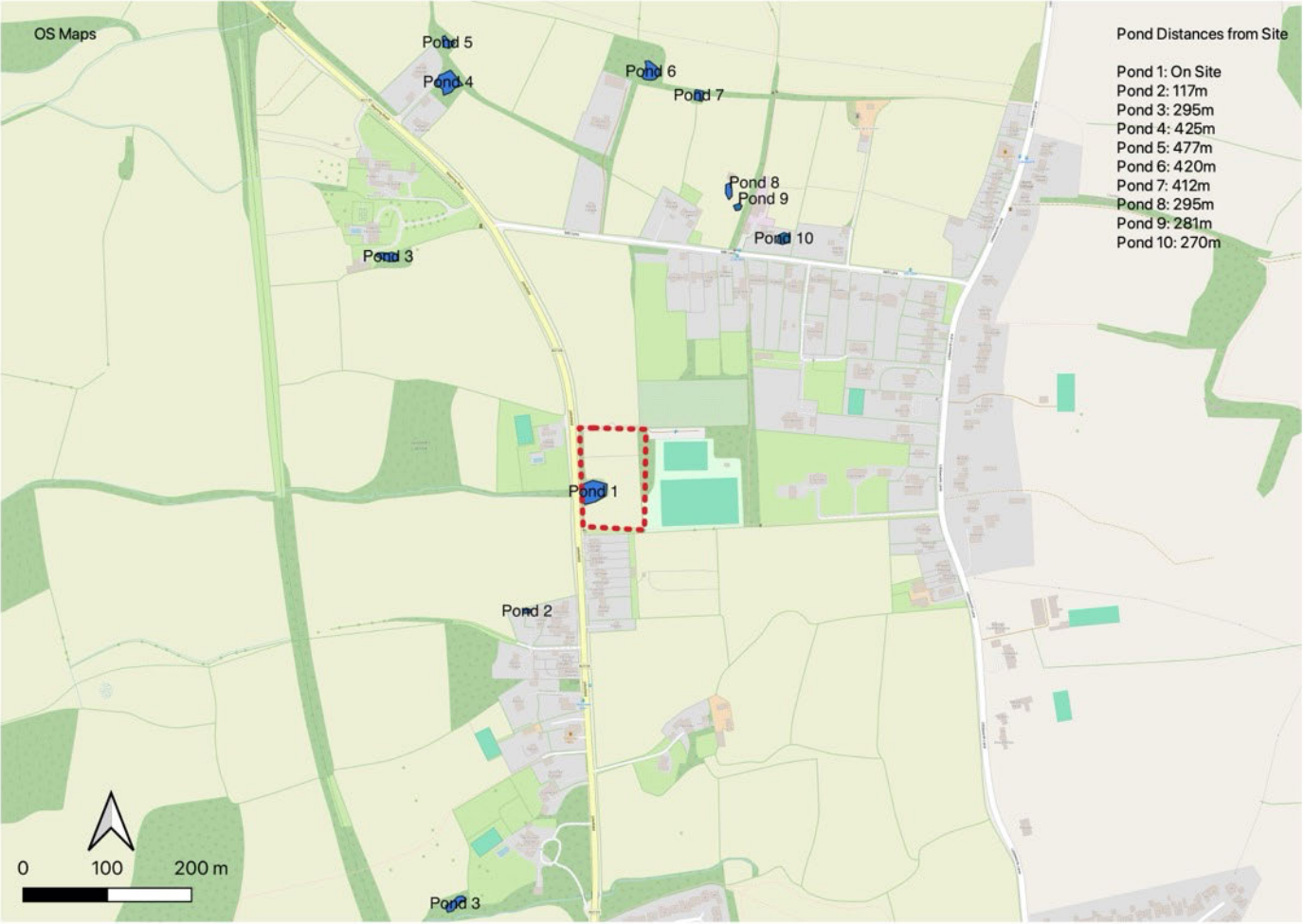
The Conservation of Habitats and Species Regulations 2017.

