

Preliminary Ecological Assessment

Oakfield

Coolham Road

Horsham

RH13 8QE

NGR: TQ 11476 20641



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Sylvatica Ecology Ltd

Company Registration Number: 07705793

<https://se-planning.com>

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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.

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1.0 SUMMARY

- 1.1 A Preliminary Ecological Assessment walkover survey of the proposed development site at Oakfield, Coolham Road, Horsham was undertaken on 16 April 2026 to inform a planning application for the redevelopment of the property. Habitats were classified using the UK Habitat Classification (Butcher *et al.* 2023) and assessed in accordance with BS 42020 and CIEEM guidance, with a 2.0 km biological records search and Natural England licence register check undertaken in parallel.
- 1.2 **Habitats.** The site comprised a mosaic of predominantly low ecological value habitats, dominated by hard-standing yards and sealed surfaces (u1b / u1c) associated with the existing farmstead, together with species-poor modified grassland (g4), a small area of recently scraped ground supporting pioneer ruderal vegetation, and a native species-rich hedgerow (h2a) of hawthorn with blackthorn, elder, field maple and bramble along the eastern boundary. Three pedunculate oaks (*Quercus robur*) were present, including one veteran standing dead / moribund tree and one mature, wide-crowned field-grown oak, alongside a line of semi-mature hawthorns along the access track.
- 1.3 **Designated sites.** No statutory designated sites lay within the 2.0 km search radius; the closest internationally designated site, The Mens SAC, was located 9.6 km to the west. Given the absence of direct impacts on hedgerows, trees or surrounding habitats, and the lack of any ecological corridor connecting the site to these features, no significant effects on designated sites or Priority Habitats are predicted.
- 1.4 **Biological records.** The 2.0 km records search returned 35 bat records across six species (dominated by soprano pipistrelle and whiskered bat, with notable records of barbastelle and serotine), 12 records of herpetofauna across eight species (including single records of great crested newt and common toad), and seven records of small terrestrial mammals (hedgehog, hazel dormouse and harvest mouse). One historic Natural England EPS mitigation licence (EPSM2013-6269, 1.7 km north) was also returned for common pipistrelle and brown long-eared bat.
- 1.5 **Bats.** All buildings on site were assessed as having negligible bat roost suitability owing to their modern, open, draughty construction and complete absence of suitable crevice or cavity features. The two large oaks were assessed as offering bat roost potential through rot-holes, hollow limbs, lifted bark and developing cavities; the veteran dead oak in particular supports multiple Potential Roost Features. The line of hawthorns was assessed as negligible. Both oaks are to be retained and are not directly impacted by the proposals.
- 1.6 **Other protected species.** The nearest pond lies 104 m from the site, with limited connectivity owing to the B2139 road; the Natural England great crested newt Rapid Risk Assessment returned a GREEN result (offence highly unlikely). The heavily managed grassland and the isolated, intensively farmed setting were considered unsuitable for reptiles. No badger setts were recorded within the survey area or a 30 m buffer. The hedgerow offers habitat connectivity for hedgehog and potentially dormouse but is retained unaffected by the proposals.
- 1.7 **Recommendations.** No further species-specific surveys are required on the basis of the proposals as currently described, provided the two oaks and the hedgerow are retained and protected under BS 5837 measures. Should works on or affecting the oaks (including lighting) be introduced, a climbed aerial bat inspection and/or emergence surveys will be required during the bat activity season. Any vegetation clearance should avoid the bird breeding season (March–August inclusive) or be preceded by a pre-works nest check. External lighting should conform to BCT (2023) guidance (warm white <2700 K, directional LEDs, low column heights, motion-activated security lighting). Biodiversity enhancements should include the installation of bird and bat boxes, hedgehog gaps of at least 15 × 15 cm under any new fencing, and native tree, shrub and herbaceous planting as set out in the report.
- 1.8 **Conclusion.** Subject to the retention and protection of the two veteran/mature oaks and the native boundary hedgerow, and compliance with the standard bird, bat-lighting and enhancement recommendations above, there are no outstanding ecological constraints to the proposed redevelopment at Oakfield, Coolham Road, Horsham.

