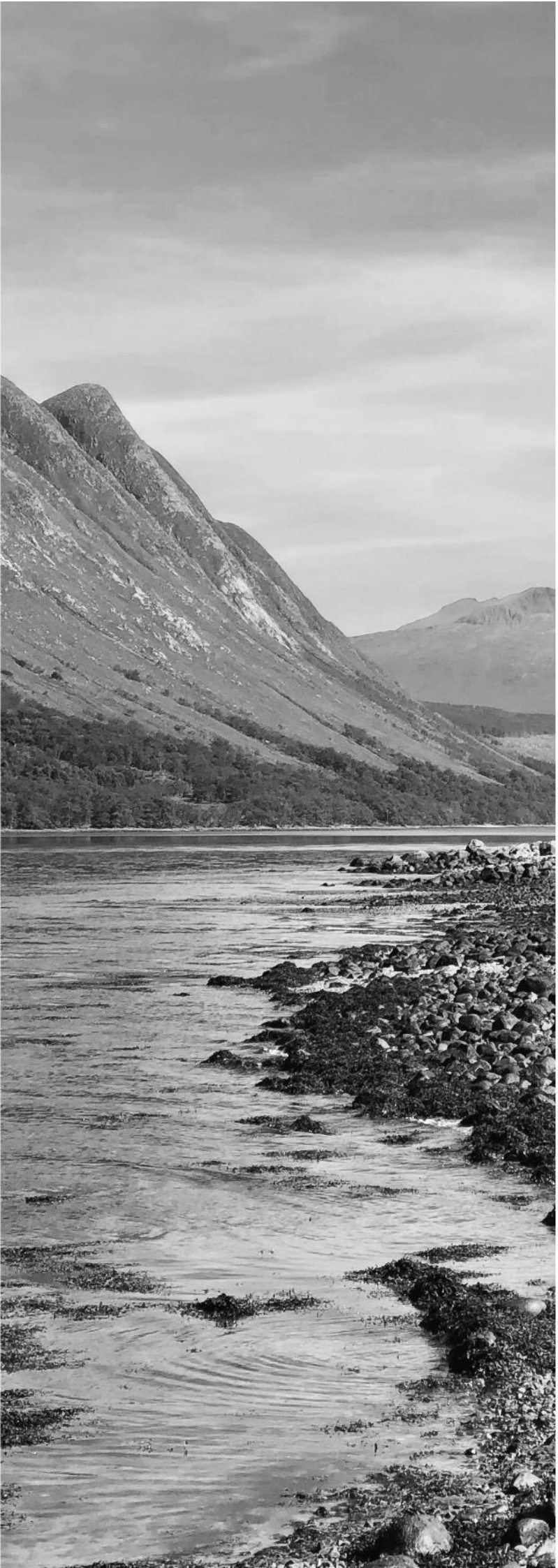

ECOLOGICAL APPRAISAL

LAND REAR OF LANGLEY COMMON

ET PLANNING

14/11/2025

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Revision History

Revision	Date	Prepared By	Reviewed By	Approved By	Comments
0.1	21/03/2025	AP	JB	CB	Draft report for client comment
0.2	19/08/2025	AP	JB	DO	Updated with badger and GCN surveys and client comments
V1	14/11/2025	CS	AS	DO	Updated with bat and reptile survey results

Quality Assurance

This report has been prepared according to Gavia Environmental Quality Management Process. Gavia Environmental employs consultant scientists who are members of appropriate professional institutions and adhere to professional codes of conduct.

Disclaimer

This report is presented to ET Planning in respect of Ecological Appraisal, and may not be used or relied on by any other person or by the client in relation to other matters not covered specifically by the scope of this report.

Notwithstanding anything to the contrary contained in the report, Gavia Environmental Ltd is obliged to exercise reasonable skill, care, and diligence in the performance of the services required by ET Planning and shall not be liable except to the extent that it has failed to exercise reasonable skill care and diligence, and this report shall be read and construed accordingly.

The report has been prepared by Gavia Environmental Ltd. No individual is personally liable in connection with the preparation of this report. By receiving this report and acting on it, the client or any other person accepts that no individual is personally liable whether in contract, tort, for breach of statutory duty or otherwise.

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Executive Summary

Gavia Environmental Ltd. was commissioned by ET Planning to undertake a suite of surveys at Land Rear of Langley Common, Barkham, Wokingham (hereafter referred to as 'the Site') as shown in **Figure 1**. The output of this is the following Ecological Appraisal report, which includes both the results of the Preliminary Ecological Appraisal (PEA) (incorporating both field and desk-based studies), and subsequent Phase 2 surveys identified as being required following completion of the PEA. These included an extended habitat survey, reptile surveys, a Ground Level Tree Assessment (GLTA), static bat detector surveys, a badger survey, and assessments for great crested newts (GCN) comprising a Habitat Suitability Index (HSI) and eDNA testing.

The desk study compiled data from the Local Environmental Record Centre, the Thames Valley Environmental Records Centre (TVERC), on any statutory nature conservation designations within 5km of the Site and any non-statutory designations within 2km of the Site. It also compiled existing records of protected or otherwise notable species from within 2km of the Site and dating from within the last 10 years.

No statutory nature conservation designations were found to overlap with the Site. Eight statutory sites designated for nature conservation were found within 5km of the Site; the closest being Longmoor bog Local Nature Reserve (LNR), located approximately 1.5km to the east of the Site. The closest non-statutory site designated for nature conservation was Hazelton's Copse Local Wildlife Site (LWS), located approximately 0.5km to the northwest of the Site. Lowland mixed deciduous woodland, a priority habitat, was found on Site and within the wider ownership boundary. Records of protected or otherwise notable species found within 2km of the Site included amphibians, reptiles, mammals (including bats) and birds.

The extended habitat survey was undertaken on the 14th of February 2025, which mapped the habitats within the Site boundary and wider ownership boundary and considered the potential for protected or otherwise notable species to be present within the Site and wider area. A GLTA was also undertaken for the trees present on the northern and eastern boundaries of the Site, to assess their suitability to support roosting bats. An HSI survey was undertaken of three ditches and three ponds found within 250m of the Site, to assess their suitability to support GCN. eDNA samples were collected from Ponds 1 and 3, Ditches 2 and 8 and Stream 1.

The Site was found to be characterised by moderate ecological value *Holcus-juncus* neutral grassland and other neutral grassland and high value other lowland mixed deciduous woodland (**Figure 1**). Other habitats on Site included a native hedgerow with trees, lines of trees, sparsely vegetated urban land and developed land, sealed surface. The wider ownership boundary was found to be characterised by *Holcus-juncus* neutral grassland and lowland mixed deciduous woodland. Additionally, in the wider ownership boundary, a stream lined by willow scrub was noted, as well as a line of trees along the western wider ownership boundary. No buffer zone was surveyed due to the Site being surrounded by private land, however ponds and ditches found within 250m were surveyed for their suitability for GCN. Additionally, access was subsequently granted for a badger survey within the surrounding land adjacent to the Site.

The GLTA identified trees with suitable bat roosting features. Bat activity surveys (deployment of static detectors) were also undertaken. Bat activity was recorded at varying levels across all five detector locations (**Figure 4**), with a total of eight individual species and species groups recorded. This included common pipistrelle, soprano pipistrelle, *Myotis* spp, Barbastelle, *Nyctalus* spp, common noctule, Leisler's bat and brown Long-eared bat, across six months of surveying in 2025. The highest level of bat activity was observed during July, with activity predominantly found to be highest for common pipistrelle across all surveyed months.

The HSI found all ponds and ditches in the wider area to be of poor suitability for GCN, however this does not confirm absence of GCN and therefore further eDNA testing was undertaken. The eDNA testing confirmed absence of GCN from Pond 1, Stream 1, and Ditch 2. Ditch 8 results came back as inconclusive; however it was not retested as the water levels

were low and this ditch is connected to Stream 1 which, was tested and returned as absent. As such, it was not deemed necessary to retest. Pond 2 and Ditch 3 were dry and so were not surveyed.

The badger survey confirmed absence of badger from the Site and the adjacent surrounding land. During this site visit, an active red kite nest was incidentally identified in the tree line along the north of School Road, off Site.

No invasive non-native species were recorded on Site or within the wider ownership boundary; however, a hedgerow of cherry laurel was recorded along the Site boundary within a residential garden located on the eastern side of the Site.

Reptile presence/absence surveys were conducted. No reptile signs were recorded utilising artificial refugia; however, an incidental finding of two slow worms was recorded within the Site during these surveys (**Figure 3**).

Based on the findings of these surveys, the following recommendations and mitigation are advised:

- Birds; pre-works nesting bird checks given suitability of woodland and hedgerow habitat for tree nesting species.
- Bats; As bats were found to be active on Site it is recommended to proceed with caution, and with proportionate mitigation being implemented:
    - Any lighting schemes should be designed with bats in mind, directing all light away from the surrounding trees and hedgerows, and using low sodium lights which have less impact on foraging and commuting bats.
- Reptiles; As slow worm were identified on site, it is recommended to proceed with caution and under specific working methods, due to transient nature of reptile species.
- Badger; a pre-construction badger survey will be required given known mobility of the species.
- Red Kite; use of working windows (if possible) or adherence to the Red Kite Protection plan. Use of hard screening using fencing and hedgerow laying as well as retaining mature trees during operation of the housing development to reduce noise and visual impacts for the red kite nest.
- Water Vole; based on incidental recording of potential burrows, a pre-construction water vole survey will be required.

1 Introduction

1.1 Aims and Objectives

Gavia Environmental Ltd ('GEL') was commissioned by ET Planning (the 'Client') to undertake a suite of surveys at Land Rear of Langley Common, Barkham, Wokingham (hereafter referred to as 'the Site') as shown in **Figure 1**. The output of this suite of surveys is the following Ecological Appraisal report, which includes both the results of the Preliminary Ecological Appraisal (PEA) (incorporating both field and desk-based studies), and subsequent surveys identified as being required following completion of the PEA. These subsequent surveys included an extended habitat survey, reptile surveys, a Ground Level Tree Assessment (GLTA), static bat detector surveys, a badger survey, and assessments for great crested newts (GCN) comprising a Habitat Suitability Index (HSI) and eDNA testing.

This work was undertaken to identify potential key ecological constraints and opportunities associated with a proposed residential development (the 'Proposed Development') within the Site, possible mitigation requirements and any detailed further surveys that could be required.

This report aims to:

- Provide a desk-based study of nature conservation designations and records of protected or otherwise notable species from the Site and local area;
- Provide a description of habitats present on Site;
- Provide any evidence of protected or otherwise notable species present on Site or immediately adjacent areas;
- Confirm the conservation significance of the Site and assess the potential for impacts on habitats or species likely to represent a material consideration in planning terms, or establish the scope and extent of any additional specialist ecological surveys that will be required before such confirmation can be made; and
- Recommend mitigation and enhancement strategies to reduce likely effects and to improve biodiversity within the Site.

1.2 The Proposed Development

The outline application includes the phased development of 27 dwellings including new access onto School Road, landscaping, infrastructure, one self-build plot and overflow parking for the benefit of the local area (with all matters reserved except access into the site).

1.3 Legislation, Policy and Guidelines

Relevant legislation, policy and guideline documents considered during the preparation of this PEA are provided in **Appendix A** and summarised below.

1.3.1 Legislation

Full consideration has been given to relevant nature conservation legislation when carrying out this assessment. This includes the following:

- The Wildlife and Countryside Act 1981 (as amended) (the 'WCA');
- The Protection of Badgers Act 1992;
- The Hedgerow Regulations 1997;
- The Countryside and Rights of Way Act 2000 (as amended) (the 'CRoW Act');
- The Natural Environment and Rural Communities Act 2006 (the 'NERC Act');
- The Conservation of Habitats and Species Regulations 2017 (as amended); and
- The Environment Act 2021.

1.3.2 Policy framework

Full consideration has been given to relevant policy when carrying out this assessment. This includes the following:

- Wokingham Borough Local Development Framework (Adopted January 2010);

- Wokingham Borough Emerging Local Plan 2023-2040;
- Wokingham Borough Council Biodiversity Action Plan 2012-2024 (Adopted 2014); and
- National Planning Policy Framework (NPPF) (Ministry of Housing, Communities & Local Government, 2024).

1.3.3 Guidelines

The assessment has been undertaken in cognisance of the Guidelines for Preliminary Ecological Appraisal produced by the Professional Standards Committee of the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017) as well as the following best practice guidelines:

- Bat Conservation Trust Guidelines (Collins J., 2023);
- The UK Habitat Classification Version 2.0 (UKHab Ltd., 2023);
- The Classification of Badger (*Meles meles*) Setts in the UK: A Review and Guidance for Surveyors (CIEEM, 2013); and
- ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index (Amphibian and Reptile Groups of the United Kingdom, 2010);
- Surveying for Reptiles: Tips, techniques and skills to help you survey for reptiles (Froglife, 2015); and
- Great Crested Newt eDNA Guidance (SureScreen Scientifics, 2023).

2 Methodology

This section describes the methods used to conduct this Ecological Appraisal, which included an ecological desk study, an extended UKHab Survey, bat surveys (including GLTA, activity surveys and aerial climbed inspection), GCN surveys (including an HSI and eDNA sampling), reptile presence/absence surveys and a badger survey.

