



**Essential
Ecology**

Land off Edneys Hill, Barkham

Ecological Appraisal

(Ref: ESEC/24084/01/v2.0)

Prepared by Essential Ecology
on behalf of Abbeymill Homes

February 2026

Quality Control

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The recommendations and conclusions are valid for the current proposals only. Should the proposals plans be amended, the report will need to be updated and where appropriate informed by additional/update survey work.

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1. Executive Summary

Table 1.1. Executive Summary	
Section	Summary
Introduction and Methodology	An Ecological Appraisal of the proposed development at Land off Edneys Hill, Barkham has been undertaken by Essential Ecology (ESEC) on behalf of Abbeymill Homes. The assessment was undertaken between December 2024 and April 2025 and is based on a desktop study, extended UK Habitat survey and protected species habitat suitability assessments, particularly in respect of Badger, roosting bats, nesting birds and Great Crested Newts. An assessment of impacts has been provided based on the proposals for the site.
Ecological Designations and Notable Habitats	The site is located within the zone of influence for Thames Basin Heaths SPA. As such, in accordance with the strategic mitigation strategy in place within Wokingham Borough, financial SANG and SAMM contributions will be made, secured through legal agreement. A number of notable trees have been identified at the site boundaries and within the local area and therefore measures are proposed to safeguard these trees during the construction phase. Given the small-scale of the proposals and the distance of the nearest identified national/local statutory and non-statutory designations, ancient woodland and Priority Habitats, no significant adverse impacts on these sites/habitats are anticipated.
Habitats and Flora	The hedgerow and ecologically valuable line of trees at the site boundaries have been assessed as Important Ecological Features (IEFs). These features are largely located offsite, albeit small lengths are present within the site boundary. No other onsite habitats have been assessed as an Important Ecological Feature (IEF), although semi-mature to mature trees (in particular tree T20) are likely to be of inherent ecological value. The site has been designed to maximise retention of hedgerows, line of trees and trees.
Protected Fauna	No evidence of protected or notable species was recorded within the site during the survey work undertaken. The site was assessed to offer limited opportunities for roosting bats, foraging and commuting bats, nesting birds and small mammals/herpetofauna (including Priority Species). The site supports suitable terrestrial opportunities for Great Crested Newts, albeit this species is unlikely to be present due to the lack of suitable connected ponds within the local area.

Mitigation, Compensation and Enhancement	A number of mitigation measures (EM1-EM8) are recommended in respect of Thames Basin Heaths SPA, trees, hedgerows, bats, Badger, Great Crested Newts, small mammals/herpetofauna and nesting birds. A number of enhancement measures (EE1-EE6) are also recommended, including provision of native tree/scrub/hedgerow planting, grassland enhancement, inclusion of Hedgehog cut-outs in garden fences and provision of bat and bird boxes and bee bricks.
Conclusions	The proposed development, subject to the implementation of recommendations set out, is not considered likely to result in significant adverse impacts to biodiversity at the site or in the local vicinity. Indeed, the opportunity exists to provide ecological enhancements as part of the proposed development.

2. Introduction

2.1 Terms of Reference

2.1.1 Essential Ecology (ESEC) has been commissioned by Abbeymill Homes to undertake an Ecological Appraisal to inform a planning application for the site, located at Land off Edneys Hill, Barkham (central ordnance survey (OS) grid reference SU 78468 67172).

2.2 Site Location and Overview

2.2.1 The site comprises a field. The site is located south of B3349 Barkham Road and west of Edneys Hill in Wokingham (see Figure 2.1 below). Within a wider context, the site is surrounded by existing residential development to the north, east and west and Rooks Nest Suitable Alternative Natural Greenspace (SANG)/proposed SANG extension.

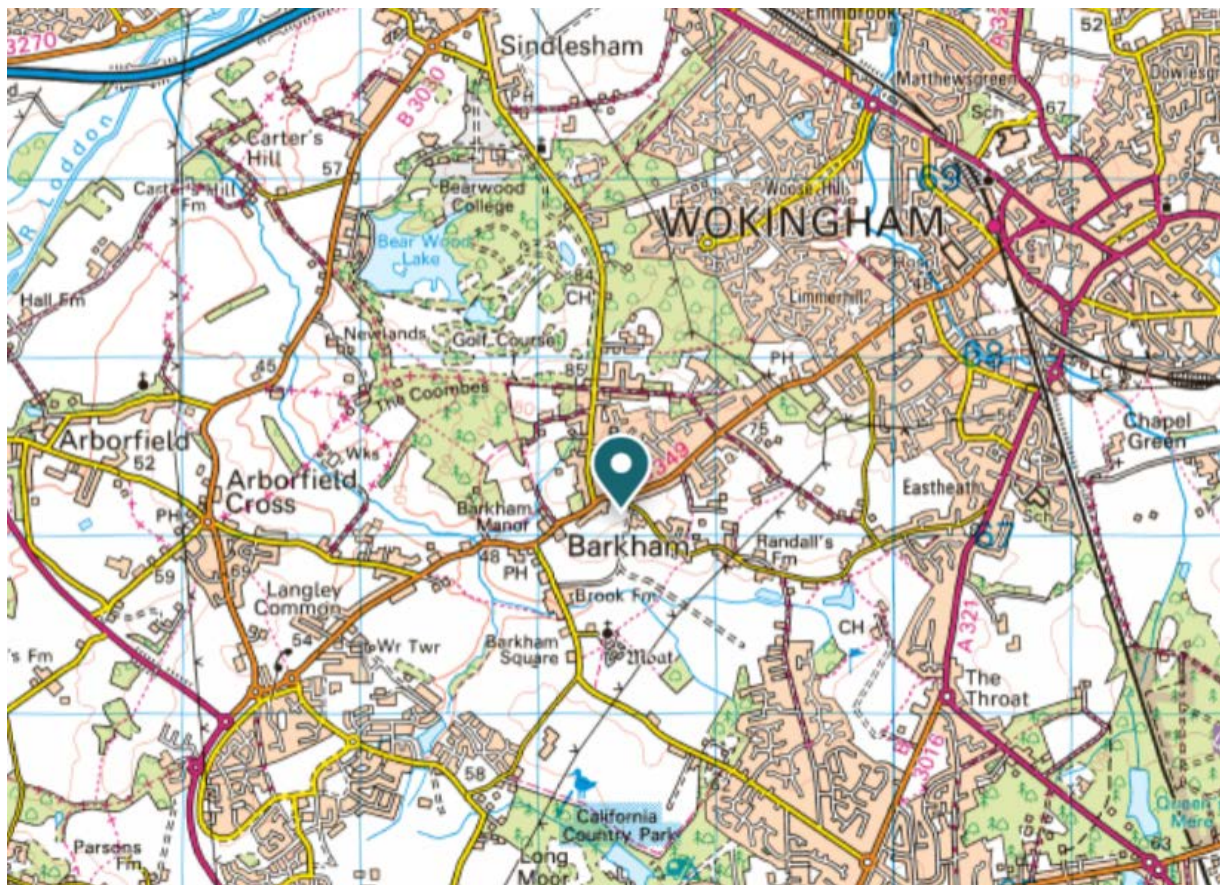


Figure 2.1: Site Location

2.2.2 The site, as shown by the red line boundary on drawing no. ESEC/24084/01-01, comprises an area of c. 0.7ha.

2.2.3 The site is dominated by other neutral grassland, along with areas of mixed scrub, Bramble scrub and trees. Hedgerows and an ecologically valuable line of trees are also present at the site boundaries, largely outside of the site boundary.

2.3 Description of Proposals

- 2.3.1 The proposals include development of sixteen residential dwellings, with associated access and ancillary facilities (see Appendix 1).

2.4 Purpose of Report

- 2.4.1 The purpose of this Ecological Appraisal is to inform the planning application for the site. Specifically, the Ecological Appraisal provides an assessment of the ecological value of the site and the anticipated impacts of the proposals, in the context of the relevant legislation and planning policy (a summary of relevant legislation and planning policy is provided at Appendix 2). The assessment is based primarily on the desktop study and site survey work undertaken and will include recommendations for appropriate mitigation where significant adverse impacts on Important Ecological Features (IEFs) are identified and/or proposals have the potential to result in the contravention of relevant legislation.

