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Interim Ecological Impact Assessment

Site Name

Land North of Sun Lane, Riseley

Client

Wellington Estate and 3West
Group

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About the Author

This report has been prepared by Ben Small at The Ecology Co-op, with 3 years' experience. He has a Level 1 great crested newt survey class licence and has assisted on several EPS licences with regards to bats and badgers. As a qualifying member of the Chartered Institute for Ecology and Environmental Management (CIEEM) and as Chartered Ecologist through this body, he is bound by their code of professional conduct.

About the Reviewer

This report has been reviewed by Emma Baker, who is a Senior ecologist with eight year's experience. She holds Level 1 great crested newt and hazel dormouse survey licenses. As a Full member of the Chartered Institute for Ecology and Environmental Management (CIEEM), she is bound by their code of professional conduct.



Report Summary

Purpose	The Ecology Co-op has been commissioned by the Wellington Estate and 3West Group to undertake an Interim Ecological Impact Assessment for a development on land at land north of Sun Lane, Riseley. Following a Preliminary Ecological Appraisal (including UKHab mapping) of the site by The Ecology Co-op in June 2025, further ecological surveys were undertaken, including protected species surveys and desk-top studies between June and October 2025 (with further surveys being completed in April-July 2026) in order to provide sufficient baseline information for this assessment. This document presents the interim findings of these surveys, and a partial Ecological Impact Assessment in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines to inform an outline application with all matters reserved except for access for the construction of up to 44 dwellings.
Context	The site predominantly comprises two neutral grassland fields, bordered by scrub along the eastern boundary as well as a small additional strip of neutral grassland in the south-east corner that leads to an access gate. Hedgerows are present along the north, west and south of the site, with a line of trees running north-east to the south-west through the centre of the site, delineating the two fields. The site sits within 2km of three designated sites, as well as within the 5km buffer zone of Thames Basin Heath Special Protection Area (SPA).
Impact on Protected Species	The protected species surveys completed in 2025 identified presence of a range of bat species, including barbastelle and serotine, as well as presence of dormice. The illustrative proposed development (which will be detailed through a future reserved matters application) will result in the loss of habitat for dormice and foraging habitat for badgers, bats and reptiles.
Impact on Habitats	The current illustrative proposal is expected to result in the loss of almost all grassland habitat, some scrub and hedgerow habitat, and a section of the central line of trees. Predicted impacts are detailed within the report and relate mostly to adjacent designated sites with limited designated or protected species noted on or directly adjacent to the site.



CONTENTS PAGE

1 INTRODUCTION	1
1.1 Background	1
1.2 Purpose of this Report	2
1.3 Policy and Legislation	3
2 SURVEY METHODOLOGY.....	4
2.1 Desk Studies	4
2.2 Habitat Survey	4
2.3 Badgers.....	5
2.4 Bats	5
2.5 Breeding Birds	8
2.6 Common Dormouse	8
2.7 Great Crested Newts	9
2.8 Reptiles	10
2.9 Invasive Non-native Species.....	11
2.10 Other Notable Species.....	11
2.11 Impact Assessment Methodology and Mitigation.....	12
2.12 Constraints/Limitations to Surveys.....	13
3 ECOLOGICAL BASELINE.....	13
3.1 Designated Sites.....	13
3.2 Habitats.....	17
3.3 Badgers.....	21
3.4 Bats	22
3.5 Breeding Birds	26
3.6 Dormice.....	27
3.7 Great Crested Newts	28
3.8 Reptiles	28
3.9 Invasive Non-native Species.....	29
3.10 Other Notable Species.....	30
4 IMPACT ASSESSMENT	30
4.1 Designated Sites.....	31
4.2 Priority Habitats.....	31
4.3 Bats	31
4.4 Common Dormice	32
4.5 Cumulative Effects	33
5 MITIGATION PROPOSALS	33
5.1 Designated Sites.....	33
5.2 Priority Habitats.....	34



5.3	Bats	34
5.4	Common Dormouse	35
6	CONCLUSIONS	37
	APPENDIX 1 – LEGISLATION AND POLICY	39
	APPENDIX 2 – WOKINGHAM BOROUGH COUNCIL AND HART DISTRICT COUNCIL LOCAL PLANNING POLICIES	43
	APPENDIX 3 - IMPORTANCE OF ECOLOGICAL FEATURES.....	45
	APPENDIX 4 - EXAMPLE PLANTING SCHEMES.....	46
	APPENDIX 5 - ARTIFICIAL LIGHTING AND WILDLIFE	47



1 INTRODUCTION

1.1 Background

The Ecology Co-op was commissioned by the Wellington Estate and 3West Group to undertake an Interim Ecological Impact Assessment (EclA) of land north of Sun Lane, Riseley. This report presents the interim findings of baseline ecological surveys and desk-study research and assesses the likely impacts and significance of effects of the proposed works in relation to protected/notable species, habitats and designated sites.