The fieldwork was undertaken by Jasmine Bernard BSc (Hons), a Qualifying Member of CIEEM and holder of a Natural England Bat Class Licence Level 1 WML CL17 (licence number 2023-11155-CL17-BAT) and GCN Licence Level 1 (licence 2024-11991-CL08-GCN) and Areti Panopoulou MSc, BSc (Hons). They were supported by Ben Fleming, a Chartered Water and Environmental Manager, and member of the Chartered Institute of Water and Environmental Management. A summary of the surveys undertaken can be found in **Table 1** below:

Table 1. Summary of Survey Details

Date	Type of Survey	Surveyor
14/02/25	Extended habitat survey and Habitat Condition Assessment	Jasmine Bernard and Areti Panopoulou
16/04/25	GCN eDNA, bat statics deployment, reptile survey set up and badger survey	Jasmine Bernard and Areti Panopoulou
30/04/25	Reptile survey 1	Jasmine Bernard
14/05/25	Bat statics collection	Jasmine Bernard and Areti Panopoulou
10/06/25	Reptile survey 2 and bat statics deployment	Areti Panopoulou
23/06/25	Reptile survey 3 and bat statics collection	Areti Panopoulou
02/07/25	Bat statics deployment	Areti Panopoulou
15/07/25	Bat statics collection	Areti Panopoulou
29/07/25	Aerial tree inspection	Kelly Jones
01/08/25	Bat statics deployment	Areti Panopoulou
20/08/25	Bat static collection	Ben Fleming
04/09/25	Reptile survey 4 and bat static re-deployment	Ben Fleming
25/09/25	Reptile survey 5 and bat static re-deployment	Ben Fleming
03/10/25	Reptile survey 6 bat static re-deployment	Ben Fleming
15/10/25	Reptile survey 7 and bat static collection	Ben Fleming

2.1.1 Ecology Desk Study

In accordance with the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017), an ecology desk study was carried out using a range of publicly available information sources and Local Environmental Record Centres (LERC) to provide an understanding of the ecological context of the Site and wider area.

In terms of nature conservation designations, the desk study identified any statutory designation, i.e. any Special Protection Area (SPA), Special Area of Conservation (SAC), Ramsar, Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), Marine Protection Area (MPA) or Local Nature Reserve (LNR), within 5km of the Site boundary, and any non-statutory designation, such as any Local Wildlife Site (LWS), Site of Interest for Nature Conservation (SINC) or an area of woodland included on the Ancient Woodland Inventory (AWI), or any priority habitats within a 2km distance of the Site boundary.

Existing records for protected or otherwise notable species, e.g. Species of Principal Importance in England as listed in Sections 41 and 42 of the NERC Act, local priority species on the Wokingham Biodiversity Action Plan (BAP), (Wokingham Borough Council, June 2014), or red- or amber-listed species on the fifth review of Birds of Conservation Concern (BoCC5) (Stanbury *et al.*, 2021), were identified within a 2km distance of the Site boundary. Only records from within the last 10 years were considered relevant to the study.

Data records available for commercial purposes were obtained from the following:

- MAGIC Maps (Multi-Agency Geographic Information for the Countryside, 2025);
- National Biodiversity Network (NBN) Atlas (NBN, 2025); and
- Thames Valley Environmental Records Centre (TVERC).

2.1.2 Extended UKHabs Survey

An extended UKHabs survey was carried out of the Site and wider ownership boundary (no buffer zone was surveyed as the surrounding area consisted of private land) following the standard survey methodology (UK Hab Ltd., 2023). The classification, which is designed to provide a simple and robust approach to both habitat baselining and monitoring, covers terrestrial and freshwater habitats and is flexible enough for use in a wide range of situations, from walkover surveys of small urban sites to regional and national-scale rural habitat mapping.

During the survey, habitats over 0.1ha located within the Site were mapped and classified according to their vegetation types. Dominant plant species were recorded in accordance with plant species nomenclature in Stace (2010). It should be noted that the survey did not compile a complete list of flora and faunal inventory for the Site and that further specialist surveys would be required if this data is necessary. A series of target notes (TNs) were also produced to describe representative habitats and features of interest. TNs were also recorded to describe habitats too small to be mapped.

The habitat survey was 'extended' to record features on Site with the potential to support protected or otherwise notable species (in addition to those for which a dedicated survey was carried out; see below) that could require further assessment. Any evidence of protected or otherwise notable species, including birds, badger and reptiles, was therefore also recorded as target notes.

The extended UKHabs survey method enables a suitably experienced ecologist to undertake a baseline ecological appraisal of the Site that will:

- Provide a preliminary evaluation of the nature conservation significance of the Site and assess the potential for impacts on habitats/species likely to represent a material consideration in planning terms; and
- Determine the scope of any further specialized surveys that may be required to inform an EcIA.

2.1.3 Bat Surveys

2.1.3.1 Ground Level Tree Assessment (GLTA)

A GLTA survey was undertaken in accordance with the standard Bat Conservation Trust guidelines (Collins, 2023). This consisted of a ground-based assessment to identify potential roost features (PRFs) on trees. The survey involved the use of close focusing binoculars and a high-powered torch to identify (from ground level) any PRFs within the trees. All potential

bat access/egress points and PRFs, for example knot holes, woodpecker holes and limb wounds were identified and recorded along with any evidence that may have indicated the location of roosts, such as stains and/or scratch marks (from claw holds, fur, oil secretions etc.); bat droppings, feeding remains; and odours or noise characteristics of bats, to aid in the search for bats and signs of bats such as droppings, urine staining and feeding remains. Where such signs were found, the location and distribution were marked on a plan of the tree.

The trees were classified for their potential to support roosting bats, using a scale of None, PRF – Individual (PRF-I) and PRF-Multiple (PRF-M), as well as their hibernation suitability. It was also considered whether the tree could be fully assessed and, if it could not, the tree was classified as 'Further Assessment Required' (FAR). This could be owing to external factors, such as vegetation obscuring view, limited access or any other reason for an inability to fully assess the feature from the ground. In these situations, it is recommended the survey is undertaken at a different time of year (i.e. winter), when there is less vegetation on the trees, or an aerial inspection is undertaken to fully assess the suitability of a feature.

Table 2 below outlines the assessment criteria.

Table 2. Bat Roost Suitability Categories

Bat Roost Suitability	Description	Survey Requirement
Trees		
None	The tree is not likely to be used by any roosting bats at any time of the year (i.e., a complete absence of crevices/suitable areas for shelter).	No further surveys required.
PRF-I	PRF is only suitable for individual bats or a very small number of bats either due to size or lack of surrounding suitable habitats.	No further surveys required.
PRF-M	PRF is suitable for multiple bats and therefore may be used by a maternity colony.	Three aerial inspection or emergence surveys undertaken between May and September, with at least two of the surveys between May and August. Surveys should be undertaken at least three weeks apart.

2.1.3.2 Bat Activity Surveys (Statics)

To assess bat activity across the Site, five static bat detectors (**Figure 4**) were deployed at strategically selected locations to provide representative coverage of different habitats and features. The detectors were programmed to record bat echolocation calls 30 minutes before sunset until 30 minutes after sunrise, aligning with peak bat activity timings.

Detector locations were chosen based on habitat features likely to influence bat activity. Such as tree lines, hedgerows, the stream running through the middle of the Site and the woodland on the west of the wider ownership boundary. The exact coordinates and details of each deployment location are provided in **Appendix E, Table E.1**.

Following the survey period, recordings from the five consecutive nights with the most favourable weather conditions – low wind, dry and mild temperatures – were selected for analysis to ensure optimal detection rates. The recordings were analysed using Anabat Insight, with calls identified to species level where possible.

All data was initially analysed with the Bat Classify auto-identification program set at 85% probability level. All auto-identified bat calls were checked by trained ecologists.

As *Myotis* genus sonograms can be difficult to identify to species level and as recommendations would be the same for all species in this genus, all *Myotis* calls were assigned only to genus level (see limitations).

Results were then entered into a pro-forma and analysed using the Ecobat tool (Mammal Society, 2025). Ecobat is an online free tool which is used to compare bat activity levels found within the surveyed Site with other sites within a given radius at the same time of year. The reference range comparison dataset was set to compare against records only found within 30 nights of the survey data and within 100km² of the surveyed area. Ecobat uses percentiles to provide a numerical representation of activity levels by comparing with a large bat data set from various other energy developments. Percentiles can then be assigned to activity categories (low, moderate, high) to provide a quantifiable measure of bat activity (Ecobat, 2025). The suggested levels of activity are:

- Low activity: 0-20th percentile;
- Low to moderate activity: 21st-40th percentile;
- Moderate activity: 41st-60th percentile;
- Moderate to high activity: 61st-80th percentile; and
- High activity: 81st-100th percentile.

2.1.3.3 Aerial Tree Inspection

An elevated search to inspect PRFs in one tree (scheduled for felling) identified during the GLTA, was undertaken. This survey catalogues the PRFs in a more accurate way and allows a search for evidence of bats in low- and higher-level features (Collins, 2023).

2.1.4 Great Crested Newt (GCN) Survey

2.1.4.1 Habitat Suitability Index (HSI)

A HSI assessment was conducted of waterbodies within 250m of the Site boundary to test for the presence of GCN in line with best practice guidance (ARGUK, 2010; Grundy, J. 2025). Six waterbodies consisting of three ponds (Ponds 1, 2 and 3) and three ditches (Ditches 2, 3 and 8) were surveyed.

The HSI for GCN is a method to measure habitat suitability and involves detailed inspection of ponds, other water bodies, and surrounding habitats. Ten suitability factors known to affect GCN populations contribute to the calculation: geographic location, pond area, permanence, water quality, % shade, waterfowl presence, fish presence, pond count, terrestrial habitat and macrophyte cover. The HSI is a numerical index between 0 and 1, with values close to 0 indicating unsuitable habitat, and 1 representing optimal habitat, as shown in **Table 3** below.

Table 3. HSI Categories

HSI Score	Pond Suitability
<0.5	Poor
0.5 - 0.59	Below Average
0.6 - 0.69	Average
0.7 - 0.79	Good
>0.8	Excellent

It is important to note that an his only provides an indication of the suitability of a waterbody to GCN; is not a substitute for newt surveys and the HSI score can change throughout the year due to factors such as hot/wet spells resulting in ponds drying out or flooding, growth of terrestrial and aquatic vegetation, etc.

2.1.4.2 eDNA Analysis

eDNA testing is a technique used to determine the presence / probable absence of GCN in ponds during the breeding season (15th April – 30th June inclusive). It involves taking water samples of the pond/s in question at multiple sample points. The samples are then sent for laboratory analysis.

In line with good practice guidance (Biggs *et al.*, 2014), 20 samples of pond water (each sample being 30ml) were collected from around each pond/ditch identified within 250m of the Site. Sample locations were spread out evenly around the waterbody edge, ensuring that samples were collected from both open water and vegetated areas, if present, and, where possible, from areas of water greater than 10cm deep. Each sample was added to the bag after collection; once all 20 samples were collected the bag was closed and shaken for ten seconds to ensure any DNA present was mixed across the sample. 15ml of water was then transferred from the bag into each of the six sample tubes containing preservative and each tube was shaken to ensure the sample was fully combined with the preservative. Samples were then sent to the lab at ADAS for analysis.

2.1.5 Badger survey

A badger survey was undertaken on Site and of land adjacent to the south and northeast of the Site following best practice guidance (Harris et al., 1989; CIEEM, 2013). During the survey, the following evidence was searched for:

- Setts – comprising either single holes or a series of holes likely to be connected underground. Where setts were present, these were categorised as far as possible in accordance with guidance;
- Hairs – usually with a white root, black band, white tip (often caught in sett entrances/fences/vegetation);
- Footprints – located in soft mud, often in sett entrances;
- Evidence of foraging – usually in the form of 'snuffle holes' (small scrapes created by badgers searching for insects and earthworms);
- Dung pits – characteristic excavated pits containing faeces;
- Latrines – a concentration of dung pits typically found at home range boundaries; and
- Paths – particularly around setts or leading to feeding areas.

2.1.6 Reptile Presence/Absence Survey

Following the identification of suitable reptile habitat during the PEA, further surveys were undertaken to determine the presence / likely absence of reptiles on Site. A total of 60 artificial refugia (reptile mats) were deployed across the Site, in late summer and autumn 2025, in locations chosen to maximise the chances of detection (as shown in **Figure 3**). Mats were placed in sunlit areas and suitable reptile habitats, such as grassland edges, scrub margins and areas with varied vegetation structure. Placement was strategic to ensure a range of microhabitats were covered across the Site and wider ownership boundary.

The mats were left in situ for a period of time sufficient to allow them to bed in and become attractive to reptiles. They were then checked on multiple occasions throughout the active reptile survey season (March to October inclusive), in accordance with best practice guidelines (Froglife, 2015). Surveys were conducted during suitable weather conditions and at optimal times of day – typically mid-morning or late afternoon when reptiles are most likely to be basking. Survey dates can be seen in **Table 1.**

Each mat was approached with care to avoid disturbing any animals sheltering underneath. Surveyors ensured their shadow did not fall on the mat during their approach. Mats were lifted quickly and all observations – species, number of individuals, life stage and behaviour – were recorded.

2.1.7 Invasive Non-Native Species (INNS)

A search for invasive species was undertaken, including but not limited to Japanese knotweed *(Fallopia japonica)*, Himalayan balsam (*Impatiens glandulifera)*, rhododendron (*Rhododendron ponticum)* and giant hogweed (*Heracleum mantegazzianum)*.

2.2 Limitations

2.2.1 General

It should be noted that ecological surveys and reports are only valid for a certain amount of time and planning decisions must be based upon up-to-date ecological reports and data. Timeframes for data and report validity vary depending on circumstances, such as the Site and species present, however in general, surveys and reporting should be updated if more than one year has lapsed between the survey data being collected and the proposed development commencing (CIEEM, 2019).

2.2.2 UKHabs Survey

The habitat survey was undertaken outside of the optimal flowering season, which is generally considered to be April to September, inclusive. Therefore, some species may have been missed, particularly forb species, or in some cases, species identification was only able to be classified to genus level, rather than species level. However, the level of identification accurately classified the habitat type by identifying key indicator species across the grassland. Additionally, the Site was visited again during optimal flowering season to undertake phase 2 surveys (GCN eDNA, badger, reptile, bat static surveys) and the grassland species were reviewed during these visits, with species lists updated if any new species were identified. Therefore, this is not considered a significant limitation. The Site is partially classified as a priority habitat (lowland mixed deciduous woodland), which can support rarer species, however tree identification can be undertaken at any time of the year, so this is not considered a significant limitation. One species which was identified in the previous PEA, Midland hawthorn (*Crataegus laevigata*), could not be distinguished from common hawthorn (*Crataegus monogyna*) at this time of the year due to the defining features being the number of seeds within the fruits. As a precautionary approach, it was assumed this species was still present within the woodland on Site.