2.5 Quality Assurance and Management

- 2.5.1 The site survey work has been undertaken by Tom Staton. Tom has over 15 years' experience in professional ecological consultancy and holds a Master degree in Biological Recording and Ecological Monitoring and a PhD in Ecology and Agri-environmental Research. Tom has experience in undertaking numerous habitat/botanical surveys, including extended Phase 1, UK Hab, NVC and ancient woodland indicator surveys across a range of sites and development projects in the UK. Tom holds a Natural England Class 2 bat licence, Natural England Class 1 Great Crested Newt licence and a Natural England Class 1 Dormouse licence.
- 2.5.2 The Ecological Appraisal has been undertaken by Megan Jewson (Director). Megan has over 12 years' experience in professional ecological consultancy, is a full member of CIEEM and holds a Master degree in Biodiversity and Conservation. Megan has experience in undertaking numerous ecological surveys and assessments and devising appropriate ecological mitigation and enhancements strategies for habitats and species across a range of sites and development projects in the UK. Megan holds a Natural England Class 2 bat licence, Natural England Class 1 Great Crested Newt licence and is an accredited agent under a Natural England Class 1 Dormouse licence.
- 2.5.3 This report has been produced with reference to current best practice guidance produced by CIEEM, including '*Guidelines for Ecological Impact Assessment (EclA) in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*', version 1.2 (dated April 2022) and '*Guidelines for Preliminary Ecological Appraisal*', second edition (dated December 2017), as well as British Standard (BS) 42020:2013 which involves the evaluation of potential ecological constraints based on UK Habitat Classification survey data and background desk study.

3. Methodology

3.1 Desktop Study

3.1.1 The desktop study was undertaken between December 2024 and April 2025. Background information for the site was obtained from Thames Valley Environmental Records Centre (TVERC), Defra's Multi-agency Geographic Information for the Countryside (MAGIC) map tool (DEFRA 2025) and the Woodland Trust's Ancient Tree Hunt map tool (Woodland Trust 2025). Information was specifically sought for the following:

- Statutory Conservation Designations – 15km
- Non-statutory Designations – 2km
- Protected Species – 2km
- Priority Habitats, Ancient Woodlands and Veteran/Ancient Trees – 1km
- Offsite Ponds – 250-500m

3.2 Habitat Survey

3.2.1 The site was surveyed on 1st March 2025 based on UK Habitat Classification Survey (v2) (UKHab Ltd 2023) methodology. This involves identifying and mapping habitat types and establishing the species composition of each habitat type. The nomenclature used for plant species is based on the Botanical Society for the British Isles (BSBI) Checklist (BSBI 2025).

3.2.2 The survey was extended in line with CIEEM guidelines (CIEEM 2018), to record details on suitability and/or presence of any notable or protected habitats or species. This survey is used to identify where further, more detailed surveys are likely to be required to inform the Ecological Appraisal.

3.3 Faunal Surveys

3.3.1 General faunal activity (observed visually or by call) during the course of the survey work was recorded. Specific attention was also paid to the potential presence of protected, rare or notable species, as set out below.

Badger

3.3.2 The site was surveyed on 1st March 2025. The site was searched for any evidence of Badger (e.g., setts, paths, push-throughs, hair, latrines, dung, footprints etc.) in order to establish use (if any) of the site. Methodology broadly followed recommendations set out within The Mammal Society Publication '*Surveying Badgers*' (Harris, Cresswell and Jefferies 1989).

Roosting Bats

Ground-level Tree Assessment (GLTA)

3.3.3 The onsite/adjacent trees were surveyed on 1st March 2025 by a Natural England licensed surveyor (Class 2 Licence: WML-CL18). The trees were subject to a Ground-level Tree Assessment (GLTA) to provide a preliminary assessment of suitability of trees to support roosting bats.

3.3.4 The GLTA comprised a detailed inspection of the exterior of the trees from the ground level to identify features which could be used by roosting bats (i.e., Potential Roosting Features or PRFs). Particular attention was paid to features such as woodpecker holes, rot holes, pruning cuts, tear out wounds, cankers, butt rot, cracks, snaps, lifted bark, fissures and ivy, where present. Where identified, field signs such as droppings, feeding remains and dead or living bats were also recorded.

3.3.5 The potential roost suitability of the trees was assessed using the criteria detailed in Table 3.1 below, in accordance with the current bat survey guidelines (Collins 2023).

Table 3.1: Potential Bat Roost Suitability of Trees	
Suitability	Criteria
None	No PRFs identified in the tree and/or tree PRFs highly unlikely to be present.
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF identified. Where PRF's are identified these are categorised as: - PRF-I: PRF identified is only suitable for individual or very small number of bats either due to size or lack of suitable surrounding habitat; or - PRF-M: PRF is suitable for multiple bats and may therefore be used by a maternity colony.

Nesting Birds

3.3.6 An assessment was made as to the suitability of the site to support nesting birds on the 1st March 2025. Survey methodology was broadly in line with standard techniques set out within 'Bird Monitoring Methods: A Manual of Techniques for Key UK Species' (Gilbert, Gibbons and Evans 1998). During the survey, particular attention was paid to the following:

- presence of habitats suitable to support nesting birds.
- site context.
- evidence of current or previous nesting activity (e.g., nests and concentrations of droppings, feathers, down and chick remains etc.).
- general bird activity (observed visually or by call) both within the site and the immediate surrounds.

Great Crested Newt

- 3.3.7 Great Crested Newts utilise ponds for breeding and will typically commute up to 250m from breeding ponds (English Nature 2004). Consideration should therefore be given to presence of Great Crested Newts within onsite ponds and any connected offsite ponds within 250m (up to 500m in rare instances¹).

Habitat Suitability Index (HSI) Assessment

- 3.3.8 An assessment, in the form of a Habitat Suitability Index (HSI) assessment (Oldham R.S. 2000), was undertaken as to the suitability of offsite ponds identified using OS/aerial imagery, where access could be obtained. A study area of up to 250m was considered appropriate in this instance.
- 3.3.9 The HSI study was undertaken on the 1st March 2025 by a licensed ecologist. The survey involved recording information in relation to ten factors, specifically including location, pond area, pond permanence, water quality, level of shading, presence of fowl and fish, pond count within 1km, suitability of surrounding terrestrial habitat and cover of macrophytes. Each factor is assigned a numerical score between 0 (unsuitable) and 1 (optimal). The score for each factor is then combined to determine the overall suitability of the waterbody as one of five categories: 'poor', 'below average', 'average', 'good' or 'excellent'.

3.4 Survey Limitations

- 3.4.1 The UK Habitat Classification Survey was undertaken in March, outside the optimum survey season. Nevertheless, the survey work was undertaken by a competent and experienced botanist and therefore, given the nature of the habitats present, the data collected provides a robust assessment.
- 3.4.2 The absence of desk study records is not relied upon to determine absence of a particular species. Absence of records is often a result of under-recording within the given search area and as such the professional judgement of the surveyor is used to assess likely presence or absence, and inform the need for more detailed survey work.
- 3.4.3 Attention was paid to the presence of any invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The detectability of such species varies due to a number of factors, e.g., time of year, site management, etc., and hence the absence of any given invasive species should not be assumed even where not recorded during the habitat survey.

¹ Natural England's Development Licence Method Statement template states that surveys are only required of ponds within 500m of the site boundary where data indicates that the pond(s) has potential to support a large Great Crested Newt population, the footprint contains particularly favourable habitat, the development would have a substantial negative effect on the favourable habitat and there is an absence of dispersal barriers.

3.5 Ecological Assessment Methodology

3.5.1 The assessment of ecological features and their relative importance is based on industry guidance and professional judgement. Where an Important Ecological Feature (IEF) is identified, importance will be defined at an appropriate geographic scale. The Ecological Appraisal follows the methodologies within the Chartered Institute of Ecology and Environmental Management (CIEEM) '*Guidelines for Ecological Impact Assessment (EclA) in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*' (CIEEM 2018).

