



Preliminary Ecological Appraisal

Ecosupport Ltd
K4 Keppel,
Daedalus Park,
Lee-on-the-Solent
PO13 9FX

Info@ecosupport.co.uk
01329 832 841

VAT: 228 4313 18



Report	Preliminary Ecological Appraisal
Site Name	Former Arborfield Studios (Parcels W, Y, and Z), Arborfield Green
Author(s)	Laura Purnell BSc (Hons) AMRSB
Reviewed By	Darla Brown BSc (Hons)
Client	Crest Nicholson Operations Ltd
Date of Issue	August 2026
Status	<i>Final</i>

Table of Contents

Executive Summary.....	5
1.0 INTRODUCTION	6
1.1 Brief	6
1.2 Site Description & Location	6
1.3 Proposed Development	7
2.0 RELEVANT LEGISLATION AND POLICY	9
2.1 Legislation.....	9
2.1.1 <i>The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019</i> 9	
2.1.2 <i>The Wildlife and Countryside Act (1981) (as amended)</i>	9
2.1.3 <i>The Countryside and Rights of Way Act (2000)</i>	9
2.1.4 <i>Natural Environment and Rural Communities Act (2006)</i>	10
2.1.6 <i>The Environment Act (2021)</i>	10
2.2 Policy	11
2.2.1 <i>National Planning Policy Framework (NPPF) 2026</i>	11
2.2.2 <i>Local – Wokingham Borough Council.....</i>	12
3.0 METHODOLOGY	14
3.1 Desk Study	14
3.1.1 <i>Data Request</i>	14
3.1.2 <i>Waterbodies</i>	14
3.2 Field Survey.....	14
3.2.1 <i>Personnel</i>	14
3.2.2 <i>Habitats</i>	14
3.2.4 <i>Bats</i>	15
3.2.5 <i>Great Crested Newts – HSI Assessment.....</i>	16
3.2.6 <i>Riparian Mammals.....</i>	17
3.3 Assessment Methodology.....	17
3.3.1 <i>Introduction</i>	17
3.3.2 <i>Valuation</i>	17
3.4 Limitations	17
3.4.1 <i>Habitats</i>	17
3.4.2 <i>Great Crested Newts – HSI Assessment.....</i>	17
4.0 ECOLOGICAL BASELINE	18
4.1 Designated Sites.....	18
4.1.1 <i>Statutory Designated Sites</i>	18
4.1.2 <i>Non-Statutory Designated Sites.....</i>	18
4.1.3 <i>S41 Priority Habitats</i>	19
4.2 Habitats	20
4.2.1 <i>g4 – Modified grassland with secondary codes scattered trees (32)</i>	20
4.2.2 <i>w1g – Other woodland; broadleaved with secondary code line of trees (33)</i>	21

4.2.3 w1f – Lowland mixed deciduous woodland.....	22
4.2.4 r1g – Other standing water with secondary code sustainable drainage system (848)23	
4.2.5 u1b – Developed land; sealed surface with secondary codes scattered trees (32), introduced shrub (847).....	23
4.2.6 u1b5 – Buildings.....	24
4.2.7 u1c – Artificial unvegetated; unsealed surface.....	25
4.2.8 h3d – Bramble scrub	25
4.2.9 u1 – Built-up areas and gardens with secondary code vegetated garden (828)	26
4.3 Bats	26
4.3.1 Pre-existing Data.....	26
4.3.2 Ground Level Tree Assessment	27
4.3.3 Preliminary Roost Assessment (Buildings).....	27
4.3.4 Assessment of Commuting & Foraging Habitat.....	27
4.4 [REDACTED] & Other Terrestrial Mammals.....	28
4.4.1 Pre-existing Data.....	28
4.4.2 Site Assessment.....	28
4.5 Reptiles	28
4.5.1 Pre-existing Data.....	28
4.5.2 Site Assessment.....	28
4.6 Great Crested Newts	28
4.6.1 Pre-existing Data.....	28
4.6.2 Waterbodies	29
4.6.3 HSI Assessment	29
4.6.4 On-site Assessment	30
4.7 Hazel Dormouse	30
4.7.1 Pre-existing Data.....	30
4.7.2 Site Assessment.....	31
4.8 Birds Of Conservation Concern (BoCC)	31
4.8.1 Pre-existing Data.....	31
4.8.2 Site Assessment.....	31
4.9 Riparian Mammals	31
4.9.1 Pre-existing Data.....	31
4.9.2 Site Assessment.....	31
5.0 LIKELY ECOLOGICAL IMPACTS IN ABSENCE OF MITIGATION	32
5.1 Introduction	32
5.2 Site Preparation and Construction	32
5.2.1 Impacts to Habitats.....	32
5.2.2 Impacts to Wildlife	32
5.3 Site Operation	33
5.3.1 Impacts to Nocturnal Species	33
5.3.2 Impacts to Designated Sites	33
6.0 MITIGATION, COMPENSATION & ENHANCEMENT	34
6.1 Introduction	34

6.2 Protection of Retained Habitats & CEMP	34
6.2.1 Protection of Retained Habitats.....	34
6.2.2 Site Design for Priority Habitat & Ancient Woodland	34
6.2.3 Construction Environmental Management Plan.....	35
6.3 Bats	35
6.3.1 Buildings – Phase II Surveys.....	35
6.3.2 Trees	35
6.3.3 Commuting & Foraging Bats – Sensitive Lighting.....	36
6.4 [REDACTED]	38
6.4.1 Updated Walkover	38
6.4.2 Mitigation – During Construction	38
6.5 Reptiles	38
6.6 Great Crested Newts	39
6.6.1 Habitat Suitability Index (HSI) Assessment.....	39
6.6.2 eDNA Survey	39
6.7 Birds of Conservation Concern (BoCC)	39
6.8 Designated Sites.....	39
6.8.1 Thames Basin Heaths SPA	39
6.9 Biodiversity Net Gain	39
6.10 Enhancements.....	39
6.10.1 Bat boxes	40
6.10.2 Bird boxes	40
6.10.3 Hedgehogs.....	40
7.0 CONCLUSION.....	42
8.0 REFERENCES	43
9.0 APPENDIX.....	45

Executive Summary

Ecosupport Ltd was instructed by Crest Nicholson Operations Ltd to undertake a Preliminary Ecological Appraisal (PEA) at the 'Former Arborfield Studios (Parcels W, Y, and Z), Arborfield Green', (hereafter referred to as 'the Site'). This was required in order to identify any potentially important ecological features that may be affected by the proposed development. As part of this assessment, the following surveys were undertaken:

- Walkover survey with UK Habs habitat assessment (July 2026);
- Ground Level Tree Assessment (July 2026);
- Preliminary Roost Assessment (July 2026); and
- Data request submitted to Thames Valley Environmental Record Centre (TVERC) (July 2026).

The following important ecological features were identified on site following the conclusion of the above survey work and may be subject to adverse impacts in the absence of suitable mitigation / compensation:

- Site situated within the recreational zone of influence for Thames Basin Heaths Special Protection Area;
- Ancient & Semi-Natural Woodland and S41 Priority Habitat Deciduous Woodland along the northern site boundary;
- Three buildings were identified as being confirmed bat roosts, three buildings were considered to offer high potential, four buildings were considered to offer moderate potential, and six buildings were considered to offer low potential to support roosting bats;
- Several trees noted to comprise potential roosting features present on site;
- Low potential for commuting and foraging bats;
- Moderate potential for commuting and foraging [REDACTED] and other terrestrial mammals;
- Low potential for common reptiles;
- Low potential for Great Crested Newts; and
- Low potential for breeding and nesting birds.

In the absence of any mitigation measures, the proposed works are anticipated to result in likely adverse impacts. In addition to this, measures are outlined within **Section 6.0** of this document to mitigate where impacts have been identified as well as provide targeted recommended ecological enhancements. With these measures implemented, there will be no adverse impacts on any features of ecological value.

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was instructed by Crest Nicholson Operations Ltd to undertake a Preliminary Ecological Appraisal (PEA) at the 'Former Arborfield Studios (Parcels W, Y, and Z), Arborfield Green' (hereafter referred to as the 'Site'). The purpose of this survey was to assess any ecological impacts that may arise as a result of the proposed development. The objectives of the survey were as follows:

- Identify and classify any priority habitats;
- Assess the ecological value of the Site;
- Identify any signs of protected species and potential features that may support them;
- Make recommendations for further survey work as necessary; and
- Make recommendations for any necessary ecological avoidance and mitigation where possible at PEA stage.

NB: If the works do not take place within 24 months of this report¹ then the findings of this survey will no longer be considered valid and may require updating.

1.2 Site Description & Location

The Site is a linear parcel of land bounded by Langley Common Road to the north-west and fields (also allocated for housing in the emerging Local Plan) to the north (centred on OS grid reference SU 77039 66185) (**Fig 1**). To the south and east lie existing residential neighbourhoods and Farley Hill Primary School to the south, within the Arborfield Garrison SDL.

The Site forms the northern extent of Arborfield Green, an existing development site of around 167 hectares, which forms part of the wider Arborfield Garrison Strategic Development Location (SDL). This SDL is allocated within Wokingham Borough Council's adopted Core Strategy (2010) and also benefits from an emerging allocation in the Council's emerging Local Plan.

¹ <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>

Figure 1. Redline boundary of the Site (Google, 2026).



1.3 Proposed Development

The proposals are for a hybrid planning application comprising (**Fig 2**):

- Full planning application for the demolition of existing buildings and construction of new homes, together with creation of accesses, parking, green infrastructure (including landscaping, public open space, play areas), associated drainage, roads, substations, plant, bin and cycle storage and other related infrastructure works; and
- Outline planning application (all matters reserved except for access) for the construction of up to 2 new homes including through the retention (of whole or part) and conversion of the existing Langley Common Farmhouse.