Wildlife and Countryside Act (1981) The Stationary Office, Norwich

APPENDIX A: PRELIMINARY ECOLOGICAL WALKOVER SURVEY HABITAT MAP



APPENDIX B: WATERBODIES WITHIN 500M



APPENDIX C: SITE PHOTOS

Plate 1: Western Site Entrance



Plate 2: Western Hedgerow



Plate 3: Rougher Grassland along Hedgerow Edge

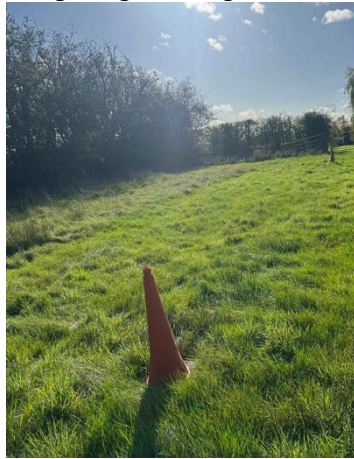


Plate 4: Northern Hedgerow



Plate 5: Shallow Detritus Pit



Plate 6: Hedge and Grassland



Plate 7: Woodland to East



Plate 8: Woodland to East



Plate 9: Woodland Edge



Plate 10: Eastern Edge

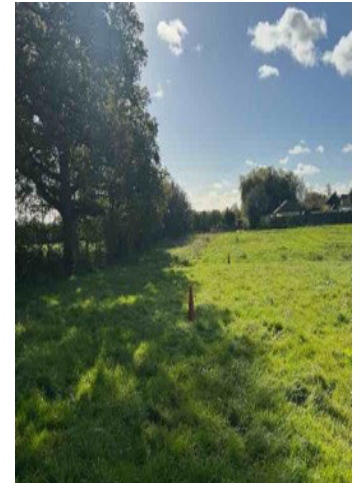


Plate 11:Wet Grassland Area



Plate 12:Southern Entrance

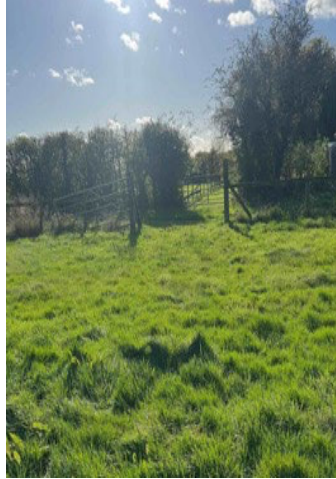


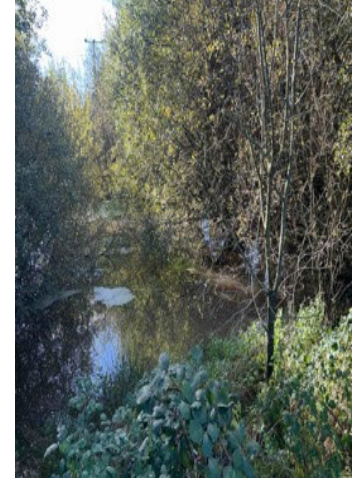
Plate 13:Southwestern Corner



Plate 14: Scrub by Pond



Palte 15: Pond Habitat



APPENDIX D: PROTECTED SPECIES AND DESIGNATED SITE LEGISLATION SUMMARY (ENGLAND AND WALES)

<i>Species</i>	<i>Legislation (England & Wales)</i>	<i>Offences</i>	<i>Licensing procedures (England & Wales)</i>
Bats European protected species	Conservation of Habitats and Species Regulations 2017	Deliberately ¹ capture, injure or kill a bat; deliberate disturbance ² of bats; or damage or destroy a breeding site or resting place used by a bat. [The protection of bat roosts is considered to apply regardless of whether bats are present.]	A Natural England (NE) licence in respect of development is required in England. European Protected Species: Mitigation Licensing- How to get a licence (NE 2010) Bat Mitigation Guidelines (English Nature 2004) Bat Workers Manual (JNCC 2004) BCT Survey Guidelines (2016)
	Wildlife and Countryside Act 1981 (as amended) S.9	Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place.	Licence from NE is required for surveys (scientific purposes) that would involve disturbance of bats or entering a known or suspected roost site.
Great Crested Newt European protected species	Conservation of Habitats and Species Regulations 2017	Deliberately ¹ capture, injure or kill a great crested newt; deliberate disturbance ² of a great crested newt; deliberately take or destroy its eggs; or damage or destroy a breeding site or resting place used by a great crested newt.	Licences issued for development by Natural England. European Protected Species: Mitigation Licensing- How to get a licence (NE 2010) Great Crested Newt Mitigation Guidelines (English Nature 2001)
	Wildlife and Countryside Act 1981 (as amended) S.9	Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb a great crested newt in such a place.	Licences issued for science (survey), education and conservation by Natural England.
Dormice European protected species	Conservation of Habitats and Species Regulations 2017	Deliberately ¹ capture, injure or kill a dormouse; deliberate disturbance ² of dormouse; or damage or destroy a breeding site or resting place used by a dormouse.	A Natural England (NE) licence in respect of development is required in England. European Protected Species: Mitigation Licensing- How to get a licence (NE 2010)
	Wildlife and Countryside Act 1981 (as amended) S.9	Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place.	Licence from NE is required for surveys (scientific purposes) that would involve disturbance of bats or entering a known or suspected roost site.
Badger	Protection of Badgers Act 1992	Wilfully kill, injure or take a badger; or intentionally or recklessly damage, destroy or obstruct access to a badger sett or disturb a	Where required, licences for development activities involving disturbance or sett interference or closure are issued by Natural England (NE). Licences for activities involving watercourse