2.1 This report presents the findings of a Preliminary Ecological Assessment (PEA) survey of land at Oakfield, Coolham Road, Horsham, RH13 8QE, NGR: TQ 11476 20641. A planning application is to be submitted which will involve the redevelopment of this location. Therefore, a Preliminary Ecological Assessment (PEA) was carried out.

2.3 The site is a compact, roughly rectangular parcel occupying the north-eastern corner of a farmstead complex, with its eastern boundary running along a minor road and its western and southern edges abutting a cluster of existing farm buildings. The plot is predominantly hard-standing and yard, enclosed by hedgerow along the road frontage and to the north, and is set within a wider landscape of open grazing fields to the east, west and north, with a small bare-earth paddock visible to the north-west and continuous countryside beyond.

2.4 The aim of this habitat survey was to assess the habitats present on and adjacent to the property and to evaluate the potential for protected species to be present. Recommendations on any further survey requirements, actions to preserve the habitats present and enhancements have been made, as a result, of the findings of this habitat survey. These findings should be used within the design phase of the proposals, to minimise the impacts for biodiversity, through careful design to avoid negative effects where possible. The survey

findings then enable a prediction of the potential impacts of any ecological receptors present to be made in each specific case.

3.0 METHODOLOGY

Ecological Survey

- 3.1 A preliminary ecological survey walkover was carried out at the Site on the 16th April 2026. 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 building/ site to support roosting and foraging bats was made and categorised according to **Table 1** (BCT 2023).

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	Building with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitats.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of 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 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	Building with one of more potential roost features that could be used by individual bats opportunistically. However, there potential roost sites do	Habitat that could be used by small numbers of commuting bats for example, a fragmented hedgerow or un-vegetated stream, but isolated, i.e.

	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)	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 statutory 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 Pond Distance Calculation Methods

- 3.9 The mapping was carried out using QGIS V 3.22.14-Bailowieza for MasOS 14.1. Habitat areas and waterbody distances from site were calculated using this QGIS software.

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 results of the records searches and of the habitats identified during the walkover survey. All the plant species names follow the nomenclature of Stace 1997.

Statutory Designated Sites and Priority Habitats

- 4.2 There were not any statutory designated site within the respective search radius of the site. The Mens Special Area of Conservation (SAC) was 9.6km to the west of the proposed development site.

Biological Records Search

- 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	12
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	7
<i>Plecotus auritus</i>	Brown Long Eared Bat	3
<i>Myotis mystacinus</i>	Whiskered Bat	10
<i>Barbastella barbastellus</i>	Barbastelle	2
<i>Eptesicus serotinus</i>	Serotine	1

- 4.4 The biological records for the local area return 35 bat records across six species. The assemblage is dominated by soprano pipistrelle (12 records) and whiskered bat (10 records), with common pipistrelle (7) and brown long-eared bat (3) also well represented. Two scarcer species are present in small numbers — barbastelle (2 records), an Annex II species under the Habitats Directive and a Section 41 species of principal importance, and serotine (1 record), also a Section 41 species.

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

<i>Latin Name</i>	<i>Common Name</i>	<i>Number of Records</i>
<i>Anguis fragilis</i>	Slow Worm	1
<i>Natrix helvetica</i>	Grass Snake	2
<i>Zootoca vivipara</i>	Common Lizard	1
<i>Rana temporaria</i>	Common Frog	3
<i>Lissotriton vulgaris</i>	Smooth Newt	2
<i>Pelophylas esculentus</i>	Edible Frog	1
<i>Triturus cristatus</i>	Great Crested Newt	1
<i>Bufo bufo</i>	Common Toad	1

4.6 The biological records for the local area return 12 records of herpetofauna across eight species, comprising three reptiles and five amphibians. The reptile records include grass snake (2), slow worm (1) and common lizard (1) — all common and widespread species protected from killing, injury and sale under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). The amphibian records are dominated by common frog (3), smooth newt (2), and single records of common toad (a Section 41 species of principal importance) and great crested newt (fully protected under the Conservation of Habitats and Species Regulations 2017 and a European Protected Species). A single record of edible frog a non-native species, is also returned.

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	4
<i>Muscardinus avellanarius</i>	Dormice	2
<i>Micromys minutus</i>	Harvest Mouse	1

4.8 The biological records for the local area return seven records of small terrestrial mammals across three species. Hedgehog is the most frequently recorded (4 records) and is a Section 41 species of principal importance under the Natural Environment and Rural Communities Act 2006, as well as a UK Red List "Vulnerable" species following recent population declines. Hazel

dormouse is represented by two records and is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 as a European Protected Species, as well as being listed on Section 41. A single record of harvest mouse also a Section 41 species.

