



Preliminary Ecological Appraisal and Biodiversity Net Gain

Land to the Rear of 88 Knights Way, Emmer
Green, Caversham, Reading, RG4 8RD

02 May 2025

PEA and BNG of 88 Knights Way, Emmer Green, Caversham, Reading, RG4 8RD

REPORT DETAILS

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EXECUTIVE SUMMARY

NatureBureau was commissioned by Rebecca Hartley to undertake a Preliminary Ecological Appraisal (PEA) and Biodiversity Net Gain (BNG) assessment in relation to a proposed development at land to the rear of 88 Knights Way, Emmer Green, Reading. The site, measuring approximately 0.051 hectares, is situated within a suburban setting and comprises modified neutral grassland, hardstanding, and eight scattered trees.

The ecological appraisal included both a desk-based review and a field survey conducted in April 2025. While the wider area supports records of protected species such as bats, badgers, and amphibians, the site itself was found to be of low ecological value, offering limited potential for wildlife. No protected or invasive species were recorded during the survey. Scattered trees on-site offer low-level opportunities for nesting birds and foraging and roosting bats. Although the site lies within a Great Crested Newt Impact Risk Zone, it is isolated from suitable aquatic habitats, and significant impacts on this species are considered unlikely.

The PEA recommends that site clearance should be timed to avoid the bird nesting season (March to August), where possible. The works should also be preceded by a check from a suitably qualified ecologist to check for amphibians, bats, birds, invertebrates, mammals and reptiles. Vegetation clearance must be conducted sensitively and in a phased way, as detailed in the recommendations of this report. Recommendations are also made regarding the storage and disposal of spoil/construction waste, and pitfall traps created via excavations must be avoided or, at minimum, mitigated with coverings and/or ramps overnight.

If any protected species are found during the destruction phase, works must be halted, and a suitably qualified ecologist must be consulted for advice. To support biodiversity post-development, it is advised that the scheme incorporate native species planting, wildlife-friendly landscaping features, and enhancements such as bird and bat boxes.

A BNG assessment was carried out using the Statutory Biodiversity Metric v4.0. The proposed development, as currently designed, will result in a biodiversity **net loss of 66.16%** (0.79 units) due to the removal of six trees, and the replacement of neutral grassland with buildings, paving, and artificial grass, which offer no biodiversity value. **Additionally, trading rules have not been satisfied** as the grassland and trees can only be replaced by the same broad habitat or a higher distinctiveness habitat.

In conclusion, it is not possible to get a 10% gain on site and meet the trading rules, and gains will have to be made off-site. If the client does not have an appropriate site which can be legally secured for a minimum of 30 years, then the client must purchase off-site credits from a habitat bank. A minimum of 0.91 statutory biodiversity credits must be purchased.

1 INTRODUCTION

NatureBureau was commissioned by Rebecca Hartley (hereafter referred to as the 'client') to undertake a Preliminary Ecological Appraisal (PEA) and Biodiversity Net Gain (BNG) calculations of Land to the rear of 88 Knights Way, Emmer Green, Caversham, Reading, RG4 8RD centred at grid reference SU 71711 76399 (hereafter referred to as the 'site'). The survey is required to support a planning application for the erection of a new building and installation of associated pathing (hereafter referred to as 'the proposed works').

1.1 Site Overview

The proposed development site is located on the northern outskirts of Caversham, approximately 3 kilometres (km) north of Reading Town. Immediately surrounding the proposed development site are residential buildings with associated private gardens and boundary fencing, commercial buildings and trees.

The wider landscape comprises further residential and commercial buildings, open fields, allotments and mature hedgerows and trees – alongside patches of woodland. A pond also exists approximately 300 metres (m) east of the site.

The boundary is approximately 0.051 hectares (ha) in size and comprises grassland, trees and an area of hardstanding, with access via a driveway to the east.

1.2 Scope of Assessment

The key objectives of a PEA are to:

- Identify the likely ecological constraints associated with a project;
- Identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy';
- Identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA); and,
- Identify the opportunities offered by a project to deliver ecological enhancement.

BNG aims to demonstrate how a proposed development will result in a measurable improvement in biodiversity and to ensure compliance with legal and planning policy requirements - particularly under the Environment Act 2021 in England.

The Key objectives of BNG are:

- Quantify baseline biodiversity;
- Provide detailed habitat classifications, condition assessments, and area measurements;
- Identify and quantify the loss or degradation of habitats due to development;
- Show if/how the development will deliver (at least 10%) net gain in biodiversity units.

Figure 1: Site location within the local landscape

(Copyright Google Earth, 2022)



Figure 2: Site location within the wider local landscape

(Copyright Google Earth, 2022)



2 METHODOLOGY

2.1 Desk Study

Freely available online datasets were searched for licences granted for works involving protected species within 2 km of the site, and for records of relevant Designated Sites within this same radius. Additionally, maps/aerial images were interrogated for features of ecological interest.

A 2 km search radius for protected species and designated sites has been deemed appropriate based on the nature of the proposed development. It is considered highly unlikely that ecological receptors beyond this distance would be adversely affected. These search parameters are informed by industry-standard guidance.

Table 1: Summary of resources used during the desk study

Resource	Information assessed
Google Earth	Assessment of the local landscape. Latest image date: March 2025.
Multi-Agency Geographic Information for the Countryside (MAGIC) website ¹	Records of licences issued by Natural England for works affecting protected species within 2 km of the site; any relevant site designations within 2 km of the site; Priority Habitats in the local area. SSSI 'Impact Zones' in relation to the proposed works on the site.
Thames Valley Environmental Records Centre (TVERC)	Key information regarding the confirmed presence and habitat of all protected species within a 2 km radius of the site boundary.
Local Plan, Biodiversity Strategy/policy	Consulted to check whether the site forms part of a local biodiversity plan and determine the Strategic Significance of the site.
Ordnance Survey Maps	Search to identify ponds within 500 metres (m) of the site which may have potential to support breeding great crested newts (<i>Triturus cristatus</i>).
Preliminary Ecological Appraisal (2023)	A survey was carried out by Ecology by Design in 2023. This report was reviewed prior to commencement of the updated survey and some recommendations were upheld in this report.

¹ [Magic Map Application \(defra.gov.uk\)](https://magic.defra.gov.uk/)

2.2 Ecology Field Survey

A site visit was undertaken on 16 April 2025 between 11:00 and 12:30 hours, during which all areas within the site boundary were walked over.

The PEA survey identified the habitats present and their potential for protected species, particularly bats, birds, hedgehogs (*Erinaceus europaeus*), badgers (*Meles meles*), hazel dormouse (*Muscardinus avellanarius*), amphibians, reptiles and invertebrates following the standard guidelines set out by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018). Examples of survey considerations include:

- Open areas of habitat were visually assessed for signs of mammal tracks, push throughs and latrines
- The site was visually assessed for features which increase likelihood of use by reptiles, including the presence of tussocky vegetation, log and rock piles, basking spots and compost heaps
- Areas of dense vegetated cover on site and adjacent to the site were assessed for their likely use by badgers, and attention was paid to the presence of any signs of current or historic badger activity such as setts and latrines
- Areas of woodland, copse, tree lines, hedgerows and other boundary vegetation were assessed for their likely use by hazel dormice, or increased likelihood of use due to presence of hazel and other suitable food species

The survey also included a search to identify the presence of any invasive, non-native plant species - particularly those listed on schedule 9 of the Wildlife & Countryside Act 1981 (as amended) which include Japanese Knotweed (*Reynoutria japonica*) and Himalayan Balsam (*Impatiens glandulifera*).

Given that there is an absence of connecting water networks on site, it is considered highly unlikely that white clawed crayfish (*Austropotamobius pallipes*), Otter (*Lutra lutra*) or Water vole (*Arvicola amphibius*) are present and therefore they have not been included in the assessment. Additionally, no buildings are present on site, and therefore a Bat Roost Assessment (structures) was not required.

The work, analysis and reporting was undertaken in line with CIEEM's Code of Professional Conduct², and other relevant guidelines and legislation as listed in the Appendices of this report.

2.2.1 Ground Level Tree Assessment

A Ground Level Tree Assessment (GLTA) was conducted on all trees on-site, whereby the surveyor identified features of interest from ground-level, such as:

² <https://cieem.net/resource/code-of-conduct/>

- Cracks and splits in limbs
- Hazard beams
- Loose bark or lifted bark plates
- Knot holes and cavities
- Woodpecker holes
- Areas of dense ivy cover
- Fissures in deadwood

Based on Collins (2023), features were categorised as either:

- PRF-I - A feature that can be fully assessed from the ground or with endoscopic tools or is only suitable for a small number of bats;
- PRF-M - A feature that is suitable for larger groups of bats or is suitable for species of higher conservation concern (e.g., barbastelle, Bechstein's)

If any evidence of use by bats such as droppings, staining or scratches around such features were present this was noted. Any existing trees on site were also assessed for nesting birds.

2.3 Biodiversity Net Gain

Following amendments to the Town and Country Planning Act in February 2024, BNG has become a mandatory requirement for all developments in England that do not meet the exemption criteria. The approach used to assess biodiversity impacts resulting from the proposed works is detailed below. This assessment has been based on the latest version of the Statutory Metric as published at the time of commission (April 2025), the proposed site plan provided by the client, and the PEA undertaken in April 2025 which identified the plants and habitats present according to the UK Habitats Classification System (UK Habs³) and made condition assessments of them using Natural England's Statutory Biodiversity Metric Technical Annex 1.

BNG is based around ten good practice principles for development (CIRIA, 2016):

- Principle 1: Apply the mitigation hierarchy;
- Principle 2: Avoid losing biodiversity that cannot be offset elsewhere;
- Principle 3: Be conclusive and equitable;
- Principle 4: Address risk;
- Principle 5: Make a measurable net gain contribution;
- Principle 6: Achieve the best outcomes for biodiversity;
- Principle 7: Be additional;
- Principle 8: Create a net gain legacy;
- Principle 9: Optimise sustainability; and

³ <https://www.ukhab.org/>

- Principle 10: Be transparent.