[illegible]

2.0 RELEVANT LEGISLATION AND POLICY

2.1 Legislation

2.1.1 *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*

The Conservation of Habitats and Species Regulations 2017 transposes the EU Habitats Directive (Council Directive 92/43/EEC) into UK domestic law. It provides protection for sites and species deemed to be of conservation importance across Europe. It is an offence to deliberately capture, kill or injure species listed in Schedule 2 or to damage or destroy their breeding sites or shelter. It is also illegal to deliberately disturb these species in such a way that is likely to significantly impact on the local distribution or abundance or affect their ability to survive, breed and rear or nurture their young.

The Conservation of Habitats and Species Regulations 2019 (EU Exit) makes changes to the three existing instruments which transpose the Habitats and Wild Birds Directives so that they continue to work (are operable) upon the UK's exit from the European Union (EU). These include The Conservation of Habitats and Species Regulations 2017 and The Conservation of Offshore Marine Habitats and Species Regulations 2017. This instrument also amends section 27 of the Wildlife and Countryside Act 1981 to ensure existing protections continue. The intention is to ensure habitat and species protection and standards as set out under the Nature Directives are implemented in the same way or an equivalent way when the UK exits the EU.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) licence must first be obtained from Natural England.

2.1.2 *The Wildlife and Countryside Act (1981) (as amended)*

This is the primary piece of legislation by which biodiversity is protected within the UK. Protected fauna and flora are listed under Schedules 1, 5 and 8 of the Act. They include all species of bats, making it an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost. Similarly, this Act makes it an offence to kill or injure any species of British reptiles and also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built).

The Wildlife & Countryside Act (1981) states that it is an offence to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9 part II of the Act. This list over 30 plants including Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Parrot's Feather (*Myriophyllum aquaticum*).

2.1.3 *The Countryside and Rights of Way Act (2000)*

This Act strengthens the Wildlife & Countryside Act by the addition of "reckless" offences in certain circumstances, such as where there is the likelihood of protected species being present. The Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

2.1.4 Natural Environment and Rural Communities Act (2006)

The Natural Environment and Rural Communities (NERC) Act 2006 requires that public bodies have due regard to the conservation of biodiversity. This means that Planning authorities must consider biodiversity when planning or undertaking activities. Section 41 of the Act lists species found in England which were identified as requiring action under the UK Biodiversity Action Plan and which continue to be regarded as conservation priorities under the *UK Post – 2010 Biodiversity Framework*.

[REDACTED]

Provisions are included within the Act to allow for the lawful licensing of certain activities that would otherwise constitute an offence under the Act.

2.1.6 The Environment Act (2021)

The Environment Act 2021 is the UK's new legislation for environmental protection in the UK, which includes protection of water quality, clean air, and biodiversity among other key protections. This Act provides the government power to set targets to reach long-term aims relating to the environment, which will be periodically reviewed and updated. This legislation also establishes a new environmental watchdog organisation, the Office for Environmental Protection (OEP), which will hold the government accountable on environmental issues.

Part 6 of The Environment Act relates to nature and biodiversity. This section makes provision for biodiversity net gain to be a condition of planning permission in England and a requirement for nationally significant infrastructure projects. Biodiversity net gain will require maintenance for a period of at least 30 years after the completion of enhancement works to be achieved.

The legislation also includes updates to existing environmental legislation, such as the NERC Act 2006, to strengthen biodiversity enhancement rather than just conservation and includes a requirement for local, or relevant, authorities to publish biodiversity reports. Further, The Environment Act places a requirement on responsible authorities to prepare local nature recovery strategies, which will outline nature conservation sites and priorities and opportunities for recovering or enhancing biodiversity within the local area. Within England, the legislation also provides Natural England with the power to publish 'species conservation strategies' and 'protected site strategies' to identify activities that may affect a species or site's status and outline their opinions on measures that would be appropriate to avoid, mitigate or compensate any adverse impacts.

2.2 Policy

2.2.1 National Planning Policy Framework (NPPF) 2026

The National Planning Policy Framework (NPPF) (2026) sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally prepared plans for housing and other development can be produced.

Chapter 19 'Conserving and enhancing the natural environment' states that planning decisions should safeguard and enhance the natural environment, recognising the hierarchy of designated sites and the wider value of natural capital. Development should be directed to land of least environmental value and must avoid, minimise or appropriately mitigate ecological impacts. The Framework emphasises nature recovery, requiring opportunities for habitat creation, restoration and strengthening ecological networks to be identified and delivered, informed by Local Nature Recovery Strategies. Proposals must incorporate high-quality green infrastructure and achieve statutory biodiversity net gain. Development affecting irreplaceable habitats should be refused unless wholly exceptional circumstances apply. For designated sites—including habitats sites, SSSIs and locally important wildlife sites—development is only acceptable where impacts are avoided or clearly justified and mitigated. Overall, Chapter 19 sets a clear expectation that development contributes positively to biodiversity, integrates nature-based solutions, and supports long-term ecological resilience.

Specifically, the NPPF states determining planning applications, local planning authorities should apply the following principles:

1. Development plans should safeguard and enhance the natural environment, and reflect the wider benefits from natural capital and ecosystem services, by using Local Nature Recovery Strategies, Protected Landscape Management Plans, River Basin Management Plans, National Forest Strategies, Community Forest Plans and other relevant evidence at the most appropriate level to:
 - a. Set out the hierarchy of international, national and locally designated sites and areas of importance for their landscape, geodiversity or biodiversity value in the plan area, and identify other features which require particular consideration in managing development due to their environmental value such as chalk streams;
 - b. Identify opportunities for the conservation, enhancement and recovery of landscapes, sensitive waterbodies, habitats and priority or threatened species, including through habitat restoration, the use of nature-based solutions, and the creation and strengthening of ecological networks that are more resilient to current and future pressures (including opportunities which exist at a catchment or landscape scale across plan boundaries);
 - c. Steer the location of development, including through site allocations, in ways which utilise land of least environmental value where that would be consistent with other policies in this Framework. This should include limiting the scale and extent of development within Protected Landscapes, avoiding the use of higher quality agricultural land where land of poorer quality is available and avoiding and minimising harm to designated sites of importance for nature. Areas which could become of particular importance for nature identified in Local Nature Recovery Strategies should be taken into account as

- opportunities to integrate development with environmental restoration, but should not necessarily preclude the allocation of land for development; and
- d. Set out standards for green infrastructure provision, in a way which complements and/or incorporates those for recreational land (as set out in policy HC1). These should draw upon Natural England's Green Infrastructure Standards for England, tailored as necessary to local circumstances.
2. Development plans should only set local standards for biodiversity net gain which are in excess of the statutory net gain requirement where this is for specific site allocations and is fully justified and deliverable. Local standards should not extend to categories of development which are exempt from statutory biodiversity net gain.

2.2.2 Local – Wokingham Borough Council

2.2.2.1 Wokingham Borough Council's Core Strategy (2010)

The Former Arborfield Studios are situated to the far north of Arborfield Green, an existing development site of approximately 167 hectares that forms part of the wider Arborfield Garrison Strategic Development Location (SDL) and allocated within Wokingham Borough Council's Core Strategy (2010).

Policy 'CP7 – Biodiversity' states that sites designated as of importance for nature conservation at an international or national level will be conserved and enhanced and inappropriate development will be resisted. The degree of protection given will be appropriate to the status of the site in terms of its international or national importance.

Development which may compromise the implementation of the national, regional, county and local biodiversity action plans, harm designated sites, habitats, species of principle importance, veteran trees or features of the landscape that are of major importance for wild flora and fauna whether directly or indirectly will be only permitted if it has been clearly demonstrated that the need for the proposal outweighs the need to safeguard the conservation importance, that no alternative site is available and mitigation and compensation measures can be put in place to prevent damaging impacts.

The Local Plan recognises that the need to protect European sites from likely significant effects could mean that housing targets are not achievable. The Habitats Regulations Assessment indicates that the development envisaged through the Core Strategy can be delivered without likely significant harm upon any European sites (either on their own or in-combination with other plans or projects). However, the Council will assess each plan or project to confirm that it can be delivered without likely significant harm (either on their own or in-combination with other plans or projects). The need for a development that affects a Site of Special Scientific Interest (SSSI) will be deemed to outweigh the need to safeguard the nature conservation interest where the development has clear social or economic benefits of national importance. The need for a development that affects Local Wildlife Sites, habitats or, species of principal importance in England for nature conservation, ancient woodland, veteran trees or features of the landscape that are of major importance for wild flora and fauna will be deemed to outweigh the need to safeguard the nature conservation interest where the development has clear social or economic benefits of regional or national importance. Similarly Policy

‘CP8 - Thames Basin Heaths Special Protection Area’ states that development which alone, or in combination, is likely to have a significant effects on the Thames Basin Heaths Special Protection Area will be required to demonstrate that adequate measures to avoid and mitigate any potential adverse effects are delivered.

2.2.2.2 Wokingham Borough Council’s Managing Development Delivery (2014)

At the local level, the Wokingham Borough Council Managing Development Delivery Local Plan (2014) forms part of the statutory Development Plan and provides detailed development management policies relevant to ecology. Key policies include TB23 (Biodiversity and Development), which requires protection and enhancement of biodiversity, avoidance of impacts on designated sites, and delivery of appropriate mitigation and compensation. Policies CC03 (Green Infrastructure), TB21 (Landscape Character), CC09 (Flood Risk) and CC10 (Sustainable Drainage) further support the protection of ecological networks, landscape features and hydrological regimes. These policies collectively ensure that development proposals within Wokingham Borough safeguard ecological receptors and deliver biodiversity enhancements in line with national policy.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 Data Request

A data request was submitted to the Thames Valley Environmental Records Centre to ascertain any records held of nature conservation designations and protected species within the wider area (2km) which could be impacted upon as a result of the proposed plans.