4. Ecological Designations and Notable Habitats

4.1 European-level Ecological Designations

- 4.1.1 The site is located c. 4.9km from Thames Basin Heaths Special Protection Area (SPA) and is located within the zone of influence for this designation. Any development within this zone may harm the rare bird populations which the SPA supports. A strategic mitigation strategy is in place in Wokingham Borough which sets the level of required mitigation for various zones: up to 400m, 400m-5km and 5-7km.
- 4.1.2 The site sits within the second zone (400m-5km). Within this zone, new developments are required to provide or make financial contributions toward Suitable Alternative Natural Greenspace (SANG) and financial contributions to Strategic Access Management and Monitoring (SAMM) (Wokingham Borough Council 2024). Given the size of the site, it will not be feasible to provide onsite SANG to the required standard whilst ensuring the site remains viable for development. As such, Abbeymill Homes will make financial contributions to SANG.
- 4.1.3 Proposals involving a net increase of 10 or more dwellings will need to be located within the catchment of a specified SANG that has sufficient capacity. The proposals are for sixteen dwellings and the site is located in the vicinity of Rooks Nest Wood SANG (and immediately north of the proposed Rooks Nest SANG extension). It is therefore considered that the site would fall within the catchment of Rooks Nest SANG. As of September 2024, remaining capacity of Rooks Nest Wood SANG was c. 4.6 ha (equating to 239 dwellings), whilst the proposed extension to the SANG would provide an additional 33 ha (equating to c. 1,700 dwellings) (Wokingham Borough Council 2024). On this basis, it is considered likely that the SANG has capacity available at this time.
- 4.1.4 On this basis, financial contributions will be made to Wokingham Borough Council in order to accord with the approved, strategic mitigation strategy and therefore no further consideration of this designation is required. Further information with regards to financial contributions is set out at Section 7 below.
- 4.1.5 The site is not located within the zone of influence of any other European statutory designation and therefore no impacts on other European-level statutory designations are anticipated.

4.2 National/Local Statutory Ecological Designations

- 4.2.1 A number of national/local statutory designations have been identified within 5km of the site. Of these, the nearest are:
- Longmoor Bog Site of Special Scientific Interest (SSSI)/Local Nature Reserve (LNR) - located c.1.6km south.
 - Holt Copse and Joel Park LNR - located c.2.7km north east.

4.2.2 At these distances, given the scale of the proposals for up to sixteen residential dwellings, no significant adverse impacts on these or any other more distant statutory designations are anticipated.

4.3 Non-statutory Ecological Designations

4.3.1 The nearest identified non-statutory ecological designations are:

- The Coombes Local Wildlife Site (LWS) and Local Geological Site (LGS) – c.0.6km north east.
- Bearwood Estate – Woods & Lakes LWS – C. 0.7km north east.

4.3.2 At these distances, no indirect impacts are anticipated as a result of construction activities at the site. Bearwood Estate – Woods & Lakes LWS appears to be in use as a golf course and therefore not publicly accessible such that no impacts resulting from increased recreational use are anticipated. The Coombes LWS/RGS is linked to the site via public rights of way, whilst numerous pathways appear to be present through the designation. However, given the existing level of residential development in the local area and the scale of the proposals for sixteen residential dwellings, any increased recreational use is unlikely to result in significant impacts.

4.4 Ancient Woodland

4.4.1 A number of areas of ancient woodland have been identified within 1km of the site. Of these, the nearest are Bears Copse Ancient & Semi-Natural Woodland (ASW) and The Coombes ASW, located 0.3km and 0.5km north west, respectively. At these distances, given the scale of the proposals for sixteen residential dwellings, no significant adverse impacts on these or any other more distant ancient woodlands are anticipated.

4.5 Priority Habitats

4.5.1 Areas of Priority Deciduous Woodland, Traditional Orchard and Woodpasture and Parkland have been identified by the desktop study within 1km of the site. Of these, the nearest are an area of Deciduous Woodland located c. 0.2km west of the site and an area of Traditional Orchard located c. 0.3km west of the site. At these distances, given the scale of the proposals for sixteen residential dwellings, no significant adverse impacts on these or any other more distant Priority Habitats are anticipated.

5. Habitats & Flora

5.1 Introduction

- 5.1.1 A description and evaluation of the habitats and ecological features present within/adjacent to the site are set out below, together with an assessment of the likely impacts of the proposals. An assessment of the habitat in terms of value for protected/notable species is set out separately within Section 6 below.

5.2 Other neutral grassland (g3c)

- 5.2.1 The site is dominated by other neutral grassland (see drawing ESEC/24084/01-01).
- 5.2.2 The grassland is situated within a single field on a gradual slope down to the south-east. The grassland appears to be subject to management and appeared to have been recently cut with a short sward height (c. up to 10cm) at the time of survey. The grassland was also noted to have been subject to substantial ground disturbance. Arisings indicated that, prior to cutting, the grassland previously comprised a tall and rank sward. Historical aerial imagery shows that much of the grassland was previously subject to significant disturbance around 20 years ago, associated with construction works to the west of the site.
- 5.2.3 The sward was recorded to be dominated by grasses, particularly Cock's-foot and Yorkshire-fog, with locally abundant Rough Meadow-grass and occasional to rare Field Wood-rush and Tufted Hair-grass. The sward also supported variable forb cover, generally forming c. 30% cover, albeit with lower forb content in the south east corner. Forbs include Yarrow, Lord's-and-Ladies, Daisy, Bitter-cress, Common Knapweed, Creeping Thistle, Spear Thistle, Willowherb, Lesser Celandine, Cleavers, Dove's-foot Crane's-bill, Hogweed, Common Ragwort, Oxeye Daisy, Ribwort Plantain, Creeping Buttercup, Lesser Stitchwort, Dandelion and Common Nettle.
- 5.2.4 The grassland swards were not assessed to be sufficiently species-rich or herb-rich (taking into account the exclusion of injurious weeds) to qualify as Priority Habitat. The vast majority of the species recorded within the other neutral grassland field are common and widespread. The majority of forb cover was attributed to species indicative of suboptimal condition. However, two grassland indicator species were recorded in the sward, namely Oxeye Daisy and Common Knapweed. These species were generally scarce, although were noted to be more frequent in the north-west of the site (G2).
- 5.2.5 On this basis, other neutral grassland is considered to be of some value in the context of the site, albeit is not considered to form an important ecological feature and therefore not considered to form a constraint to the proposals.

5.3 Dense scrub (h3)

5.3.1 Areas of dense scrub were recorded within the site (see drawing ESEC/24084/01-01). This comprises areas of Mixed scrub (h3h) and Bramble scrub (h3d).

Bramble scrub (h3d)

5.3.2 Areas of Bramble scrub were recorded within the site, particularly within the south. A number of areas of scrub appeared to have been recently cleared at the time of survey, albeit were beginning to regenerate. Areas of Bramble scrub were also recorded to support ruderal species, particularly including Common Nettle, Hogweed and Cleavers.

Mixed scrub (h3h)

5.3.3 A small area of mixed scrub was recorded in the south-west of the site. The area was recorded to be well-established and likely formed by an outgrown historic hedgerow. The scrub was recorded to be dominated by Holly and Hazel, along with occasional Elder, Hawthorn, and Bramble. A number of coppice stools were also noted.

5.3.4 Areas of scrub largely comprise common and widespread species, whilst areas of mixed scrub at the southern site boundary were noted to be well established. On this basis, scrub is largely considered to be of limited value in the context of the site, is not considered to form an important ecological feature and therefore not considered to form a constraint to the proposals. Losses of scrub would be limited to areas of Bramble scrub, whilst areas of mixed scrub will be retained and enhanced within the area of proposed greenspace at the site.

5.4 Individual Trees (secondary code 200)

5.4.1 Three trees are present within the site (see drawing ESEC/24084/01-01), in the form of semi-mature Norway Maple trees (T8 and T13) and a semi-mature Hazel (T18).

5.4.2 A Pedunculate Oak tree (T20) was also recorded offsite to the south west of the site, within an area of mixed scrub (see drawing ESEC/24084/01-01). This tree supported significant deadwood. The tree is assessed as notable. This is supported by the arboricultural assessment (Aspect Arboriculture 2025).

5.4.3 The trees within and adjacent to the site, particularly tree T20, are of inherent ecological value in their own right, albeit are unlikely to form important ecological features at this time. Under the proposals, the majority of trees will be retained within areas of open space. In particular, a substantial buffer will be maintained between T20 and proposed dwellings/infrastructure. It is therefore recommended that the trees are protected throughout the construction phase in accordance with measures set out within the arboricultural report and recommendations set out at Section 7 below. Additional measures are also set out specifically to ensure tree T20 is fully safeguarded from indirect effects of construction.

5.5 Hedgerows (h2)

5.5.1 Two hedgerows are present at the site boundaries (see drawing ESEC/24084/01-01). Further details of the hedgerows are set out at Table 5.1, below.