The Statutory Biodiversity Metric User Guide (DEFRA, 2024) details a further nine Biodiversity Metric Principles which inform the use of the Statutory Biodiversity Metric Calculation Tool (hereafter ‘the Metric’) to ensure that appropriate methods and reasoning are applied when undertaking BNG assessment.

In addition, a series of Biodiversity Metric rules are detailed which must be followed to claim a net gain in biodiversity. These include the requirement to achieve a 10% net gain in each unit type individually, i.e. habitats, hedgerows and watercourses as these cannot be summed, traded, or converted between types. Trading rules must also be followed which are designed to ensure that habitat losses associated with a proposed scheme are offset by suitable habitat creation or enhancement measures. Depending on the distinctiveness of a habitat type, it may be subject to a “like for like” trading rule, requiring the delivery of Biodiversity Units through creation of the same habitat type.

2.3.1 The Biodiversity Metric

The quantitative assessment is based on the Metric to provide a transparent and repeatable measure of biodiversity at both the baseline and post-development stages of the project. The Metric calculates a biodiversity unit value for area habitats, hedgerows and watercourses individually. The baseline biodiversity score for each of these unit types considers several factors:

- Habitat distinctiveness (the relative scarcity of the habitat and its importance for nature conservation);
- Habitat condition (assessed using the specific criteria detailed in the Statutory Biodiversity Metric Technical Annex 1);
- Strategic significance (a landscape scale assessment which considers the habitat type and location); and
- Spatial area (ha) of area habitats or length (km) of hedgerows and watercourses.

The post-development biodiversity score is calculated using the same approach, but factors in a series of risk multipliers:

- Temporal risk i.e. time required for newly created or enhanced habitats to reach target condition;
- Difficulty of creation/enhancement, i.e. risk associated with the effectiveness of techniques to create or enhance habitats; and
- Spatial risk i.e. the distance between on-site biodiversity loss and the location of off-site habitat compensation (where applicable).

The baseline biodiversity value is compared to the post-development biodiversity value to assess the change (positive or negative) in Habitat Units, Hedgerow Units and Watercourse Units.

The Metric uses habitats as a proxy for determining the biodiversity value of a site and does not take the presence of protected and notable species or associated enhancement measures (e.g. bird/bat boxes) into account.

2.4 Surveyor Information

The survey was carried out by Kristina Wood (B.Sc. Hons, M.Res.), a terrestrial ecologist and Associate Member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Kristina has been employed as an ecologist at NatureBureau since 2019 and is experienced in landscape surveying for ecological assessments related to planning applications, as well as monitoring sites under Countryside Stewardship agreements. Her work also includes the management and annual surveying of a Site of Special Scientific Interest (SSSI) on behalf of Eton College for pennyroyal (*Mentha pulegium*). Additionally, she has contributed to a broader assessment of rare vascular plant assemblages and (*Cirsium tuberosum*) on the 16,690 ha Salisbury Plain SSSI, a project commissioned by Natural England. Additionally, Kristina has completed various BNG training courses, including CIEEM's Biodiversity Metric V3.1, Statutory Biodiversity Metric for Mandatory BNG in England, and Mandatory BNG: The Policy.

BNG metric calculations were conducted by Kristina Wood and reviewed by Annika Binet BSc (Hons) MCIEEM. Annika Binet is a qualified ecologist with over 15 years' experience in ecological consultancy in addition to land management experience. Annika has a post graduate certificate in ecological consultancy, is a full member of CIEEM and has undertaken a range of courses related to habitat survey, condition assessment and BNG.

2.5 Limitations

Desk-based data relies on third-party records and datasets, which may be incomplete, out of date, or subject to reporting biases (e.g. more records near populated areas).

The survey was conducted during a period generally regarded as optimal for habitat assessments. However, it represents a snapshot in time and may not capture the full extent of floristic diversity present on site. It is reasonable to assume that further surveys conducted in different months could identify additional plant species. Furthermore, the absence of invasive species during the survey does not conclusively indicate their absence from the site. Similarly, for animal species, surveys were conducted during a specific period and may not reflect seasonal variations. Some species may not have been detectable at the time of survey due to life cycle stages or weather conditions.

Habitat condition assessments are based on professional judgment and available guidance but can be subjective.

The results of this report are valid up to 18 months and/or if the conditions of the site change significantly, as per the Advice Note on the lifespan of ecological reports and surveys produced by CIEEM in 2019⁴.

⁴ <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>

3 RESULTS

3.1 Desk Study

3.1.1 Natural England Protected Species Licences

Within 2 km of the site there are 13 records for licences issued by Natural England for works affecting protected species entered on the MAGIC⁵ website. These records relate to the modification and destruction of bat roosts, impacting species such as brown long-eared bats (*Plecotus auritus*) common pipistrelle bats (*Pipistrellus pipistrellus*), Daubenton's bats (*Myotis daubentii*), Natterer's bats (*Myotis nattereri*), serotine bats (*Eptesicus serotinus*) and soprano pipistrelle bats (*Pipistrellus pygmaeus*) between 2011 and 2020.

3.1.2 Site Designations

Within 2 km of the site there are no Sites of Special Scientific Interest (SSSIs). The site check report indicates that Natural England only need to be consulted about the development if any of the following criteria will apply:

- **Air Pollution:** Livestock & poultry units with a floorspace > 500m², slurry lagoons > 4000m²;
- **Combustion:** General combustion processes >50MW energy input. Including: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion;
- **Discharge:** Any discharge of water or liquid waste of more than 20m³/day that is discharged to ground (i.e. to seep away) or to surface water, such as a beck or stream.

Within 2 km of the site there is one Local Nature Reserve (LNR). Clayfield Copse is located 800 m northeast. Viewing of aerial imagery shows very limited ecological connectivity between the site and this LNR.

3.1.3 Priority Habitats

The nearest parcel of Deciduous Woodland (a Priority Habitat) is located 170 m southwest of the site, and there is a large parcel of Woodpasture and Parkland (a BAP habitat) 500 m east. The site has low connectivity to these habitats.

⁵ [Magic Map Application \(defra.gov.uk\)](https://defra.gov.uk/magic)

3.1.4 Flora

A total of 54 records of 19 notable plant species were identified within the 2 km search area (TVERC, 2025). A full species list can be found in the Appendices.

The TVERC data search within 2 km of the site returned 10 records of invasive plants related to seven species.

Table 2: Seven species of invasive plant have been recorded within 2 km of the site (TVERC, 2025)

Common Name	Latin Name
Canadian Waterweed	<i>Elodea canadensis</i>
Japanese Knotweed	<i>Fallopia japonica</i>
New Zealand Pigmyweed	<i>Crassula helmsii</i>
Nuttall's Waterweed	<i>Elodea nuttallii</i>
Rhododendron	<i>Rhododendron ponticum</i>
Three-cornered Garlic	<i>Allium triquetrum</i>
Winter Heliotrope	<i>Petasites fragrans</i>

3.1.5 Fauna

In Section 3.2.2 the findings of the desk study and PEA are presented together

3.1.6 Site Context

The site is situated within a high-density residential area with associated private gardens and boundary fencing, local commercial buildings and trees.

The wider landscape comprises further residential and commercial buildings, open fields, allotments and mature hedgerows and trees – alongside patches of woodland. A pond also exists approximately 300 meters (m) east of the site.

3.2 Ecology Field Survey

A daytime site visit was undertaken on 16 April 2025. At the time of the survey the temperature was 15°C with bright and sunny conditions. Site photos can be found in the Appendices.

3.2.1 On-site Habitat

On-site habitats were recorded in line with current UKHabs classification. The predominant habitat on the site was (unmanaged) neutral grassland, with some holly and bramble overhanging the site on the northwest corner. In addition to this, there was an area of hardstanding, a driveway and

individual trees – eight sycamore (*Acer pseudoplatanus*) and one ash (*Fraxinus excelsior*). The site features discarded materials including pallets, rubble, children's toys and litter.

Figure 3: Annotations from the site visit, with trees shown in green



None of the notable or invasive plant species recorded locally have been found on-site. A full plant species list can be found in the Appendices.

Figure 4 demonstrates the broad on-site habitats and their locations.

3.2.2 Fauna

Amphibians

A data search conducted by TVERC within a 2 km radius of the site identified five amphibian records. These comprised one record of the common frog (*Rana temporaria*) and four records of the smooth newt (*Lissotriton vulgaris*).

The site is enclosed by secure fencing on all sides. However, small gaps were noted at the northwestern boundary, adjacent to a neighbouring garden. Should this garden connect to other residential gardens, and if any of these contain ponds, there is potential for amphibians such as frogs and toads to access the site. Suitable terrestrial refugia is present on-site, including areas of long grass, scrub/brash, and discarded materials.

The proposed development lies within a green Impact Risk Zone (IRZ) for great crested newt (GCN) as defined by Natural England's habitat suitability modelling. Green IRZs indicate the presence of moderately suitable habitat with a low likelihood of GCN occurrence.

A review of the Ordnance Survey mapping layer on MAGIC identified one pond within 500 m of the site - the accepted dispersal distance for great crested newts - located approximately 300 m to the east. This pond is isolated from the site by a network of residential boundary fencing and a road, which act as significant barriers to amphibian dispersal. Additionally, there are no existing records of GCN within a 2 km radius of the site.

Given the above factors, it is concluded that the proposed development poses no risk to GCN or their associated habitats.

Badgers

A data search conducted by TVERC identified 55 records of badgers within a 2 km radius of the site, all recorded since 2010.

A site walkover revealed no field signs indicative of badger activity, such as latrines, tracks, guard hairs, or snuffle holes. The development site is securely fenced and generally well-maintained, with only minor gaps along the northwestern boundary. The surrounding landscape is characterised by high-density residential development, offering limited suitability for sett construction.