2.2.3 GLTA

Due to the limitations of what is known about the ecology of tree-roosting bats, it is arguable that all trees with Bat Roost Potential (BRP) should be considered part of a resource that will be used at one time or another by tree roosting bats, to determine the extent of potential impacts. Survey work on individual trees may confirm presence but is unlikely to conclusively confirm absence. Precautionary measures are likely to still be required during works, even where surveys have not identified occupancy.

2.2.4 Bat activity surveys (static)

During the August survey period, Bat Detector D2 (**Figure 4**) failed and did not record the full survey period. However, this is not a significant limitation as there is sufficient data from other survey months at this location to inform the assessment. Furthermore, during analysis of data collected in May, the data was corrupted and therefore not usable for analysis and therefore is not included in this report. As per previous, it is considered that there was sufficient other data gathered during the other survey months to inform this assessment, and therefore this is not considered to be a significant limitation.

As *Myotis* genus sonograms can be difficult to identify to species level and as recommendations would be the same for all species in this genus, all *Myotis* calls were assigned only to genus level.

There are limitations associated with analysing the bat activity levels on Site using the online tool Ecobat. This tool depends on third party data and the constant input and use of the service, therefore the accuracy and validity of the results produced requires a substantial number of records to be present. However, considering the volume of data recorded during these deployments, it was considered the most efficient way to evaluate the data.

2.2.5 Badger Survey

The area immediately adjacent to the northeast of the Site was not accessible as it was part of private land [redacted]

2.2.6 HSI

The HSI for GCN is a measure of habitat suitability. It is not a substitute for newt surveys. In general, ponds with high HSI scores are more likely to support GCN than those with low scores. However, the system is not sufficiently precise to conclude that any pond or other waterbody with a high score will support newts, or that any pond with a low score will not do so.

2.2.7 eDNA Testing

Pond 2 and Ditch 3 were dry at the time of the sampling and therefore could not be surveyed. However, given it was early in the season (16th April) and the waterbodies were already dry, it suggests these are not suitable for breeding GCN and therefore it is not considered a significant limitation. Additionally, Ditch 2 was mostly dry so samples were all taken from the same location rather than being spread evenly as recommended by best practice guidelines. Ditch 8 results came back inconclusive, however as it was connected to Stream 1 which came back negative, and water levels were low it was not retested.

3 Results

3.1 Desk Study

3.1.1 Nature Conservation Designations

As summarised in **Table 4**, nine sites receiving statutory designation for nature conservation were identified within 5km of the Site.

Table 4. Statutory Nature Conservation Designations

Name	Designation	Distance and direction from Site	Reason for designation
Longmoor Bog	Local Nature Reserve (LNR)	1.85km southeast of the Site.	Longmoor Bog is designated as a LNR for its lowland valley mire and wet (bog) woodland habitats. Species found here include bog bush cricket, adders, bog bean and common wintergreen.
	Site of Special Scientific Interest (SSSI)	1.92km southeast of the Site.	Longmoor Bog SSSI, located southwest of Wokingham, is a rare base-poor valley mire in Berkshire. Its key features include a well-developed carr of alder, grey willow, downy birch, and alder buckthorn, along with wet heathland dominated by purple moor-grass and cross-leaved heath. The rest of the designation consists of secondary mixed woodland. The nature conservation designation is situated in a shallow valley with sandy deposits and peat accumulation in the valley bottom, creating waterlogged conditions. A small stream flows through the carr, and the area is characterized by mosses, including rare species like *Sphagnum fimbriatum*, *Orthotrichum lyelli*, and *Lejeunea ulicina*. The carr is home to acid-tolerant plants like water horsetail, white sedge, bottle sedge, hard fern, bogbean, and common spotted orchid. The wet heathland to the south is dominated by *Sphagnum* mosses, cross-leaved heath, heather, and rushes, with species like cotton-grass and round-leaved sundew. Other plants include honeysuckle, wavy hair-grass, pill sedge, slender rush, heath woodrush, and several orchids.
Thames Basin Heaths	Special Protection Area (SPA)	4.0km south of the Site.	Thames Basin Heaths are composed of heathland and bog, woodland, parkland and wood pasture (including veteran trees), ponds, with a known population of water voles found near Sandhurst. The site is designated for breeding species including European nightjar, woodlark and Dartford warbler.
Pearman's Copse	LNR	4.19km northwest of the Site.	This LNR is managed by Wokingham District Council. The northern area is dominated by oak and cherry, with hazel and maple in the shrub layer and bluebell and bramble in the field layer. The central copse features ash coppice stools, with hazel and crab apple, and a ground layer of bramble and dog's mercury. The southern end has more hazel, field maple, and elder, with a mix of dog's mercury, bluebell, and ground ivy. Spring brings abundant lesser celandine and early purple orchid. In 2022,

Name	Designation	Distance and direction from Site	Reason for designation
			the LNR expanded to include 1980s-planted woodland, a wet ditch, and scrub, with spindle, oak, and a wild service-tree.
Holt Copse & Joel Park	LNR	4.46km northwest of the Site.	Holt Copse and Joel Park includes lowland mixed deciduous woodland an ancient semi-natural woodland. A large noctule bat roost is found within the area.
Bramshill	SSSI	4.53km southeast of the Site.	This site is notable for its shallow acid ponds and mire, home to a diverse range of dragonflies and damselflies. It also features a rotationally felled conifer plantation, providing habitat for internationally significant populations of nightjar, woodlark, and Dartford warbler.
Swallowfield Meadow	LNR	4.66km southwest of the Site.	This LNR is notable for its species rich meadows including oxeye daisies, field scabius, silver birch, field maple and hazel. Additional habitats include native hedgerows, a small copse and seasonal ponds. Water voles are also found in this conservation designation.
Maiden Eriegh Park	LNR	4.68km northwest of the Site.	Ancient and semi-natural woodland dominated by ash with occasional oak and locally rare sycamore. The understorey includes holly, hazel, hawthorn, privet, elder and blackthorn. The field layer includes nettle, herb Robert, cleavers, male fern, occasional bluebell. Species of principal importance include freshwater crayfish and song thrush. Legally protected species found here include bluebell, kingfisher, common frog and crayfish.
The Marshes	LNR	4.79km southwest of the Site.	Part wet woodland and part wet semi-improved mesotrophic horse grazed grassland with boundary hedges. This wet woodland is a national priority BAP habitat.

Nine non-statutory sites designated for nature conservation were identified within the 2km search buffer (see **Table 5**, below).

Table 5. Non-statutory Nature Conservation Designations

Name	Designation	Distance and direction from Site	Reason for designation
Hazelton's Copse	Local Wildlife Site (LWS)	0.5km northwest of the Site.	Hazelton Copse is designated as a Local Wildlife Site due to its status as ancient semi-natural woodland and its diverse habitat, including a mix of Lowland Mixed Deciduous Woodland and key ancient woodland indicators. It supports a variety of species, such as bluebell, primrose, and wood anemone, and has a range of habitats from coppice to wetland areas with unique plant species. Additionally, its varied structure and natural boundaries, such as a ditch and hedgerows, enhance its ecological importance.
The Coombes	LWS	1.03km northeast of the Site.	The Coombes consists mainly of lowland mixed deciduous woodland with varied structure and species. The canopy varies, with frequent silver birch, occasional oak, and localized areas of sweet chestnut, beech, sycamore (north), and ash (south and west). The shrub layer includes frequent hazel,

Name	Designation	Distance and direction from Site	Reason for designation
			occasional holly, rowan, and hawthorn, with rhododendron dominating centrally and in the east. The field layer ranges from diverse flora to bramble, bracken, or bare patches. Two even-aged larch plantations exist in the north-west and east, with bracken-dominated field layers. A stream, lined with alder and ash, and various drains support wetland species such as bog stitchwort, water mint, and marsh pennywort. The north-western tip features semi-improved grassland with Lowland Meadow species, while the south-east contains small acidic grassland. Several paths, including mountain bike tracks, cause compacted bare ground. Badger are present within the LWS and many notable bird species such as cuckoo, dunnock, kestrel.
Long Copse (South) and Robin Hood Copse	LWS	1.6km southwest of the Site.	The LWS is designated for its ancient woodland status, with diverse habitats across Long Copse and Robin Hood Copse. It features a variety of tree species such as ash, alder, birch, and hazel, alongside rich ground flora including bluebell, primrose, and wood sorrel. The presence of wood banks and diverse woodland strips along Wokingham Lane further contribute to its ecological value.
Spring Copse and Long Copse (North) extension	LWS	1.6km southwest of the Site.	This LWS is designated for its semi-natural ancient woodland, featuring a canopy dominated by oak, ash, alder, and birch, with wet flush areas in Long Copse supporting rushes and marsh marigold. The ground flora includes bluebells, dog's mercury, wood anemone, and bracken, with a proposed extension adding lowland mixed deciduous woodland. The diverse habitats, including the wet flush and varied plant species, contribute to its ecological significance.
Bearwood Estate – Woods and Lakes	LWS	1.7km northeast of the Site.	This LWS is designated for its diverse habitats, including long-established broadleaved woodland, conifer plantation, and mixed woodland, with species like wood spurge, yellow archangel, and yellow pimpernel linked to ancient woodland. It also features heathland species, acidic soil plants, and attracts a variety of birds, including records by the British Trust for Ornithology. The LWS's ecological value is further highlighted by the presence of the silver-washed fritillary butterfly.
Longmoor Bog and Woodland, California Country Park	LWS	1.7km southeast of the Site.	This is the part of California Country Park that lies outside the Longmoor Bog SSSI. There is a lack of specific habitat details.
Hogwood Shaw	LWS	1.9km south of the Site.	This small woodland site features a mix of oak in the north-east, hazel coppice in the south-west, and a small area of Norway spruce. Despite not being listed in the English Nature Inventory of Ancient Woodland, it supports species linked to long-established woodland, including wild service tree, pignut, common spotted orchid, and bluebell. The presence of these species adds to its ecological significance.

Name	Designation	Distance and direction from Site	Reason for designation
Pound Copse	LWS	1.9km west of the Site.	Ancient woodland with ash-filed maple dog's mercury woodland and an oak, bracken and bramble woodland. Some areas also include sedge swamps. Notable plant species include slender St. John's-wort, pignut, purple loosestrife and hemlock water-dropwort.
Brook Farm Meadow	LWS	2km	This site consists of two wet grasslands separated by a scrubby hedgerow, featuring neutral to acidic marshy grassland with remnant rush pasture. The area supports a range of species, including soft rush, marsh thistle, and greater bird's-foot trefoil, and includes a seasonally inundated wet scrub woodland with aspen and willows. A pond with aquatic plants and the presence of badgers further contribute to its ecological value, and it is part of a SANG, with public accessibility.

In terms of priority habitats and ancient woodlands, 16 were identified within the 2km search buffer (see **Table 6**, below).

Table 6. Priority Habitats and Ancient Woodlands

Name	Type of Habitat	Distance and direction from Site
N/A	Traditional Orchard	~0.2km south
Kidgem Copse	Ancient & Semi-Natural Woodland	~0.45km southeast
Bignell's Copse	Ancient & Semi-Natural Woodland	~0.5km northeast
N/A	Wood-pasture and Parkland	~1km north
Little Coppice	Ancient & Semi-Natural Woodland	~1km northeast
Spring Copse	Ancient & Semi-Natural Woodland	~1.3km southwest
Bears Copse	Ancient & Semi-Natural Woodland	~1.4km northeast
Whitehall Copse	Ancient & Semi-Natural Woodland	~1.4km south
Long Copse	Ancient & Semi-Natural Woodland	~1.4km southwest
Robinhood Copse	Ancient & Semi-Natural Woodland	~1.5km south
Lowland heathland	Lowland Heathland	~1.6 southeast
Dog Kennel Copse	Ancient & Semi-Natural Woodland	~1.6km northwest
Brick Kiln Coppice	Ancient & Semi-Natural Woodland	~1.8km northwest
Hogwood Shaw	Ancient & Semi-Natural Woodland	~1.9km south

Name	Type of Habitat	Distance and direction from Site
Furzen Coppice/Parson's Coppice	Ancient & Semi-Natural Woodland	~2km northwest
N/A	Purple moor grass and rush pastures	~2km east

3.1.2 Protected or Otherwise Notable Species

As summarised in **Table 7**, records were identified of 13 non-avian species of nature conservation interest from within 2km of the Site boundary, dating from within the last 10 years.

Table 7. Legally Protected or Otherwise Notable Non-Avian Species

Common Name	Scientific Name	Detail of Record(s)	Legal / Conservation Status
Reptiles			
Slow worm	*Anguis fragilis*	338 records, the closest of which was located 0.08km east of the Site.	Wildlife and Countryside Act 1981, Schedule 5 section 9.1k/j (WACA-Sch5-s9.1k/j), Natural Environment and Rural Communities Act 2006, Section 41 (NERC-S41)
Grass snake	*Natrix helvetica*	116 records, the closest of which was located 0.08km east of the Site.	WACA-Sch5, NERC-S41
Amphibians			
Common frog	*Rana temporaria*	10 records, the closest of which was located 1.06km northeast of the Site.	WACA-Sch5-s9.5a
Common toad	*Bufo bufo*	Four records, the closest of which was located 1.35km southeast of the Site.	WACA-Sch5-s9.5a, NERC-S41, Local Biodiversity Action Plan (LBAP)
Great crested newt	*Triturus cristatus*	57 records, the closest of which was located 1.50km	Conservation of Habitats and Species Regulations 2017, Schedule 2 (HabReg-Sch2), HabDir-A2np, HabDir-A4, WACA-Sch5-s9.4b/s9.4c/s9.5a, NERC-S41, LBAP
Smooth newt	*Lissotriton vulgaris*	20 records, the closest of which was located 1.92km	WACA-Sch5-s9.5a
Palmate newt	*Lissotriton helveticus*	11 records, the closest of which was located 2.00km	WACA-Sch5-s9.5a
Bats			
Soprano pipistrelle	*Pipistrellus pygmaeus*	Two records, the closest being located 0.7km southeast of the Site boundary.	HabReg-Sch2, WACA-Sch5, NERC-S41
Common Pipistrelle	*Pipistrellus pipistrellus*	108 records the closest of which was located 1.3km east of the Site.	HabReg-Sch2, WACA-Sch5, NERC-S41, LBAP

Common Name	Scientific Name	Detail of Record(s)	Legal / Conservation Status
Brown long-eared bat	*Plecotus auritus*	57 records, the closest of which was 1.4km west of the Site.	HabReg-Sch2, WACA-Sch5, NERC-S41
Noctule bat	*Nyctalus noctula*	55 records, the closest of which was located 1.4km east of the Site.	HabReg-Sch2, WACA-Sch5, NERC-S41
Mammals (excluding bats)			
Otter	*Lutra lutra*	One record located 1.3km southeast of the Site.	HabReg-Sch2, WACA-Sch5, NERC-S41
Badger	*Meles meles*	Within 2km. Owing to the sensitivity of these records, locations are not disclosed.	Protection of Badgers Act 1992

As summarised in **Table 8**, records were identified of 48 bird species of nature conservation interest from areas within 2km of the Site boundary, dating from within the last 10 years. Four of these bird species were identified in the Local Biodiversity Action Plan (LBAP).