Table 5.1: Hedgerow Descriptions							
No.	Height	Width	Woody species	Avg. per 30m* ¹	Ground flora & climbers	Associated features	Likely to Qualify* ²
H1	2m	1.5m	Cherry Laurel	0	Ground flora consistent with adjacent habitats	<10% gaps	N
Comments: Non-native and ornamental garden hedgerow (h2b), regularly managed. Offsite.							
H2	6m shrub layer, plus trees	3-4m	<u>English Elm, Holly, Hazel, Hawthorn, Field Maple, Field Rose, Broom, Pedunculate Oak, Ash</u>	5	Dominated by Ivy, with Lord's-and-Ladies, Bluebell, Greater Stitchwort	<10% gaps, standard trees, ditch, parallel hedge, potentially woodland species	Y
Comments: Species-rich native hedgerow (h2a5) with trees (secondary code 11) and a dry ditch on the east side (secondary code 50). Largely offsite. No recent management aside of roadside trimming. Supports semi-mature and mature trees.							
* ¹ estimated average number of woody species per 30m (as listed under Schedule 3 of the Hedgerows Regulations 1997). Qualifying species underlined.							
* ² likely to qualify – as 'important' under the wildlife and landscape criteria of the Hedgerows Regulations 1997							

5.5.2 Hedgerow H1 is a non-native, ornamental hedgerow and therefore does not qualify as important under the Hedgerows Regulations 1997 and does not represent a Priority Habitat. Hedgerow H1 is therefore considered to be of limited ecological value and is therefore not considered to form an important ecological feature and does not form a constraint to the proposals.

5.5.3 Hedgerow H2 is dominated by native species and is likely to qualify as important under Schedule 3 of the Hedgerows Regulations 1997 due to its species richness and associated features. Given the dominance of native species, this hedgerow is also considered to qualify as a Priority Habitat. On this basis, hedgerow H2 is considered to be of elevated value in the context of the site and is considered to form an important ecological feature, of value at the local level. Hedgerow H2 is largely located offsite and therefore the vast majority of the hedgerow will be retained save for access. It is therefore recommended that the hedgerow is fully safeguarded throughout construction in line with recommendations set out at Section 7 below.

5.6 Ecologically Valuable Line of Trees (w1h, secondary code 34)

- 5.6.1 An ecologically valuable line of trees is present largely offsite along the northern boundary of the site (see drawing ESEC/24084/01-02), located on an embankment adjacent to the public road.
- 5.6.2 The tree line supports a continuous, 5m wide line of semi-mature trees, in addition to numerous young self-set specimens. The most frequent tree species were Pedunculate Oak and Ash, with Silver Birch and Norway Maple also recorded. A small group of Leyland Cypress trees is present towards the western end. The tree line is therefore considered to be characteristic of 'other woodland; mixed' habitat (w1h). A number of the trees supported light coverings of Ivy.
- 5.6.3 A variable shrub layer was present below the tree canopy, including a short dense section near the middle (but insufficient in length to qualify as a hedgerow). The shrub layer was dominated by Bramble, with Holly, Hawthorn, Hazel and Field Maple, whilst the ground flora is dominated by Ivy.
- 5.6.4 The ecologically valuable line of trees is likely to qualify under the Priority Habitat 'hedgerows' (which also includes native tree lines within its definition). As such, the line of trees is considered to form an important ecological feature, of value at a local level. The ecologically valuable line of trees is largely located offsite and will therefore be retained under the proposal. It is therefore recommended that the ecologically valuable line of trees is fully safeguarded throughout construction in line with recommendations set out at Section 7 below.

6. Protected Fauna

6.1 Introduction

6.1.1 A description and evaluation of the site's suitability for protected species and likely presence/absence of protected species is set out below, together with an assessment of the likely impacts of the proposals. The legislative protection afforded to each species/species group is provided below, with a summary of the legislation included at Appendix 2.

6.2 Badger

6.2.1 **Legislative Protection.** Protection of Badgers Act 1992.

6.2.2 **Desktop Study Review.** A number of records of Badger have been identified within the search area. The closest records are located 0.5km south east and west of the site, dated 2017 and 2023 respectively.

6.2.3 **Survey Results, Assessment & Evaluation.** No definitive evidence of Badger in the form of setts, latrines or dung were recorded within the site, whilst no pathways or push-throughs were noted. The site provides opportunities for Badger, in the form of other neutral grassland, scrub, hedgerows and line of trees, whilst similar opportunities are afforded by land to the south and south east of the site.

6.2.4 Given the lack of recorded activity, no impacts on the local population are anticipated as a result of the proposals. Nevertheless, Badgers are dynamic animals and levels of Badger activity can rapidly change, with new setts being created at any time. Given the known presence of Badger within the local area, a number of recommendations are set out at Section 7 below to ensure Badgers are fully safeguarded throughout construction.

6.3 Bats

6.3.1 **Legislative Protection.** Regulation 41 of the Conservation of Habitats and Species Regulations 2017 (as amended), Wildlife and Countryside Act 1981 (as amended), Wild Mammals (Protection) Act 1996 and Natural Environment and Rural Communities Act 2006 (various species).

6.3.2 **Desktop Study Review.** A number of records of bats have been identified within the search area, including Common Pipistrelle, Soprano Pipistrelle, Nathusius's Pipistrelle, Pipistrelle species, *Myotis* species, Daubenton's Bat, Natterer's Bat, Long-eared species, Brown Long-eared Bat, Serotine, Noctule Bat, Leisler's Bat, *Nyctalus* species and Barbastelle. The nearest identified records are for Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle and Noctule Bat, located adjacent to the east of the site in 2017 and an unidentified bat adjacent to the west of the site in 2018.

- 6.3.3 **Roosting Bats - Survey Results, Assessment & Evaluation.** The trees to be removed/impacted by arboricultural works as a result of the proposals were subject to a ground-level tree assessment (GLTA). None of these trees were assessed to be suitable for roosting bats. Tree (T20) was noted to be of particular suitability for roosting bats and was assessed to be suitable for multiple bats (PRF-M). This tree will be retained within a buffer of greenspace under the proposals.
- 6.3.4 On this basis, no significant impacts on the local population of roosting bats are anticipated as a result of the proposals. Nevertheless, in order to enhance the site for bats in the future, a number of recommendations in respect of bat box provision are outlined at Section 7 below.
- 6.3.5 **Foraging and Commuting Bats - Survey Results, Assessment & Evaluation.** The site affords opportunities for foraging and commuting bats, largely limited to boundary hedgerow H2, the ecologically valuable line of trees, dense scrub and individual trees at the field boundaries. Similar opportunities are afforded by land to the south and south east of the site.
- 6.3.6 The majority of habitat of value to foraging and commuting bats within the site will be retained, with losses to hedgerow H2 to accommodate the access and losses of Bramble scrub. The potential exists for retained habitats to be subject to increased light spill under the proposals which would reduce their value for bats. Efforts should therefore be made to minimise light spill on these habitats as part of the proposals through the design of a sensitive lighting scheme.
- 6.3.7 Subject to the implementation of the recommendations outlined at Section 7 below in relation to lighting design, it is considered that the conservation status of local bat populations (with regards to foraging and commuting) will be fully safeguarded under the scheme.

6.4 Other Mammals

- 6.4.1 **Legislative Protection.** Regulation 41 of the Conservation of Habitats and Species Regulations 2017 (as amended) (Dormouse), Wildlife and Countryside Act 1981 (as amended) (Dormouse, Otter and Water Vole), Wild Mammals (Protection) Act 1996 (all wild mammals as defined by the act) and Natural Environment and Rural Communities Act 2006 (various species, including Hedgehog, Brown Hare, Harvest Mouse and Polecat).
- 6.4.2 **Desktop Study Review.** A small number of records of Schedule 5 species have been returned from within the search area, including for Otter and Water Vole. The identified record of Otter is located c. 0.6km south west of the site in 2016. The records of Water Vole are located c 1.8km south of the site in 1996.
- 6.4.3 A number of records of Priority Species Hedgehog were returned from within the search area. The nearest identified record of Hedgehog is located 0.2km north of the site in 2020.
- 6.4.4 **Survey Results, Assessment & Evaluation.** No evidence of any protected, rare or notable mammal species was recorded within the site.