Granted Mitigation Licences

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

Licence Number	Distance and Direction	Species	Type	Date	NGR
EPSM2013-6269	1.7km north	Common Pipistrelle and Brown Long Eared Bat	Destruction of a Breeding Site	03/12/2013 to 30/09/2015	TQ 1201 2271

- 4.10 A search of the Natural England European Protected Species (EPS) mitigation licence register returned one relevant record within the wider area. Licence EPSM2013-6269, issued 1.7 km north of the site at NGR TQ 1201 2271, authorised the destruction of a breeding site for common pipistrelle and brown long-eared bat between 3 December 2013 and 30 September 2015. This record confirms that both species — each protected under the Conservation of Habitats and Species Regulations 2017 and listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), with brown long-eared bat also a Section 41 species of principal importance.

Habitat Types

- 4.11 **Developed Land – Sealed and Unsealed Surfaces (UKHab: u1b, u1c):** The central area of the site is dominated by the agricultural buildings and their associated yards . Hard-standings of concrete slab, compacted hardcore and gravel extend between the structures, with no vegetation present. These areas are of negligible intrinsic botanical value.
- 4.12 **Modified Grassland (UKHab: g4):**—The sward comprised of Yorkshire fog (*Holcus lanatus*), perennial ryegrass *Lolium perenne*, common bent *Agrostis capillaris*, white clover *Trifolium repens*, ribwort plantain *Plantago lanceolata*, meadow buttercup *Ranunculus acris*, and daisy *Bellis perennis*.
- 4.13 **Medium Sized and Large/ Veteran Deciduous Trees:** A large standing dead / moribund English oak stood within the scraped area, approximately 1.1–1.3 m DBH, with a skeletal retrenched crown, extensive deadwood, sloughing bark and evident rot-pockets and broken limb stubs. A mature, wide-crowned field-grown oak stood in front of the buildings, approximately 1.0–1.2 m DBH, in full leaf and good vigour, with a low, spreading, multi-limbed canopy, fissured bark,

pruning wounds and early bark-plate separation. A short line of semi-mature, multi-stemmed hawthorns *Crataegus monogyna* ran along the gravel access track, 3–5 m tall with stems 8–15 cm diameter, growing as an open row with occasional bramble *Rubus fruticosus agg* and young elder *Sambucus nigra* at the base.

- 4 .14 **Native Species Hedgerow:** A mature native hedgerow was along the eastern edge of the site. The hedge is dominated by hawthorn with occasional blackthorn *Prunus spinosa*, elder, field maple *Acer campestre* and bramble within the overall structure. Ivy *Hedera helix* was also present on stems. The hedgerow is continuous, of varying height (approximately 2–4 m).
- 4 .15 **Unmanaged Vegetated Garden and Bareground:** A large rectangular area adjacent to the buildings has been recently scraped. Vegetation cover at the time of survey was very sparse, with pioneer and ruderal regrowth colonising the bare substrate. Species visible included creeping thistle *Cirsium arvense*, groundsel *Senecio vulgaris*, shepherd's-purse *Capsella bursa-pastoris*, and nettle *Urtica dioica*.

5.0 POTENTIAL FOR PROTECTED SPECIES

Birds

- 5.1 The time of year the survey was carried out was within the main bird breeding season. The site and its immediate surroundings support an assemblage of common and widespread farmland and edge-of-woodland birds typical of the wider landscape. The veteran and early-veteran oaks, the native hedgerow and the associated tall-herb margin offer nesting, foraging and song-post habitat for bird species. The surrounding grazed grassland and hedgerow network is likely to support foraging birds in the breeding season. The veteran oaks additionally have potential to support cavity-nesting bird species.

Bats

- 5.2 The veteran dead oak was assessed as having bat roost suitability, supporting multiple Potential Roost Features (PRF) including rot-holes, hollow limbs, lifted bark and likely woodpecker cavities. The large oak was also assessed as having suitability, with fissured bark, limb stubs and developing cavities offering good crevice and cavity opportunities. The line of hawthorns was assessed as **negligible** suitability, as the stems were too young and smooth to offer meaningful roost features. Both oaks should be retained, protected under BS 5837 root protection measures, and subject to a climbed aerial bat and nest inspection prior to any arboricultural works; the hawthorn line holds value principally for nesting birds, foraging and commuting rather than roosting.