The data search covered:

- Statutory designated sites;
- Non-statutory designations such as Local Wildlife Sites (LWS); and
- Records of protected and notable species.

3.1.2 Waterbodies

Any ponds located within 500m of the proposed development were searched for using Ordnance Survey maps and available aerial images.

3.2 Field Survey

3.2.1 Personnel

The field survey work which forms the basis of the findings of this report was carried out by Senior Ecologist Darla Brown BSc (Hons) MCIEEM and Assistant Project Ecologist Laura Purnell BSc (Hons) AMRSB on the 10th of July 2026.

3.2.2 Habitats

Habitats on Site pre-development were identified in accordance with the categories specified for a UK Habitats survey, using Habitat Definitions Version 2.0 (UKHab Ltd., 2023). This was chosen as an appropriate habitat categorisation system as it fits within the Statutory Biodiversity Metric calculation.

The standard survey methodology has been 'extended' in this report to include the following:

- Floral species lists for each identified habitat;
- Descriptions of habitat structure, the evidence of management and a broad assessment of habitat condition;
- Mapping of additional habitat types (e.g. hardstanding);
- Identification of Priority Habitats under Section 41 of the NERC Act; and
- Evidence of, or potential for, the presence of certain species/groups.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3.2.4 Bats

3.2.4.1 Ground Level Tree Assessment

A Ground Level Tree Assessment (GLTA) assessment of trees on Site was undertaken by Senior Ecologist Darla Brown BSc (Hons) MCIEEM (holding a class 2 Natural England Bat licence) and Assistant Project Ecologist Laura Purnell BSc (Hons) AMRSB on the 10th of July 2026. This followed BCT (Collins (ed) 2023) best practice survey which includes aiming to identify the following Potential Roost Features (PRFs):

- PRFs formed by disease and decay: woodpecker holes, squirrel holes, knot holes, pruning cuts, tear outs, wounds, cankers, compression, forks, butt rots;
- PRFs formed by damage: lightning strikes, hazard beams, subsidence cracks, shearing cracks, transverse snaps, welds, lifting bark, desiccation features, frost cracks; and
- PRFs formed by association: fluting Ivy.

The presence or absence of any of the features listed above are then feed into the classification of the tree which is as follows (**Table 1**).

Table 1. Guidelines for assessing the suitability of trees on proposed development sites for bats, to be applied using professional judgement (Collins (ed) 2023).

Suitability	Description
None	Either no PRFs in the tree or highly unlikely to be any
FAR	Further Assessment Required (FAR) to establish if any PRFs are present in the tree
PRF	A tree with at least one PRF present.

3.2.4.2 Preliminary Roost Assessment (Buildings)

The assessment of the buildings noted on Site was undertaken by Senior Ecologist Darla Brown BSc (Hons) MCIEEM (holding a class 2 Natural England Bat licence) and Assistant Project Ecologist Laura Purnell BSc (Hons) AMRSB on the 10th of July 2026. This followed BCT (Collins, J. (ed) 2023) best practice survey guidelines searching for any PRFs / evidence of bat occupation and assigning a roost potential assessment as outlined in **Table 2** below.

Table 2. Guidelines for assessing the potential suitability of a built structure for roosting bats (reproduced from BCT (Collins (ed) 2023).

Suitability	Description of Roosting Habitats
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ² and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e., unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats ³ .
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ² and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ² and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g., maternity or classic cool/stable hibernation site.

3.2.5 Great Crested Newts – HSI Assessment

A Habitat Suitability Index (HSI) was carried out on Site following the guidance provided with ARG (2010). This considers the following factors when calculating the waterbodies suitability to support GCN:

- Location of Waterbody;
- Surface Area;
- Permanence;
- Water Quality;
- Shade;
- Presence of Waterfowl and Fish;
- Number of Ponds within 1km;
- Quality of Terrestrial Habitat;
- Macrophyte Cover.

These criteria are used to calculate a score according to ARC Guidelines (ARC 2010) using the Oldham (2000) calculation formulae.

This gives a score between 0 and 1 of the suitability of the waterbody for GCN with:

- 0.40 – 0.50: Poor suitability for GCN;
- 0.51 – 0.59: Below average suitability for GCN;
- 0.60 – 0.69: Average suitability for GCN;

- 0.70 – 0.79: Good suitability for GCN; and
- 0.80 – 1.00: Excellent suitability for GCN.

3.2.6 Riparian Mammals

The length of the watercourse bordering the Site was searched for any evidence of Water Vole or Otter by Darla Brown BSc (Hons) in July 2026 during suitable weather conditions. This included a search for any evidence of either species including latrines, mammal holes, slides, spraints, holts, footprints etc in line with relevant Best Practice Guidelines.

3.3 Assessment Methodology

3.3.1 Introduction

The methodology for the assessment of the likely ecological effects of the proposed development is based on CIEEM's *Guidelines for Ecological Assessment in the UK* (CIEEM, 2018). Although this assessment does not constitute a formal Ecological/ Environmental Impact Assessment, the CIEEM guidelines provide a useful framework for assessing ecological impacts at any level.

3.3.2 Valuation

Features of ecological interest are valued on a geographic scale. Value is assigned on the basis of legal protection, national and local biodiversity policy and cultural and/or social significance.

3.4 Limitations

3.4.1 Habitats

No significant limitations were identified during the Site visit with the survey undertaken during suitable weather conditions and at an appropriate time of year for vascular flowering plants. This survey does not constitute a full Site assessment for invasive species, such as Japanese Knotweed (*Reynoutria japonica*).

3.4.2 Great Crested Newts – HSI Assessment

During the walkover survey, the SuDS features present on Site were noted to be dry. Notwithstanding this, a full assessment was able to be made with further recommendations (including subsequent eDNA testing) undertaken. As such, this was not considered to be a major limitation of the survey work.

4.0 ECOLOGICAL BASELINE

4.1 Designated Sites

4.1.1 Statutory Designated Sites

Thames Valley Environmental Records Centre (TVERC) identified two statutory designated sites within a 2km search radius of the Site (**Fig 3**). This is Longmoor Bog Local Nature Reserve (LNR) and Site of Special Scientific Interest, located approximately 0.54km south-east of the Site at its closest point.

Furthermore, following a review of freely available resources, the Site is situated within the 5km zone of influence for recreational impacts to Thames Basin Heaths Special Area of Protection (SPA).

4.1.2 Non-Statutory Designated Sites

TVERC identified nineteen non-statutory designated sites from within 2km of the Site (**Fig 3**), a summary of these are shown within **Table 3**, below. Furthermore, thirteen S41 Priority Habitats were also identified, comprising eutrophic standing waters, lowland dry acid grassland, lowland fens, lowland heathland, lowland meadows, lowland mixed deciduous woodland, mesotrophic lakes, ponds, reedbeds, rivers, traditional orchards, wet woodland, and wood-pasture and parkland.

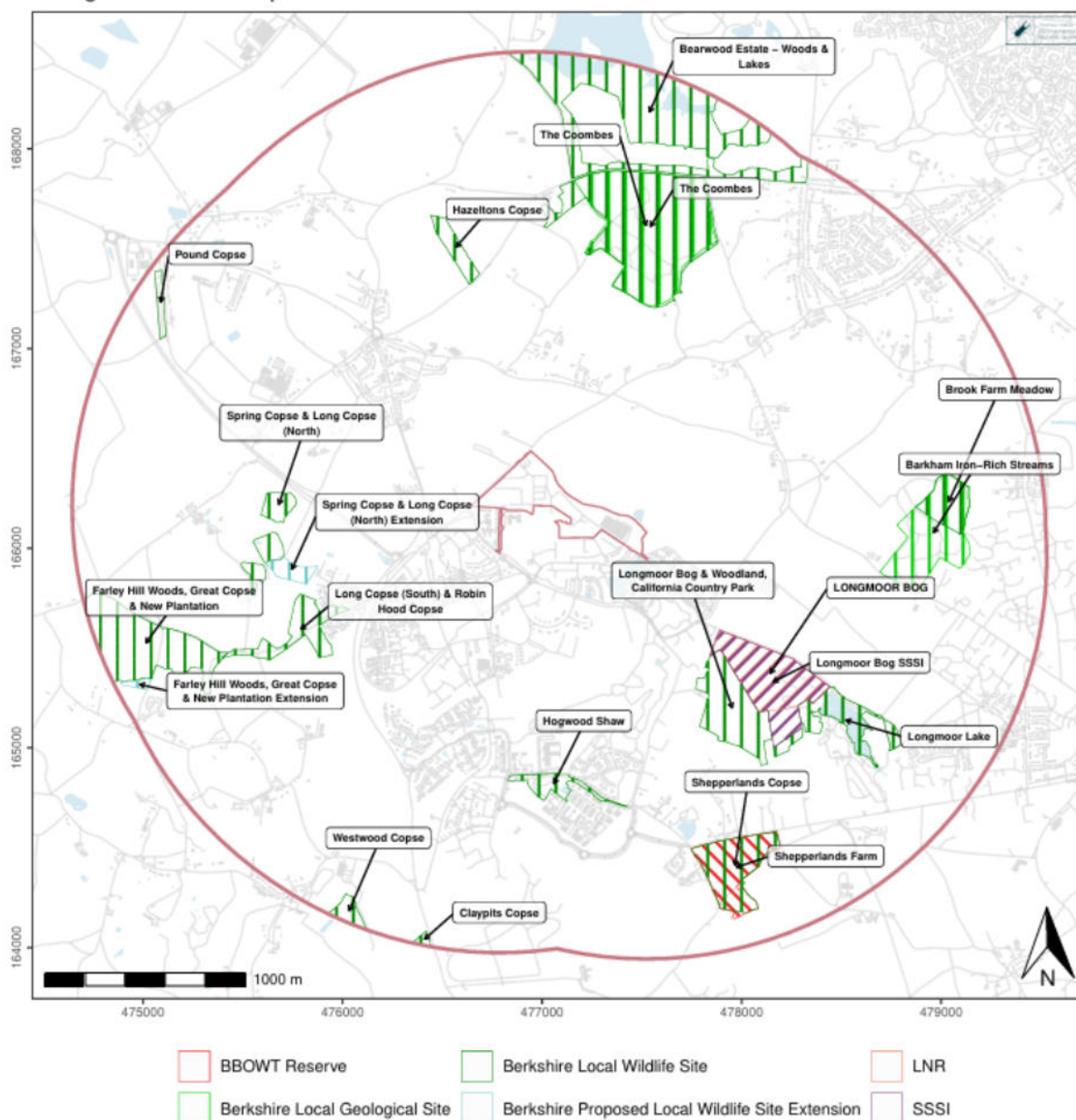
Table 3. Summary of non-statutory designated sites within 2km of the Site as provided by TVERC and shown in **Fig 3**.