Table 8. Legally Protected or Otherwise Notable Non-Avian Species

Common Name	Scientific Name	Legal / Conservation Status				
		Annex 1, Birds Directive	Schedule 1, WCA	Species of Principal Importance	LBAP	BoCC 5
Barn owl	*Tyto alba*		x			Green
Bearded tit	*Panurus biarmicus*		x			Green
Black redstart	*Phoenicurus ochruros*		x			Amber
Black tern	*Chlidonias niger*	x	x			Amber
Black-headed gull	*Chroicocephalus ridibundus*					Amber
Brambling	*Fringilla montifringilla*		x			Green
Bullfinch	*Pyrrhula pyrrhula*			x	x	Amber
Cetti's warbler	*Cettia cetti*		x			Green
Crossbill	*Loxia curvirostra*		x			Green
Cuckoo	*Cuculus canorus*			x		Red
Dartford warbler	*Curruca undata*	x	x			Amber
Fieldfare	*Turdus pilaris*		x			Red
Firecrest	*Regulus ignicapilla*		x			Green

Common Name	Scientific Name	Legal / Conservation Status				
		Annex 1, Birds Directive	Schedule 1, WCA	Species of Principal Importance	LBAP	BoCC 5
Golden plover	*Pluvialis apricaria*	x				Green
Grasshopper warbler	*Locustella naevia*			x		Red
Great black-backed gull	*Larus marinus*					Amber
Greenfinch	*Chloris chloris*					Red
Grey partridge	*Perdix perdix*			x		Red
Grey wagtail	*Motacilla cinerea*					Amber
Hawfinch	*Coccothraustes coccothraustes*					Red
Herring gull	*Larus argentatus*					Red
Hobby	*Falco subbuteo*		x			N/A
Honey buzzard	*Pernis apivorus*	x	x			Amber
Kestrel	*Falco tinnunculus*					Amber
Kingfisher	*Alcedo atthis*	x	x			N/A
Lapwing	*Vanellus vanellus*					Red
Lesser Black-backed Gull	*Larus fuscus*					Amber
Lesser Redpoll	*Acanthis cabaret*					N/A
Lesser Spotted Woodpecker	*Dryobates minor*					Red
Linnet	*Linaria cannabina*			x		Red
Marsh harrier	*Circus aeruginosus*	x	x			Amber
Marsh tit	*Poecile palustris*					Red
Mistle thrush	*Turdus viscivorus*					Red
Osprey	*Pandion haliaetus*	x	x			Amber
Peregrine	*Falco peregrinus*	x	x	x		N/A
Red kite	*Milvus milvus*	x	x			N/A
Redwing	*Turdus iliacus*		x			Amber
Reed bunting	*Emberiza schoeniclus*				x	Amber
Ring ouzel	*Turdus torquatus*					Red

Common Name	Scientific Name	Legal / Conservation Status				
		Annex 1, Birds Directive	Schedule 1, WCA	Species of Principal Importance	LBAP	BoCC 5
Skylark	*Alauda arvensis*					Red
Song Thrush	*Turdus philomelos*				x	Amber
Sparrowhawk	*Accipiter nisus*					Amber
Spotted flycatcher	*Muscicapa striata*				x	Red
Starling	*Sturnus vulgaris*					Red
Tawny owl	*Strix aluco*					Amber
Wheater	*Oenanthe oenanthe*					Amber
Yellow wagtail	*Motacilla flava*					Red
Yellowhammer	*Emberiza citrinella*			x		Red

It should be noted that all nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended).

3.1.3 Invasive Non-Native Species (INNS)

As summarised in **Table 9**, records were identified of two invasive non-native species from within 2km of the Site boundary, dating from within the last 10 years.

Table 9. List of Non-Native Invasive Species

Common Name	Scientific Name	Detail of Record(s)	Legal / Conservation Status
Himalayan balsam	*Impatiens glandulifera*	55 records were identified the closest of which was 0.7km northwest from Site.	Listed on Schedule 9 of the Wildlife and Countryside Act (WCA) 1981, and on the Local Biodiversity Action Plan (LBAP).
Rhododendron	*Rhododendron ponticum*	11 records were identified the closest of which was 0.8km northeast from Site.	Listed on Schedule 9 of the WCA.

3.2 Field Survey

3.2.1 Habitats

The results of the habitat survey are presented below and shown in **Figure 1**, which illustrates the location and extent of habitat types recorded within the Site boundary. TN locations are also shown on the map and TNs are detailed in **Appendix B**. Plant species are listed in **Appendix C**, where the reader can see scientific names, which are therefore not included in the descriptions below or in the target notes in **Appendix B**. The habitat types listed in **Table 10** were recorded in the survey.

Table 10. Habitats recorded in the Survey

Habitat Name	Habitat Code	On Site (ha) / (km)	Within Wider Ownership Boundary (ha) / (km)	Description
Area Habitats				
Other lowland mixed deciduous woodland	W1f7	N/A	0.61ha	This habitat was located on the southwest side of the wider ownership boundary. The woodland canopy was dominated by English oak, with frequent ash, occasional hawthorn, Midland hawthorn and grey willow, and locally rare lime, and birch. The shrub layer was dominated by elder, with abundant bramble and locally rare holly. The ground flora featured abundant Yorkshire fog, frequent creeping bent, dove's-foot cranesbill, ground ivy, cleavers, broad-leaved dock, and common nettle. Occasional species included lords-and-ladies, wood avens, ivy, yellow oat-grass, false oat-grass, germander speedwell, cock's-foot, common foxglove, and perennial rye grass.
Holcus-Juncus neutral grassland	G3c8	1.46ha	1.23ha	This habitat was located to the west of the stream in the wider ownership boundary and to the east within the Site. The tussocky and damp neutral grassland was dominated by Yorkshire fog and creeping bent, with frequent self-heal, sweet vernal grass, creeping buttercup, and soft rush. Occasional species included perennial rye grass, ragwort, common bent, dandelion, ribwort plantain, bristly oxtongue, marsh thistle, cuckoo flower, meadow foxtail, soft brome, annual meadow grass, black knapweed and red fescue. Locally rare species included cleavers, lesser stitchwort, common agrimony, oxeye daisy and meadowsweet.
Other neutral grassland	G3c	0.57ha	N/A	This habitat was located on the east side within the Site. The neutral grassland was dominated by Yorkshire fog, with frequent creeping buttercup, and occasional ragwort, perennial ryegrass, creeping bent, and common daisy. Locally rare species included ribwort plantain, dandelion, white clover, and rough meadow grass. This habitat differed from the G3c8 parcel (above) as it was dry with no rush species.
Other lowland mixed deciduous woodland	W1f7	0.08ha	0.39ha	This habitat was located in the southeast, primarily within the wider ownership boundary but with a small section lying within the Site. The woodland canopy was dominated by English oak, with frequent ash,

Habitat Name	Habitat Code	On Site (ha) / (km)	Within Wider Ownership Boundary (ha) / (km)	Description
				occasional hawthorn and grey willow, and locally rare lime, birch, and holly. The shrub layer was dominated by elder, with abundant bramble. The ground flora featured abundant Yorkshire fog, frequent creeping bent, dove's-foot cranesbill, ground ivy, cleavers, broad-leaved dock, and common nettle. Occasional species included lords-and-ladies, wood avens, ivy, yellow oat grass, false oatgrass, germander speedwell, cock's-foot, common foxglove, and perennial ryegrass.
Sparsely vegetated urban land (81,82)	U1f	0.06ha	N/A	This habitat was located on the southeast side within the Site. The sparsely vegetated urban land was abundant in Yorkshire fog and mouse ear chickweed, with frequent bristly oxtongue. Occasional species included common nettle, bramble, ragwort, ribwort plantain, and spear thistle. Locally rare species included dove's-foot cranesbill.
Developed land sealed surface	U1b	0.01ha	N/A	This habitat was located on the east side within the Site. Habitat consisted of sealed land with very limited vegetation growing and litter throughout.
Willow scrub – scattered trees	H3j / 32	N/A	0.2ha	Willow scrub with scattered trees surrounded the stream on Site and was dominated by a hybrid of goat and grey willow and bramble, with frequent hawthorn, occasional elder, and locally rare alder. This habitat appeared to have been an unmanaged hedgerow which had developed into scrub with trees.
Linear Habitats				
Native hedgerow with trees	H2a	0.13km	N/A	This habitat was located on the east side within the Site. The native hedgerow with trees was dominated by bramble, with frequent hawthorn and multiple ash trees. There was also occasional birch, along with three hawthorn and two poplar trees.
Line of trees	34	0.09km	0.05km	This habitat was located along the northern boundary and was located both within the Site and wider ownership boundary. Tree line was dominated by oak with locally rare ash and elm.
Line of trees	34	0.16km	N/A	This habitat was located on the east boundary of the Site. The tree line was dominated by oak, with occasional ash and locally rare goat willow.

Habitat Name	Habitat Code	On Site (ha) / (km)	Within Wider Ownership Boundary (ha) / (km)	Description
Line of trees	34	N/A	0.07km	This habitat was located on the west side of the wider ownership boundary. The tree line consisted of oak, occasional hawthorn, and locally rare crack willow, and ash.
Other rivers and streams	R2b	0.20km	N/A	This habitat was located on the west side of the Site. Hemlock water dropwort, spring sedge, fool's watercress, and water mint were identified within the stream.

3.2.2 Species

3.2.2.1 Bats

Habitat Appraisal

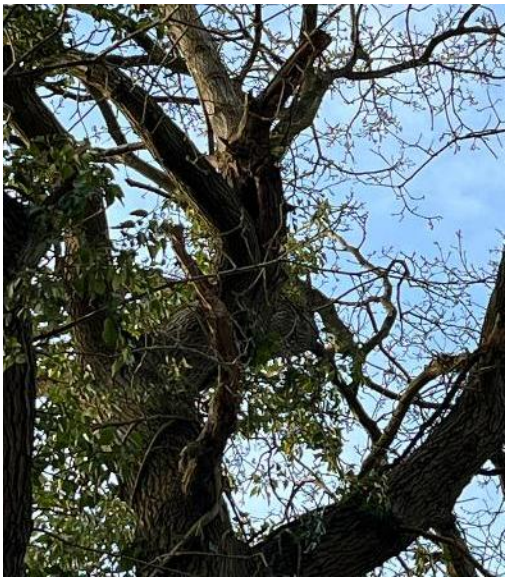
The Site and wider ownership boundary were of high suitability for foraging bats due to the presence of woodland, tree line, hedgerow and neutral grassland habitats. The Site and wider ownership boundary were also well connected to the surrounding habitats through hedgerows and tree lines.

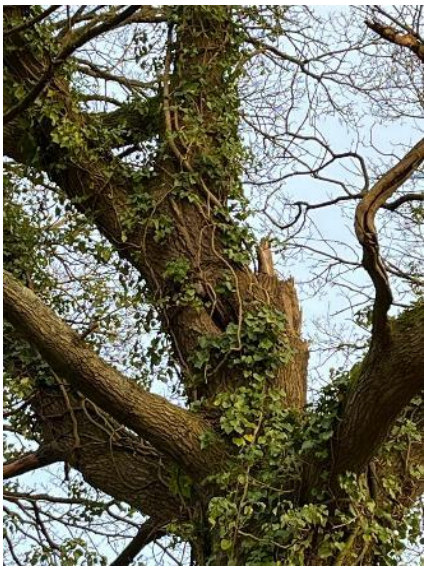
GLTA and Aerial Results

Table 11 below summarises the findings of the GLTA survey.

Table 11. Findings of the GLTA and Aerial Inspection

Tree ID	Tree species	Description and Survey Results	Bat Roost Suitability
T149	Oak	Oak tree with a rot hole on the west aspect of the tree at approximately 3m from the ground on the main trunk. Another rot hole was identified on the main trunk of the tree on the east aspect at approximately 5m from the ground. Both features appeared shallow. 	PRF-I
T147	Oak	On the south aspect of the tree three broken limbs were identified at approximately 5m, 7m and 9 m from the ground. This could create features however their suitability could not be determined from ground level and would require climbing to confirm/negate suitability.	FAR

Tree ID	Tree species	Description and Survey Results	Bat Roost Suitability
			
T142	Oak	An oblong rot hole was identified on the southeast aspect of the tree at approximately 12m from the ground. The aerial tree inspection confirmed the feature only extended 5cm inwards, therefore providing PRF-I potential. 	PRF-I
T152	Oak	A decaying broken limb was identified on the northeast aspect of the tree at approximately 8m from the ground.	PRF-I

Tree ID	Tree species	Description and Survey Results	Bat Roost Suitability
			
T13	Oak	Several broken limbs were identified on the northwest aspect of the tree. A limb wound was identified at approximately 12m high from the ground on the main trunk. Another broken limb was identified on the southeast aspect of the tree at approximately 8m high from the ground. 	PRF-M
T23	Oak	A split limb was identified on the southwest aspect of the tree at approximately 8m high with limited protection.	PRF-I

Tree ID	Tree species	Description and Survey Results	Bat Roost Suitability
			
T25	Oak	On the southeast aspect, a split limb was identified at approximately 11m high with limited protection, and a cracked limb/wound at 6m. Another feature was identified on the southeast aspect of the tree consisting of a cracked limb wound at approximately 8m height on the underside. All features presented limited protection. 	PRF-I
T53	Oak	A decayed limb wound with a woodpecker hole was identified on the east aspect of the tree at approximately 10m from the ground.	PRF-M

Tree ID	Tree species	Description and Survey Results	Bat Roost Suitability
			
T32	Ash	A feature was identified on the southeast aspect of the tree at approximately 1.5m height from ground. The fissure and rot extended up into small clean cavity. 	PRF-I

Bat Activity Surveys (Statics)

April 2025 Results

In April 2025, five detectors were deployed and successful in gathering five nights of data that met the weather condition (as previously stated) requirements. April activity was predominantly common pipistrelle (*Pipistrellus pipistrellus*) (82.3%), with activity further made up of six other species, as shown in **Table 12**.