- 5.3 All of the buildings on site were assessed as having **negligible** bat roost suitability. The structures are predominantly of modern steel-frame, corrugated-metal and lightweight clad construction, or comprise simple open-sided agricultural barns and lean-tos. They are consistently open, draughty and well-lit internally, with no enclosed warm, dark voids; roof coverings are tight single-skin corrugated sheeting with no lifted flashings, missing tiles or gaps suitable for crevice-dwelling bats; walls are either single-skin brick or clad panels without cavities; and there are no hanging tiles, weatherboarding voids, soffit boxes, fascia gaps or ridge tile spaces offering access to any sheltered cavity. No evidence of bats (droppings, urine staining, feeding remains or scratch marks) was recorded within or on the exterior of any building. On this basis, the buildings are not considered to offer roosting opportunities for any bat species, and no further bat surveys of the structures are recommended; demolition or conversion works may proceed without additional bat mitigation, subject to the standard precaution that if any bat or evidence of bats is encountered during works, activity should cease and a suitably qualified ecologist be consulted before work resumes.

Reptiles and Amphibians

- 5.4 ***Table 6: Ponds and Distance from Site (See Map in Appendices)***

Pond Number	Distance from Site
1	104m
2	158m

- 5.5 Pond 1 is the closest pond to the proposed development site. There was limited connectivity to the site and this waterbody due to the relatively busy B2139 road. Pond 2 was 158m from the site to the west.
- 5.7 The next closest pond was 104m away (Pond 1). Using the great crested newt risk calculator (**Table 7**) 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 0.1ha – 0.5ha lost or damaged category, this gives a National Offence Probability Score of 0.01, which means the result of GREEN: OFFENCE HIGHLY UNLIKELY

5.8 **Table 7: 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)	No effect	0
Land 100-250m from any breeding pond(s)	0.01 – 0.1ha lost or damaged	0.1
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
Maximum:		0.1
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

- 5.9 The habitats present within the site boundary, notably the modified grassland was heavily managed and did not present any suitability for reptile species to be present. Furthermore, the site was heavily isolated within an area of intensive agricultural operations which would severely limit the ability of reptile to colonise this location from any nearby suitable habitat.

Terrestrial and Riparian Mammals

- 5.10 Specific location records of badger are always confidential. While potential badger foraging habitat was present within the survey area, no badger setts were found within the locations that were likely to have the pitches installed or within a 30m zone around these.
- 5.11 Records of hedgehog were present within the 2.0km search area and there was hedgehog habitat present within the deciduous woodland.
- 5.12 The hedgerow could potentially offer habitat connectivity within the wider landscape for dormice, but this is not being impacted and is being retained unaffected.

6.0 DISCUSSION AND RECOMMENDATIONS

Designated Sites and Habitats

- 6.1 The were not any designated site within the search radius, but the Men SAC was 9.6km to the west. The proposed development site comprised of habitats that were unlikely to support commuting and foraging habitat within the main part of the site. Aany suitable foraging and commuting habitat was situated along the hedgerow to the east, following along the road. This habitat is not to be impacted by the proposed development.
- 6.2 There is no requirement for tree removal, hedgerow clearance, or access through adjacent woodland or field margin habitats. No construction footprint, machinery access, or material storage is proposed beyond the immediate curtilage of the site. Additionally, the site does not share a direct ecological corridor with these features, and no alterations to existing hedgerows or connectivity routes are proposed. As such, the integrity, structure, and ecological function of the surrounding habitats and hedgerows will remain unaffected by the planned works.

Birds

- 6.3 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 and building clearance (notably ground level vegetation clearance) should avoid the breeding season (March to August inclusive). Nests are protected throughout the year, not just within the specified nesting season.
- 6.4 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.