Given the absence of evidence on-site and the suboptimal nature of the surrounding habitat, it is considered unlikely that any badger setts exist within 100 m of the site boundary. As such, badgers are scoped out of further detailed assessment in this report – but precautionary considerations are included within the recommendations.

Bats

A data search conducted by TVERC identified 841 bat records within a 2 km radius of the site, dating from 2010 onwards. After removing duplicate entries, these records represent 12 distinct bat species. A full species list is provided in the Appendices.

Additionally, 13 European Protected Species (EPS) licences relating to bat mitigation works were identified within 2 km of the site via the MAGIC mapping tool, indicating a local presence of roosting bats.

The site is likely to provide suitable habitat for foraging and commuting bats via linear features such as tree lines and canopy cover.

A GLTA was undertaken to assess the suitability of on-site trees for roosting potential (refer to Section 3.2.3).

Birds

The TVERC data provided a total of 1,887 bird records within a 2 km radius of the site. Following the removal of duplicate entries, these records represent 65 bird species recorded since 2010. A complete species list is provided in the Appendices.

During the site survey, a wood pigeon (*Columba palumbus*) was observed resting in a tree within a neighbouring garden. On-site, limited suitable nesting habitat exists, primarily within individual trees. However, no birds were observed nesting, and no evidence of active or historic nests (e.g. old nests, droppings, or alarm calling) was identified during the visit.

Given the characteristics of the site, it is considered that there is negligible risk of disturbance to ground nesting birds. However, the precautionary measures recommended in Section 4.1.2 will mitigate any potential risks to ground nesting birds should they be present on-site before or during construction activities.

Brown Hare

The data search identified no records of Brown hare (*Lepus europaeus*) within 2 km of the site and the site and surrounding landscape do not provide suitable habitat for this species.

Hazel Dormice

The data search returned no records of Hazel dormouse with a 2 km radius of the site and the site and surrounding landscape do not provide suitable habitat for this species.

Hedgehogs

A total of 118 records of hedgehogs within a 2 km radius of the site have been identified through the TVERC data search, all recorded since 2010.

No hedgehogs or signs of hedgehog activity (e.g. tracks, droppings, nests) were observed during the site survey. However, the presence of unmanaged grassland offers suitable foraging habitat, and the small gap identified in the northwestern boundary fence may allow hedgehog access. Additionally, areas of scrub encroachment and scattered discarded materials provide potential shelter for nesting and hibernation.

Given the availability of suitable habitat features, it is considered that hedgehogs may utilise the site on occasion for foraging or refuge.

Invertebrates

A total of 186 invertebrate species records within a 2 km radius of the site were returned by the TVERC data search, covering records since 2010. After removing duplicates, these records pertain to 18 distinct species. A full species list is provided in the Appendices.

No evidence of Stag beetles (*Lucanus cervus*) was found on-site, nor is there any habitat present that would be impacted by the development. However, given that Stag beetle records exist within 2 km of the site and the species is often under-recorded, invertebrate species, including Stag beetles, have been considered when formulating the recommendations.

Reptiles

The TVERC data provided 17 reptile records within a 2 km radius of the site. When duplicates were removed, these records pertain to two species: the grass snake (*Natrix helvetica*) and the slow worm (*Anguis fragilis*), both recorded within the area since 2010.

Given the nature of the site and the absence of significant reptile habitats, it is considered that the proposed development will not result in the loss of suitable reptile habitat, and no further reptile surveys are deemed necessary. However, the precautionary measures recommended in Section 4.1.2 will mitigate any potential risks to reptiles should they be present on-site before or during construction activities.

Other

TVERC returned records of two otter observations and one polecat observation since 2010.

3.2.3 Ground Level Tree Assessment

A GLTA was carried out to assess the sites suitability for roosting bats. The location of the trees can be seen in Figure 4.

Table 3: Ground Level Tree Assessment Results

Tree Number	Species	GLTA Notes	Evaluation
1	Sycamore	Pruning cuts	No bat potential
2	Sycamore	Pruning cuts	No bat potential
3	Sycamore	Multi-stemmed, lifted bark but the features are very low down	Negligible bat potential
4	Sycamore	Significant dead wood and lifting bark	PRF-I bat potential
5	Sycamore	Dead wood, lifted bark, ivy clad	Negligible bat potential
6	Ash	Shallow knot hole at 2 m from the ground facing east	Negligible bat potential
7	Sycamore	Deadwood in crown	No bat potential
8	Sycamore	Small area of lifted bark facing south Bird nesting box on south-facing limb	Negligible bat potential
9	Sycamore	Deadwood in crown	No bat potential

3.3 Biodiversity Net Gain

3.3.1 Local Plans

The Reading Borough Local Plan (2019 – 2036)⁶ shows that the site does not fall under any policy and none of the species or habitats found on site are referenced for special protection in the Reading Biodiversity Action Plan⁷.

3.3.2 Statement of Degradation

Based on the site visit and desk study (including viewing of aerial imagery prior to 2020), it has been determined that the site has not undergone degradation. The habitat conditions observed are consistent with the site's natural state, and no significant signs of deterioration or loss of biodiversity were identified. As such, the site is considered to have retained its ecological integrity and does not exhibit any evidence of degradation. Therefore, the baseline outlined in Section 3.2.1 is appropriate for the BNG Metric calculations.

3.3.3 Irreplaceable Habitats

Based on the site visit and desk study it has been determined that the proposed development is not expected to have any impacts on irreplaceable habitats.

3.3.4 Strategic Significance

The site and its habitats are not mentioned within the Local plan. This meets the relevant description of “The habitat is not included in local plans, strategy, or policy, and there is no evidence to suggest the habitat is of medium strategic significance” as outlined by the Strategic Significance Scoring System, and the strategic significance of the site is determined to be low (1).

3.3.5 Baseline Habitats

The area to be developed included a driveway comprising a sealed surface, an area of grassland dominated by species such as Yorkshire fog (*Holcus lanatus*) and cow parsley (*Anthriscus sylvestris*), a central area of hardstanding, a northeast (enclosed) area of gravel, and nine trees. A species list can be found in Appendix 6.1.

⁶ https://images.reading.gov.uk/2019/12/Local_Plan_Adopted_November_2019.pdf

⁷ <https://images.reading.gov.uk/2021/03/Reading-Biodiversity-Action-Plan-2021.pdf>

Table 4: Habitats identified on site

Habitat Type	Size	Condition	Comments
u1c Artificial unvegetated – unsealed surface	0.00175 ha	N/A	Area containing electricity substation
u1b Developed land – sealed surface	0.0046 ha	N/A	Hardstanding on site
u1b Developed land – sealed surface	0.0183 ha	N/A	Driveway
g3c Other neutral grassland	0.0256 ha	*Moderate	Secondary code: 521 - unmanaged Species list available in Appendices
Individual tree (T1)	Medium	*Moderate	To be retained Condition sheet: Individual Trees (T1)
Individual tree (T2)	Medium	*Moderate	To be removed Condition sheet: Individual Trees (T2)
Individual tree (T3)	Small	*Moderate	To be removed Condition sheet: Individual Trees (T3)
Individual tree (T4)	Medium	*Good	To be removed Condition sheet: Individual Trees (T4)
Individual tree (T5)	Small	*Good	To be removed Condition sheet: Individual Trees (T5)
Individual tree (T6)	Medium	*Good	To be removed Condition sheet: Individual Trees (T6)
Individual tree (T7)	Small	*Moderate	To be removed Condition sheet: Individual Trees (T7)
Individual tree (T8)	Medium	*Good	To be retained Condition sheet: Individual Trees (T8)
Individual tree (T9)	Small	*Moderate	To be retained Condition sheet: Individual Trees (T9)

*Condition sheets available in Appendices, alongside additional site photos

3.3.6 Post-Development Habitats

The proposed development includes the removal of six trees and the erection of a new building to the south of the site. There will be associated paving and storage. Most of the site post-development will be developed land; sealed surface (building and hardstanding).

As trees do not provide a groundcover area, their areas are not included in the total within Table 5 below, meaning that the total areas presented remain the same as the area of the site. Within the Metric calculator, however, they are included in addition to the ground vegetation areas.

Table 5: Post-development habitats on site

Habitat Type	Size	Comments
u1c Artificial unvegetated – unsealed surface	0.00175 ha	Retained electricity substation
u1b Developed land – sealed surface	0.0183 ha	Retained driveway
u1b Developed land – sealed surface	0.0106 ha	Patio and artificial grass area
u1b Developed land – sealed surface	0.00325 ha	New paving to east of site
g3c Other neutral grassland	0.00458 ha	Retained grass to the west and south
g3c Other neutral grassland	0.0013 ha	Retained grass to the northeast
u1b5 Buildings	0.0105 ha	New building. Secondary code 813 educational building
u1b5 buildings	0.00015 ha	Small storage unit
Individual tree (T1)	Medium	Retained tree
Individual tree (T8)	Medium	Retained tree
Individual tree (T9)	Small	Retained tree