- 6.4.5 The site does not contain, nor is it linked to, riparian habitat. The site is therefore unlikely to be of particular value for Otter or Water Vole.
- 6.4.6 No records of Dormouse were returned from within the search area, whilst the People's Trust for Endangered Species state that Dormouse are rare within the county of Berkshire. The site supports limited suitable habitat, largely restricted to the site boundaries. The site is also isolated to the north, east and west by existing development, whilst the hedgerow network linking the site to the south is unlikely to support a viable population of Dormouse due to distance from areas of optimal habitat, such as woodland.
- 6.4.7 The site may provide opportunities for Hedgehog, whilst similar opportunities are likely afforded by land to the south/south east of the site. The vast majority of hedgerows, the ecologically valuable line of trees and areas of mixed scrub and grassland will be retained under the proposals. As such, continued opportunities for Hedgehog will be available in the long-term.
- 6.4.8 Other common species which likely make use of the site, e.g., Fox, Mice and Brown Rat, do not receive specific legislative protection in a development context and are therefore not a material planning consideration.
- 6.4.9 On this basis, no significant adverse impacts on the local mammal populations are anticipated as a result of the proposals. Use of the site by small mammals, including Priority Species, cannot be conclusively ruled out. A number of recommendations are therefore set out at Section 7 below to ensure this species group is fully safeguarded throughout construction.

6.5 Birds

- 6.5.1 **Legislative Protection.** Wildlife and Countryside Act 1981 (as amended) (note additional protection afforded to Schedule 1 birds as listed within the act) and Natural Environment and Rural Communities Act 2006 (various species).
- 6.5.2 **Desktop Study Review.** A number of records of bird species were returned from within the search area, including records of Schedule 1 species Barn Owl, Black Redstart, Brambling, Cetti's Warbler, Common Scoter, Crossbill, Fieldfare, Firecrest, Goshawk, Green Sandpiper, Greenshank, Hobby, Kingfisher, Mediterranean Gull, Peregrine, Pintail, Red Kite, Redwing and Whimbrel.
- 6.5.3 A number of records of Priority Species of bird were also returned from within the search area, including Bullfinch, Common Scoter, Cuckoo, Dunnock, Hawfinch, Herring Gull, House Sparrow, Lapwing, Lesser Redpoll, Lesser Spotted Woodpecker, Linnet, Nightjar, Reed Bunting, Ring Ouzel, Skylark, Song Thrush, Spotted Flycatcher, Starling, Tree Pipit, Yellow Wagtail and Yellowhammer.
- 6.5.4 **Survey Results, Assessment & Evaluation.** The site provides nesting opportunities for a range of common species, particularly in the form of the hedgerows, ecologically valuable line of tree,

mixed scrub and Bramble scrub. No Schedule 1 or Priority bird species were recorded within the site during the survey work undertaken. Similar opportunities for bird species are likely afforded by land to the south/south east of the site.

6.5.5 Overall, taking into account the size of the site, no significant impacts on the local bird population are anticipated. Nevertheless, the proposals will result in the disturbance of habitats suitable to support nesting birds, which could potentially affect any nesting birds that may be present at the time of works. Accordingly, a number of measures are set out at Section 7 below to ensure nesting birds are fully safeguarded throughout construction.

6.6 Great Crested Newts

6.6.1 **Legislative Protection.** Regulation 41 of the Conservation of Habitats and Species Regulations 2017 (as amended), Wildlife and Countryside Act 1981 (as amended) and Natural Environment and Rural Communities Act 2006.

6.6.2 **Desktop Study Review.** A number of records of Great Crested Newts have been returned by the desktop study from within the search area. Of these, the closest record returned is located c. 1.2km south east of the site in 2014.

6.6.3 **Survey Results, Assessment & Evaluation.** The terrestrial habitats within the site afford suitable opportunities for Great Crested Newts. No ponds are present within the site, whilst only a single waterbody (W1) has been identified within 250m of the site boundary.

6.6.4 Waterbody W1 is located approximately 190m south west of the site (approximate grid reference SU 78297 66921). The waterbody is formed by a widening of a ditch and supported a shallow depth of water at the time of survey. As such, W1 is considered likely to support water on an ephemeral basis and likely to be dry during the newt breeding season.

6.6.5 An HSI assessment was undertaken of W1. The results of the HSI assessment are summarised at Table 6.1, below.

Table 6.1. Habitat Index Suitability (HSI) Assessment	
Suitability Indices	Waterbody
	W1
SI 1 Location	1
SI 2 Pond Area	0.05
SI 3 Pond Drying	0.1
SI 4 Water Quality	0.33
SI 5 Shade	0.6
SI 6 Water Fowl	1
SI 7 Fish	1
SI 8 Ponds	0.95
SI 9 Terrestrial	0.33
SI 10 Macrophytes	0.3
HSI Score	0.40
Suitability	Poor

6.6.7 Waterbody W1 is likely to be dry during the newt breeding season and therefore not considered likely to be utilised by Great Crested Newts. This is supported by the results of the HSI assessment which assessed W1 to be of 'poor' suitability.

6.6.8 On this basis, it is considered unlikely that the local conservation status of Great Crested Newts would be impacted as a result of the proposals. Nevertheless, given the suitability of the onsite terrestrial habitat, recommendations in respect of Great Crested Newts are set out at Section 7 below to ensure Great Crested Newts are fully safeguarded in the highly unlikely event individuals are present.

6.7 Other Amphibians

6.7.1 **Legislative Protection.** Regulation 41 of the Conservation of Habitats and Species Regulations 2017 (as amended) (Natterjack Toad), Wildlife and Countryside Act 1981 (as amended) (Natterjack Toad) and Natural Environment and Rural Communities Act 2006 (Natterjack Toad, Common Toad and Pool Frog).

6.7.2 **Desktop Study Review.** A number of records of Common Toad, Common Frog, Palmate Newt and Smooth Newt have been returned from within the search area. Of these, the closest record is for Common Frog, located c. 0.7km south west of the site in 2002.

6.7.3 **Survey Results, Assessment & Evaluation.** All the habitats within the site provide opportunities for other amphibians, whilst similar opportunities are likely afforded by land to the south/south east of the site.

6.7.4 The proposals will result in losses of grassland and scrub. The vast majority of hedgerows and tree lines will be retained under the proposals, along with a proportion of mixed scrub and grassland within public open space. Common amphibian species will also make use of proposed

vegetated gardens under the proposals. As such, continued opportunities for other amphibians will be available in the long-term.

- 6.7.5 On this basis, taking into account the size of the site, no significant adverse impacts on the local conservation status of amphibian species are anticipated as a result of the proposals. Use of the site by common amphibian species, including Priority Species, cannot be ruled out. A number of recommendations are therefore set out at Section 7 below to ensure this species group is fully safeguarded throughout construction.

6.8 Reptiles

- 6.8.1 **Legislative Protection.** Regulation 41 of the Conservation of Habitats and Species Regulations 2017 (as amended) (Smooth Snake and Sand Lizard), Wildlife and Countryside Act 1981 (as amended) (Smooth Snake and Sand Lizard; and partial protection: Adder, Common Lizard, Grass Snake and Slow-worm) and Natural Environment and Rural Communities Act 2006.

- 6.8.2 **Desktop Study Review.** A number of records of Common Lizard, Slow-worm, Adder and Grass Snake have been returned from within the search area. Of these, the closest record is for Slow-worm located 0.5km north east of the site in 2022.

- 6.8.3 **Survey Results, Assessment & Evaluation.** All the habitats within the site provide opportunities for reptiles, albeit the site is generally isolate from suitable habitat to the north, east and west, with habitat connectivity only afforded by land to the south.

- 6.8.4 The vast majority of hedgerows and tree lines will be retained under the proposals (save for losses to accommodate access), whilst a proportion of scrub and grassland will be retained and enhanced within proposed public open space. As such, continued similar opportunities for reptiles will be available in the long-term.

- 6.8.5 On this basis, taking into account the size of the site, no significant adverse impacts on the local conservation status of reptiles are anticipated as a result of the proposals. Use of the site by reptile species cannot be ruled out. A number of recommendations are therefore set out at Section 7 below to ensure this species group is fully safeguarded throughout construction.

6.9 Invertebrates

- 6.9.1 **Legislative Protection.** Regulation 41 of the Conservation of Habitats and Species Regulations 2017 (as amended) (Large Blue, Fisher's Estuarine Moth and Lesser Whirlpool Ram's-horn Snail), Wildlife and Countryside Act 1981 (as amended) (White-clawed Crayfish) and Natural Environment and Rural Communities Act 2006 (various).

- 6.9.2 **Desktop Study Review.** A number of records of notable invertebrates have been returned from within the search area, including Schedule 5 butterfly species Wood White, Black Hairstreak, Purple Emperor, Pearl-bordered Fritillary, Small Blue, Marsh Fritillary, Duke of Burgundy, Chalk

Hill Blue and White-letter Hairstreak. Of these, the closest record returned is for Wood White located c.1.6km south east of the site in 1991.