Bat Roost Potential

- 6.5 The two large oak trees can be considered as having bat roosting potential. Should any works be planned on these trees or works planned that could potentially impact these trees (lighting installation, for example), then these trees would require further assessment for roosting bats. These could take the form of climbing surveys to check for suitable roosting locations and/ or emergence surveys. These surveys would take place during the bat activity season (May to

September inclusive), with two surveys being within the bat maternity season (May to August inclusive). If the trees are classified as having bat potential at PRF-M, then three surveys would be required, each of which would have to be a minimum of three weeks apart. Avoidance of impacts of always the preferred option, if this can be implemented.

Bats and Lighting

- 6.6 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 moderate value 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 and Riparian Mammals

- 6.7 Hedgehog have seen their number decline significantly over the last 13 years by around 66%. There were records for hedgehog within 2.0km. The hedgerow may provide suitable refuge for hedgehogs and the habitat had some potential to support foraging hedgehogs if they are present in the local area.
- 6.8 During any 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, including badger.

- 6.9 To enhance the site for hedgehog post-development the planting of native trees and hedgerows and the provision of gaps of at least 15cm by 15cm under any installed fences will ensure this species continues to have access to the site and can use the site for foraging, commuting and shelter.

7.0 RECOMMENDATIONS FOR BIODIVERSITY ENHANCEMENT

- 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. Additional measures may be required as a result, of the further survey findings, which could potentially form part of species mitigation.
- 7.2 As part of the scheme, it is recommended to install bird and bat boxes around the site periphery. These would provide an ecological enhancement by providing suitable roosting and nesting locations for these protected species. Two bird boxes and two bat boxes could be installed. These would all be installed at a minimum of 3m height, on a southwestern or southeastern aspect within a tree or building.
- 7.3 Tree and shrub planting of native species would provide and contribute to the improvement of the scrub habitat present replacing some of the less ecologically viable habitat currently present within the site. Native herbaceous and grassland species could also be planted into newly landscape areas, providing a valuable nectar source for invertebrate species. These would enable an improved score on the habitat condition assessment criteria to be achieved.

7.4 **Table 8: List of Recommended Plant Species for Native Tree and Shrub Planting**

Species Name	Common Name
<i>Carpinus betula</i>	Hornbeam
<i>Corylus avellana</i>	Hazel
<i>Crataegus monogyna</i>	Hawthorn
<i>Prunus avium</i>	Bird cherry
<i>Quercus robur</i>	Oak
<i>Sambucus nigra</i>	Elder
<i>Sorbus aucuparia</i>	Rowan

Table 9: List of Recommended Plant Species for Native Herbaceous Species Planting

Species Name	Common Name
<i>Hyacinthoides non-scripta</i>	Bluebell
<i>Digitalis purpurea</i>	Foxglove
<i>Myosotis arvensis</i>	Field forget-me-not
<i>Lavandula angustifolia</i>	English lavender
<i>Leucanthemum vulgare</i>	Oxeye daisy
<i>Origanum vulgare</i>	Wild marjoram
<i>Potentilla erecta</i>	Tormentil
<i>Primula veris</i>	Cowslip
<i>Silene dioica</i>	Red campion
<i>Silene latifolia</i>	White campion
<i>Silene noctiflora</i>	Night-flowering catchfly
<i>Succisa pratensis</i>	Devil's-bit scabious