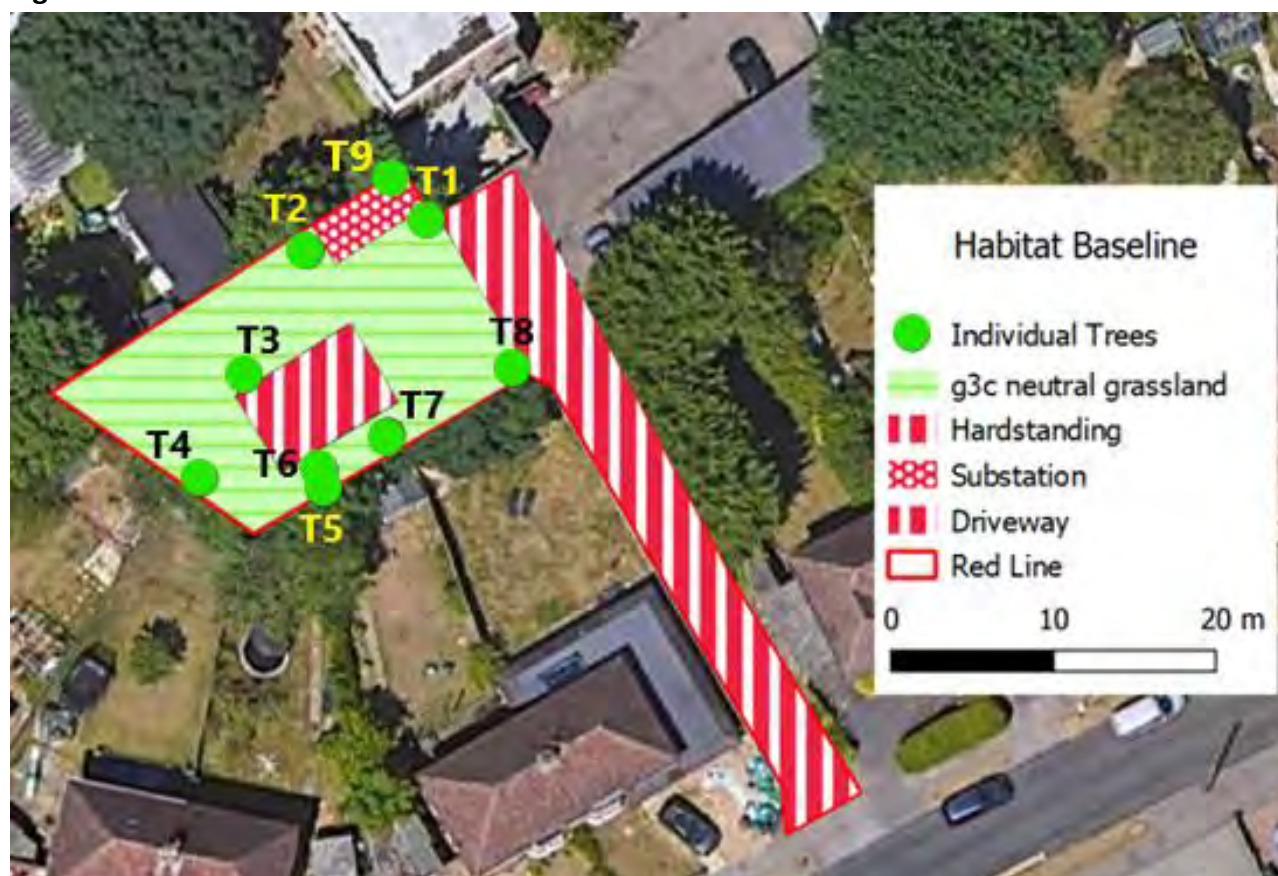
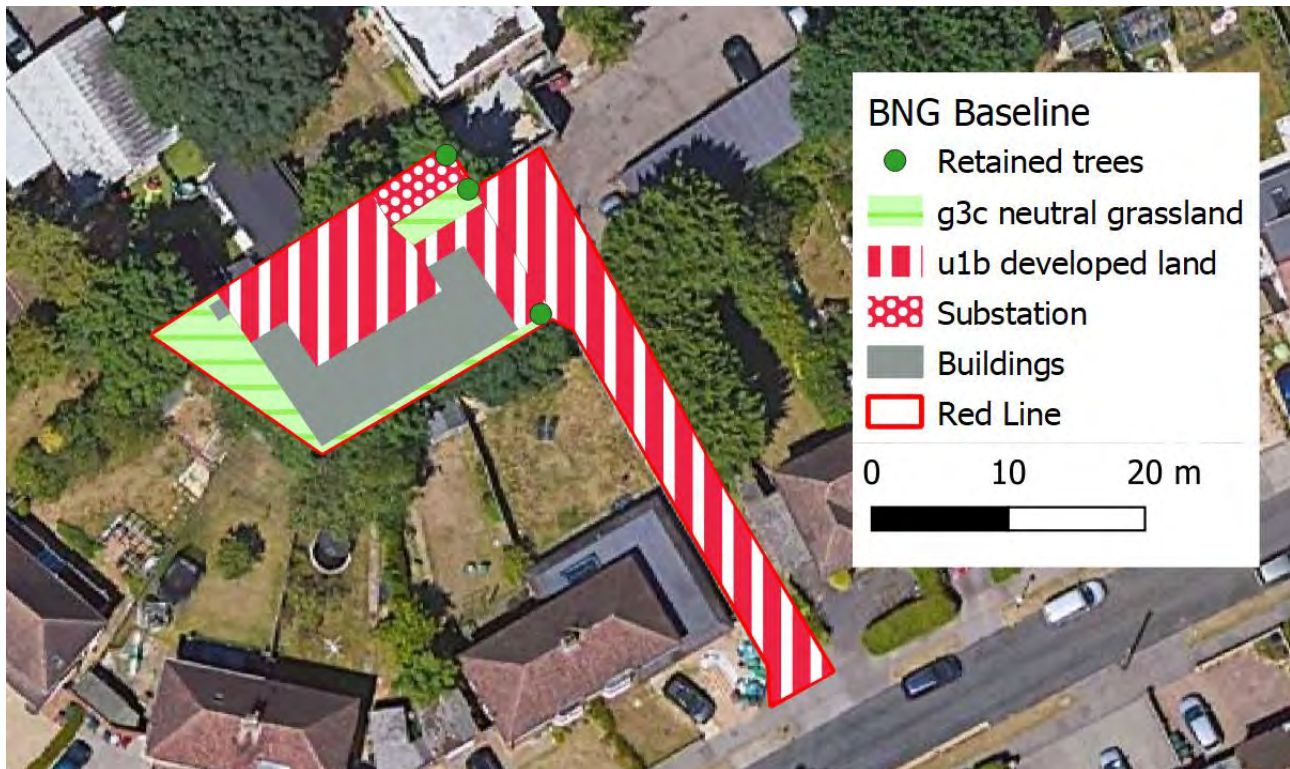
Figure 4: On-site habitats

Figure 5: Post-development Map



3.3.7 Metric Result

The proposed development will result in a biodiversity net loss of 66.16% (0.79 units) due to the removal of six trees, and the replacement of neutral grassland with buildings, paving, and artificial grass, which offer no biodiversity value. **Additionally, trading rules have not been satisfied** as the grassland and trees can only be replaced by the same broad habitat or a higher distinctiveness habitat.

Figure 6: Headline Results from the Biodiversity Metric

FINAL RESULTS

Total net unit change

(Including all on-site & off-site habitat retention, creation & enhancement)

Habitat units

-0.79

Hedgerow units

0.00

Watercourse units

0.00

Total net % change

(Including all on-site & off-site habitat retention, creation & enhancement)

Habitat units

-66.16%

Hedgerow units

0.00%

Watercourse units

0.00%

Trading rules satisfied?

No - Check Trading Summaries ▲

Unit Type

Target

Baseline Units

Units Required

Unit Deficit

Habitat units

10.00%

1.20

1.32

0.91

Hedgerow units

10.00%

0.00

0.00

0.00

Watercourse units

10.00%

0.00

0.00

0.00

No additional hedgerow units required to meet target ✓

No additional watercourse units required to meet target ✓

Input errors/rule breaks present in metric ▲

4 EVALUATION AND RECOMMENDATIONS

4.1 Preliminary Ecological Appraisal

4.1.1 Flora

T1, T8 and T9 are due to be retained and should be fully safeguarded from harm as part of any detailed proposals as indicated by a suitably qualified appointed arboriculturist.

T2-T7 are due to be removed and should be checked for bats and birds prior to their removal (see Section 4.1.2).

The proposed works are not expected to have any impacts on any priority habitats or notable species, and no invasive or notifiable species were identified on site.

4.1.2 Fauna

Bats

There are trees on site that have PRF-I potential in the form of lifted bark, and these are due to be removed. Additionally, the site has some value to foraging and commuting bats.

In line with Collins (2023), precautionary measures should be taken during works, with the trees being inspected prior to felling. This inspection must be undertaken by a licenced ecologist. If any bats or evidence of bats is found, a European Protected Species mitigation licence will be required before any works can be carried out on the tree.

Furthermore, due to the habitats on and around the site, it is recommended that any development which takes place should be considerate of bats when implementing any new lighting regimes during the construction and operational phases.

To reduce the likelihood of disturbing bats, during the construction phase there should be no temporary nighttime lighting from sunset to sunrise, and all works must be completed in daylight hours. If emergency lighting is required, it should follow the following specifications:

- Lighting should be directional, facing away from retained/neighbouring trees, and set using a steep ground-ward angle and on short columns (no higher than 3m);
- Use a lamp no greater than 2000 lumens (150 watts), using light sources that peak higher than 550 nanometres, which avoids the UV, white and blue wavelengths;
- Warm white spectrum LED (<2500 Kelvin) should be used over a cool white spectrum;
- Cowls, hoods, baffles or louvres should be used to avoid light spillage off-site;
- Use of reflective surfaces under the light should be avoided

In addition, the following recommendations should be employed post-development:

- Lighting should use sensor activated lamps;
- Variable lighting regimes must be utilised to lower lighting levels during periods of reduced human activity (e.g. 22:00-05:30)

As per the recommendations of the previous PEA (Ecology by Design, 2023), it is recommended that two bat boxes are included as part of the proposed development. A suitably qualified ecologist must direct and/or approve the installation of bat boxes to ensure their suitable placement.

Birds

Birds could potentially begin nesting in trees on site at any time during bird nesting season. The proposed works could therefore cause disturbance, injury or death to nesting birds when trees are removed.

If work is to be carried out during bird nesting season (March to August, inclusive), site contractors must be aware of their obligations towards nesting birds and must check for them prior to commencing the works. If an active bird nest is discovered, an exclusion zone must be put in place (minimum 5 m), and works must be halted in that area. Breeding birds and their nests are protected by law and all active nests must be retained until the young have fledged. Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works.