Site Code	Name	Designation	Area (ha)	Distance from Site
SU76U03	Bearwood Estate – Woods and Lakes	Berkshire LWS	135.7	1.4km N
76R04	Claypits Copse	Berkshire LWS	1.61	1.96km SW
SU76T01	Hazeltons Copse	Berkshire LWS	2.55	0.93km N
SU76S03	Hogwood Shaw	Berkshire LWS	1.59	1.2km S
SU76X06	Longmoor Lake	Berkshire LWS	3.05	1.28km SE
76S05	Shepperlands Copse	Berkshire LWS	9.32	1.58km S
76S02	Westwood Copse	Berkshire LWS	3.71	1.97km SW
SU76N02	Pound Copse	Berkshire LWS	1.08	1.8km NW
76M01	Farley Hill Woods, Great Copse, New Plantation	Berkshire LWS	34.46	1.67km SW
SU76M03	Long Copse (South) And Robin Hood Copse	Berkshire LWS	5.61	0.79km SW
76X02	Longmoor Woodland And Bog, California Country Park	Berkshire LWS	12.34	0.56km SE
SU76Y06	Brook Farm Meadows	Berkshire LWS	4.8	1.22km E
SU76T04	The Coombes	Berkshire LWS	33.4	0.93km NE
SU76M06	Long Copse (North) And Spring Copse	Berkshire LWS	4.46	0.91km W
N/A	Barkham Iron-Rich Streams	Berkshire Local Geological Site	N/A	1.22km E
N/A	The Coombes	Berkshire Local Geological Site	N/A	0.93km N
SheF	Shepperlands Farm	BBOWT Reserve	9.43	1.58km S

Site Code	Name	Designation	Area (ha)	Distance from Site
N/A	Spring Copse & Long Copse (North) Extension	Berkshire Proposed LWS Extension	N/A	0.83km W
N/A	Farley Hill Woods, Great Copse & New Plantation Extension	Berkshire Proposed LWS Extension	N/A	1.88km SW

Figure 3. Statutory and non-statutory designated sites located within 2km of the Site as provided by TVERC.

TVERC/26/0347 Former Arborfield Studios, Arborfield Green Designated Sites Map



4.1.3 S41 Priority Habitats

TVERC do not provide further information regarding S41 Priority Habitats present within 2km of the Site boundary. Notwithstanding this, following a review of freely available resources, priority habitat

deciduous woodland and Ancient & Semi-Natural Woodland (Kidgem Copse) was identified along the northern Site boundary.

4.2 Habitats

The vegetation within the Site has been described below using classification terminology as described within Habitat Definitions Version 2.0 (UKHab Ltd, 2023). The below species should not be considered an exhaustive list and instead refer to dominant, characteristic and other noteworthy species associated with each community within the survey area. A habitat map can be found appended to this report. The habitat types identified within the Site comprise of:

- g4 – Modified grassland with secondary codes scattered trees (32);
- w1g – Other woodland; broadleaved with secondary code line of trees (33);
- w1f – Lowland mixed deciduous woodland;
- r1g – Other standing water with secondary code sustainable drainage system (848);
- u1b – Developed land; sealed surface with secondary codes scattered trees (32) and introduced shrub (847);
- u1b5 – Buildings;
- u1c – Artificial unvegetated; unsealed surface;
- h3d – Bramble scrub; and
- u1 – Built-up areas and gardens with secondary code vegetated garden (828).

4.2.1 g4 – Modified grassland with secondary codes scattered trees (32)

Modified grassland parcels are present throughout the Site which appear to be regularly managed (**Fig 4**). Species identified include Perennial Rye Grass (*Lolium perenne*), False Oat Grass (*Arrhenatherum elatius*), Willowherb species (*Epilobium* sp.), White Clover (*Trifolium repens*), White Stonecrop (*Sedum album*), Common Horsetail (*Equisetum arvense*), Creeping Cinquefoil (*Potentilla reptans*), St John's Wort (*Hypericum perforatum*), White Campion (*Silene latifolia*), Parsley species (*Petroselinum* sp.), Creeping Buttercup (*Ranunculus repens*), Field Bindweed (*Convolvulus arvensis*), Yarrow (*Achillea millefolium*), Herb Robert (*Geranium robertianum*), Bristly Oxtongue (*Helminthotheca echinoides*), and Ivy (*Hedera helix*).

Figure 4. Area of modified grassland (taken July 2026).



Several scattered trees were identified on Site (**Fig 5**). Species identified include Poplar species (*Populus* sp.), European Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*), Field Maple (*Acer campestre*), and Oak (*Quercus robur*).

Figure 5. Scattered trees within the modified grassland on Site (taken July 2026).



4.2.2 w1g – Other woodland; broadleaved with secondary code line of trees (33)

Three lines of trees (under primary code w1g) were identified throughout the Site, forming the Site boundaries (**Fig 6**). Species identified include Poplar species (*Populus* sp.), European Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*), Field Maple (*Acer campestre*), and Oak (*Quercus robur*).

NB. Although this woodland habitat is present on Site, the UKHab classification system requires the secondary habitat code 'line of trees' (33) to be placed under the primary woodland category (W). This is a technical mapping requirement within UKHab to ensure consistency in how linear tree features are recorded and does not imply that the feature functions ecologically as woodland.

Figure 6. Line of trees within the Site (taken July 2026).



4.2.3 w1f – Lowland mixed deciduous woodland

A small parcel of lowland mixed deciduous woodland (w1f) is present along the northern boundary (Fig 7). The woodland was noted to lack in understorey vegetation and woodland indicators within the ground flora. Tree species identified include Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus excelsior*), and Field Maple (*Acer campestre*).

Figure 7. Lowland mixed deciduous woodland located at the north of the Site (taken July 2026).



4.2.4 r1g – Other standing water with secondary code sustainable drainage system (848)

Two Sustainable urban Drainage System (SuDS) waterbodies are present within the redline Site boundary. One is situated towards the north-west of the Site, with the other situated at the south-east of the Site. Following a review of aerial imagery, both SuDS waterbodies were constructed between 2020 and 2021.

4.2.5 u1b – Developed land; sealed surface with secondary codes scattered trees (32), introduced shrub (847)

The majority of the Site comprises of developed land; sealed surface in the form of hardstanding, with several scattered trees (**Figs 8 & 9**).

Figure 8. Hardstanding on Site (taken July 2026).



Figure 9. Scattered trees within the hardstanding on Site (taken July 2026).



4.2.6 u1b5 – Buildings

There are numerous buildings around the Site, with further details regarding these buildings present in **Section 4.3 (Fig 10)**.

Figure 10. Buildings found throughout Site (taken July 2026).



4.2.7 u1c – Artificial unvegetated; unsealed surface

A small area of gravel (artificial unvegetated; unsealed surface) is present adjacent to the hardstanding car park (**Fig 11**).

Figure 11. Artificial unvegetated; unsealed surface found throughout Site (taken July 2026).



4.2.8 h3d – Bramble scrub

Bramble scrub is present forming a barrier between the Site and the adjacent woodland (outside of the redline Site boundary) (**Fig 12**). The scrub predominately consists of Bramble (*Rubus fruticosus*

agg.) with some Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), and Field Maple (*Acer campestre*).

Figure 12. Bramble scrub near the northern boundary (taken July 2026).



4.2.9 u1 – Built-up areas and gardens with secondary code vegetated garden (828)

Towards the north of the Site, a vegetated garden is present surrounding a building.

4.3 Bats

4.3.1 Pre-existing Data

TVERC have provided the following bat records from within 2km of the Site (**Table 4**).

Table 4. Bat records as provided by TVERC within 2km of the Site.