The site is located at Sun Lane, Riseley, Berkshire RG7 1QR and predominantly comprises two neutral grassland fields, bordered by scrub along the eastern boundary as well as a small additional strip of neutral grassland in the south-east corner that leads to an access gate. Hedgerows are present along the north, west and south of the site, with a line of trees running north-east to the south-west through the centre of the site, delineating the two fields. The site is bordered by residential housing to the north-east, south-east and south-west, and woodland to the north-west. Additional housing, woodland and arable farmland is present in the wider landscape. Figure 1 shows the boundary of the site.

This report will be used in relation to an outline application with all matters reserved except for access for the construction of up to 44 dwellings, including affordable housing together with access, landscaping and associated infrastructure (Figure 2).



Figure 1. An aerial image showing the location of the site, with the approximate site boundary outlined in red. Image produced courtesy of Google maps (map data ©2025 Google).



Figure 2. Proposed scheme layout for the development at land north of Sun Lane, provided courtesy of Ashby Design (January 2026, drawing no. 713/25/OUT/PL1006).

The Ecology Co-op undertook a Preliminary Ecological Appraisal (PEA)¹ of the site in June 2025. Based on the findings of this assessment, further surveys for bats, breeding birds, common dormice *Muscardinus avellanarius* and reptiles were recommended.

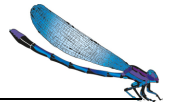
1.2 Purpose of this Report

Following the recommendations of the PEA, The Ecology Co-op undertook further protected species surveys for breeding birds, dormice, common reptiles, and activity surveys for bats.

The purpose of this report is to:

- present the interim findings of surveys and desk-study research (baseline ecological information);
- identify and evaluate ecologically important features present on the site and within the zone of influence of the proposed development;
- describe the potential impacts of the proposed development and determine the significance of effects on these ecologically important features;

¹ The Ecology Co-op (2026). *Land North of Sun Lane Preliminary Ecological Appraisal Issue Rev01*.



- set out the proposed impact avoidance, mitigation, compensation measures that will be undertaken to reduce significant adverse effects to an acceptable level;
- outline the habitat creation and enhancement measures that will be put into place as part of the proposed development. These are designed to ensure that the proposals contribute to both local and national biodiversity objectives.

This report is intended for submission as part of an outline planning application for the illustrative proposed development (which will be detailed through a future reserved matters application).

The surveys and report were carried out and produced at the request of the Wellington Estate and 3West Group and supervised by Ben Small MSc, who holds a Level 1 Great Crested Newt licence.

1.3 Policy and Legislation

Legal protection applying to relevant bird, mammal, herpetofauna and invertebrate species and current nature conservation planning policy is outlined in Appendix 1 of this report.

Where possible, this report provides information on how the development proposal will be designed to meet the requirements of both the National Planning Policy Framework (NPPF) and local planning policy. Details of the NPPF is provided in Appendix 1 and relevant local planning policy by Wokingham Borough Council and Hart District Council is provided in Appendix 2.



2 SURVEY METHODOLOGY

The following sections describe the methods used in the desk study and protected species/habitat surveys. All survey methods are in accordance with current best practice guidance for the respective species/taxonomic group and any limitations encountered during the survey are explained in section 2.12.

This document is written in accordance with the CIEEM Guidelines for Ecological Impact Assessment² and CIEEM Guidelines for Ecological Report Writing³. Details of the ecological assessment methods are provided within section 2.9 below.

2.1 Desk Studies

A search for pre-existing records of protected species, priority species for conservation and invasive non-native species was requested from the Hampshire Biodiversity Information Centre (HBIC; radius of 1km of the site) and Thames Valley Environmental Records Centre (TVERC; radius of 2km of the site).

A search of on-line mapping resources was undertaken to identify the location of any features of potential ecological interest including ponds within 500m (relevant to great crested newts *Triturus cristatus*), watercourses (relevant to riparian mammals and crayfish for example) and connectivity to woodland, scrub, and hedgerow networks (relevant to bats and dormice *Muscardinus avellanarius* for example) in the wider landscape around the site. The connectivity of the site to these features, buildings and other semi-natural habitats are also relevant to species such as bats, great crested newts and reptiles.

The MAGIC website resource (www.magic.gov.uk) was used to identify the location of designated sites for nature conservation and European Protected Species (EPS) licences granted in relation to the survey site.