As per the recommendations of the previous PEA (Ecology by Design, 2023), two house sparrow (*Passer domesticus*) and three open nest boxes suitable for common species e.g. robin (*Erithacus rubecula*) and wren (*Troglodytes troglodytes*) boxes will be installed somewhere on site. A suitably qualified ecologist must direct and/or approve the installation of bird boxes to ensure their suitable placement.

Invertebrates

Given the presence of notable invertebrate species within 2 km of the site and considering the tendency for such species to remain under-recorded, it is recommended that caution be exercised during any works that may impact deadwood, vegetation clearance, spoil piles, or areas of dense habitat. These features may support a diverse range of invertebrate species, including those of conservation concern, and should be checked by an ecologist prior to the works.

Furthermore, the loss of grassland and trees is likely to reduce the ecological value of the site for common invertebrates. To compensate for this, it is recommended that native planting be incorporated into the development plans. Additionally, the installation of an insect box and/or log pile should be considered. These features can be created using felled deadwood from tree removal.

Amphibians, Mammals and Reptiles

Owing to the development being limited to a small area of habitat not expected to impact on any notable or priority species, it is deemed disproportionate to require further surveys for this proposal. Additionally, survey efforts only provide a snapshot of animal activity on any site, and it is possible that animals such as badgers, frogs, hedgehogs and foxes (*Vulpes vulpes*) could move onto the site after the surveys are completed and be injured or killed during works. Therefore, to protect ground-dwelling species from harm or death, a Precautionary Method of Working should be implemented.

Specifically for this site, this would require the following:

- Prior to the commencement of works, a check of the development area should be made for ground-dwelling mammals and nesting birds. This will be carried out by an ecologist.
- Vegetation clearance must be conducted sensitively. Clearance of tall vegetation should be undertaken using a strimmer or brush cutter with all cuttings raked and removed the same day. Cutting will be undertaken in a phased way: vegetation to a height of no less than 15 centimetres (cm) at the first cut and 7.5cm at the second cut. Clearance must be directional, towards the site boundary in the direction of the area of retained habitat.
- All discarded materials and holly/bramble encroachment (if relevant) should be cleared by hand to ensure no wildlife is present.
- Any frogs or toads discovered during works should be safely relocated to suitable habitat away from the development area. The likelihood of discovering protected amphibians or reptiles during the works is considered highly unlikely, but if any are found during the destruction phase, works must be halted, and a suitably qualified ecologist must be consulted for advice.
- Any spoil resulting from excavations will be spread and compacted within the area on the same day or be removed from the construction area on the same day. It will not be left in loose heaps overnight.
- All excavations created during the construction period will be filled in and finalised on the same day so as not to leave any pitfall traps. If this is unavoidable, they must be covered overnight or left with a sloping end or ramp to allow trapped wildlife to escape. All trenches and pits will be inspected each morning to ensure no wild mammals have become trapped overnight.
- During the construction phase, any debris and brash will be stored on pallets or removed from the development area to prevent reptiles and hedgehogs from utilising these areas. It is advisable that only building products to be used on the day are brought and stored on the site. If building products need to be stored onsite (e.g., overnight or for more than one day), they will be stored on pallets or retained in bags on pallets to ensure that refuges are not created that may attract wildlife.
- All green waste should be removed from site the same day or stored in a manner that will prevent wildlife from accessing it.

- Any chemicals or pollutants used or created by the development should be stored and disposed of correctly, according to COSHH regulations.
- During the construction phase, works are not carried out after dusk and do not commence until after dawn. It is strongly recommended that generators and machinery that emit significant noise levels are not left to run through the night.

Additionally, hedgehog highways should be included within the boundary fencing to allow hedgehogs to move freely through the site, neighbouring gardens and into the wider landscape. To increase the probability that these hedgehog highways are not blocked by future residents, they will each be labelled both sides with an appropriate painted stencil or plaque (e.g. "Hedgehog Highway – please do not block").

The creation of log piles on site post-development will not only benefit invertebrates but could also be beneficial for amphibians, hedgehogs and reptiles.

Should any notable species (i.e., badgers, bats, birds, newts and reptiles) be discovered during development, works must cease immediately, and the advice of a suitably qualified ecologist must be sought. If any frogs, toads or hedgehogs are found during works, then they should be moved by gloved hand to a suitable, undisturbed and sheltered area - away from disturbance.

4.2 Biodiversity Net Gain

Due to the significant loss of habitat and the lack of appropriate compensation through habitat creation or enhancement, the development will result in a net loss of biodiversity totalling 66.16% - or 0.79 units. Additionally, the trading rules within the metric have not been satisfied, as the removal of medium distinctiveness habitats (including scattered trees and neutral grassland) has not been offset by the provision of habitats of equivalent or greater ecological value.

To align with statutory BNG requirements, the development would require either:

- On-site habitat creation or enhancement
- Off-site biodiversity offsetting, or
- The purchase of statutory biodiversity credits.

4.2.1 On-site Habitat Creation

To meet the trading rules for removing the six scattered trees, they must be replaced with either new woodland planting, or new scattered trees of equal or greater ecological quality.

Manipulation of the Metric shows that the addition of 19 trees (of medium size and moderate condition) would be required to achieve a 12.72% biodiversity net gain on site. However, the trading rules would still not be satisfied due to the loss of neutral grassland.

To compensate for the loss of neutral grassland of medium distinctiveness, it must be replaced with one of the following:

- Species-rich neutral grassland (g3a – higher distinctiveness)
- Semi-improved neutral grassland (g3b – same type)
- Calcareous or acid grassland, if ecologically appropriate
- Wet grassland, depending on local conditions
- Species-rich meadow or pasture
- Wet meadows (if part of a habitat mosaic)
- Wood-pasture and parkland (if it includes species-rich grassland understorey)

It is not possible to accommodate 19 trees and grassland creation on site. Therefore, **it will not be possible to compensate for the development using on-site habitat creation or enhancement**, and gains must be achieved off-site.

4.2.2 Off-Site Habitat Creation

This option involves securing biodiversity gains on land outside the development site. The key requirements are:

- The off-site land must be legally secured for a minimum of 30 years via a conservation covenant or planning obligation (Section 106 agreement);
- The habitat creation must be appropriately designed and managed, and its location, type, and condition must be recorded in the Biodiversity Gain Site Register maintained by Natural England;
- The proposed off-site units must be sufficient in quality and quantity to offset the loss from the development and achieve the required 10% net gain.

A separate Biodiversity Metric calculation will be required for the off-site location.

The created habitats must be managed to achieve long-term biodiversity benefits, and therefore a Habitat Management and Monitoring Plan (HMMP) will be required.

4.2.3 Statutory Biodiversity Credits

The other option is to **purchase 0.91 statutory biodiversity credits** from the Government's national credit scheme, managed by Natural England. This is considered a last resort option under the mitigation hierarchy.

Credits are priced to reflect the cost of long-term habitat creation and maintenance and may be significantly more expensive than direct habitat delivery. The Government is responsible for using the funds to deliver habitat creation elsewhere in England, but the exact location and outcomes are not under the developer's control.

5 CONCLUSION

The proposed works are not expected to have any impacts on Designated Sites, Priority Habitats or notable flora species, and no invasive or notifiable flora were observed on site during the April survey.

Following an assessment of local species data and a site survey, additional species surveys are not required for this site. However, a series of recommendations have been made to help protect a range of animal species both during and after development. An ecologist must inspect several habitats on site prior to any works (i.e. trees, grassland, discarded materials, deadwood) and must approve the placement of bat and bird boxes on site.

The development will result in a net loss of biodiversity totalling 66.16% - or 0.79 units. As it is not possible to get a 10% gain on site and meet the trading rules, gains will have to be made off-site. If the client does not have an appropriate site which can be legally secured for a minimum of 30 years, then the client must purchase off-site credits from a habitat bank. A minimum of 0.91 statutory biodiversity credits must be purchased.

6 APPENDICES

6.1 Species Identified on site during the April 2025 survey

Common Name	Latin Name
Ash	<i>Fraxinus excelsior</i>
Black horehound	<i>Ballota nigra</i>
Bluebells	<i>Hyacinthoides non-scripta</i>
Cleavers	<i>Galium aparine</i>
Common vetch	<i>Vicia sativa</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Dandelion	<i>Taraxacum officinale</i>
Dock	<i>Rumex spp.</i>
False oat grass	<i>Arrhenatherum elatius</i>
Forget me not	<i>Myosotis spp.</i>
Garlic mustard	<i>Alliaria petiolata</i>
Green alkanet	<i>Pentaglottis sempervirens</i>
Herb robert	<i>Geranium robertianum</i>
Ivy	<i>Hedera helix</i>
Primrose	<i>Primula vulgaris</i>
Stinging nettle	<i>Urtica dioica</i>
Sweet violet	<i>Viola odorata</i>
Sycamore	<i>Acer pseudoplatanus</i>
White dead nettle	<i>Lamium album</i>
Yorkshire fog	<i>Holcus lanatus</i>

6.2 Bird Records (within 2 km of the site since 2010)

TVERC, 2025

Common Name	Latin Name	Year	UK Legislation	NERC S41	Other Designations
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	2015	NA	NA	Bird-Amber
Brambling	<i>Fringilla montifringilla</i>	2013	WACA-Sch1-p1	NA	NA
Bullfinch	<i>Pyrrhula pyrrhula</i>	2013	NA	NERC-S41	Bird-Amber
Cetti's Warbler	<i>Cettia cetti</i>	2022	WACA-Sch1-p1	NA	NA
Common Gull	<i>Larus canus</i>	2015	NA	NA	Bird-Amber
Common Scoter	<i>Melanitta nigra</i>	2020	WACA-Sch1-p1	NERC-S41	Bird-Red
Common Tern	<i>Sterna hirundo</i>	2016	NA	NA	Bird-Amber
Crossbill	<i>Loxia curvirostra</i>	2015	WACA-Sch1-p1	NA	NA