Species Name	Taxon Name	Number of Records
Bat Species	<i>Chiroptera</i> spp.	58
Pipistrelle Bat Species	<i>Pipistrellus</i> spp.	98
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	475
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	340
Nathusius' Pipistrelle	<i>Pipistrellus nathusii</i>	27
Serotine	<i>Cnephaeus serotinus</i>	80
Noctule Bat	<i>Nyctalus noctula</i>	229
Leisler's Bat	<i>Nyctalus leisleri</i>	30
<i>Nyctalus</i> Bat Species	<i>Nyctalus</i> spp.	2
<i>Myotis</i> Bat Species	<i>Myotis</i> spp.	98
Daubenton's Bat	<i>Myotis daubentonii</i>	14
Natterer's Bat	<i>Myotis nattereri</i>	45
Whiskered Bat	<i>Myotis mystacinus</i>	2
Long-eared Bat Species	<i>Plecotus</i> spp.	29
Brown Long-eared Bat	<i>Plecotus auritus</i>	253

Western Barbastelle	<i>Barbastella barbastellus</i>	19
Greater Horseshoe	<i>Rhinolophus ferrumequinum</i>	1

4.3.2 Ground Level Tree Assessment

During the walkover survey, a non-exhaustive Ground Level Tree Assessment (GLTA) was undertaken across all accessible trees within the Site boundary to evaluate their potential to support roosting bats. In the absence of a confirmed tree-removal or retention plan, multiple trees were identified as FAR (Further Assessment Required) due to the presence of potential roosting features (PRFs), including knot holes, splits, longitudinal cracks, woodpecker holes, dead or delaminating limbs, and dense, thick-stemmed Ivy capable of concealing cavities.

In addition, although located outside the redline boundary, several trees within the adjacent woodland also exhibited PRFs, such as woodpecker holes, significant limb damage, and mature Ivy stems.

As no tree-removal plan has yet been provided, it remains uncertain which trees will be retained, modified, or removed as part of the proposed works. As a result, the current level of assessment is insufficient to rule out impacts to roosting bats. Further assessment is therefore required, including updated GLTA and PRF inspections once the arboricultural strategy is confirmed.

4.3.3 Preliminary Roost Assessment (Buildings)

A Preliminary Roost Assessment was undertaken by Pioneer Environment Group (2025). In summary, a total of thirty-three buildings are present on Site to be demolished. Three buildings were identified as being confirmed bat roosts. A total of three buildings were considered to offer high potential to support roosting bats, four buildings were considered to offer moderate potential, six buildings were considered to offer low potential, and seventeen buildings were considered to offer negligible potential.

During the walkover survey, there were not considered to be any changes to the buildings or structures present and as such, all buildings are considered to maintain their status as offering varying roosting potential.

Full details on the Preliminary Roost Assessment and building descriptions can be found within the associated Preliminary Roost Assessment Report (Pioneer Environment Group, 2025).

4.3.4 Assessment of Commuting & Foraging Habitat

The Site is largely dominated by developed land and modified grassland, which support low structural diversity and limited forb cover, resulting in poor invertebrate availability and minimal foraging value for bats. Although scattered trees are present, and some mature specimens provide short sections of continuous canopy, these features are isolated and do not form strong linear commuting routes.

Higher-value habitats, including broadleaved and ancient woodland and a watercourse beyond the northern boundary, are likely to support greater insect abundance and more reliable flight lines.

However, connectivity between these off-Site features and the main development parcels is weak due to intervening modified grassland and built form.

Overall, the Site is assessed as having **low potential** for commuting and foraging bats.

4.4 [REDACTED] & Other Terrestrial Mammals

4.4.1 Pre-existing Data

TVERC returned 234 records for [REDACTED] within 2km of the Site. Furthermore, TVERC returned 27 records for European Hedgehog (*Erinaceus europaeus*) within 2km of the Site.

4.4.2 Site Assessment

During the walkover, no evidence of [REDACTED] [REDACTED] however several mammal trails were identified throughout the Site. Furthermore, the Site supports some suitable foraging habitat for [REDACTED] such as short sward grassland, and proximity to deciduous woodland and ancient woodland beyond the northern boundary. Therefore, the Site is considered to offer **moderate potential** for foraging and commuting [REDACTED] on Site, as well as other terrestrial mammals such as Hedgehogs.

4.5 Reptiles

4.5.1 Pre-existing Data

TVERC have provided the following reptile records on-Site within 2km of the Site; Slow Worm (*Anguis fragilis*) (887 records), Common Lizard (*Zootoca vivipara*) (228 records), Adder (*Vipera berus*) (76 records), and Grass Snake (*Natrix helvetica*) (236 records).

4.5.2 Site Assessment

Most on-Site habitats offer limited suitability for reptiles, with modified grassland dominated by a short sward and large areas of hardstanding providing little structural diversity or thermal opportunities. These habitats lack the heterogeneity required to support foraging or sheltering reptiles (Edgar et al., 2010). However, the Bramble scrub boundary provides some connective value to adjacent woodland and grassland parcels beyond the Site, and small pockets of tussocky grassland and occasional brash piles scattered throughout the Site offer isolated microhabitats of higher suitability.

Overall, while minor features of value are present, the Site is assessed as having **low potential** to support common reptile species.

4.6 Great Crested Newts

4.6.1 Pre-existing Data

TVERC returned 9 records for Great Crested Newt (*Triturus cristatus*) within 2km of the Site.

Furthermore, the Site is situated within both the Amber and Red Risk Zone following a review of Nature Space District Level Licensing mapping.

4.6.2 Waterbodies

A total of 20 waterbodies were identified within 500m of the Site, including two within the redline boundary (Fig 13 - 14). These are P1 and P2, both SuDS waterbodies. It is considered that P14, P17, P18, and P19 can be screened out, due to being situated the other side of major barriers for dispersal, including main roads (Langley Common Road & Biggs Lane).

Figure 13. Waterbodies within 500m of the Site boundary.

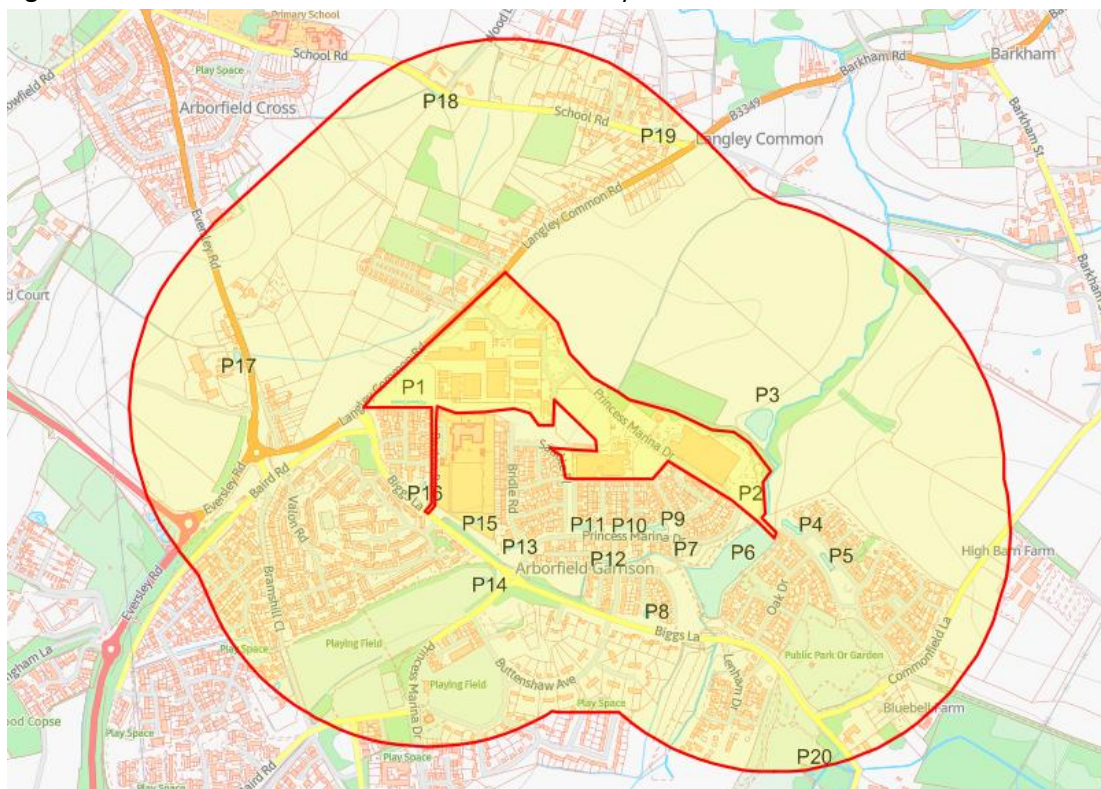
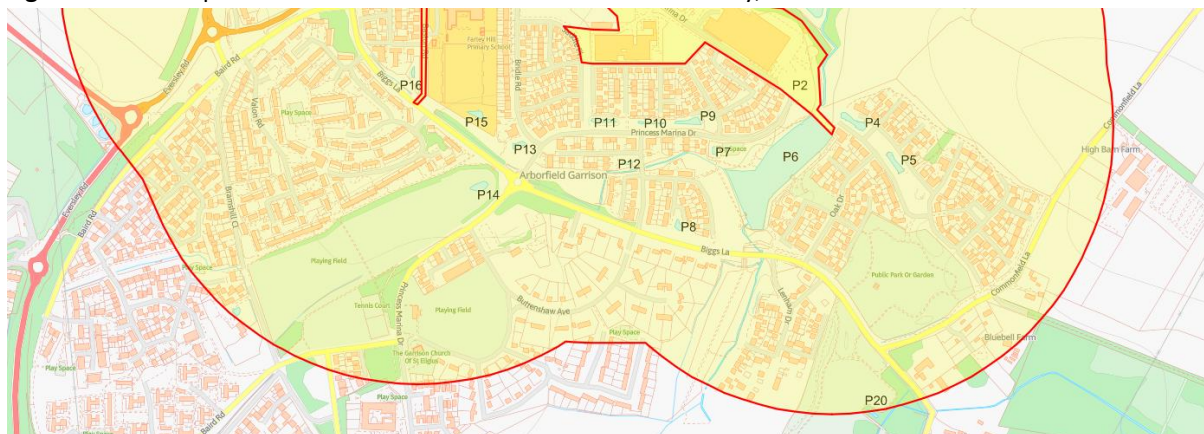


Figure 14. Close-up of waterbodies within 500m of the Site boundary, south of the Site.