2.2 Habitat Survey

A site walkover survey was undertaken on 16th June 2025, during which the habitats contained within the site were described and evaluated in accordance with standard UK Habitat Classification (UKHab)⁴. The dominant species and indicators of important habitat types such as ancient woodland or unimproved grassland, were recorded.

UKHab survey presents a standardised system for classifying and mapping wildlife habitats in all parts of Great Britain, including urban areas. The aim of the survey is to provide, relatively rapidly, a record of the vegetation and wildlife habitats present. The habitat classification is based principally on vegetation, augmented by reference to topographic and substrate features, particularly where vegetation is not the dominant component of the habitat.

² CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.

³ CIEEM (2017) *Guidelines for Ecological Report Writing, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

⁴ The UK Habitat Classification Working Group (2018) *The UK Habitat Classification User Manual* at <http://ecountability.co.uk/ukhabworkinggroup-ukhab>



Data was gathered through a site walkover survey and use of on-line aerial photography to broadly categorise the habitats present using the UKHab classifications⁵. The results are presented as a map showing the distribution of habitat categories across the site. Target notes are used to describe specific features of biodiversity interest and record indicator species where appropriate. In addition to this, notable habitats, such as habitats listed under the NERC Act, 2006, are highlighted.

The UKHab methodology is a recognised tool for initial scoping of potential ecological constraints and opportunities, and for identifying potential effects of the proposed development as part of the planning application process.

As part of the Preliminary Ecological Appraisal, the site features were evaluated for their potential to support legally protected species and observations of any important plant communities, bird assemblages or other potentially valuable ecological features were recorded. Details of the preliminary survey methods for each legally protected species are given below and any specific limitations to the survey(s), such as access constraints, are set out in section 2.9.

2.3 Badgers

Badgers *Meles meles* tend to live in family groups with clearly defined territories with the main sett, used throughout the year, as a focal point. The territory often also contains a number of 'annex', 'subsidiary' and outlier setts that are used intermittently. Badgers can exist in a variety of habitats, but a mixed farmland landscape containing pasture and arable land, studded with woodland, scrub and hedgerows support the highest population density.

No signs of badgers were identified during the initial PEA, and as such no specific surveys were completed for this species, however any signs of badgers on site encountered while completing other fieldwork was recorded.

2.4 Bats

There are 18 species of bat resident in the UK, each with their own specific habitat requirements. Bats can use a wide range of features for roosting purposes including loft spaces, cavity walls, loose tiles, mortice joints and cracks/gaps in a variety of built structures. They can also be found in trees with holes, splits, cracks, cavities, ivy and loose bark. Bats are generally active at night and utilise a wide range of habitats for foraging and commuting between roost sites, hibernation sites and foraging habitats. Linear features such as hedgerows, woodland edges, even fences can be important for navigation between roosting and foraging habitats.

There are no built features on site and as such no surveys were conducted with regards to these.

2.4.1 Natural Roost Features – Trees

All trees likely to be affected directly or indirectly by the proposed development were subject to a ground-based visual inspection to identify potential roost features followed by climbing inspections where necessary and safe,

⁵ UK Habitat Classification Working Group (2018). *UK Habitat Classification – Habitat Definitions V1.0* at <http://ecountability.co.uk/ukhabworkinggroup-ukhab>



to look for evidence of roosting bats and to further assess the suitability of the feature. The potential for roosting bats for each feature, or group of features was assessed as none, FAR (further assessment required) or PRF (Potential Roost Feature(s)) in accordance with best practice guidelines⁶.

2.4.2 Bat Activity Surveys – Walked Transects

Two bat activity surveys covering the summer and autumn periods followed best practice guidelines⁶ (a third survey will be conducted in spring 2026). Pre-determined transect routes were followed by surveyors (Figure 3), focusing on all linear features within the site boundary (boundary hedgerows and a line of trees running through the centre of the site). The transect routes were walked at a slow pace during the period from sunset to two hours after sunset by a team of surveyors, such that each part of the route was passed approximately every twenty minutes. All surveys were undertaken during weather conditions suitable for bat activity and at ambient temperatures above 10°C. The surveyors recorded bat activity using 'Echo Meter Touch' bat detectors featuring auto-identification of bat species and automatically triggered recording for later review. The locations of all bat 'registrations' was recorded onto a field map during the survey to correspond with all sound recordings.