Cuckoo	<i>Cuculus canorus</i>	2022	NA	NERC-S41	Bird-Red
Dunnock	<i>Prunella modularis</i>	2017	NA	NERC-S41	Bird-Amber
Fieldfare	<i>Turdus pilaris</i>	2013	WACA-Sch1-p1	NA	Bird-Red
Firecrest	<i>Regulus ignicapilla</i>	2016	WACA-Sch1-p1	NA	NA
Gadwall	<i>Mareca strepera</i>	2022	NA	NA	Bird-Amber
Golden Plover	<i>Pluvialis apricaria</i>	2020	NA	NA	NA
Great Black-backed Gull	<i>Larus marinus</i>	2020	NA	NA	Bird-Amber
Great White Egret	<i>Ardea alba</i>	2021	NA	NA	Bird-Amber
Greenfinch	<i>Chloris chloris</i>	2011	NA	NA	Bird-Red
Grey Wagtail	<i>Motacilla cinerea</i>	2016	NA	NA	Bird-Amber
Greylag Goose	<i>Anser anser</i>	2015	NA	NA	Bird-Amber
Hawfinch	<i>Coccothraustes coccothraustes</i>	2017	NA	NERC-S41	Bird-Red
Herring Gull	<i>Larus argentatus</i>	2015	NA	NERC-S41	Bird-Red
House Martin	<i>Delichon urbicum</i>	2016	NA	NA	Bird-Red
House Sparrow	<i>Passer domesticus</i>	2013	NA	NERC-S41	Bird-Red
Kestrel	<i>Falco tinnunculus</i>	2011	NA	NA	Bird-Amber
Kingfisher	<i>Alcedo atthis</i>	2016	WACA-Sch1-p1	NA	NA
Lapwing	<i>Vanellus vanellus</i>	2013	NA	NERC-S41	Bird-Red
Lesser Black-backed Gull	<i>Larus fuscus</i>	2015	NA	NA	Bird-Amber
Lesser Redpoll	<i>Acanthis cabaret</i>	2013	NA	NERC-S41	NA
Lesser Spotted Woodpecker	<i>Dryobates minor</i>	2012	NA	NERC-S41	Bird-Red
Linnet	<i>Linaria cannabina</i>	2018	NA	NERC-S41	Bird-Red
Little Egret	<i>Egretta garzetta</i>	2020	NA	NA	NA
Mallard	<i>Anas platyrhynchos</i>	2015	NA	NA	Bird-Amber
Marsh Tit	<i>Poecile palustris</i>	2010	NA	NERC-S41	Bird-Red
Meadow Pipit	<i>Anthus pratensis</i>	2020	NA	NA	Bird-Amber
Merlin	<i>Falco columbarius</i>	2016	WACA-Sch1-p1	NA	Bird-Red
Mistle Thrush	<i>Turdus viscivorus</i>	2011	NA	NA	Bird-Red
Moorhen	<i>Gallinula chloropus</i>	2015	NA	NA	Bird-Amber
Nightingale	<i>Luscinia megarhynchos</i>	2018	NA	NA	Bird-Red
Peregrine	<i>Falco peregrinus</i>	2011	WACA-Sch1-p1	NA	NA
Red Kite	<i>Milvus milvus</i>	2010	WACA-Sch1-p1	NA	RL-Global-post2001-NT
Redstart	<i>Phoenicurus phoenicurus</i>	2011	NA	NA	Bird-Amber

Redwing	<i>Turdus iliacus</i>	2016	WACA-Sch1-p1	NA	Bird-Amber
Reed Bunting	<i>Emberiza schoeniclus</i>	2015	NA	NERC-S41	Bird-Amber
Ring Ouzel	<i>Turdus torquatus</i>	2015	NA	NERC-S41	Bird-Red
Rook	<i>Corvus frugilegus</i>	2011	NA	NA	Bird-Amber
Ruddy Shelduck	<i>Tadorna ferruginea</i>	2021	NA	NA	NA
Shoveler	<i>Spatula clypeata</i>	2020	NA	NA	Bird-Amber
Skylark	<i>Alauda arvensis</i>	2021	NA	NERC-S41	Bird-Red
Song Thrush	<i>Turdus philomelos</i>	2017	NA	NERC-S41	Bird-Amber
Sparrowhawk	<i>Accipiter nisus</i>	2016	NA	NA	Bird-Amber
Spotted Flycatcher	<i>Muscicapa striata</i>	2013	NA	NERC-S41	Bird-Red
Starling	<i>Sturnus vulgaris</i>	2019	NA	NERC-S41	Bird-Red
Stock Dove	<i>Columba oenas</i>	2013	NA	NA	Bird-Amber
Swift	<i>Apus apus</i>	2011	NA	NA	Bird-Red
Tawny Owl	<i>Strix aluco</i>	2015	NA	NA	Bird-Amber
Whimbrel	<i>Numenius phaeopus</i>	2020	WACA-Sch1-p1	NA	Bird-Red
White Stork	<i>Ciconia ciconia</i>	2022	NA	NA	NA
Whitethroat	<i>Curruca communis</i>	2022	NA	NA	Bird-Amber
Willow Warbler	<i>Phylloscopus trochilus</i>	2014	NA	NA	Bird-Amber
Woodcock	<i>Scolopax rusticola</i>	2012	NA	NA	Bird-Red
Woodpigeon	<i>Columba palumbus</i>	2010	NA	NA	Bird-Amber
Wren	<i>Troglodytes troglodytes</i>	2011	NA	NA	Bird-Amber
Yellow Wagtail	<i>Motacilla flava flavissima</i>	2020	NA	NERC-S41	Bird-Red
Yellow-legged Gull	<i>Larus michahellis</i>	2022	NA	NA	Bird-Amber
Yellowhammer	<i>Emberiza citrinella</i>	2013	NA	NERC-S41	Bird-Red

6.3 Invertebrate Records (within 2 km of the site since 2010)

(TVERC, 2025)

Taxon Group	Common Name	Latin Name	European Directives	UK Legislation	NERC S41	Other Designations
Ants, Bees, Sawflies & Wasps	Large Scabious Mining Bee	<i>Andrena hattorfiana</i>	NA	NA	NA	RL-GB-pre94-R
Ants, Bees, Sawflies & Wasps	Red-girdled Mining Bee	<i>Andrena labiata</i>	NA	NA	NA	Notable-A
Beetles	A Beetle	<i>Stictoleptura scutellata</i>	NA	NA	NA	Notable-A

Beetles	Stag Beetle	<i>Lucanus cervus</i>	HabDir-A2np	WACA-Sch5-s9.5a	NERC-S41	NA
Butterflies	Dingy Skipper	<i>Erynnis tages tages</i>	NA	NA	NERC-S41	RL-GB-post2001-VU
Butterflies	Grizzled Skipper	<i>Pyrgus malvae</i>	NA	NA	NERC-S41	RL-GB-post2001-VU
Butterflies	Small Heath	<i>Coenonympha pamphilus pamphilus</i>	NA	NA	NERC-S41	RL-GB-post2001-NT
Butterflies	White-letter Hairstreak	<i>Satyrrium w-album</i>	NA	WACA-Sch5-s9.5a	NERC-S41	RL-GB-post2001-EN
Dragonflies & Damselflies	Common Club-tail	<i>Gomphus vulgatissimus</i>	NA	NA	NA	RL-GB-post2001-NT
Dragonflies & Damselflies	Common Darter	<i>Sympetrum striolatum</i>	NA	NA	NA	RL-GB-post2001-DD
Moths	Blood-vein	<i>Timandra comae</i>	NA	NA	NERC-S41	NA
Moths	Buff Ermine	<i>Spilosoma lutea</i>	NA	NA	NERC-S41	NA
Moths	Cinnabar	<i>Tyria jacobaeae</i>	NA	NA	NERC-S41	NA
Moths	Sprawler	<i>Asteroscopus sphinx</i>	NA	NA	NERC-S41	NA
Moths	Toadflax Brocade	<i>Calophasia lunula</i>	NA	NA	NA	RL-GB-pre94-R
Moths	White Ermine	<i>Spilosoma lubricipeda</i>	NA	NA	NERC-S41	NA
True Flies	A True Fly	<i>Gymnosoma rotundatum</i>	NA	NA	NA	RL-GB-pre94-R
True Flies	Wasp Wood-soldierfly	<i>Xylomya maculata</i>	NA	NA	NA	RL-GB-post2001-VU

6.4 Bat Records (within 2 km of the site since 2010)

(TVERC, 2025)

Common Name	Latin Name	Year	European Directives	UK Legislation
Alcathoe Bat	<i>Myotis alcathoe</i>	2022	HabDir-A4	HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b

Barbastelle	<i>Barbastella barbastellus</i>	2016	HabDir-A2np, HabDir-A4	HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b
Brown Long-eared Bat	<i>Plecotus auritus</i>	2016	HabDir-A4	HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	2016	HabDir-A4	HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b
Daubenton's Bat	<i>Myotis daubentonii</i>	2011	HabDir-A4	HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b
Leisler's Bat	<i>Nyctalus leisleri</i>	2016	HabDir-A4	HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b
Nathusius's Pipistrelle	<i>Pipistrellus nathusii</i>	2016	HabDir-A4	HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b
Natterer's Bat	<i>Myotis nattereri</i>	2011	HabDir-A4	HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b
Noctule	<i>Nyctalus noctula</i>	2016	HabDir-A4	HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b
Serotine	<i>Eptesicus serotinus</i>	2016	HabDir-A4	HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	2016	HabDir-A4	HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b
Whiskered Bat	<i>Myotis mystacinus</i>	2011	HabDir-A4	HabReg-Sch2, WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b

6.5 Notable Plant Species Recorded (within 2 km of the site since 2010)

(TVERC, 2025)