4.6.3 HSI Assessment

During the walkover survey, P1 and P2 were subject a Habitat Suitability Index (HSI) Assessment with results displayed in **Table 5**, below.

Table 5. Results of the HSI assessment undertaken of P1 & P2 on Site (as per ARG 2010).

*Assumed based on aerial imagery as both P1 and P2 were dry at the time of the walkover survey.

Suitability Indices	Criteria Selected	Score Awarded
<u>P1</u>		
Location	A	1.00
Pond area	225m ²	0.45
Pond drying	Dries Annually	0.1
Water quality*	Moderate	0.67
Shade	0-60%	1.00
Water fowl	Absent	1.00
Fish	Absent	1.00
Ponds within 1 km	>12	1.00
Terrestrial habitat quality	Poor	0.33
Macrophytes*	1-5%	0.35
HSI score – 0.5678 (Below Average)		
<u>P2</u>		
Location	A	1.00
Pond area	175m ²	0.35
Pond drying	Dried Annually	0.1
Water quality*	Moderate	0.67
Shade	0-60%	1.00
Water fowl	Absent	1.00
Fish	Absent	1.00
Ponds within 1 km	>12	1.00
Terrestrial habitat quality	Moderate	0.67
Macrophytes*	1-5%	0.35
HSI score – 0.5943 (Below Average)		

4.6.4 On-site Assessment

As with reptiles, on-Site habitats provide limited suitability for Great Crested Newts (GCN). The modified grassland present lacks the structural diversity and moisture regime favoured by GCN, aside from small pockets of tussocky grassland and occasional brash piles that offer minor sheltering opportunities. Two recently constructed waterbodies were recorded on Site and assessed as having 'Below Average' suitability for GCN. Several additional ponds lie within 500m of the Site and are connected to the wider landscape, including areas of suitable terrestrial habitat such as woodland. These features provide potential dispersal routes, but overall connectivity to the development parcels is limited due to the extent of hardstanding. Considering the limited terrestrial habitat quality, below-average on-Site pond suitability, local pond network, and existing records, the Site is assessed as having **low potential** to support GCN.

4.7 Hazel Dormouse

4.7.1 Pre-existing Data

TVERC returned no records of Hazel Dormouse (*Muscardinus avellanarius*) within 2km of the Site.

4.7.2 Site Assessment

Several lines of trees with a native understory and areas of Bramble scrub are present on Site, providing some suitable habitat and connectivity to adjacent woodland and native hedgerows, as well as providing limited fruiting foraging resources. However, all suitable habitat is proposed to be retained and buffered, and no dormouse records were returned by TVERC. Notwithstanding this, all suitable habitat is proposed to be retained and buffered and as such, in combination with the absence of records, the Site is considered to offer **negligible potential** to support Hazel Dormice.

4.8 Birds Of Conservation Concern (BoCC)

4.8.1 Pre-existing Data

TVERC returned numerous records for birds of conservation concern (BoCC) within 2km of the Site, including numerous records of red and amber-listed species. Due to the abundance of records, they will not be reproduced within this report.

4.8.2 Site Assessment

The trees and buildings on Site provide ideal habitat for nesting and foraging birds. In the wider environment, there are areas of woodland and grassland habitat which provides ideal foraging habitat for any nesting or breeding birds using the Site. Due to the quantity of notable bird records and the suitable breeding and nesting bird habitat within and surrounding the Site, the Site is considered to be of **low potential** for nesting and breeding birds.

4.9 Riparian Mammals

4.9.1 Pre-existing Data

TVERC provided records of Otter (*Lutra lutra*) (1 records) and no records for Water Vole (*Arvicola amphibius*) within 2km of the Site.

4.9.2 Site Assessment

Although the Site itself comprises predominantly urban habitats with no suitable features for Water Vole or Otter, Barkham Brook lies to the south-east and was assessed during the walkover survey. No evidence of either species was recorded. Despite the presence of a species-rich riparian corridor, the Brook was steep-sided and heavily shaded, offering limited opportunities for resting, foraging, or latrine placement. Based on these observations, the Site is assessed as having **negligible potential** to support riparian mammals.

5.0 LIKELY ECOLOGICAL IMPACTS IN ABSENCE OF MITIGATION

5.1 Introduction

The CIEEM guidelines (CIEEM, 2018) require that the potential impacts of the proposals should be considered in absence of mitigation. In order for a significant adverse effect to occur, the feature being affected must be at least of local value. However, in some cases, features of less than local value may be protected by legislation and/or policy and these are also considered within the assessment. Although significant effects may be identified at this stage of the assessment, it is often possible to provide appropriate mitigation.

5.2 Site Preparation and Construction

5.2.1 Impacts to Habitats

The proposals will predominantly involve the loss of the areas of modified grassland, developed land; sealed surface, buildings, and artificial unvegetated; unsealed surface, with enhancement works to the other standing water and Bramble scrub, considered to be of value at the **site level** of **significance**. Furthermore, the proposed works will require the removal of a low number of trees which are considered to be of **local level** of **significance**. Additionally, the proposed works would also take place adjacent to retained ancient and semi-natural woodland and deciduous woodland S41 Priority Habitat to the north (outside of the redline boundary), considered to be of **county level** of **significance**, and therefore the woodland nearby could be damaged by machinery and particularly by root zone compaction or lost. The loss of habitat and potential indirect effects would have a moderate adverse impact to habitats of **site - county value**.

5.2.2 Impacts to Wildlife

5.2.2.1 Bats

The removal of the trees could also have a **minor adverse impact** on foraging and commuting bats using the Site but given the location and urban habitats present, is unlikely to be significant.

The proposed works may involve tree removal or remedial actions for trees which may have suitability for bats. This has the potential to cause harm, or even death, to roosting bats that may be present on Site. Therefore, in the absence of mitigation **an adverse impact is possible** at the **local level**.

Several buildings are present on Site, offering varying potential for roosting bats, with a three confirmed bat roosts. The proposed demolition of the buildings will lead to the damage or destruction of bat roosts, in the absence of mitigation. Therefore, in the absence of mitigation **an adverse impact is certain** (level to be determined following the results of the Phase II surveys).

5.2.2.2 Birds of Conservation Concern (BoCC)

Whilst the boundaries and majority of the trees will be retained, removal of suitable bird nesting habitats (notably buildings and scattered trees) have the potential to directly impact nests and/or create disturbance, if nesting birds are present, and could potentially constitute an offence under the W&CA, 1981. Therefore, it is considered the development will result in a **possible adverse impact** at the **site level** of significance.

[REDACTED]

5.2.2.4 Reptiles and GCN

The proposed plans will involve the loss of a small area of habitat on Site, which has been assessed as offering suitable habitat for reptiles and Great Crested Newts (GCN). This has the potential to cause harm, or even death of common reptile species and GCN which may be present on Site. Therefore, in the absence of mitigation **an adverse impact is possible** at the **local level**.

5.3 Site Operation

5.3.1 Impacts to Nocturnal Species

The development will result in an increase in lighting within the general area from external lights accompanied with the proposed development. This can affect the behaviour, particularly foraging, of nocturnal wildlife. Therefore, an **adverse impact is likely** on [REDACTED] bats and nocturnal birds.

5.3.2 Impacts to Designated Sites

The Site is located within the 5km recreational zone of influence for the Thames Basin Heath SPA. Due to the net addition of accommodation units on Site, it is possible that there will be increased recreational pressure on the SPAs as a result of the development. Therefore, an **adverse impact is likely** on sites of **international significance**.

6.0 MITIGATION, COMPENSATION & ENHANCEMENT

6.1 Introduction

The below sections outline the requirements for further survey work, mitigation, compensation and enhancements. With the below inclusions, this will ensure any features of ecological value are protected and the proposed development will result in a net gain for biodiversity.

6.2 Protection of Retained Habitats & CEMP

6.2.1 Protection of Retained Habitats

All existing trees, woodland, and other habitats that will be retained will be protected from damage during the works. All the Site boundaries outside the area of impact will be fenced using Heras fencing or similar, with a tarpaulin screen to prevent the spread of dust and prevent access by machinery, throughout works. Where large mature trees are present, they will be protected using standard arboricultural tree protection measures which include protection of the canopy and prevents root compaction. Access will not be permitted behind this fencing by construction personnel. This will protect the retained habitats, including priority habitat and ancient & semi-natural woodland from direct damage/disturbance and dust.

No vehicles will enter the protective ring fencing and no materials will be stored within their circumference. All protective fencing must be in place prior to any construction machinery arriving on Site, before any works on Site get underway, and will remain in place until all work is completed.

This will minimise the level of disturbance within the boundary habitat / retained habitat areas during the works and ensure the habitats and any wildlife species that may be using them are protected.

6.2.2 Site Design for Priority Habitat & Ancient Woodland

Due to the presence of ancient & semi-natural woodland at the north of the Site, in line with the advice from the UK Gov website² the following will need to be implemented:

“For ancient woodlands, the proposal should have a buffer zone of at least 15 metres from the boundary of the woodland to avoid root damage (known as the root protection area). Where assessment shows other impacts are likely to extend beyond this distance, the proposal is likely to need a larger buffer zone. For example, the effect of air pollution from development that results in a significant increase in traffic.”