Table 12. Total no. passes recorded of each species across all detectors in April 2025.

Species	Passes (No.)	% of Total for month[1]
Common pipistrelle	2973	82.3
Soprano pipistrelle (*Pipistrellus pygmaeus*)	493	13.6
Myotis spp.	23	0.6
Barbastelle *(Barbastella barbastellus*)	1	0.0
Nyctalus spp.	119	3.3
Leisler's (*Nyctalus leisleri*)	1	0.0
Brown long-eared (*Plecotus auritus*)	2	0.1
Total	**3612**	**99.9[1]**

Activity levels, in terms of their relative Site levels during April, were highest at Detectors D2 and D12 (**Figure 4**) for common pipistrelle and soprano pipistrelle. The data was analysed in terms of likelihood of proximity to a bat roost by comparing bat pass times with standard roost emergence times (Russ, 2012) for each relevant species. Detectors D2 and D12 recorded significant common and soprano pipistrelle activity, which is indicative of multiple roost sites within close proximity to the Site. Further to this, Detector D8 recorded significant *Nyctalus* spp activity, which is further indicative of a nearby roost.

June 2025 Results

In June 2025, five detectors (**Figure 4**) were deployed and successful in gathering 5 nights of data that met the weather condition requirements. June activity was predominantly from common pipistrelle (87.6%), with activity further made up of seven other species, as shown in **Table 13**.

Table 13. Total no. passes recorded of each species across all detectors in June 2025.

Species	Passes (No.)	% of Total for month
Common pipistrelle	5767	87.6
Soprano pipistrelle	459	7.0
Myotis spp.	16	0.2
Barbastelle	3	0.0

[1] Note that the 'Total' percentage may not be exactly 100% due to rounding of the percentage per species.

Species	Passes (No.)	% of Total for month
Nyctalus spp.	289	4.4
Leisler's bat	10	0.2
Common noctule (*Nyctalus noctula*)	34	0.5
Brown long-eared	8	0.1
Total	**6586**	**100**

Activity levels, in terms of their relative Site levels during June, were highest at Detectors D12 and D2 for common pipistrelle and soprano pipistrelle. Detectors D12 and D2 recorded significant common and soprano pipistrelle activity, which is indicative of multiple roost sites within the close proximity to the site. Further to this, Detector D8 recorded significant *Nyctalus* spp. activity, which is further indicative of a nearby roost.

July 2025 Results

In July 2025, five detectors (**Figure 4**) were deployed and successful in gathering five nights of data that met the weather condition requirements. July activity was predominantly common pipistrelle (78.9%), with activity further made up of seven other species, as shown in **Table 14**.

Table 14. Total no. passes recorded of each species across all detectors in July 2025.

Species	Passes (No.)	% of Total for month
Common pipistrelle	8966	78.9
Soprano pipistrelle	1794	15.8
Myotis spp.	15	0.1
Barbastelle	3	0.0
Nyctalus spp.	482	4.2
Leisler's	30	0.3
Common noctule	62	0.5
Brown long-eared	11	0.1
Total	**11363**	**99.9**[1]

Activity levels, in terms of their relative Site levels during July, were highest at Detectors D12, D15 and D2 for common pipistrelle. Detectors D12, D15, and D2 recorded significant common pipistrelle activity, which is indicative of multiple roost sites within close proximity to the Site. Further to this, Detector D12 recorded significant soprano pipistrelle activity, which is further indicative of a nearby roost.

August 2025 Results

In August 2025, five detectors (**Figure 4**) were deployed, and four were successful in gathering 5 nights of data that met the weather condition requirements. August activity was

predominantly common pipistrelle (71.1%), with activity further made up of six other species, as shown in **Table 15**.

Table 15. Total no. passes recorded of each species across all detectors in August 2025.

Species	Passes (No.)	% of Total for month
Common pipistrelle	1933	71.1
Soprano pipistrelle	594	21.8
Myotis spp.	7	0.3
Barbastelle	53	1.9
Nyctalus spp.	128	4.7
Leisler's	1	0.0
Brown long-eared	4	0.1
Total	**2720**	**99.9**[1]

Activity levels, in terms of their relative Site levels during August, were highest at Detectors D12, D15 for common pipistrelle and soprano pipistrelle. Detectors D12, D15, and D2 recorded significant common pipistrelle activity, which is indicative of roost sites in nearby proximity to the Site.

September 2025 Results

In September 2025, five detectors (**Figure 4**) were deployed and successful in gathering five nights of data that met the weather condition requirements. September activity was predominantly Common pipistrelle (66.1%), with activity further made up of six other species, as shown in **Table 16**.

Table 16. Total no. passes recorded of each species across all detectors in September 2025.

Species	Passes (No.)	% of Total for month
Common pipistrelle	2716	66.1
Soprano pipistrelle	874	21.3
Myotis spp.	26	0.6
Barbastelle	172	4.2
Nyctalus spp.	270	6.6
Common noctule	46	1.1
Brown long-eared	4	0.1
Total	**4108**	**100**

Activity levels, in terms of their relative Site levels during September, were highest at Detectors D2 and D8 for common pipistrelle, which is indicative of multiple roost sites within

close proximity of the Site. Further to this, Detector D2 recorded comparatively high barbastelle activity, which is indicative of nearby roosts.

October 2025 Results

In October 2025, five detectors (**Figure 4**) were deployed and successful in gathering five nights of data that met the weather condition requirements. October activity was predominantly Common pipistrelle (66.5%), with activity further made up of six other species, as shown in **Table 17**.

Table 17. Total no. passes recorded of each species across all detectors in October 2025.

Species	Passes (No.)	% of Total for month
Common pipistrelle	3006	66.5
Soprano pipistrelle	1179	26.1
Myotis spp.	8	0.2
Barbastelle	52	1.2
Nyctalus spp.	249	5.5
Common noctule	25	0.6
Brown long-eared	2	0.0
Total	**4521**	**100**

Activity levels, in terms of their relative Site levels during October, were highest at Detectors D2, D10, and D15 for common and soprano pipistrelle. Detectors D2, D10 and D15 recorded significant common pipistrelle activity, which is indicative of multiple roost sites within close proximity of the Site. Further to this, Detector D2 recorded comparatively significant barbastelle activity, which is further indicative of a nearby roost.

3.2.2.2 Amphibians (including GCN)

Habitat Appraisal

No opportunities for breeding amphibians were identified on Site due to a lack of waterbodies (ponds). The Site and wider ownership boundary provided good terrestrial habitat for amphibians, including tussocky, damp grassland, willow scrub, woodland and native hedgerow.

HSI

Three ponds and three ditches were identified within 250m of the Site. These were connected to the Site through suitable terrestrial habitat including neutral grassland, hedgerows, tree lines and lowland mixed deciduous woodland. An HSI survey was undertaken on these waterbodies to assess their suitability for GCN. A summary table with these findings can be seen below in **Table 18** (full calculations can be found in **Appendix D, Table D.1**).

Table 18. GCN Habitat Suitability Index (HSI)

Waterbody Reference	HSI Score	Pond Suitability
Pond 1	0.39	Poor
Pond 2	0.38	Poor

Waterbody Reference	HSI Score	Pond Suitability
Pond 3	0.37	Poor
Ditch 2	0.35	Poor
Ditch 3	0.35	Poor
Ditch 8	0.39	Poor

A HSI was not completed for the stream on Site due to it being very fast flowing at the time of survey and therefore deemed unsuitable for breeding GCN. However, during the eDNA survey, the flow was much slower, making it more suitable for GCN and therefore eDNA was carried out (see below).

eDNA Analysis

The outcome of the eDNA analysis is summarised in **Table 19** below. Pond 2 and ditch 3 were dry during the time of sampling rendering them unsuitable as breeding habitats for GCN and were not sampled.

Table 19. GCN eDNA Analysis

Waterbody Reference	Date Sampled	Outcome
Pond 1	16/04/2025	Negative
Pond 3	16/04/2025	Indeterminate, evidence of degradation
Ditch 2	16/04/2025	Negative
Ditch 8	16/04/2025	Indeterminate, evidence of degradation
Stream 1	16/04/2025	Negative

3.2.2.3 Badger

Habitat Appraisal

Foraging and dispersing opportunities were found on Site and within the wider ownership boundary for badger due to the grassland, native hedgerows, tree lines, willow scrub and lowland mixed deciduous woodland habitats. However, the woodland was relatively open, and the ground morphology was flat and very damp, therefore opportunities for sett building were limited. Badger activity was identified during the UKHabs survey which consisted of a single footprint in the mud leading into the native hedgerow on the northeast of the Site (**TN21, Appendix B**).

Surrounding habitats in the wider area such as hedgerows, agricultural fields and woodlands, including Hazelton's Copse LWS, which is connected to the Site via hedgerows, provided suitable foraging and dispersing opportunities for badger.

Badger Survey

A full badger survey was undertaken on Site and the land located northeast and south of the Site. No evidence of badger was found.

3.2.2.4 Reptiles

Habitat Appraisal

The Site and wider ownership boundary was considered to be of high value for reptiles due to the presence of tussocky *Holcus-juncus* neutral grassland, native hedgerow, tree lines, refugia (log/brash/rubble piles) presenting opportunities for foraging, sheltering, dispersing and hibernating. The stream and damp grassland provided particular suitability for foraging grass snake.

Opportunities for reptiles were present in the surrounding habitats due to the presence of scrub, grassland, hedgerows and woodland areas.

Reptile Presence / Absence Survey

Reptile presence/absence surveys were completed in late summer and autumn 2025. Reptile No evidence of reptile were recorded utilising artificial refugia; however, an incidental finding of two slow worms was recorded within the Site during these surveys

3.2.2.5 Birds

Habitat Appraisal

Opportunities were found on Site and within the wider ownership boundary for tree nesting birds due to willow scrub, tree lines, hedgerows and lowland mixed deciduous woodland habitats (some trees showed features suitable for tree nesting birds, see GLTA section above). Foraging opportunities were also present for birds due to willow scrub, native hedgerows, lowland mixed deciduous woodland and neutral grassland habitats. The habitat on Site and within the wider ownership boundary was of low suitability for ground nesting birds due to the small size of open grassland habitats and presence of boundary features including tree lines, hedgerows and woodland, reducing sight lines. However, log/brash piles provided some opportunities for ground nesting species such as warblers, wrens and robins.

Opportunities for birds were present in the surrounding habitats due to farmland, agricultural fields and woodland areas, all of which were connected to the Site.

An active red kite nest was found in the tree line on the north of School Road. It appeared to be a first-year nest due to the fact that it was relatively small and more loosely constructed with fewer sticks and lining materials such as wool and leaves.

3.2.2.6 Otter

Habitat Appraisal

No opportunities for otter were identified on Site due to a lack of waterbodies and suitable watercourses. The stream found within the Site was not deep enough to provide a foraging resource for otter, however it could be used opportunistically by transient otter. The stream was connected to a series of minor ditches and streams in the wider area however the closest significant waterbody was located 625m east. Therefore, given the lack of a key foraging resource within the surrounding area, it is considered highly unlikely that otter will be on Site or within the wider ownership boundary.

No evidence of otter was recorded within the Site.

Otter have been scoped out of the rest of the report due to the lack of suitable habitat on Site.

3.2.2.7 Water Vole

Habitat Appraisal

Limited opportunities for water vole were identified on Site due to a lack of waterbodies with optimal suitability for the species. The stream running along the west edge of the Site lacked banksides in the south extent thereby presenting no opportunities for burrow creation. Shallow banks were present in the northern extent of the stream, where the stream was shaded by willow scrub. However the banks were un-vegetated, so were deemed to be sub-optimal for water vole burrows. Further, during some site visits the stream was observed to be fast flowing, and on others almost dry and not very deep, further contributing to the likely unsuitability for water vole. The stream was connected to a series of minor ditches and streams in wider area which may support water vole. Water vole are also known to be in the wider area, as described in the desk study (**Section 3.1**).

During the reptile survey set-up, four holes were found along the west bank of the stream on the north side of the Site. One of the holes was located along the waterline whereas the other three holes were located higher up on the bank. The holes measured approximately 5cm in diameter, no other field signs were recorded. In cognisance of the lack of other field signs, alongside the size observed being similar to brown rat (*Rattus norvegicus*) burrows, the presence or absence of water vole on site could not be conclusively determined, although based on the lack of other evidence, the risk is considered to be low.

3.2.2.8 Hazel Dormouse

Habitat Appraisal

The habitat on Site and within the wider ownership boundary was sub-optimal for hazel dormouse as, although other lowland mixed deciduous woodland was present, these parcels lacked understorey shrubs which hazel dormouse rely upon. The Site and wider ownership boundary also lacked hedgerow networks, providing limited opportunities for dispersal.

No evidence of hazel dormouse was identified within the Site.

Hazel dormouse have been scoped out of the rest of the report due to the lack of suitable habitat on Site and in the wider ownership boundary.

3.2.2.9 Invasive Non-Native Species

On the southeast boundary of the Site, a hedgerow dominated by cherry laurel was noted, which belonged to the residential garden of the adjacent property (**TN19, Appendix B**). No other invasive non-native species were recorded during the survey.