6.9.3 A number of records of Priority Species of butterfly and moth have also been returned from within the search area.

6.9.4 **Survey Results, Assessment & Evaluation.** The habitats within the site, particularly the native hedgerow, line of trees and trees (particularly T20) likely afford opportunities for common invertebrates, whilst similar opportunities are likely afforded by land within the local area.

6.9.5 The vast majority of habitats of value will be retained under the proposals. As such, continued opportunities for common invertebrates will be available at the site in the long-term.

6.9.6 On this basis, no significant impacts on the conservation status of the local invertebrate population are anticipated.

7. Mitigation, Compensation and Enhancement Recommendations

7.1 Mitigation and Compensation

7.1.1 In accordance with the information set out above, an overview of required mitigation measures is provided in Table 7.1 below.

Table 7.1: Ecological mitigation measures		
Ref	Receptor	Recommendations
EM1	Thames Basin Heaths SPA	- Based on the proposals and information provided by Wokingham Borough Council in relation to purchasing capacity at Rooks Nest Wood SANG (Wokingham Borough Council 2024), the following financial contributions would be anticipated: - SANG - £36,960.94 - SAMM - £13,630.002 - Financial contributions may increase in the event the tariffs increase. - It is anticipated that financial contributions would be secured via a legal agreement (e.g., S106 Agreement).
Construction Phase		
EM2	Tree T20	- Dust sources will be dampened down loose materials will be covered to reduce dust deposition. - Chemicals and hazardous materials will be stored in line with best practice guidelines. - Fires will only be lit in secure compounds and not allowed to remain during the night. - Unsecured food and litter will not be left within the working area overnight. - Fires will only be lit in secure compounds and not allowed to remain during the night. - Any lighting required will be turned off when not in use/outside of working hours. - Measures set out under EM3 below will also safeguard tree T20.
EM3	Trees / Hedgerows	- All trees and hedgerows shall be protected during construction in line with standard arboriculturalist best practice (BS5837:2012). This will include installation of protective fencing or other methods appropriate to safeguard the root protection areas of the onsite/adjacent trees. - Refer to the Arboricultural Impact Assessment (Aspect Arboriculture 2025) for further details.
EM4	Badger	Roughened planks of wood (or similar) will be placed in any trench/excavations which are left overnight in order to ensure Badgers (and any other animals) do not become trapped. This is particularly pertinent

Table 7.1: Ecological mitigation measures

Ref	Receptor	Recommendations
		during winter/periods of wet weather which could cause trenches/excavations to fill with water. - Storage of topsoil or similar materials will be given careful consideration and minimised wherever possible. - Trenches/excavations and mounds will be inspected every morning to ensure Badgers (or other animals) have not become trapped and/or have not taken the opportunity to build a new sett. - Any temporarily exposed open pipes with a diameter of >150mm will be securely blocked outside of working areas to prevent access by Badgers or other animals. - Consideration should also be given to preventing access by Badger to any trenches/excavations and mounds through the use of heras fencing. - Should a trapped Badger or suspected new setts be encountered during the construction period, a suitably qualified ecologist (e.g., Essential Ecology) will be contacted immediately for further advice. - Should more than 1 year elapse between commencement on site and the time of the initial survey work (March 2024), it is recommended that a pre-commencement check survey is undertaken in order to confirm the current status of Badgers at the site.
EM5	Great Crested Newts	- Development and habitat clearance works at the site will proceed under a non-licensed method statement. - Retained habitats will be fenced off using heras fencing, where feasible. Fenced off areas will not be used for storage of equipment or materials or for any other purposes which may result in the degradation of the habitat. - All site operatives, including contractor and sub-contractor staff, will receive a briefing by a Suitably Qualified Ecologist (SQE)/experienced Ecological Clerk of Works (ECoW). This will include details of the legal protection of Great Crested Newts, the precautionary methods of working, tips on identification of Great Crested Newts and relevant procedures should the species be discovered during construction works. The contents of this document will be made available to contractors / staff carrying out these works. - All ground works will be undertaken in weather suitable for Great Crested Newts to be active and between the period March to September / October (outside of the hibernation period). - Where necessary, vegetation that needs to be removed will first be cut to a height of 150mm. All arisings will be removed from the working area and then left for a minimum of 24 hours prior to the commencement of further works. This will allow for Great Crested Newts (and other animals) to disperse to adjacent suitable habitat, in the highly unlikely event individuals are present. This will be undertaken under the supervision of an SQE/experienced ECoW.

Table 7.1: Ecological mitigation measures

Ref	Receptor	Recommendations
		- All access routes will be identified, kept to a minimum in length and clearly defined. If necessary, access tracks will be trimmed of suitable vegetation in line with the measures set out above. - Loose excavated soil left above ground overnight will either be covered with a membrane or once excavated, the surface of the soil will be compacted slightly with the digger bucket to minimise the risk of animals entering the stored soil. - Vehicles will not travel outside the pre-determined access routes or work outside the pre-determined working areas which have been cleared of vegetation. Further to this, wherever possible vehicles and site equipment will not be positioned under the canopy of trees or hedges where the weight will compress soils, potentially damaging tree roots and indeed, any sheltering amphibians that may be present. - Machinery will not be left on habitat suitable for Great Crested Newts when not being used. - In the highly unlikely event that Great Crested Newts are recorded during the course of the vegetation clearance works (or any other construction activities), work will cease and the SQE/experienced ECoW contacted immediately, with consideration given to the need for licensing.
EM6	Small Mammals/ Herpetofauna	- Measures set out in respect of Great Crested Newts (EM5) will also safeguard small mammals and herpetofauna - In the event animals are encountered (e.g., Hedgehog, frog etc), these will be carefully moved to an area of suitable retained habitat within the site or immediate vicinity. - In the event that an injured animal is encountered, it will be taken to a vet or animal hospital for treatment.
EM7	Nesting Birds	- Where feasible, habitat clearance will be avoided between the 1st March to 31st August. - If this is not practicable, the building/vegetation to be removed will be checked by a SQE no more than 24hrs prior to commencement of works to identify the presence of any nests/nesting activity. - A watching brief for nesting birds will be maintained by contractors throughout construction. - Any active nests identified will be cordoned off within an appropriate buffer (minimum 5m) and protected until the end of the nesting season or until the nesting attempt is complete.
Completed Development		
EM8	Foraging/ Commuting Bats	- External lighting should be so far as possible minimised. - A sensitive lighting scheme should be designed in line with recommendations set out within the Institute of Lighting Professionals (ILP) Guidance Note GN08/23 '<i>Bats and Artificial Lighting at Night</i>' (ILP 2023).

7.2 Enhancements

7.2.1 In accordance with the information set out above, an overview of recommended enhancement measures is provided in Table 7.2 below.

Table 7.2: Ecological enhancement measures		
Ref	Enhancement Measure	Recommendations
EE1	Trees/Scrub/ Hedgerow Planting	- It is recommended that new planting within the site comprises native species of local provenance. - Tree planting could include native species such as Field Maple, Downy Birch, Crab Apple, Bird Cherry, Oak, Rowan and Whitebeam. - Scrub and hedgerow planting could include Field Maple, Hazel, Hawthorn, Wild Privet, Crab Apple, Blackthorn, Dog-rose, Holly, Spindle, Elder, Guelder Rose, Butcher's Broom and Wayfaring Tree.
EE2	Grassland Enhancement	- It is recommended that areas of grassland retained within areas of open greenspace are enhanced. - It is recommended that areas of wildflower grassland are seeded with an appropriate wildflower mix, such as Emorsgate EM2 General Purpose Wildflower Meadow Mix, with added Yellow Rattle. - It is recommended that areas of wildflower grassland are subject to ecologically sensitive management in the long-term to monitor establishment and control undesirable species.
EE3	Bat Boxes	- It is recommended that a minimum of six bat boxes (e.g., Habitat or Schwegler tubes) be provided within the fabric of the proposed buildings. Units should be provided at the eaves on the southern, eastern and western elevation. - It is also recommended that a minimum of two woodcrete/woodstone bat boxes (e.g., Vivara Pro Large Multi Chamber Woodstone Bat Box) be provided on retained trees. Boxes should be positioned on the southern, eastern and western face at a minimum height of 4-5m.
EE4	Hedgehog Fence Cut-outs	- It is recommended that cut-outs are provided at the base of any proposed close-board fence panels at the curtilages/site boundary in order to allow Hedgehogs to disperse through the residential development. - Hedgehog cut-outs should measure c. 13cm x 13cm.
EE5	Bird Boxes	- It is recommended that a minimum of six bird boxes are incorporated into the fabric of the proposed buildings on the northern and eastern elevations. Swift boxes (e.g., Habitat Swift box or Ibstock Swift Eco Habitat) are recommended as these boxes target a variety of urban species. Boxes should be positioned at intervals of 50-100cm at a minimum height of 5m. - It is also recommended that a minimum of two woodcrete/woodstone bird boxes (e.g., Vivara Pro Large Multi Chamber Woodstone Bat Box) are

Table 7.2: Ecological enhancement measures

Ref	Enhancement Measure	Recommendations
		provided on retained trees. Bird boxes should be provided at a minimum height of 5m on the northern or eastern aspect.
EE6	Bee Bricks	• It is recommended that a minimum of ten bee bricks are incorporated into the fabric of the proposed buildings. These should be positioned on the southern elevation of buildings at a minimum height of 1m. • Bee bricks should not be obstructed by vegetation.