The habitat on Site adjacent to the Priority Habitat woodland to the west comprises of modified grassland and existing developed land and buildings. No development is proposed within the root protection zones of the woodland, and the woodland will be fenced off for protection during development, with no access post development. Additional woodland edge planting of mixed scrub

² <https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions#:~:text=For%20ancient%20or%20veteran%20trees,15%20times%20the%20tree's%20diameter.>

buffering the main aspect of the proposals to both the priority habitat woodland and ancient woodland will be incorporated comprising of native species and species-rich understory.

While the Woodland Trust guidance recommends a 50m buffer to ancient woodland, national planning guidance acknowledges that smaller buffers may be acceptable in certain contexts if they are robustly justified and mitigation is clearly defined (Natural England & Forestry Commission, 2022). In this case, a 15m buffer is proposed based on site-specific conditions and supported by ecological evidence and mitigation measures in line with the mitigation hierarchy.

6.2.3 Construction Environmental Management Plan

In addition, a Construction Environmental Management Plan (CEMP) has been recommended to protect the retained habitats and adjacent ancient woodland from pollution during the construction phase and ensure unnecessary impacts contributing to climate change are adequately mitigated for.

6.3 Bats

6.3.1 Buildings – Phase II Surveys

A total of three buildings were identified as being confirmed bat roosts with three further buildings identified as offering high potential to support roosting bats. As such, three dusk emergence surveys will be required per building (as per the survey effort requirements from BCT 2023 **Table 6**). A total of four buildings were considered to offer moderate potential to support roosting bats. As such, two dusk emergence surveys will be required per building. Furthermore, a total of six buildings were considered to offer low potential to support roosting bats. As such, one dusk emergence survey will be required per building. Surveys will comprise of surveyors covering all elevations of the building, in addition to the use of Night Vision Aids (NVAs) at each surveyor location.

Table 6. Recommended minimum number of survey visits (from Table 7.2 (BCT, 2023)).

Low Roost Suitability	Moderate Roost Suitability	High Roost Suitability / Known Roost
One dusk emergence survey.	Two separate dusk emergence survey visits.	Three separate dusk emergence survey visits.

A detailed mitigation strategy will be required for those buildings noted as containing confirmed bat roosts. Should bats be found to be roosting in any of the other buildings, a total of three dusk surveys will be required. It will be necessary to apply for a European Protected Species licence for works to proceed for buildings noted to contain confirmed bat roosts. Any necessary mitigation/compensation would be determined following the completion of the phase II bat surveys.

6.3.2 Trees

6.3.2.1 Mitigation – Updated GLTA & Initial PRF Inspections

A number of trees were identified as supporting several potential roost features on Site; however, a tree removal plan has not yet been provided.

Following receipt of a tree removal plan, should any trees require removal or remedial works, an updated Ground Level Tree Assessment will be required.

Following this, a single PRF inspection survey will be required for each tree classified as having PRFs (BCT, 2023) to record characteristics of the PRFs and categorise them according to **Table 7** below. This can be conducted at any time of year by a suitably qualified ecologist and entails a more detailed assessment of the likely suitability of a PRF for roosting bats as well as searching for evidence of bats (e.g. droppings) within the PRF via an endoscope. Access equipment (such as ladders, MEWPS or scaffold towers) may be required to gain access to PRFs.

Table 7. Categorisation of PRFs (from Table 6.2, BCT 2023).

Suitability	Description
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

6.3.2.2 Mitigation – Follow Up Survey Work (if required)

For those trees noted to only possess PRF-I's, the Roost Resource Approach will be followed in which no further surveys are required and a precautionary working method statement will be adhered to (BCT, 2023).

For those trees noted to possess PRF-Ms, the Further Surveys Approach will be followed in which a total of three PRF inspection surveys will be required between May – September (with at least two between May – August), with these visits spaced at least 3 weeks apart (BCT, 2023).

6.3.3 Commuting & Foraging Bats – Sensitive Lighting

Due to the Site's proximity to the ancient woodland, a sensitive lighting strategy will need to be adhered to, detailed in **Sections 6.3.3.1** and **6.3.3.2**.

6.3.3.1 During Construction

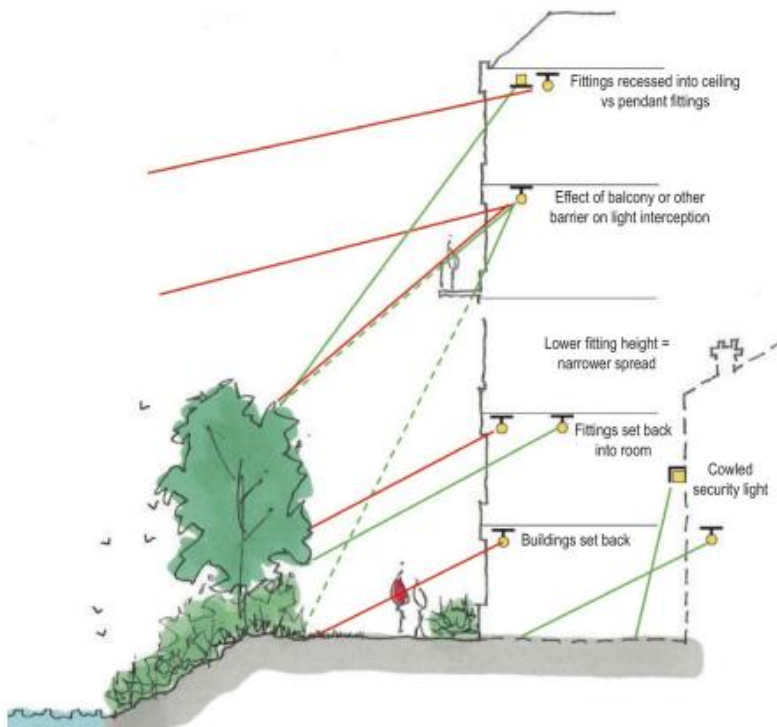
In order to avoid any disturbance to bats (and other potential nocturnal wildlife) construction works should be limited to daylight hours and should not be undertaken 30 minutes prior to dusk through to dawn. All lighting should be sensitive to the use of the Site by nocturnal wildlife, for example by including low-level downward-facing / hooded lights that are sensor-operated where possible.

6.3.3.2 During Operation

In addition, it is recommended that any lighting complies with the following the *Guidance Note 08/23 Bats and Artificial Lighting at night* (ILP / BCT, 2023) produced via a collaboration between the Institute of Lighting Professionals (ILP) and the Bat Conservation Trust (BCT), which outlines the latest recommendations to minimise the impacts of increased artificial lighting on bats. The key recommendations within this document have been outlined below and will be implemented as far as is practicable:

'Light sources, lamps, LEDs and their fittings come in a myriad of different specifications which a lighting professional can help to select. However, the following should be considered when choosing luminaires and their potential impact on Key Habitats and features:

- *All luminaires will lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used*
- *LED luminaires will be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability*
- *A warm white light source (2700Kelvin or lower) will be adopted to reduce blue light component*
- *Light sources will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012)*
- *Internal luminaires can be recessed (as opposed to using a pendant fitting - See **Fig 15**) where installed in proximity to windows to reduce glare and light spill*
- *Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges (see Case Study 1)*
- *Column heights will be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards*
- *Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01*
- *Luminaires will always be mounted horizontally, with no light output above 90° and/or no upward tilt*
- *Where appropriate, external security lighting will be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate*
- *Use of a Central Management System (CMS) with additional web-enabled devices to light on demand Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS*
- *The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues. See Case Study 6*
- *Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely'*

Figure 15. Internal lighting mitigation options (ILP 2023).

6.4.2 Mitigation – During Construction

During the construction phase, any open excavations left overnight will either be covered to prevent commuting [REDACTED] and other terrestrial mammals falling in or escape ladders will be used to prevent them from becoming trapped. Any open pipework will be checked and then capped nightly.

6.5 Reptiles

The unmanaged areas of grassland present around the Site have been assessed as offering low potential to support common reptiles. It is therefore recommended that a suite of reptile presence/likely absence surveys be completed. This would involve the laying of artificial refugia within areas of suitable habitat and checking the refugia on seven occasions between March and mid-October (optimal survey season April, May and September) in suitable weather conditions.

Should reptiles be present it is recommended that suitable habitats are retained and protected during works (with the masterplan providing ample opportunities for on-Site reptile habitat retention), with exclusion fencing used if necessary to ensure reptiles cannot enter the construction area.

6.6 Great Crested Newts

6.6.1 Habitat Suitability Index (HSI) Assessment

Due to the proximity to Ponds P3 – P16 & P20, and suitable habitat in between, it is recommended that these are subject to a formal Habitat Suitability Index (HSI) assessment (as per ARG, 2010) the results of which will inform the need for any further investigations (such as taking an eDNA sample).

6.6.2 eDNA Survey

All of those ponds considered to be of 'average' or greater suitability for GCN will need to be subject to eDNA surveys to determine the presence / likely absence of GCN.

Please note: In the event that the eDNA result is positive within any of the ponds, then a suite of surveys to determine the full population size class will be required to inform a GCN licence.

6.7 Birds of Conservation Concern (BoCC)

In order to avoid disturbance of breeding and nesting birds or damage to their nests, any works to the trees or woodland on Site (and future habitat management of suitable habitat) should avoid bird nesting season (typically March – August, dependent on weather). If this is not possible, the buildings / trees should be thoroughly checked by an ecologist immediately prior to works. If any active nests are found, they should be left undisturbed with a suitable buffer within which works cannot take place (ca. 5m) until nestlings have fledged.