<i>Species</i>	<i>Legislation (England & Wales)</i>	<i>Offences</i>	<i>Licensing procedures (England & Wales)</i>
		badger in its sett. [It is not illegal to carry out disturbance activities in the vicinity of setts that are not occupied.]	maintenance, drainage works or flood defences are issued under a separate process. Licences are normally not granted from December to June inclusive because cubs may be present within setts. Badgers & Development (NE 2007)
Birds	Wildlife and Countryside Act 1981 (as amended) S.1	Intentionally kill, injure or take any wild bird; intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; intentionally take or destroy the nest or eggs of any wild bird. [Special penalties are liable for these offences involving birds on Schedule 1 (e.g. most birds of prey, kingfisher, barn owl, black redstart, and little ringed plover).] Intentionally or recklessly disturb a Schedule 1 species while it is building a nest or is in, on or near a nest containing eggs or young; intentionally or recklessly disturb dependent young of such a species.	No licences are available to disturb any birds in regard to development. Licences are available in certain circumstances to damage or destroy nests, but these only apply to the list of licensable activities in the Act and do not cover development. General licences are available in respect of 'pest species' but only for certain very specific purposes e.g. public health, public safety, air safety.
Adder Common lizard Grass snake Slow worm	Wildlife and Countryside Act 1981 S.9(1) (part); S.9(5)	Intentionally kill or injure any common reptile species.	No licence is required in England. However, an assessment for the potential of a site to support reptiles should be undertaken prior to any development works which have potential to affect these animals.
Rabbits, foxes and other wild mammals	Wild Mammals (Protection) Act 1996	Intentionally inflict unnecessary suffering to any wild mammal.	Natural England provides guidance in relation to rabbits (TIN003, Rabbits- management options for preventing damage, July 2007) and foxes (which are also protected under the Wildlife and Countryside Act 1981 from live baits and decoys, see TAN43 April 2005 and TAN08 April 2005) as well as other wild mammals; see Natural England's website for the list of 'Regulatory Guidance, Best Practice and Information'.

Site Designation	Legislation (England & Wales)	Protection	Guidance
Special Area of Conservation (SAC)	Conservation of Habitats and Species Regulations 2010	Planning controls are effected through Part 2 of the Conservation of Habitats and Species regulations 2010 (Reg 21) and Part 6 (Regs 61-67).	Formal Appropriate Assessment is required before undertaking, or giving consent, permission or other authorisation for a plan or project which is likely to have a significant effect on such a site.
Special Protection Area (SPA)	EC Directive on the conservation of natural habitats and of wild fauna and flora (92/42/EEC).		
Wetland of International Importance (Ramsar site)	EC Directive on the conservation of wild birds (79/409/EEC). Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 (the Ramsar Convention).	The legislation for the Site of Special Scientific Interest which will underpin each designation also applies. These sites are given protection through policies in the Local Development Plan.	Planning Policy Statement 9: Biodiversity and Geological Conservation (ODPM 2005) and the accompanying joint Circular (ODPM Circular 6/2005 & Defra Circular 01/2005) for England or Technical Advice Note 5 in Wales.
Site of Special Scientific Interest (SSSI)	Wildlife and Countryside Act 1981 (as amended)	It is an offence to carry out or permit to be carried out any potentially damaging operation. SSSIs are given protection through policies in the Local Development Plan.	Owners, occupiers, public bodies and statutory undertakers must give notice and obtain the appropriate consent under S.28 before undertaking operations likely to damage a SSSI. S.28G places a duty on all public bodies to further the conservation and enhancement of SSSIs. Planning Policy Statement 9: Biodiversity and Geological Conservation (ODPM 2005) for England or Technical Advice Note 5 in Wales.
Local Nature Reserve (LNR)	National Parks and Access to the Countryside Act 1949 S.21	LNRs are given protection through policies in the Local Development Plan.	LNRs are generally owned and managed by local authorities. Development proposals that would potentially affect a LNR would need to provide a detailed justification for the work, an assessment of likely impacts, together with proposals for mitigation and restoration of habitats lost or damaged. Planning Policy Statement 9: Biodiversity and Geological Conservation (ODPM 2005) for England or Technical Advice Note 5 in Wales.
Locally Designated Sites	There is no statutory designation for these	Sites are given protection through policies in the Local Development Plan.	Development proposals that would potentially affect these would need to provide a detailed justification for the work, an assessment of likely impacts, together with proposals for mitigation and restoration of habitats lost or damaged.