8. Conclusions

- 8.1.1 Essential Ecology has undertaken an Ecological Appraisal of the site based on the results of a desktop study, extended UK Habitat Survey, habitat suitability assessments for protected species, particularly including Badger, bats, nesting birds and Great Crested Newts. An assessment of impacts has been provided based on the proposals for the site.
- 8.1.2 Subject to the implementation of recommended mitigation measures, proposals will ensure the ecological value of the site and protected species are safeguarded. A number of enhancement measures could also be implemented to provide an ecological betterment over the existing situation in line with local and national planning policy.
- 8.1.3 On this basis, the proposed development is not considered likely to result in significant adverse impacts to biodiversity at the site or in the local vicinity either alone or in combination with other projects. Indeed, the opportunity exists to provide ecological enhancements as part of the proposed development.

9. References

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Drawings



Key:

- Site boundary
- Other neutral grassland (g3c)
- Bramble scrub (h3d)
- Mixed scrub (h3h)
- Non-native and ornamental hedgerow (h2b)
- Species-rich native hedgerow (h2a5)
- Ecologically valuable line of trees (w3h, 34)
- Individual tree (200)

Please note: Scrub S1-S3 has been recently cleared at the time of survey, albeit was beginning to regenerate at the time of survey

Project:
Land off Edneys Hill, Barkham

Drawing Title:
Habitats & Ecological Features

Drawing No: **ESEC/24084/01-01** Rev: **-**

Date:
April 2025



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Appendices



Indicative Native Tree Species	
Acer campestre	Field Maple
Betula pubescens	Downy Birch
Carpinus betulus	Common Hornbeam
Crataegus monogyna	Common Hawthorn
Malus sylvestris	Crab Apple
Prunus padus	Bird Cherry
Quercus robur	Common Oak
Sorbus aria	Common Whitebeam
Sorbus aucuparia	Rowan
Indicative Mixed Native Hedgerow Mix	
10% Acer campestre	Field Maple
10% Corylus avellana	Common Hazel
40% Crataegus monogyna	Common Hawthorn
5% Ligustrum vulgare	Wild Privet
10% Malus sylvestris	Crab Apple
15% Prunus spinosa	Blackthorn
5% Rosa canina	Dog Rose
5% Viburnum lantana	Wayfaring Tree
Indicative Mixed Native Shrub Mix	
Cornus sanguinea	Common Dogwood
Corylus avellana	Common Hazel
Crataegus monogyna	Common Hawthorn
Euonymus europaeus	Spindle
Ilex aquifolium	Common Holly
Rosa canina	Dog Rose
Ruscus aculeatus	Butcher's Broom
Sambucus nigra	Elder
Sorbus torminalis	Wild Service Tree
Viburnum opulus	Guelder Rose
Indicative Ornamental Shrubs & Grasses	
Brachyglottis 'Sunshine'	
Ceanothus thyrsiflorus repens	
Choisya 'Aztec Pearl'	
Cornus sanguinea 'Midwinter Fire'	
Cotinus coggyria 'Royal Purple'	
Euonymus fortunei 'Emerald n' Gold'	
Genista lydia	
Hebe albicans	
Hebe 'Midsummer Beauty'	
Lavandula angustifolia 'Hidcote'	
Potentilla fruticosa 'Tangerine'	
Sarcococca confusa	
Sedum spectabile 'Brilliant'	
Skimmia japonica 'Rubella'	
Spiraea japonica 'Firelight'	
Viburnum davidii	
Indicative Grass & Wildflower Mixtures @4g/msq.	
Emorsgate EL1 Flowering Lawn Mix.	
Emorsgate EM2 General Purpose Wildflower Meadow Mix (supplemented with Yellow Rattle to control the grasses).	
Emorsgate EM8 Meadow Mixture for Wetlands.	

Legend:

- Application Site Boundary
- Existing Trees & Vegetation Structure Retained | Refer Arboricultural Information
- Proposed Houses, Apartments & Carports
- Proposed Standard Specimen & Native Tree Planting | Min 14-16cmg | Rb
- Proposed Large Canopied Semi-mature Native Tree Planting | Min 18-20cmg | Rb
- Proposed Species Rich Mixed Native Hedgerow | @4/1in m
- Proposed Species Rich Mixed Native Hedgerow with Trees & Dry Ditch
- Proposed Mixed Native Shrub / Scrub Planting @ 2-3/m | Br | Transplants
- Proposed Ornamental Evergreen & Herbaceous Shrub Planting | @ 3/m | in groups of 3+5 plants
- Proposed Flowering Lawn Turf / Grass Mix Emorsgate EL1 or similar
- Proposed Species Rich Wildflower Mix Emorsgate EM2 or similar (supplemented with Yellow Rattle to control grasses)
- Proposed Attenuation Basin with Wetland Grass Mix Emorsgate EM8 or similar
- Existing 1.2m Timber Post & Rail Fence
- Proposed 1.8m Timber Close Board Fence
- Proposed Timber Bike Shed
- Proposed Asphalt Path
- Proposed Permeable Block Paved Road Brindle or similar finish
- Proposed Block Paved Road & Parking Charcoal Grey or similar finish
- Proposed Flag Paving Paths & Patios Charcoal Grey or similar finish | 400x400mm
- Existing Sewer Easement
- Highways Visibility Splay

Drawing Notes:

Drawing prepared for planning purposes and depicts the indicative landscape arrangement and principles of the landscape strategy only.

Native species of local provenance to be used.

Do not scale from drawing, use figured dimensions only.

Drawing to be read in conjunction with all Jenk Landscape Design + Planning Ltd reports and drawings.

Refer to Arboricultural drawings for full details of existing trees and retention / protection methods.



client / project:
Abbeymill Homes
Land Off Edneys Hill, Barkham

drawing title:
Landscape Strategy Plan

project no:	drawing no:	revision:
LA1031	LSP/100	E
date:	scale:	initials:
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Drawing Annotations:

- Majority of the existing mature trees and vegetation structure along Barkham Road & Edneys Hill are retained to maintain the existing character of the streetscenes. Localised vegetation removal required for the new access and associated highways visibility splays - refer Arboricultural Info.
- Proposed dwellings to be set back from Barkham Road & Edneys Hill to reflect the set back and settlement form of the locality whilst maximising tree retentions. Proposed materials and elevational treatment to reflect the local character enabling the development to respond to its context.
- High quality hard landscape materials used for roads, parking, paths and patios utilising recessive finishes. This seeks to reflect the settlement - countryside edge context and responds to the localised townscape character of Barkham.
- An area of open space for landscape and biodiversity enhancements with attenuation basin is included on the southern boundary which reflects localised character and assist in softening the proposed dwellings. This enhances green infrastructure and creates a high quality landscape setting.
- Proposed tree planting internally and along the boundaries will mitigate for the degree of vegetation removal required for the access and creates a high quality green setting to the residential development. Ornamental planting using flowering and berry producing species add to wildlife value.
- Proposed pedestrian access link through to Barkham Road provides direct links between the new development and existing built up area. Existing vegetation structure to be cut back locally and appropriately managed over the long-term to improve its overall condition and maintain longevity with additional spot planting.