6.8 Designated Sites

6.8.1 Thames Basin Heaths SPA

As the Site is located within 5km of the Thames Basin Heaths SPA, the development will be required to contribute to Suitable Alternative Natural Greenspace (SANG) provision and to the Strategic Access Management and Monitoring (SAMM) scheme, in accordance with Wokingham Borough Council's Thames Basin Heaths SPA Avoidance and Mitigation Strategy.

Under this strategy, SAMM contributions are secured through Section 106 obligations and are applied on a per-bedroom basis across the borough. Contributions are collected by the administrative authority and passed to Natural England, who oversee delivery of the access management and monitoring programme. The tariff is based on sub-regional average occupancy figures, as set out in Natural England's Thames Basin Heaths SAMM Project Tariff Guidance (2011 (updated 2021)), and funds a coordinated programme of measures designed to manage recreational pressure on the SPA.

6.9 Biodiversity Net Gain

Biodiversity net gain will be required for the Site, as per relevant legislation and policy, with a minimum gain of 10% required. This will be provided in a separate assessment / report once the full habitat classification and Site layout details are known.

6.10 Enhancements

Finalised details on ecological enhancement measures will be incorporated into the final Site design, following completion of necessary Phase II survey work. Notwithstanding this, the following enhancement measures are recommended at this stage.

6.10.1 Bat boxes

At least 50% of the newly built dwellings will have 1 No Ibstock bat brick (**Fig 16**) integrated within the external brick work. These features are entirely self-contained and available in a variety of different colours to match different construction materials. They should ideally be placed on an elevation which will benefit from some degree of sunlight exposure and be located away from windows.

Figure 16. Ibstock bat brick 'B' which will be integrated into the gable walls of at least 50% of the newly built dwellings.



6.10.2 Bird boxes

To act as biodiversity enhancement, at least 50% of the newly built dwellings will incorporate one Swift (*Apus apus*) brick. The Ibstock 'Eco Home for Swifts' bricks will be installed (**Fig 17**) as they are a discreet and attractive box ideal for new dwellings. The boxes should be installed under the eaves or in high walls in shaded areas out of direct sunlight and away from windows. The installation of such boxes has also been shown to be beneficial for House Sparrows (*Passer domesticus*) which are a nationally declining species.

Figure 17. Ibstock eco home for swifts that will be incorporated into at least 50% of the newly built dwellings.



6.10.3 Hedgehogs

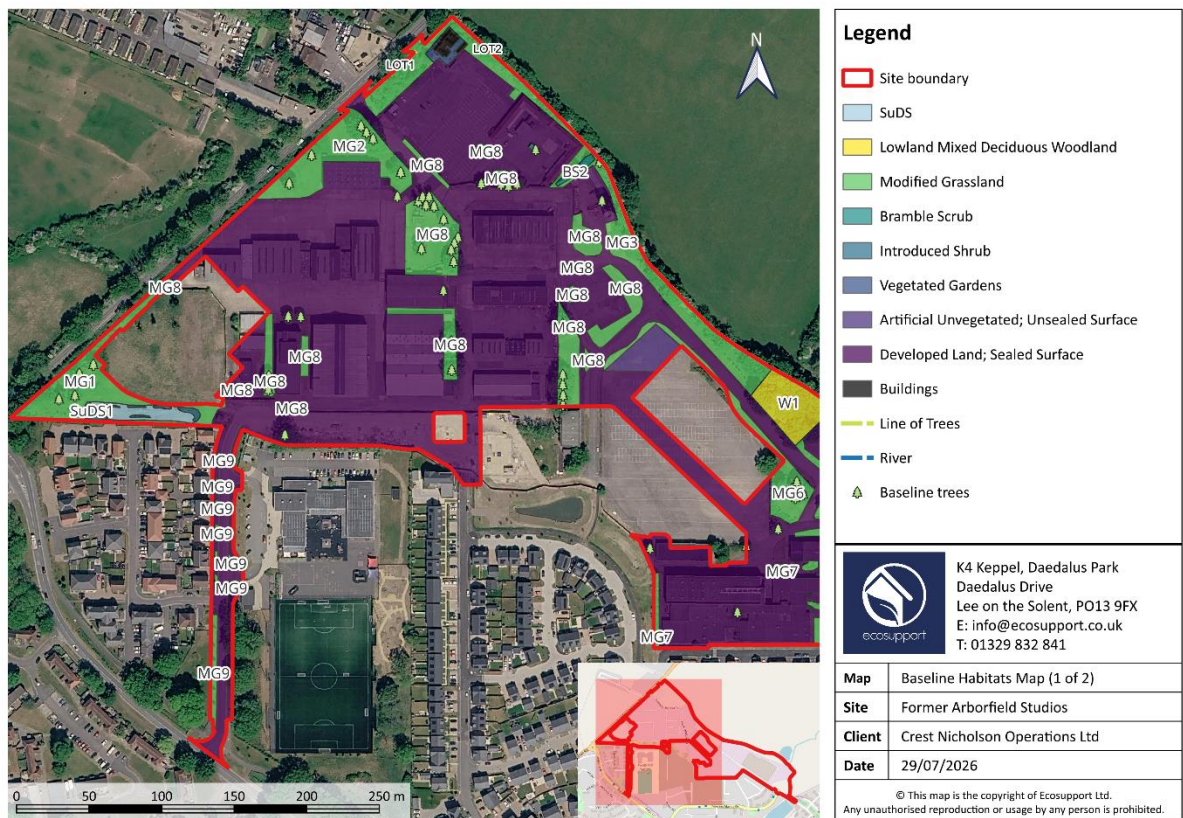
The retained boundaries on Site will incorporate 2 No Hedgehog home (**Fig 18**) (such as the Igloo Hedgehog home or Hogitat Hedgehog house). This will be provided within or adjacent to areas of retained trees / shrubs and will provide a rapidly declining species with a place to shelter / hibernate.

It is recommended that the hedgehog home is maintained to ensure it remains suitable for use by Hedgehogs. The hibernation period for Hedgehogs typically spans from October – April, therefore it is recommended that the hedgehog home is inspected every year in mid to late-April, after hibernation

but prior to the nesting period. During these inspections the hedgehog home should be checked for any damage and replaced/repaired where necessary.

Additionally, the hedgehog home should be cleared of any old nesting material and would be beneficial to be replaced with fresh, dry hay. The hedgehog home should be placed back in their original location, unless the hedgehog homes have been interfered with by the public or not utilised by any Hedgehogs, an alternative discrete location should be considered.

Figure 18. Example of the Igloo Hedgehog Home.



7.0 CONCLUSION

Ecosupport Ltd was instructed by Crest Nicholson Operations Ltd to undertake a Preliminary Ecological Appraisal (PEA) at the 'Former Arborfield Studios (Parcels W, Y, and Z), Arborfield Green'. This has identified a number of ecological features that will require consideration within the design and delivery of the proposed development.

The Site is located within the recreational Zone of Influence for the Thames Basin Heaths SPA, and contains Ancient & Semi-Natural Woodland and S41 Priority Deciduous Woodland along its northern boundary, both of which represent high-value habitats. Multiple buildings were confirmed as bat roosts, with additional structures offering high, moderate or low roosting potential, alongside several trees containing potential roost features. The Site also supports low potential for commuting/foraging bats, moderate potential for [REDACTED] and other terrestrial mammals, and low potential for common reptiles, Great Crested Newts, and nesting birds.

Overall, the appraisal demonstrates that, while much of the Site comprises habitats of limited ecological value, several important features are present that could be adversely affected without appropriate avoidance, mitigation and compensation. These findings should inform the next stages of design, licensing and ecological impact assessment to ensure compliance with relevant legislation and local planning policy, and to secure proportionate biodiversity protection and enhancement.

8.0 REFERENCES

CIEEM (2018). *Guidelines for Ecological Assessment in the UK and Ireland*. Version 1.3 updated September 2024. Chartered Institute of Ecology and Environmental Management, Winchester.

Collins, J. (ed) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition)*. The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6.

HMSO (1989) Wildlife and Countryside Act (amended). HMSO, London.

HMSO (2000) The Countryside and Rights of Way Act. HMSO, London.

HMSO (2006) Natural Environment and Rural Communities Act. HMSO, London.

HMSO (2017). *The Conservation of Habitats and Species Regulations*. Statutory Instrument 2010 No. 490. HMSO, London.

HMSO (2019) The Conservation of Habitats and Species Regulations. Statutory Instrument 2019 No. 579. HMSO, London.

HMSO (2021). The Environment Act 2021. HMSO, London. Available at: <https://www.legislation.gov.uk/ukpga/2021/30>

ILP / BCT (2023) Guidance Note 08/23: Bats and Artificial Lighting at Night.

Ministry of Housing, Communities and Local Government (MHCLG). 2026. *National Planning Policy Framework*. August 2026. London: MHCLG.

Pioneer Environment Group. (2025). PEG659-02B - Preliminary Roost Assessment.

UKHab Ltd. (2023). UK Habitat Classification – Habitat Definitions Version 2.0 (September 2023).

Wokingham Borough Council (2014). *Managing Development Delivery Local Plan (MDD)*. Adopted 21 February 2014. Wokingham Borough Council, Wokingham.

Wokingham Borough Council (2010) 'Wokingham Borough Local Development Framework: Adopted Core Strategy Development Plan Document' Available online at:

<http://www.wokingham.gov.uk/planning-and-building-control/planning-policy/key-planning-documents/>

9.0 APPENDIX

Baseline Habitats Map