4 Discussion and Recommendations

4.1 Nature Conservation Designations

4.1.1 Summary

No statutory sites, designated for nature conservation were identified on Site. Nine statutory sites designated for nature conservation were identified in the desk study. The nearest to the Site was The Longmoor Bog SSSI and Longmoor Bog LNR, located approximately 1.85km southeast of the Site (see **Table 4**). A European Site, Thames Basin Heaths SPA, was located approximately 4km south of the Site.

No non-statutory sites designated for nature conservation were identified on Site. Nine non-statutory nature conservation designations were identified in the desk study. The nearest to the Site was Hazelton's Copse LWS located approximately 0.5km northwest of the Site boundary and connected to the Site via hedgerows and lines of trees.

4.1.2 Appraisal

Longmoor Bog SSSI LNR, located approximately 1.5 km from the Site, is designated for its bog habitats. However, due to the distance and lack of hydrological connectivity between the Site and Longmoor Bog, no significant negative effects on these habitats are expected as a result of the Proposed Development. All other statutory nature designations are located over 4km away and therefore are unlikely to be impacted by the Proposed Development.

Thames Basin Heaths SPA, which is located approximately 4km south of the Site is designated for breeding European nightjar, woodlark and Dartford warbler. Nightjar are ground nesting birds. No suitable habitat was present on Site or within the wider ownership boundary for nightjar to create nests thus, this species is unlikely to be found on Site or within the wider ownership boundary and will not be negatively impacted by the Proposed Development. Similarly, woodlark is also a ground nesting bird that favours open, dry habitats with short grasses and thus is very unlikely to be using the Site or wider ownership boundary. No negative impacts are expected from the Proposed Development on woodlark. Dartford warbler is also a ground nesting bird preferring dry heath habitats and gorse, therefore there was no suitable habitat on Site or within the wider ownership boundary and thus no negative impacts are expected from the Proposed Development on Dartford warbler. As such, no negative impacts are predicted on the qualifying features of the SPA.

As the Site lies within 5km of the Thames Basin Heaths SPA, there is potential for increased recreational disturbance from the development, as per the findings of Natural England's visitor surveys (Liley, D, Jackson, D. & Underhill-Day, J., 2005). In line with the Local Plan guidance (Wokingham Borough Council, 2010), a Suitable Alternative Natural Green Space (SANG) should be created to mitigate for the potential increase in recreational disturbance.

No impacts are expected on the surrounding non-statutory sites, designated for nature conservation, primarily due to the distance of the Site from these areas. Hazelton's Copse, located approximately 0.5 km from the Site, consists of ancient semi-natural woodland and lowland mixed deciduous woodland. Similar woodland was present on Site, and these areas were connected through hedgerows and lines of trees. However, no lowland mixed deciduous woodland will be lost on Site as a result of the Proposed Development, and therefore, no impacts are anticipated on this LWS. No impacts are expected on the other eight non-statutory nature designations for the same reasons.

4.1.3 Recommendations

No impacts are predicted on nature conservation designations, so no mitigation is required.

4.2 Habitats

4.2.1 Evaluation

Nine habitat types were recorded in the survey, descriptions of which can be found in Section 3 of this report. **Table 20** below includes evaluations of the habitats with regard to the quality and the extent of each habitat and the Proposed Development.

Table 20. Habitat Evaluation

Habitat Name	Habitat Code	On Site area (ha) / linear (km)	Within Wider Ownership Boundary area (ha) / linear (km)	Evaluation
Area Habitats				
Lowland Mixed deciduous Woodland	W1f	N/A	0.61	This habitat was of high ecological value as it is designated as a priority habitat. The habitat included diverse tree and shrub species. The Proposed Development will retain this habitat as it is located on the west side of the stream within the wider ownership boundary. The condition of this habitat was assessed as 'Moderate' condition by the condition assessment.
Holcus-Juncus Neutral grassland	G3c8	N/A	1.20	This habitat was of moderate ecological value as it had a good diversity of grass and forb species and was suitable for supporting diverse wildlife including birds, reptiles, amphibians and mammals. However, this habitat was semi-improved and showed signs of enrichment due to the presence of creeping buttercup and perennial rye grass. The Proposed Development will retain this habitat as its located on the west side of the stream within the wider ownership boundary. The condition of this habitat was assessed as 'Moderate' condition by the condition assessment.
Holcus-Juncus Neutral grassland	G3c8	1.65	N/A	This habitat was of moderate ecological value as it had a good diversity of grass and forb species and was suitable for supporting diverse wildlife including birds, reptiles, amphibians and mammals. However, this habitat was semi-improved and showed signs of enrichment due to the presence of creeping buttercup and perennial rye grass. This habitat will be lost in as a result of the Proposed Development.
Other Neutral grassland	G3c	0.57	N/A	This habitat was of moderate ecological value as it had a good diversity of grass and forb species and was suitable to support diverse wildlife including birds, reptiles, amphibians and mammals. However, this habitat was semi-improved and showed signs of enrichment due to the presence of perennial rye grass. This habitat will be lost as a result of the Proposed Development. The condition of this habitat was assessed as 'Moderate' condition by the condition assessment.
Lowland Mixed deciduous Woodland	W1f7	0.08	0.39	This habitat was of high ecological value as it is designated as a priority habitat. It included diverse tree and shrub species. This habitat will be retained as part of the Proposed Development. The condition of this habitat was assessed as 'Moderate' condition by the condition assessment.
Sparsely vegetated urban	U1f	0.06	N/A	This habitat was of low ecological value due to lack of species and structural diversity. This habitat was of ecological value to invertebrates/basking reptiles. This

Habitat Name	Habitat Code	On Site area (ha) / linear (km)	Within Wider Ownership Boundary area (ha) / linear (km)	Evaluation
land (81,82)				habitat will be lost as a result of the Proposed Development. The condition of this habitat was assessed as 'Moderate' condition by the condition assessment.
Developed land sealed surface	U1b	0.01	N/A	This habitat was of very low ecological value as the ground consisted of sealed surface and did not support any notable plant species nor had the potential to support wildlife. This habitat will be lost in as a result of the Proposed Development.
Willow scrub with scattered trees	H3j	N/A	0.2	This habitat was of moderate ecological value due to opportunities for species such as bats and birds, although it was in need of management. The Proposed development will retain this habitat. The condition of this habitat was assessed as 'Poor' condition by the condition assessment.
Linear Habitats				
Native hedgerow with trees	H2a	0.13	N/A	This habitat was of moderate value as the dominant species was bramble. The tree species were also younger, and hedgerow was not very diverse. It provided however good connectivity to the wider area. This habitat will be retained as part of the Proposed Development. The condition of this habitat was assessed as 'Good' condition by the condition assessment.
Line of trees	34	0.09	0.05	This habitat was of ecologically high value with native mature trees that provided ecological niches for invertebrates and bats and good connectivity with the wider area. One elm tree and one oak tree will be lost as part of the Proposed Development to create access roads. This, however, will not impact the integrity of the tree line. The condition of this habitat was assessed as 'Moderate' condition by the condition assessment.
Line of trees	34	0.16	N/A	This habitat was of ecologically high value with native mature trees that had suitable features for ecological niches such as invertebrates and bats and provided good connectivity with wider area. One oak tree and one ash will be lost as part of the Proposed Development to create access for vehicles. This, however, will not impact the integrity of the tree line. The condition of this habitat was assessed as 'Good' condition by the condition assessment.
Line of trees	34	0.07	N/A	This habitat was of ecologically high value with native mature trees that had suitable features for ecological niches such as invertebrates and bats and good connectivity with wider area. The Proposed Development will retain this habitat as it was located on the wider ownership boundary west of the stream. The condition of this habitat was assessed as 'Good' condition by the condition assessment.
Other Rivers and Streams	R2b	0.2	N/A	This habitat was of high ecological value, the stream was shallow and fast flowing (during the winter, slower flow in spring/summer), with diverse floating and submerged aquatic plants and good water quality with low turbidity. In the more shaded sections, it was lacking in aquatic plants. The Proposed Development will retain the stream. The stream was suitable for amphibians and water vole. A

Habitat Name	Habitat Code	On Site area (ha) / linear (km)	Within Wider Ownership Boundary area (ha) / linear (km)	Evaluation
				river condition assessment had not been completed at the time of writing.

4.2.2 Appraisal

The highest value habitats on Site and within the wider ownership boundary will be retained and protected. This includes the lowland mixed deciduous woodland, stream, hedgerows and tree lines. Additionally, a large area of *Holcus-juncus* neutral grassland, which is of moderate ecological value, in the wider ownership boundary will be retained.

The Proposed Development will however result in the loss of some areas of moderate value *Holcus-juncus* neutral grassland and other neutral grassland and four individual trees. This will be mitigated for by new habitat creation and habitat enhancements on Site and within the wider ownership boundary. Details of the proposed enhancements are included in the separate Biodiversity Net Gain Assessment report (GEL, 2025).with a summary of the enhancements therein provided in section 4.2.4 below.

The Proposed Development will also result in the loss of sparsely vegetated urban and developed land, sealed surface. These habitats were of low/very low ecological value and therefore no mitigation is required.

4.2.3 Mitigation

Mitigation measures have been provided below to reduce impacts on retained habitats within the Site/wider ownership boundary and beyond in surrounding habitats:

- Demarcation of sensitive habitats by a Suitably Qualified Ecologist prior to Site clearance/construction works commencing;
- Prevention or reduction of dust spread through timing of works;
- Control of surface water runoff, including from damping down, preventing contamination of the stream/nearby waterbodies. Site specific pollution prevention measures should be implemented such as silt fences to prevent any potential contamination of nearby waterbodies. Contractors should ensure that all areas are equipped with spill kits;
- Implementation of a Pollution Prevention Plan to manage and mitigate any potential pollution risks, particularly given the stream found on Site. This plan should outline specific measures to prevent accidental contamination of habitats on Site and the wider ownership boundary;
- Secure storage and safe disposal of any materials and substances to prevent accidental contamination of habitats; and
- Protection of trees and vegetation in accordance with good practice methods and guidance as outlined by the British Standards Institute (BSI) (2012; 2013).

4.2.4 Enhancements

The following recommended enhancements aim to deliver measurable ecological benefits to habitats and protected species in line with local biodiversity targets:

Other Neutral Grassland

- The remainder of other neutral grassland on site will be enhanced to traditional orchard by planting open-grown fruit trees of the Rosaceae family with a minimum of 5 trees.
- Other neutral grassland in the Wider Ownership Boundary will be enhanced to create g3a lowland meadow.

Willow Scrub

- The willow scrub on site will be managed to achieve good condition by pruning the existing shrub to allow for regeneration (criteria B) and encourage growth of native species other than goat willow to enhance native species composition (criteria A).
- A well-developed edge should be encouraged by allowing tall grassland and/or forbs to grow (criteria D), and the habitat should be maintained with clearings, glades or rides (criteria E) to sustain regeneration and sheltered areas for a variety of species.

Lowland Mixed Deciduous Woodland

- Other lowland mixed deciduous woodland in the west of the Wider Ownership Boundary will be enhanced from 'Moderate' condition to 'Good' condition.
- To achieve good condition, the criteria detailed in the Biodiversity Net Gain Assessment must be met (GEL, 2025).

Additional Created Habitats

- On Site, buildings and roads will take up the majority of the habitat created, followed by vegetated gardens for residential plots. Non-native hedgerows will be planted, and an unsealed footpath will be created through existing grassland for leisure and access.

4.3 Protected or Otherwise Notable Species

4.3.1 Bats

Evaluation

All bat species and their roosts are legally protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and Wildlife and Countryside Act 1981 (as amended). Full detail on legal protection afforded to bats are summarised in **Appendix A**.

Appraisal

The Site and wider ownership boundary provided suitable foraging and roosting opportunities for bats, particularly within the lowland mixed deciduous woodland, tree lines, neutral grassland, and willow scrub. Nine trees were identified within the Site as having either FAR, PRF-I or PRF-M. The wider area also offered suitable opportunities for commuting and foraging bats due to the presence of hedgerows connecting the Site with surrounding woodland areas, such as Hazelton's Copse LWS, located 0.5 km northwest of the Site.

The bat activity levels recorded during the activity surveys reflect the suitability and subsequent use of the aforementioned habitats by bats. Bat activity was recorded at varying levels across all five detector locations, with a total of eight species recorded, including common pipistrelle, soprano pipistrelle, *Myotis* spp., barbastelle, *Nyctalus* spp. common noctule, Leisler's, and brown long-eared, across the six successful months of surveying. The highest level of bat activity was observed during July, with activity predominantly found to be common pipistrelles across all surveyed months. The survey results indicated that there is a likely presence of bat roosts for some of the aforementioned species in close proximity to the Site.

While part of the grassland habitat on Site will be lost due to the Proposed Development, a large area of other neutral grassland within the wider ownership boundary will be retained and enhanced to create g3a lowland meadow. Additionally, the highest value habitats for bats found both on Site and within the wider ownership boundary — including hedgerows, tree lines, and the stream, which provided key foraging and commuting corridors — will be retained, ensuring continued connectivity. Four trees will be removed as part of the Proposed Development, including one (T142) which was identified as PRF-I during the GLTA.

Further Surveys

The following surveys are recommended:

- T142: Planned for removal, aerial inspection assessed as PRF-I suitability. Pre-construction checks via aerial inspection survey should be carried out by a licensed bat ecologist to confirm the presence or absence of roosting bats.
- T32: Identified as a PRF-I, with a feature located approximately 1.5m from the ground. This tree will be retained, although construction works will occur within the 15m buffer zone. Therefore, a pre-construction check using an endoscope and torch by a licensed bat ecologist is recommended to confirm the presence or absence of roosting bats.
- T23: Identified as PRF-I, with a split limb at 8m high. This tree will be retained, although construction works will occur within the 15m buffer zone. Therefore, a pre-works check using a pole camera by a licensed bat ecologist is recommended to confirm the presence or absence of roosting bats.

Mitigation

Considering there are trees on site with bat roosting potential which may be impacted (either felled or disturbed), the following is recommended:

- A 15m no-works buffer will be applied to all trees with BRP to avoid impacts of roosting bats. Where the 15m buffer cannot be established, a pre-works check will be required.
- A precautionary working method statement (PWMS) and toolbox talk for bats will be required for all works.