8.0 REFERENCES

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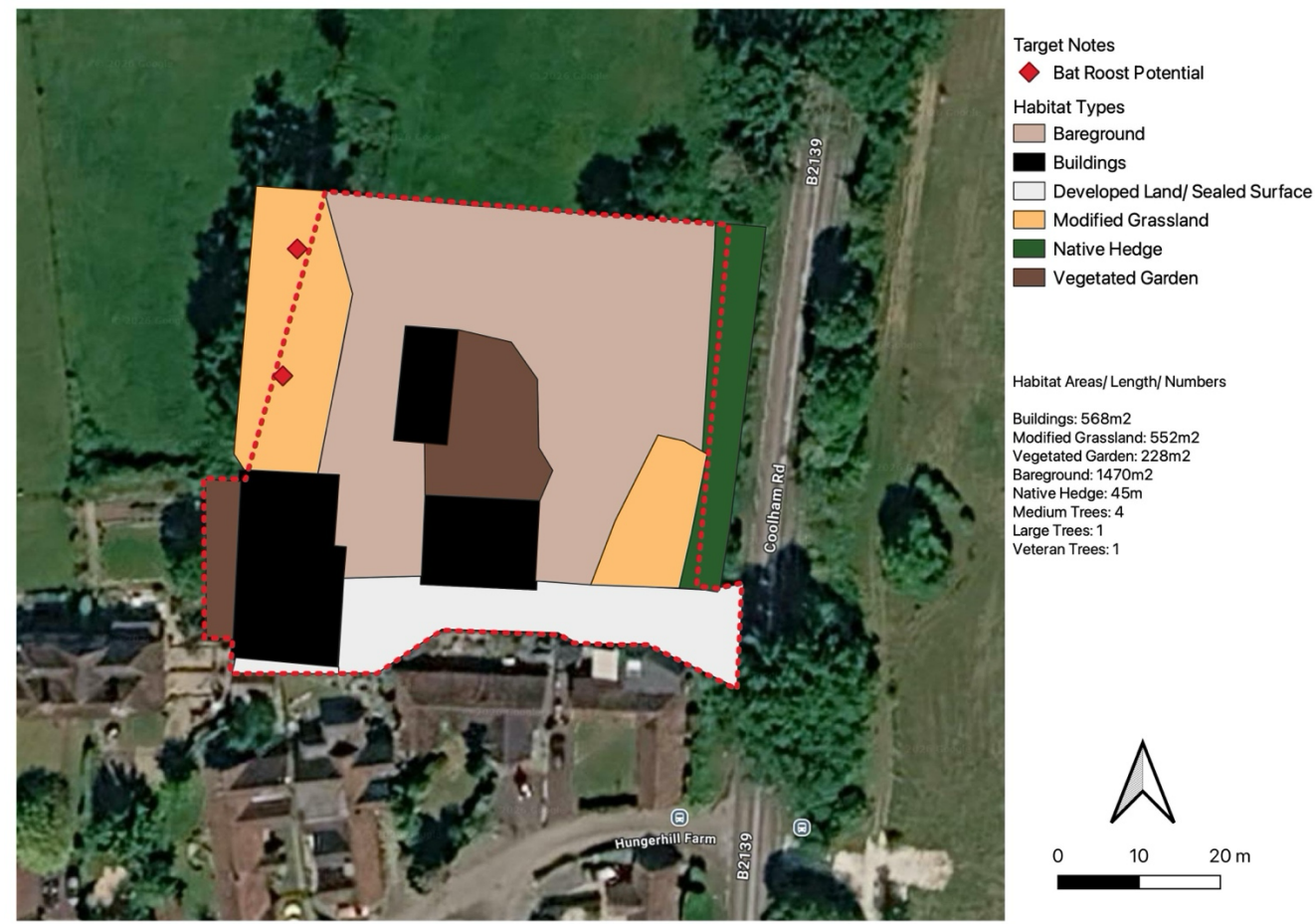
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Wildlife and Countryside Act (1981) The Stationary Office, Norwich

APPENDIX A: PRELIMINARY ECOLOGICAL WALKOVER SURVEY HABITAT MAP



APPENDIX B: PONDS WITHIN 500M



APPENDIX C: PHOTOS OF THE SITE

Plate 1: Garden Area (Unmanaged)



Plate 2: Bare Ground



Plate 3: Access Track



Plate 4: Access Track and Building



Plate 5: Large Oak (Bat Roost Potential)



Plate 6: Veteran Oak (Bat Roost Potential)



Plate 7: Barn



Plate 8: Residential Unit



Plate 9: Side Barn



Plate 10: Barn



Plate 11: Corrugated Roofing in Barn



Plate 12: Single Layered Brick Frontage



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

Species	Legislation (England & Wales)	Offences	Licensing procedures (England & Wales)
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 badger in its sett.	Where required, licences for development activities involving disturbance or sett interference or closure are issued by Natural England (NE). Licences for activities involving watercourse

Species	Legislation (England & Wales)	Offences	Licensing procedures (England & Wales)
		[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) Special Protection Area (SPA) Wetland of International Importance (Ramsar site)	Conservation of Habitats and Species Regulations 2010 EC Directive on the conservation of natural habitats and of wild fauna and flora (92/42/EEC). 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).	Planning controls are effected through Part 2 of the Conservation of Habitats and Species regulations 2010 (Reg 21) and Part 6 (Regs 61-67). 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.	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. 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.