2.4.3 Bat Activity Surveys – Automated Static Bat Detecting

Two SongMeter static bat detectors were deployed across the site (Figure 3) on four separate occasions, from July-October 2025 (with three further deployments scheduled in April-June 2026) and left in the field for a minimum of five days – the expected maximum lifetime of the battery. Static bat detectors comprise a passive recording device with real-time full-spectrum calls that can be viewed in detail once downloaded on analysis software, allowing accurate identification of most bat calls to species level (or genus level in the case of *Myotis* and *Plecotus* spp.).

⁶ Collins, J.(ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn). The Bat Conservation Trust, London.



Figure 3. The transect route (marked in blue) of surveyors with stops (white numbers) and the position of the two static bat detectors deployed on the site (red dots). Images produced using QGIS software, version 3.34 – Prizren.

The data was processed using the British Trust for Ornithology's (BTO) Acoustic Pipeline c5.502⁹, an auto-identification system. The Acoustic Pipeline uses classifiers to detect and identify bat calls within files and assign them a probability or confidence percentage of the call belonging to a particular species. The data output from the pipeline was then processed differently depending on the species identified, but groups of species calls underwent some degree of post-classification manual analysis by a suitably experienced bat acoustic analyst using Kaleidoscope Lite software v5.6.3¹⁰. Data management was facilitated using the R Shiny App through R Studio v2023.09.1+494¹¹, including to choose a random sample of some datasets to establish error rates.

Common and Soprano Pipistrelles, Barbastelle and Serotine

All calls with a confidence score of below 50% were discarded from the dataset. 10% of remaining calls from each logger then underwent post-classification validation through manual analysis to establish false positive error rates within the dataset. Each logger was validated as bat calls can vary between habitats, meaning that the location in which the logger is placed can influence the effectiveness of species detection.

Myotis, *Plecotus*, and *Nyctalus* species and *Nathusius*' Pipistrelle

All low confidence calls and 10% of high confidence calls from these species were analysed. This is because these genera overlap and are often very difficult to distinguish. Therefore, it is likely that the Acoustic Pipeline may otherwise underestimate the numbers of calls from these genera as it assigns them a lower confidence score, whilst the confidence in correctly analysing the genera the call belongs to is still high.



Noise

10% of all noise files identified by the BTO Acoustic Pipeline were manually analysed to establish a false negative error rate. Individual error rates were established for each logger location due to possible variation in noise production from logger placement.

If error rates of any species or noise files is above 10%, the entire dataset for that logger deployment is manually analysed by a competent bat acoustic analyst.

The walked transect and static bat detector ('bat logger') survey methods complement each other with the transect surveys providing information on foraging and commuting patterns, and distribution across the site; and automated static detector surveys giving more prolonged coverage through consecutive nights, thus increasing the likelihood of detecting scarce species.

2.5 Breeding Birds

Breeding bird transect surveys have been scheduled for April-June 2026, and further details of these surveys will be provided once they have been completed.

2.6 Common Dormouse

Common dormice are typically associated with broadleaved woodland habitat, hedgerows and scrub. They tend to occur at low density and good habitat connectivity is important. Common dormice need a constant supply of food throughout the active season over a large home range. A diversity of tree and shrub species will provide a range of fruit, nuts and insects. They hibernate during the winter – typically at ground level amongst leaf litter and mosses protected by coppice stools, tree stumps or piles of brash wood.

2.6.1 Nest Tube Survey

Dormouse surveys are undertaken by attaching purpose built 'nest tubes' on trees and shrubs in suitable habitat such as woodland, scrub and hedgerows. Nest tubes are used by dormice as places of shelter and they will often construct their nests within them during their periods of activity (typically between April and November). In accordance with current best practice guidelines⁷, 50 nest tubes were deployed approximately 20m apart in the boundary hedgerows and central line of trees on 18th July 2025 and left *in situ* for the survey season (see Figure 4). These were checked on a monthly basis for presence of animals and evidence of dormouse presence (distinctively woven nests) from August-October. Dormice checks were undertaken in the mornings and commenced one month after the nest-tubes were positioned. Surveys were undertaken by Ben Small MSc and Holly Waters, supervised overall by Holly Waters, an accredited agent under Sam Lunn's dormouse licence.

⁷ Bright, B., Morris, P., Mitchell-Jones, A.J. and Mitchell-Jones, T (1997) *The Dormouse Conservation Handbook*. English Nature.