Given the presence of suitable foraging, commuting and roosting habitat on Site, which is evidently an important resource for a variety of bat species, the following mitigation is recommended:

- Lighting utilised during the construction phase will only illuminate the working area and must not be directed to adjacent habitats, including woodland edge and mixed scrub, to avoid disruption to crepuscular and nocturnal species (including bats).
- If permanent lighting is required as part of the Proposed Development, a sensitive lighting scheme must be employed at the Site to prevent unnecessary light spill into naturally dark corridors currently used by nocturnal species (including bats).
- The lighting scheme must be developed in line with appropriate guidance, including the Bats and Artificial Lighting in the UK guidance note (ILP and BCT, 2023) and the Guidelines for Consideration of Bats in Lighting Projects (Voigt et al., 2018).
- Examples of measures that could be employed as part of the lighting scheme include, but may not be limited to consideration of type of lamp, use of UV filters/glazing, appropriate timing of lighting (using timers and/or movement sensors to ensure lighting is only used when required), light levels (within standards for safety and security, light levels should be at the minimum required), minimising light spill using accessories such as hoods, cows, louvres and shields, and using directional lighting to avoid illuminating important commuting corridors and foraging habitat, as well as potential bat roost features within trees.

Enhancements

Below are some recommendations for enhancements for bats:

- Bat boxes can be installed on nearby mature trees or on raised poles to provide additional roost features for bats. For longevity, woodcrete (a mixture of wood and concrete) or styrocrete (a mixture of polystyrene and concrete) bat boxes are recommended. It is recommended that 2-3 bat boxes are installed throughout the Site. Overseeding retained neutral grassland to increase invertebrate diversity for foraging bats;
- Planting native tree species to increase connectivity throughout the Site for commuting bats.

4.3.2 Badger

Evaluation

Badgers in the UK are protected under the Protection of Badgers Act 1992, making it illegal to kill, injure, or interfere with them or their setts, with additional safeguards under the Wildlife and Countryside Act 1981. Their conservation status is Least Concern, but local populations face threats from habitat loss, road traffic, and culling due to bovine TB control measures. Legal protection afforded to badger are summarised in **Appendix A**.

Appraisal

Mitigation

Due to the possibility of badger using the Site given suitable habitat, connectivity of the Site with the wider area and the high mobility nature of the species the following mitigation measures should be implemented:

- Pre-construction badger survey;
- Toolbox talk to be provided to contractors ahead of works;
- The storage of topsoil or other 'soft' building materials on Site should be given careful consideration as badgers will readily adopt such mounds as setts. To avoid the risk of badgers excavating setts, mounds should be kept to a minimum and any essential mounds covered or fenced overnight to prevent access by badger;
- All trenches (if required) must be covered overnight to ensure no badger become trapped. Alternatively, trenches must be left with a ramp or sloping end, and pipes should be capped off in order to prevent mammals from becoming trapped; and
- The storage of any chemicals within the Site should be contained in such a way that they cannot be accessed or knocked over by any roaming badger.

Enhancements

The following enhancement recommendations should be considered for badger:

- Enhancement of hedgerows and tree lines by infilling with native fruit tree and shrub species such as hawthorn, blackthorn and hazel to improve the foraging resources the hedgerow corridors provide;
- Soft landscaping should include planting of native fruit bearing shrubs and trees such a rowan, elder and crab apple to provide food sources for badgers; and
- Retention and enhancement of woodland areas to increase shrub understorey for foraging, dispersing and sett building badger.

4.3.3 Birds

Evaluation

Birds in the UK are protected under the Wildlife and Countryside Act 1981, making it illegal to harm them, their nests, or eggs, with additional protections for vulnerable species. Their conservation status is assessed through the UK Birds of Conservation Concern list. Legal protection afforded to birds are summarised in **Appendix A**.

Appraisal

The Site provided suitable opportunities for nesting birds and for foraging due to neutral grassland, lowland mixed deciduous woodland, tree lines, native hedgerow and willow scrub. The wider area also presented suitable habitat for bird species due to agricultural land, woodland, and grassland habitats. This is further supported by the presence of a red kite nest off Site by School Road.

Mitigation

Given the presence of suitable habitat, it is recommended the following mitigation measures are implemented:

- Any vegetation clearance activities should be done outside of the breeding bird season (the period from March to August, inclusive). If for any reason works must take place during the breeding bird season, a suitably experienced ecologist should check works areas for nests within 48 hours of clearance activities commencing. If an active nest is discovered, a species-specific buffer should be identified and be in place until the young have fledged the nest.
- Hard screening using fencing and hedgerow laying before and during development and ensuring maintenance of these features as well as retaining mature trees during operation of the housing development to reduce noise and visual impacts for the red kite nest.
- Construction would all be completed outwith the breeding season to avoid direct impacts on nesting red kite. If this is not practicable then the Red Kite Protection Plan will be followed.

Enhancements

The following enhancements should be considered for birds:

- New native tree planting to increase foraging and nesting opportunities;
- Diversifying the hedgerow and scrub species by infill planting to increase foraging opportunities; and
- Provision of suitable bird boxes on trees at a minimum height of 3m and on a north to northeast elevation. Bird boxes are best put up in the autumn and should be cleaned from September onwards only once birds have stopped using the bird boxes for nesting that season (British Trust for Ornithology, No Date).

The following enhancements should be considered specifically for red kites:

- RSPB and Natural England should be consulted to discuss avoidance, mitigation and compensation proposals both for the construction and the operation of the Proposed Development.

4.3.4 Reptiles

Evaluation

All native reptiles in the UK are protected under Schedule 5 of the Wildlife and Countryside Act 1981, making it illegal to intentionally kill, injure, or trade them. Legal protection afforded to reptiles is summarised in **Appendix A**.

Appraisal

Suitable habitat for reptiles was identified on Site, including the tussocky *Holcus-juncus* neutral grassland which offered both basking and sheltering opportunities. The hedgerows and tree lines on Site provided sheltering and hibernation opportunities, while the wider ownership boundary contained piles of wood and rocks scattered throughout the grassland and woodland habitats, creating further basking and hibernation opportunities.

Through the course of the reptile presence/absence surveys, there was only one incidental finding (i.e. not under an artificial refugia) of two slow worms recorded within the Site (As shown on **Figure 3**).

Although areas of neutral grassland will be lost as a result of the Proposed Development, a large portion to the west of the wider ownership boundary will be retained. Furthermore, the inclusion of soft landscaping and habitat creation within the Site will maintain some foraging and sheltering opportunities for reptiles. Importantly, all hedgerows, woodland and tree lines will be retained on Site, preserving habitat connectivity for reptiles.

Further Surveys

No further surveys are required at this time.

Mitigation

Given the presence of suitable habitat and reptiles on site, the following mitigation recommendations should be considered based on the findings of the reptile surveys:

- ECoW supervision when removing potential refugia to prevent harm to any reptiles alongside a PWMS and toolbox talk;
- Any clearance of vegetation should happen during the active reptile season (March to October), during mild and dry weather conditions when reptiles are more likely to be active and can be safely translocated if necessary;
- Phased vegetation clearance would allow any reptiles on Site to move away from the disturbance. This process should be implemented when cutting vegetation down, allowing for a period of time for reptiles to disperse before a second cut to ground level; and
- Relocating deadwood found on the east side of the Site to the west side of the stream and/or within the retained woodland areas within the wider ownership boundary.

Enhancements

The following enhancements should be considered for reptiles:

- Creation of deadwood habitat and log piles within the lowland mixed deciduous woodland and grassland in the wider ownership boundary;
- Maintaining or creating basking opportunities for reptiles by leaving patches of bare ground or using flat stones would be beneficial; and
- Hibernacula could be created to create sheltering opportunities for reptiles and amphibians. Hibernacula should be created in a warm sunny area, facing south and consist of a hole of approximately 50cm deep and up to 1.5m wide. The hole should be filled with rocks, bricks, logs and twigs, with lots of gaps and holes in between so reptiles can enter, and covered with the previously removed soil. Wildflower seeds should be sowed over the top of the soil to attract invertebrates and enhance the opportunities provided by the hibernacula (PTES, No date).

4.3.5 Amphibians

Evaluation

All native amphibians in the UK are protected under Schedule 5 of the Wildlife and Countryside Act 1981, with common species protected from trade and rarer species like the great crested newt receiving full protection, making it illegal to harm or disturb them or their habitats. Legal protection afforded to amphibians is summarised in **Appendix A**.

Appraisal

Suitable terrestrial habitat on Site for amphibians, including GCN, due to tussocky grassland, native hedgerow, woodland and tree lines. Suitable breeding habitat on Site is limited; flow within the stream is too sporadic to support breeding amphibians.. However, three ponds and three ditches were identified within 250m of the Site which provided potential breeding opportunities.

All the waterbodies were found to be of 'Poor' suitability for GCN and eDNA surveys confirmed the absence of GCN from Pond 1 and 3, Stream 1 (on Site) and Ditch 2. Results for Ditch 8 were inconclusive however, due to Ditch 8 connecting downstream with Stream 1 it can be concluded that no GCN will be present in Ditch 8. Additionally Ditch 8 had very low water levels and thus retesting is not required. Stream 3 and Pond 2 were dry and so were not sampled and were considered unsuitable for GCN.

Mitigation

Detailed mitigation has been informed by the eDNA surveys and with consideration to the presence of suitable terrestrial habitat and the proximity of potential breeding habitats, the following mitigation measures are recommended:

- An ECoW should be appointed to supervise all vegetation clearance and groundworks, ensuring that all activities are conducted in accordance with best practice guidelines. The ECoW will monitor for any amphibians present and oversee the implementation of mitigation measures;
- Phased vegetation clearance would allow any amphibians on Site to move away from the disturbance. This process should be implemented when cutting vegetation down, allowing for a period of time for amphibians to disperse before a second cut to ground level; and
- Implement a PWMS and toolbox talk to ensure best practice during vegetation clearance and groundworks to avoid harm to any amphibians that may be using the terrestrial habitat.

Enhancements

Opportunities for enhancement for amphibians are the same as those for reptiles (see above).

4.3.6 Water Vole

Evaluation

Water Vole in the UK are protected under the Wildlife and Countryside Act 1981, making it an offence to kill, injure or take them, alongside intentionally or recklessly damaging or destroying a structure or place used for shelter or protection, alongside disturbing them while they occupy such a place. *Their conservation status is* listed as 'endangered' on the Red List for England's mammals (Mammal Society, 2020). Legal protection afforded to water vole are summarised in **Appendix A**.

Appraisal

The habitat on Site for water vole is generally considered to be sub-optimal, with a seasonally wet stream with un-vegetated banks running along the west edge of the Site providing limited suitability for water vole. Possible burrows were identified during further site visits, though given the similarity to brown rat burrows and lack of other field signs, these are inconclusive at determining the presence or absence of water vole on Site.

The stream on site is expected to be retained, with only minor works (footpaths) in the nearby vicinity.

Mitigation

Due to the possibility of water vole using the Site, connectivity of the Site with the wider area and the high mobility nature of the species the following mitigation measures should be implemented:

- Pre-construction water vole survey;
- Toolbox talk to be provided to contractors ahead of works;
- All trenches (if required) must be covered overnight to ensure no water vole become trapped. Alternatively, trenches must be left with a ramp or sloping end, and pipes should be capped off in order to prevent mammals from becoming trapped; and
- Appropriate pollution prevention controls must be in place to prevent degradation of the stream on Site.

Enhancements

- Enhancement of the stream on site to improve suitability for water vole could be undertaken, and could be managed sensitively in line with the Water Vole Conservation Handbook (Strachan et al., 2011).

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Figure 1: Habitat Map

Figure 2: GLTA

Figure 3: Reptile Artificial Refugia Map and Results

Figure 4: Bat Static Detector Locations

Appendices

Appendix A Legislation and Policy

Relevant legislation and policy documents considered during the preparation of this Ecological Appraisal are summarised below.

Legislation

Wildlife and Countryside Act 1981 (the 'WCA')

The Wildlife and Countryside Act is the key legislation for the protection of habitats and species. In England it is this legislation which is used to notify Sites of Special Scientific Interest (SSSI) and protect certain species of animals and plants.

Schedules attached to the Act categorise species. The level of protection given to a species depends on the schedule it's listed on. The main schedules are:

- Wildlife and Countryside Act 1981 Schedules 1, 1A, A1, 2, 3 and 4 – birds
- Wildlife and Countryside Act 1981 Schedules 5 and 6 – animals
- Wildlife and Countryside Act 1981 Schedule 8 – plants

Habitats Directive and The Conservation of Habitats and Species Regulations 2017, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

EEC Council Directive 92/43/EEC, The Conservation of Natural Habitats and of wild fauna and flora, known as the 'Habitats Directive', protects over 1,000 animal and plant species, as well as 200 habitat types, listed in the Directive's annexes are protected in various ways:

- Annex II species (about 900): core areas of their habitat are designed as Sites of Community importance (SCIs) and included in the UK site network. These sites must be managed in accordance with the species own ecological needs.
- Annex IV species (over 400, including many annex II species): a strict protection regime must be applied across their entire natural range within the EU, both within and out-with Natura 2000 sites.
- Annex V species (over 90): Member States must ensure that their exploitation and taking in the wild is compatible with maintaining them in a favourable conservation status.

The objectives in relation to the UK site network (previously 'Natura 2000' sites) are to:

- maintain or restore certain habitats and species listed in the Habitats Directive to favourable conservation status (FCS); and
- contribute to ensuring the survival and reproduction of certain species of wild bird in their area of distribution and to maintaining their populations at levels which correspond to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements.

The Conservation of Habitats and Species Regulations 2017, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 translate the Habitats Directive into domestic law. This legislation protects habitats and species across Europe and so includes species on animal found in the UK. These species are known as European Protected Species (EPS) and these regulations are the primary regulations protecting these species, rather than the WCA.

The Protection of Badgers Act 1992

The Protection of Badgers Act ensures that it is a criminal offence to kill, injure, take a badger as well as damaging or interfering with a sett unless a specific license is gained from a statutory authority.