Legislation – Statutory Designations
Ramsar Sites: Ramsar Sites are wetlands of international importance designated under the Ramsar Convention on Wetlands for containing representative, rare or unique wetland types or for their importance in conserving biological diversity. Ramsar sites receive statutory protection under the Wildlife & Countryside Act 1981 (as amended). Policy statements relating to Ramsar Sites have been issued which extend to same level of protection at policy level as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).
Special Protection Areas (SPAs): Special Protection Areas (SPAs) are protected areas for birds in the UK and in England are classified under the Conservation of Habitats and Species Regulations 2017 (as amended). The Regulations require the provision of a register of SPAs (along with other European sites) under the Birds Directive (Council Directive 79/409/EEC).
Special Areas of Conservation (SACs): Special Areas of Conservation (SACs) are protected areas in the UK and in England are designated under the Conservation of Habitats and Species Regulations 2017 (as amended). The Regulations require the provision of a register of SACs (along with other European sites). Under these Regulations, the UK Government and devolved administrations are required to establish a network of important conservation sites which will contribute to conserving the habitats and species identified in Annexes I and II of the Habitats Directive (European Council Directive 92/43/EEC).
Sites of Special Scientific Interest (SSSIs): Sites of Special Scientific Interest (SSSIs) are designated under the Wildlife and Countryside Act (1981), as amended. Modified provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000. SSSIs comprise the UK's finest sites and are typically designated on the basis of wildlife or geological interest.
National Nature Reserves (NNRs): National Nature Reserves (NNRs) are declared under the National Parks and Access to the Countryside Act 1949 or the Wildlife and Countryside Act 1981 (as amended). NNRs comprise important habitats, species and geology in the UK and are open to the public.
Local Nature Reserves (LNRs): Local Nature Reserves are designated under the National Parks and Access to the Countryside Act 1949, LNRs and are declared for nature conservation by principal local authorities following consultation with Natural England. LNRs comprise features of local wildlife or geological interest.
Hedgerows: Hedgerows defined as 'Important' under the Hedgerow Regulation 1997 are protected from removal (up-rooting or otherwise destroying). The definition of importance is based on a number of criteria in relation to wildlife, landscape or historical value, with hedgerows within or forming the curtilage of residential dwellings exempt.
Various Habitats: Including Grassland, Arable Field Margins, Woodland, Rivers, Ponds, Open Mosaic Habitat on Previously Developed Land¹. Section 41 of the NERC Act requires the Secretary of State to publish a list of habitats of principal importance (often referred to as Priority Habitats) for the conservation of biodiversity in England. Under Section 40 of the Act, the list should be used by local planning authorities, to have regard to the conservation of biodiversity in England. A total of 56 habitats, all identified on the UK Biodiversity Action Plan (BAP), are included on the S41 list.

Legislation – Species
European Protected Faunal Species: Including, Creeping Marshwort, Early Gentian, Fen Orchid, Floating-leaved Water Plantain, Killarney Fern, Lady's Slipper, Shore Dock, Slender Naiad, Yellow Marsh Saxifrage¹. Regulation 47 of the Conservation of Habitats and Species Regulations 2017 (as amended) provide protection to European Protected Species of plant. Under the regulations, it is an offence to deliberately or recklessly pick, collect, cut, uproot or destroy any listed plant at any stage of the plant's biological cycle.
European Protected Faunal Species: Including, bats, Dormouse, Otter, Great Crested Newt, Natterjack Toad, Pool Frog, Sand Lizard, Smooth Snake, Large Blue Butterfly, Fisher's Estuarine Moth, Lesser Whirlpool Ram's-horn¹. Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended) provide protection to European Protected Species of animals. Under the regulations, it is an offence to: • Deliberately capture, injure or kill any wild animal of a European Protected Species. • Deliberately disturb any wild animals of any such species, including in particular any disturbance likely to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate, or which is likely to affect significantly their local distribution or abundance. • Deliberately take or destroy the eggs of such an animal. • Damage or destroy a breeding site or resting place of such an animal. In accordance with these regulations, European Protected Species (EPS) licences can be granted by Natural England to permit activities that would otherwise be unlawful provided the development is for reasons of overruling public interest, there is no satisfactory alternative and the favourable conservation status of the species will be maintained or enhanced.
Protected Faunal Species: Including, bats, Dormouse, Otter, Water Vole, Pine Marten, Great Crested Newt, Natterjack Toad, Pool Frog, Sand Lizard, Smooth Snake, White-clawed Crayfish, Roman Snail and a number of other invertebrate species¹. These animals receive full protection under the Wildlife and Countryside Act 1981 (as amended), which makes it illegal (subject to certain exceptions) to: • Intentionally kill, injure or take any such animal. • Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection. • Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.
Protected Faunal Species (partial protection only): Including, Adder, Common Lizard, Grass Snake, Slow Worm¹. These animals receive partial protection under the Wildlife and Countryside Act 1981 (as amended), which makes it illegal (subject to certain exceptions) to intentionally kill or injure these animals
Schedule 1 Birds Protection is provided to birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). It is illegal to intentionally or recklessly disturb any bird listed on Schedule 1, or their dependent young while nesting. Protection with respect to nesting birds (set out below) also applies to Schedule 1 birds.

Legislation – Species
Nesting Birds
All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it illegal to: • Intentionally kill, injure or take any wild bird. • Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.
Badgers
Badgers are protected under the Protection of Badgers Act 1992. Under the Act it is an offence to: • Wilfully kill, injure, take, possess or cruelly ill-treat* a Badger, or attempt to do so. • Intentionally or recklessly interfere with an active sett, including damaging or destroying a sett, obstructing access to a sett or disturbing Badgers using a sett. In England, licences can be obtained from Natural England to permit development activities that would otherwise be unlawful under the legislation.
Wild Mammals
The Wild Mammals (Protection) Act 1996 provides legal protection to all wild mammals against intentional harm or suffering.
Various Species:
Including, Hedgehog, Brown Hare, Polecat, Common Toad, all species of UK reptiles and a wide variety of plants, birds and invertebrates¹. Section 41 of the NERC Act requires the Secretary of State to publish a list of species of principal importance (often referred to as Priority Species) for the conservation of biodiversity in England. Under Section 40 of the Act, the list should be used by local planning authorities, to have regard to the conservation of biodiversity in England. A total of 943 species, all identified on the UK Biodiversity Action Plan (BAP), are included on the S41 list.
Schedule 9 Invasive Species:
Including, Japanese Knotweed, Himalayan Balsam, Giant Hogweed, Various Cotoneasters, Rhododendron, American Mink, Muntjac Deer, Grey Squirrel, Italian Crested Newt, Alpine Newt, Signal Crayfish¹. Certain non-native species of plants and animals have been identified as representing a threat to native species. Section 14 of the Wildlife and Countryside Act 1981 (as amended) prohibits the release or allowed spread of any such species listed on Schedule 9 into the wild.

¹ Where species/habitat lists are set out these are provided to give an indication of species included. These do not, and are not intended, to provide complete species/habitat lists.

Planning Policy
National Planning Policy Framework: The National Planning Policy Framework (NPPF) sets out policies to conserve and enhance the natural environment at Chapter 15 with the overarching aim of halting biodiversity loss (set out at paragraph 174). The NPPF is accompanied by Planning Practice Guidance on 'Biodiversity, ecosystems and green infrastructure' and ODPM Circular 06/200512. Paragraph 180 of the NPPF states: a) <i>When determining planning applications, local planning authorities should apply the following principles:</i> b) <i>if significant harm to biodiversity resulting from a development cannot be avoided (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;</i> c) <i>development on land within or outside a Site 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</i> d) <i>clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest</i> e) <i>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</i> f) <i>development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments 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.'</i>
National Planning Practice Guidance (NPPG): The National Planning Practice Guidance (NPPG) accompanies the NPPF, providing guidance on its interpretation. The NPPG includes guidance on how biodiversity should be taken into account when preparing a planning application, provides clarification on the interpretation of the mitigation hierarchy and sets out appropriate enhancement recommendations.
Government Circular 06/05: Government Circular 06/05 'Biodiversity and Geological Conservation – Statutory obligations and their impact within the planning system' provides guidance on the application of legislation relating to planning and nature conservation in England and details on the implications of designations and protected habitats and species.
Wokingham Borough Local Development Framework: Adopted Core Strategy Development Plan Document (January 2010): The Core Strategy includes a number of policies of relevance to ecology and biodiversity. The following policies have been reviewed as part of the Ecological Appraisal: • Policy CP3: General Principles for development • Policy CP7: Biodiversity • Policy CP8: Thames Basin Heaths Special Protection Area
Wokingham Borough Council Supplementary guidance The following has also been reviewed: • Advice for developers: Thames Basin Heaths Special Protection Area



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