Common Name	Latin Name	Year	UK Legislation	NERC S41	Other Designations
Alexanders	<i>Smyrniololus satrum</i>	2015	NA	NA	NA
Bluebell	<i>Hyacinthoides non-scripta</i>	2010	NA	WACA-Sch8	NA
Butcher's-broom	<i>Ruscus aculeatus</i>	2010	HabDir-A5	NA	NA
Common Rock-rose	<i>Helianthemum nummularium</i>	2014	NA	NA	NA
Corn Mint	<i>Mentha arvensis</i>	2015	NA	NA	NA
Field Scabious	<i>Knautia arvensis</i>	2011	NA	NA	NA
Fritillary	<i>Fritillaria meleagris</i>	2016	NA	NA	NA
Grape-hyacinth	<i>Muscari neglectum</i>	2020	NA	NA	NERC-S41
Hoary Plantain	<i>Plantago media</i>	2014	NA	NA	NA
Hound's-tongue	<i>Cynoglossum officinale</i>	2015	NA	NA	NA
Quaking-grass	<i>Briza media</i>	2014	NA	NA	NA
Ragged-Robin	<i>Silene flos-cuculi</i>	2017	NA	NA	NA
Sainfoin	<i>Onobrychis viciifolia</i>	2014	NA	NA	NA

Sanicle	<i>Sanicula europaea</i>	2010	NA	NA	NA
Shepherd's-needle	<i>Scandix pecten-veneris</i>	2011	NA	NA	NERC-S41
Slender Parsley-piert	<i>Aphanes australis</i>	2015	NA	NA	NA
Stinking Hellebore	<i>Helleborus foetidus</i>	2020	NA	NA	NA
Wild Pear	<i>Pyrus pyraster</i>	2016	NA	NA	NA
Wild Strawberry	<i>Fragaria vesca</i>	2018	NA	NA	NA

6.6 Additional photos from the Site Visit on 16 April 2025

6.6.1 Trees 1, 9 and 2



6.6.2 Tree 3



6.6.3 Tree 4

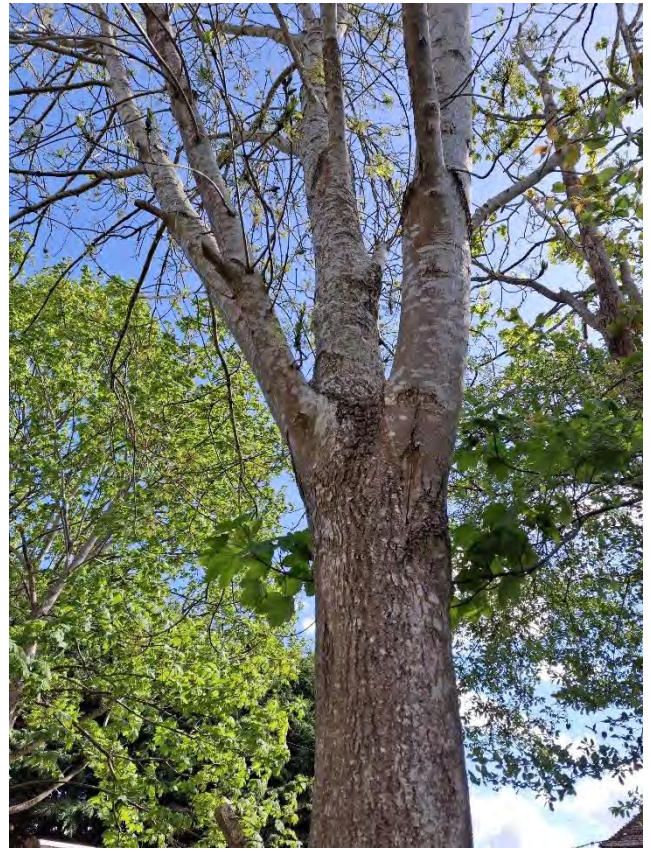




6.6.4 Tree 5



6.6.5 Tree 6



6.6.6 Tree 7 and 8





6.6.7 Additional Habitat Pictures















6.7 Condition Sheet: Individual Trees

Condition Sheet: INDIVIDUAL TREES Habitat Type														
Habitat Types														
Individual trees – Urban trees														
Individual trees – Rural trees														
Complete a condition sheet for each tree or block of trees.														
Please see the separate Line of trees condition sheet for a line of <u>rural</u> trees. You should only use the Line of trees condition assessment and record that habitat type in <u>rural</u> locations.														
Habitat Description														
Individual trees (description applied to the urban or rural environment): Young trees over 7.5 cm in diameter at breast height whose canopies are not touching.														
Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only): Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies should predominantly overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category.														
On-site or off-site, site name and location	Knights Way				Survey date and Surveyor name	16.4.25								
Limitations (if applicable)					Survey reference (if relating to a wider survey)									
					Habitat parcel reference									
					1	2	3	4	5	6	7	8	9	
Condition Assessment Criteria					Grid reference									
					Criterion passed (Yes or No)									
					Notes (such as justification)									
A	The tree is a native species (or at least 70% within the block are native species).				Y	Y	Y	Y	Y	Y	Y	Y	Y	
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).				Y	Y	Y	Y	Y	Y	Y	Y	Y	
C	The tree is mature (or more than 50% within the block are mature) ¹ .				N	Y	N	Y	N	Y	N	Y	N	
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.				N	N	N	Y	Y	Y	Y	Y	N	
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.				N	N	Y	Y	Y	Y	N	N	N	
F	More than 20% of the tree canopy area is overhanging vegetation beneath.				Y	Y	Y	Y	Y	Y	Y	Y	Y	
Number of criteria passed														
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score				Score Achieved %/									
Passes 5 or 6 criteria	Good (3)													
Passes 3 or 4 criteria	Moderate (2)													
Passes 2 or fewer criteria	Poor (1)													

6.8 Condition Sheet: Grassland

Condition Sheet: GRASSLAND Habitat Type (medium, high and very high distinctiveness)												
UK Habitat Classification (UKHab) Habitat Types												
Grassland - Lowland calcareous grassland Grassland - Lowland dry acid grassland Grassland - Lowland meadows Grassland - Other lowland acid grassland Grassland - Other neutral grassland Grassland - Tall herb communities (H6430) (Not to be confused with the Tall herbs secondary code – see UKHab guidance for details.) Grassland - Upland acid grassland Grassland - Upland calcareous grassland Grassland - Upland hay meadows Sparsely vegetated land - Calaminarian grassland												
Habitat Description												
Ukhab - UK Habitat Classification												
On-site or off-site, site name and location		Survey date and Surveyor name	16.4.23									
		Survey reference (if relating to a wider survey)										
Limitations (if applicable)		Habitat parcel reference										
		Grid reference										
Condition Assessment Criteria		Condition achieved (Yes or No)										
A The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description). ¹ Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	N											
B Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Y											
C Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	Y											
D Cover of bracken (<i>Pteridium aquilinum</i>) is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	Y											
E Combined cover of species indicative of suboptimal condition ³ and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) are present, this criterion is automatically failed.	N											
Additional Criterion – must be achieved for all non-acid grassland types												
F There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type (species referenced in Footnote 3 and 5 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.	N											
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)												

6.9 Legislation and Policy

6.9.1 Wildlife Legislation

Wildlife in the United Kingdom (UK) is protected through European and national legislation, supported by national and local policy and guidance. Development can contribute to conservation and enhancement goals outlined by these various legislation and policy by retaining and protecting the most valuable ecological features within a site and incorporating enhancements to provide biodiversity net gain.

This section provides a summary of the principal legislation and policy that triggers the requirement for a PRA, and further ecological assessments in the UK. The presence of protected species within a site are a material consideration during the planning process. PRAs and any necessary further ecological assessments provide an ecological baseline for a site and evaluation of the potential impact of proposals.

It is the responsibility of those involved with development works to ensure that the relevant legislation is complied with at every stage of a project. Such legislation applies even in the absence of related planning conditions or projects outside the scope of the usual planning process.

Legislation relating to wildlife and biodiversity of relevance to this PEA includes:

- The Conservation of Habitats and Species Regulations 2017 (as amended)
- The Wildlife and Countryside Act 1981 (as amended)
- The Natural Environment and Rural Communities (NERC) Act 2006
- The Protection of Badgers Act 1992
- Environment Bill 2021

This above legislation has been addressed, as appropriate, in the production of this report.

Bats

In England and Wales, all bat species and their roosts are legally protected under the Wildlife and Countryside Act (1981) (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2019) (as amended).

You will be committing a criminal offence if you:

- Deliberately capture, injure or kill a bat
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat

- Intentionally or recklessly obstruct access to a bat roost

Barbastelle, Bechstein's, greater horseshoe, lesser horseshoe, brown long-eared, soprano pipistrelle, and

noctule bats are all priority species under the UK Biodiversity Action Plan (UK BAP) and have also been

adopted as species of principal importance in England under Section 41 of the NERC Act 2006.

Birds

All wild birds in the UK are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy the nest or its eggs. Some bird species, such as the barn owl *Tyto alba*, are listed in Schedule 1 of the 1981 Act and receive further protection, making it an offence to intentionally or recklessly disturb these birds whilst building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird. The NERC Act (2006) inserts a new schedule into the Wildlife and Countryside Act (1981) to protect the nests of some bird species that regularly re-use their nests, even when the nests are not in use. This protection currently applies to golden eagle, white-tailed eagle and osprey.

Badger

Badgers and their setts are afforded strict protection under the Protection of Badgers Act 1992. This Act consolidates past badger legislation and, in addition to protecting the badger itself, makes it an offence to damage, destroy or obstruct badger setts. Badgers are also protected under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended), and listed under Appendix III of the Bern Convention, as a species that is in need of protection but may be hunted in exceptional instances. Only badger setts that are currently in use are covered by wildlife legislation.