The Hedgerows Regulations 1997

The Hedgerows Regulations 1997 were created to protect hedgerows, in particular those in the countryside aged 30 years or older. It is a criminal offence to remove a hedgerow in contravention to the regulations. The legislation includes sub-categories detailing specific descriptions of offences, the procedure of notification to the local planning authority, circumstances that exempt the need to notify, replacement and retention notices, appeals against those notices, local planning authority records of hedgerows, injunctions, and how hedgerows may be defined to be 'important'.

The Countryside and Rights of Way Act (CRoW Act) 2000 (as amended)

The Countryside and Rights of Way Act 2000 made some changes to the WCA in respect of nature conservation, including extending offences of disturbing certain birds and animals are to cover reckless as well as intentional acts.

The Natural Environment and Rural Communities Act 2006 (NERC Act)

This act means the government have a duty to make sure that all parties involved are taking steps to improve the conservation of biodiversity and species that are involved in developments.

Environment Act 2021

The Environment Act 2021 makes provision about targets, plans and policies for improving the natural environment; environmental protection; waste and resource efficiency; air quality; water and nature and biodiversity. Part 6 is the key chapter for biodiversity as detailed below:

- Schedule 14 makes provision for at least 10% biodiversity gain to be a condition of planning permission in England; and
- Schedule 15 makes provision about biodiversity net gain in relation to development consent for national significant infrastructure projects (NSIPs).

Legislation relating to Specific Taxa

Bats

All bat species in the UK are listed on Schedule 5 of the WCA, and they are afforded strict statutory protection as European Protected Species under The Conservation of Habitats and Species Regulations 2017, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

It is, with certain exceptions, an offence to deliberately or recklessly:

- harass a wild bat or group of wild bats;
- to disturb a wild bat while it is occupying a structure or place which it uses for shelter or protection;
- to disturb a wild bat while it is rearing or otherwise caring for its young;
- to obstruct access to a breeding site or resting place of a wild bat, or otherwise to deny the bat use of the breeding site or resting place;
- to disturb a wild bat in a manner that is, or in circumstances which are, likely to significantly affect the local distribution or abundance of the species to which it belongs;
- to disturb a wild bat in a manner that is, or in circumstances which are, likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young; and
- to damage or destroy a breeding site or resting place of such an animal.

All the above protections apply regardless of the stage of the life of the animal in question.

Bat shelters, breeding or resting sites are known as 'roosts' irrespective of whether or not bats are resident at the time of survey. A shelter used during one season is protected throughout the year, and any proposed works that may result in disturbance to bats, and loss, obstruction of, or damage to, a shelter are licensable.

Badger

Badger (*Meles meles*) is protected by the Protection of Badgers Act (1992), which protects them against deliberate cruelty and incidental effects of otherwise lawful activities. It is an offence, amongst others, to:

- kill, injure, take, possess, or cruelly ill-treat a badger or attempt to do so;
- damage, destroy or obstruct access to a badger sett or part of a sett; and
- disturb a badger when it occupies a sett.

Otter

Otter (*Lutra lutra*) is listed on Schedule 5 of the WCA and is afforded strict statutory protection as a European Protected Species under The Conservation of Habitats and Species Regulations 2017, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

It is, with certain exceptions, an offence to deliberately or recklessly:

- kill, injure or capture an otter;
- disturb or harass an otter;
- disturb an otter in a holt or any other structure or place it uses for shelter or protection;
- disturb an otter in a manner that is likely to significantly affect the local distribution of the species;
- disturb an otter in a manner that is likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young; and
- damage, destroy or obstruct access to a breeding site or resting place of an otter.

An otter shelter is defined as any structure or place which is used for shelter or protection, irrespective of whether or not otters are resident. A shelter used during one season is protected throughout the year and any proposed works that may result in disturbance to otters, and loss, obstruction of, or damage to, a shelter are licensable.

Water vole

Water vole (*Arvicola amphibius*) and its places of shelter are protected through listing on Schedule 5 of the WCA. This gives protection to water vole with regard to killing, injury and taking, and to their places of shelter with regard to obstructing, damaging and destruction.

Birds

Under the WCA, a wild bird is defined as any bird of a species which is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds are not included in this definition (except for limited parts of the Act); they are covered by the Game Acts, which fully protect them during the close season.

All birds, their nests and eggs are legally protected, and it is thus an offence, with certain exceptions, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.
- Intentionally take or destroy the egg of any wild bird;
- Have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- Have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- Use traps or similar items to kill, injure or take wild birds;
- Have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations (see Schedules); or

- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Reptiles

The WCA provides limited protection of all reptile species found naturally in the UK. Under the Act wild reptiles are protected against:

- intentional or reckless killing and injury; and
- trade – i.e., sale, barter, exchange, transport for sale, or advertise for sale or to buy.

Sand Lizard (*Lacerta agilis*) and Smooth Snake (*Coronella austriaca*) are afforded strict statutory protection as a European Protected Species under The Conservation of Habitats and Species Regulations 2017, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

Amphibians

The WCA provides limited protection of all amphibian species found naturally in the UK. Under the Act wild reptiles are protected against:

- intentional or reckless killing and injury; and
- trade – i.e., sale, barter, exchange, transport for sale, or advertise for sale or to buy.

Great Crested Newt (*Triturus cristatus*) and Natterjack Toad (*Bufo calamita*) are afforded strict statutory protection as a European Protected Species under The Conservation of Habitats and Species Regulations 2017, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

Invasive Non-native Species

It is illegal to plant or otherwise cause to grow in the wild any plant listed on Schedule 9 of the WCA, including the following commonly found species:

- Japanese Knotweed (*Fallopia japonica*);
- Giant Hogweed (*Heracleum mantegazzianum*);
- Himalayan Balsam (*Impatiens glandulifera*);
- Rhododendron (Rhododendron ponticum); and
- New Zealand Pigmyweed (*Crassula helmsii*).

These rules also apply to any:

- live part of the species, such as seeds or cuttings that might grow or reproduce; and
- hybrids, varieties or breeds of such a species that might survive and subsequently reproduce.

Policy

The National Planning Policy Framework (NPPF) (2023)

The National Planning Policy Framework encompasses local and neighbourhood plans, while also including spatial development strategies, produced by both elected mayors and other combined authorities.

Wokingham Borough Local Development Framework (Adopted January 2010).

- CP3 – General Principles for Development: Requires that development proposals demonstrate high-quality design, protect the environment, and contribute to the Borough's green infrastructure.
- CP7 – Biodiversity: Ensures that proposals protect and enhance biodiversity and geodiversity by incorporating biodiversity enhancements in and around developments and ensuring that ecological networks are safeguarded.

Wokingham Borough Council Biodiversity Action Plan 2012-2024 (Adopted 2014).

The BAP includes habitat action plans including:

- 2 HAP - Woodland
- 3 HAP - Grassland and hedgerow

Appendix B Target Notes (see Figure 1)

Table B1: Target notes

Target note	Grid Reference	Description and Photographs
1	(476770, 166700)	Lowland Mixed deciduous Woodland: Dominated by English oak. Frequent ash, occasional hawthorn and grey willow, and locally rare lime, birch, and holly. Shrub layer dominated by elder and abundant bramble. Ground flora included abundant Yorkshire fog, frequent creeping bent, dove's-foot cranesbill, ground ivy, cleavers, broad-leaved dock, and common nettle. Occasional species include lords-and-ladies, wood avens, ivy, yellow oat grass, false oatgrass, cock's-foot, common foxglove, and perennial ryegrass. 
2	(476757, 166754)	Damp area dominated by soft rush. 
3	(476764, 166765)	Mammal path likely from deer.

		
4	(476804, 166773)	Large log brash pile suitable habitat for reptiles. 
5	(476827, 166735)	Other Neutral Grassland: Dominated by Yorkshire fog with abundant creeping bent. Frequent species include creeping buttercup, self-heal, sweet vernal grass, and soft rush. Occasional species include perennial ryegrass, ragwort, common bent, dandelion, ribwort plantain, bristly oxtongue, marsh thistle, and red fescue. Locally rare species include meadowsweet. The grassland was tussocky and damp with some rush species. 
6	(476811, 166712)	Log pile suitable for reptiles and potential for ground nesting birds such as warblers, wrens and robins.

		
7	(476857, 166684)	Stream: Hemlock water dropwort, spring sedge, fool's watercress, and water mint present. 
8	(476867, 166811)	Log pile suitable for reptiles.
9	(476953, 166840)	Tree line dominated by oak. 
10	(476913, 166845)	Gateway, access point.

		
11	(476889, 166764)	Overgrown hedge with trees, dominated by bramble and goat willow, frequent hawthorn, occasional elder, and locally rare alder.
12	(476909, 166794)	Deer pathway 
13	(476877, 166642)	Bramble scrub in the south of the Site presented opportunities for nesting birds. 
14	(476910, 166644)	Dominated by oak with frequent elder, occasional hawthorn and locally rare ash. Ground flora included lords-and-ladies and foxglove, similar to other woodland areas on Site.

		
15	(476944, 166673)	Suitable habitat for reptiles. 
16	(476991, 166681)	Neutral grassland consisted of dominant Yorkshire fog, with frequent creeping buttercup. Occasional species include ragwort, perennial ryegrass, creeping bent, and common daisy. Locally rare species include ribwort plantain, dandelion, white clover, and rough meadow grass.
17	(477045, 166612)	Other developed land – hard standing driveway in the east of the Site. 
18	(477018, 166643)	Frequent bristly oxtongue. Occasional ragwort, nettle, ribwort plantain, bramble and spear thistle. Abundant Yorkshire fog and mouse-ear

		chickweed, with rare dove's-foot cranesbill. 
19	(477053, 166648)	Cherry laurel invasive hedgerow along residential garden. Some opportunities for nesting birds. 
20	(477018, 166693)	Native hedgerow: dominated by bramble and frequent hawthorn, with three ash trees, three hawthorn, one birch, and two poplar trees. 

21	(477018, 166693)	Footprint and path: potential evidence of badger activity. 
22	(476983, 166779)	Dominated by oak, with occasional ash and rare goat willow. 
23	(476950, 166713)	Open section within hedgerow. 

24	(476851, 166822)	Tree line dominated by oak with rare crack willow. 
25	(476893.5, 166790.6)	 

		

Appendix C Plant Species List

Table C1: Plant species list

Common Name	Scientific Name
Alder	*Alnus glutinosa*
Ash	*Fraxinus excelsior*
Birch	*Betula pendula*
Black knapweed	*Centaurea nigra*
Bramble	*Rubus fruticosus agg.*
Bristly oxtongue	*Helminthotheca echioides*
Broad-leaved dock	*Rumex obtusifolius*
Cleavers	*Galium aparine*
Cock's-foot	*Dactylis glomerata*
Common agrimony	*Agrimonia eupatoria*
Common bent	*Agrostis capillaris*
Common daisy	*Bellis perennis*
Common foxglove	*Digitalis purpurea*
Common nettle	*Urtica dioica*
Crack willow	*Salix fragilis*
Creeping bent	*Agrostis stolonifera*
Creeping buttercup	*Ranunculus repens*
Dandelion	*Taraxacum officinale*
Dove's-foot cranesbill	*Geranium molle*
Elder	*Sambucus nigra*
Elm	*Ulmus spp.*
English oak	*Quercus robur*
False oatgrass	*Arrhenatherum elatius*
Fool's watercress	*Apium nodiflorum*
Germander speedwell	*Veronica chamaedrys*
Goat willow	*Salix caprea*
Grey willow	*Salix cinerea*
Ground ivy	*Glechoma hederacea*
Hawthorn	*Crataegus monogyna*
Hemlock water dropwort	*Oenanthe crocata*
Holly	*Ilex aquifolium*
Ivy	*Hedera helix*
Lesser stitchwort	*Stellaria graminea*
Lime	*Tilia cordata*
Lords-and-ladies	*Arum maculatum*
Marsh thistle	*Cirsium palustre*
Meadowsweet	*Filipendula ulmaria*
Midland hawthorn	*Crataegus laevigata*
Mouse ear chickweed	*Cerastium fontanum*
Oxeye daisy	*Leucanthemum vulgare*
Perennial rye grass	*Lolium perenne*
Poplar	*Populus spp.*

Common Name	Scientific Name
Ragwort	*Jacobaea vulgaris*
Red fescue	*Festuca rubra*
Ribwort plantain	*Plantago lanceolata*
Rough meadow grass	*Poa trivialis*
Self-heal	*Prunella vulgaris*
Soft rush	*Juncus effusus*
Spear thistle	*Cirsium vulgare*
Spring sedge	*Carex caryophyllea*
Sweet vernal grass	*Anthoxanthum odoratum*
Water mint	*Mentha aquatica*
White clover	*Trifolium repens*
Wood avens	*Geum urbanum*
Yellow oat grass	*Trisetum flavescens*
Yorkshire fog	*Holcus lanatus*

Appendix D GCN HSI

Table D.1 HSI Survey Findings

HSI Factors	Pond 1	Pond 2	Pond 3	Ditch 2	Ditch 3	Ditch 8
Location	1	1	1	1	1	1
Pond Area (M^2)	0.15	0.2	0.25	0.05	0.05	0.4
Pond Drying	0.5	0.5	0.9	0.9	0.9	0.1
Water Quality	0.01	0.01	0.01	0.01	0.01	0.01
Shade	0.6	0.3	0.3	0.3	0.3	0.6
Fowl	1	1	0.67	1	1	1
Fish	1	1	1	1	1	1
Ponds per km2	1	1	1	1	1	1
Terrestrial Habitat	0.67	0.67	0.33	0.67	0.67	1
Macrophytes Cover (%)	0.3	0.3	0.3	0.3	0.3	0.3
HSI Score	**0.39 (Poor)**	**0.38 (Poor)**	**0.37 (Poor)**	**0.35 (Poor)**	**0.35 (Poor)**	**0.39 (Poor)**

Appendix E Bat Statics Locations

Table E.1

Bat Static Detector	Coordinates
D2	51.39484 -0.898897
D8	51.39415 -0.895275
D10	51.39392 -0.894947
D12	51.39480 -0.896487
D15	51.40650 -0.897420