Reptiles

All British reptiles are listed under schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are therefore protected from intentional killing or injury. This is largely because of a national decline in numbers associated with habitat loss. Two scarcer native British reptiles (smooth snakes *Coronella austriaca* and sand lizards *Lacerta agilis*), are afforded 'full' protection. This legislation makes it an offence to intentionally or recklessly kill, injure, disturb, take, possess or sell these species (in all life stages). It is also illegal to damage, destroy or obstruct access to places they use for breeding, resting, shelter and protection. All species of reptile are priority species in the UKBAP and have been adopted as Species of Principal Importance under Section 41 of the NERC Act (2006) in England (Section 42 in Wales).

Amphibians

Great crested newts and their habitats are fully protected by the Conservation of Habitats and Species Regulations (2019) and partially protected under the Wildlife and Countryside Act 1981 (as amended).

This legislation makes it an offence to kill, injure or capture GCN's, their young or eggs, or destroy / damage their ponds or places of shelter used for breeding or protection. The great crested newt is also a Priority species in the UK Biodiversity Action Plan (UKBAP), and had been adopted as a Species of Principal Importance in England under Section 41 of the NERC Act 2006. The natterjack toad *Epidalea calamita* is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of The Conservation of Habitats and Species Regulations 2019 making it a European Protected Species. The natterjack toad is also a priority species under the UK Biodiversity Action Plan. The pool frog *Rana Lessonae* is protected under the Conservation (Natural Habitats & C.) Regulations 1994 (as amended).

As a European protected species the deliberate capturing, disturbing, injuring or killing of this species is prohibited, as is damage or destruction of its breeding sites or resting places. The pool frog is also a priority species under the UK Biodiversity Action Plan due to a 100% decline over 25 years (1980-2005). Common toads are also designated UKBAP species due to a serious decline of populations across large areas of southern, eastern and central England, thought to be mainly due to changes in habitat management, mortalities on the roads, and climate change.

Dormice

Common dormice *Muscardinus avellanarius* and their habitats are fully protected by both the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations (2019). This legislation makes it an offence to kill, injure, disturb or capture dormice, or destroy or obstruct their resting or breeding places. The dormouse is also a priority species under the UK Biodiversity Action Plan and has been adopted as a species of Principal Importance in England under Section 41 of the NERC Act 2006 (section 42 in Wales) and so is protected from any adverse effects because of development.

Hedgehogs

Hedgehogs are listed as a Priority Species for Conservation Action under the UK Biodiversity Action Plan and protected from harm in the UK under Schedule 6 of the Wildlife and Countryside Act 1981. Under the NERC Act 2006, the hedgehog is categorised as a 'Species of Principal Importance' for biodiversity.

A recent by Wembridge (2011) shows that hedgehog numbers have declined by 25% in the last ten years.

Stag Beetles

Stag Beetles *Lucanus cervus* are protected under section 5 of the Wildlife and Countryside Act 1981 (as amended). This legislation prohibits: The killing, injuring or taking of Stag Beetles; the damage, destruction, or obstruction of access to any structure or place which Stag Beetles use for shelter or protection; or the disturbance of Stag Beetles while they are occupying a structure or place which they use for that purpose.

6.9.2 National Planning Policy

The National Planning Policy Framework (2024) aims to minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. Chapter 15 'Conserving and enhancing the natural environment' details what local planning policies should seek to consider with regard to planning applications.

Planning policies and decisions should contribute to and enhance the natural and local environment by:

174 a) Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

174 b) Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

174 d) Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

175) Plans should: distinguish between the hierarchy of international, national and local designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries; Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas and should be given great weight in National Parks and Broads. The scale and extent of development within all these designated areas should be limited, while development within their settings should be sensitively located and designed to avoid or minimize adverse impacts on the designated area.

176) Specific policies regarding habitats and biodiversity comprise:

179) To protect and enhance biodiversity and geodiversity, plans should:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and

- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species and identify and pursue opportunities for securing measurable net gains for biodiversity.

180) When determining planning applications, local planning authorities should apply the following principles:

- If significant harm to biodiversity resulting from a development cannot be avoid (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- Development on land within or outside of Sites of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the feature of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- Development whose primary objective is to conserved or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around development should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Biodiversity 2020: A strategy for England's wildlife and ecosystem services provides the UK Biodiversity Action Plan and country level biodiversity strategies for England, based on the list of habitats and species listed on Section 41 of the Natural Environment and Rural Communities Act 2006. These are considered the habitats and species of principal importance requiring conservation action.

6.9.3 Local Planning Policy

The Berkshire Biodiversity Action Plan (BAP) (89) builds upon national and regional targets for biodiversity enhancement. Therefore, the Council will seek opportunities to support the delivery of the Berkshire BAP.

There are many opportunities for biodiversity and geological enhancement in all parts of the District and not just on identified sites. Berkshire Nature Conservation Forum (BNCF) is a collection of organisations, groups and individuals working together to conserve, enhance and promote biodiversity in the county. 'A Framework for Biodiversity Action in Berkshire' was published in 1999 and revisions to the Berkshire BAP targets have followed. There are currently targets to maintain, restore and create the following BAP Priority Habitats:

- Calcareous Grassland
- Lowland Meadow
- Dry Acid Grassland
- Purple Moor Grass and Rush Pasture
- Lowland Heathland
- Ponds
- Eutrophic Standing Water
- Mesotrophic Lakes
- Fen
- Reedbed
- Rivers
- Lowland Mixed Deciduous Woodland
- Lowland Beech and Yew Woodland
- Wet Woodland
- Lowland Wood Pasture and Parkland
- Hedgerows
- Traditional Orchards

The full Berkshire BAP targets are available on the Biodiversity Action Reporting System website (www.ukbars.defra.gov.uk)

The local planning policy for the site is the West Berkshire Local Plan 1991-2006 (Saved Policies 2007), which forms part of the Berkshire Core Strategy 2006-2026 with relevant policies which includes;

- The retention and protection of trees identified in accordance with the NPPF and Policies ADPP1, (ADPP5 if within NWDAONB), CS14, CS17, CS18 and CS19 of the West Berkshire Core Strategy 2006-2026.
- Policy CS 17 - Biodiversity and Geodiversity - Biodiversity and geodiversity assets across West Berkshire will be conserved and enhanced. Habitats designated or proposed for designation as important for biodiversity or geodiversity at an international or national level or which support protected, rare or endangered species, will be protected and enhanced. The degree of protection given will be appropriate to the status of the site or species in terms of its international or national

importance.

- The Berkshire Biodiversity Action Plan (BAP)(89) builds upon national and regional targets for biodiversity enhancement. Therefore the Council will seek opportunities to support the delivery of the Berkshire BAP. There are many opportunities for biodiversity and geological enhancement in all parts of the District and not just on identified sites.
- Qualities identified within the relevant landscape character assessments and relevant guidance include; the visual amenity and scenic quality of the landscape; Historic landscapes, parks, gardens and features; Important local, natural and historic features such as trees, woodlands, hedgerows, water features e.g. rivers and other landscape features and their

function as ecological networks; and; it does not lead to the physical or visual coalescence of settlements, or damage their separate identity, either individually or cumulatively with other existing or proposed development. An assessment of the impact on landscape character and visual quality should be carried out proportionate to the scale and nature of the development proposed.

6.10 Industry Guidance and Standards

This report has been written with consideration to:

- Bat Conservation Trust (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines. 4th edition.
- Bat Conservation Trust (2019). National Bat Monitoring Program Annual Report 2019.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standards Institution, 2021. *BS 8683:2021. Process for designing and implementing Biodiversity Net Gain. Specification*. BSI.
- BSI Standards Publication BS 8683:2021: Process for designing and implementing Biodiversity Net Gain - Specification
- Chartered Institute of Ecology and Environmental Management, 2016. *Biodiversity Net Gain: Good practice principles for development*.
- Chartered Institute of Ecology and Environmental Management, 2017. *Guidelines for Preliminary Ecological Appraisal*, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester, UK.
- Chartered Institute of Ecology and Environmental Management (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). *Guidelines on Ecological Report Writing*. Chartered Institute of Ecology and Environmental Management, Winchester.
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- Chartered Institute of Ecology and Environmental Management (2020). *Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK*. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
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- Chartered Institute of Ecology and Environmental Management, 2022. *Code of Professional Conduct*. Chartered Institute of Ecology and Environmental Management. Winchester, UK.
- CIRIA (2016) *Biodiversity Net Gain: Good practice principles for development* © CIEEM, CIRIA, IEMA, 2016

- Department for Levelling Up, Housing and Communities, 2021. *National Planning Policy Framework*. Policy Paper.
- DEFRA (2024) The Statutory Biodiversity Metric User Guide. July 2024.
- Garland, L. & Markham, S. (2008) Is Important Bat Foraging and Commuting Habitat Legally Protected? <http://biodiversitybydesign.co.uk/cmsAdmin/uploads/protection-for-bat-habitat-sep-2007.pdf>
- Harris, S. & Yalden, D. (2008). *Mammals of the British Isles: Handbook*, 4th Edition. The Mammal Society, Southampton.
- Institution of Lighting Professionals (2018). Guidance Note 08/18 Bats and Artificial Lighting in the UK. Bats and the Built Environment Series Publication: http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting
- Mathews F, and Harrower C. (2020). IUCN – compliant Red List for Britain’s Terrestrial Mammals. Assessment by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage. Natural England, Peterborough ISBN 978-1-78354-485-1.
- Natural England, 2025. *The Statutory Biodiversity Metric User guide*. Defra Group.
- The Environment Act 2021. Available from: www.legislation.gov.uk/ukpga/2021/30/contents/enacted
- UKHab Ltd., 2025. The UK Habitat Classification Version 2.0. Available from: <https://ukhab.org/>

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary (BS 42020, 2013).

6.11 Planning Policy

National Planning Policy Framework 2021

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and recreation. The protection and recovery of priority species (considered likely to be those listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; measurable gains in biodiversity in and around developments are incorporated; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'. Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity'. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.