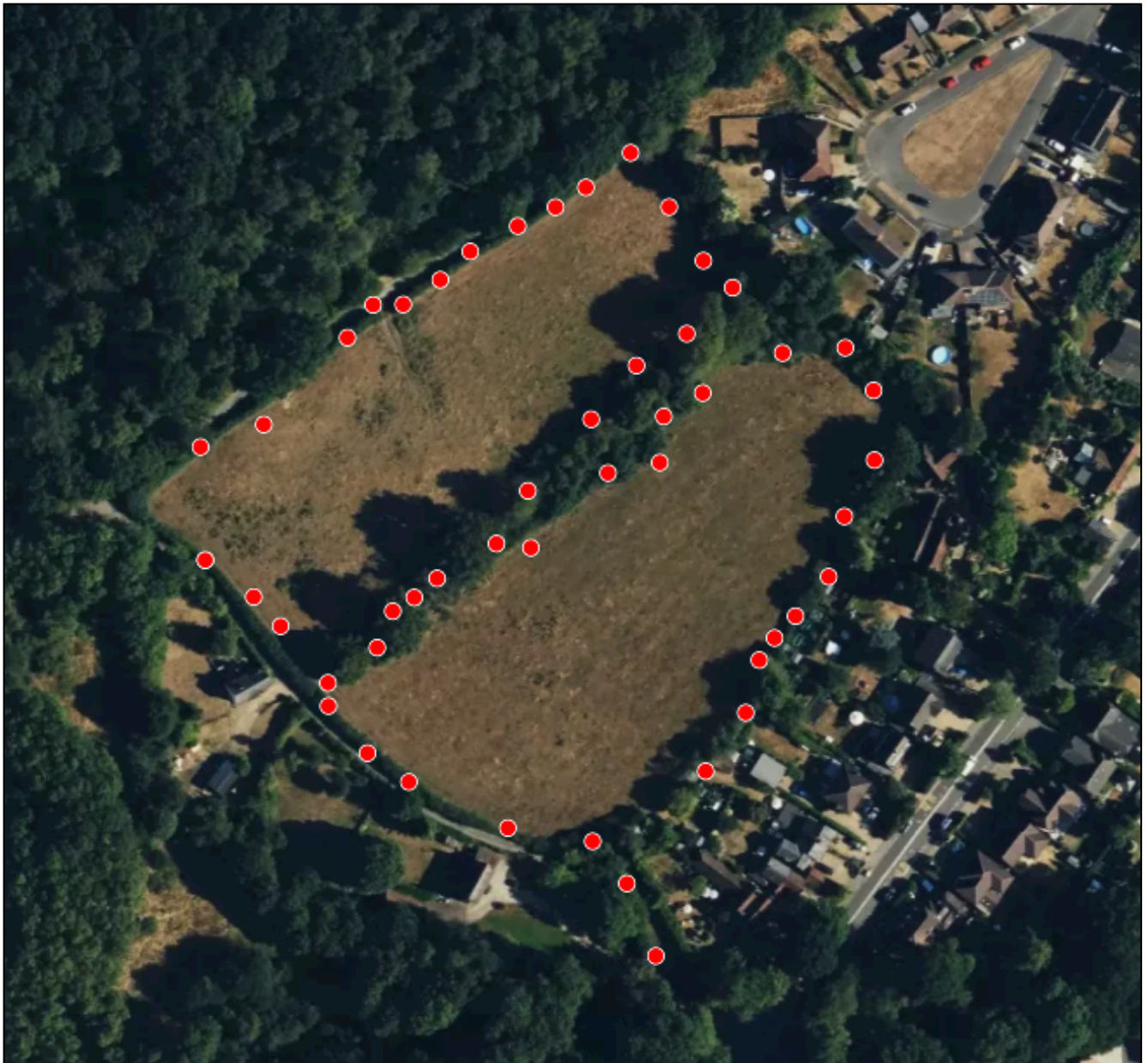


Figure 4. Dormouse nest tube locations (identified as red dots) across all suitable habitat. Images produced courtesy of Coreo.

2.7 Great Crested Newts

Great crested newts require ponds for breeding that meet a series of habitat criteria including good quality water, aquatic plants and an absence of predatory fish. The ponds must have good connectivity to semi-natural terrestrial habitats that provide their invertebrate food sources and suitable safe places to rest and hibernate outside the breeding season. Great crested newts tend to occur more frequently in areas of high pond density across the landscape in 'metapopulations' where habitat occupancy ebbs and flows according to changes in conditions. Six ponds were identified within 500m of the site, however routes from these ponds are obstructed by residential development or major roads and it was assessed that newts would be unlikely to disperse from these ponds to the site despite the suitable habitat. No further surveys were undertaken at the site that specifically target great crested newts, but a record has been made if they are found during any other survey.

Common toad *Bufo bufo* are a priority species in England under Biodiversity 2020: A strategy for England's wildlife and ecosystem services and under section 41 of The Natural Environment and Rural Communities (NERC) Act



2006, where UKBAP species were recognised as of principal importance for the conservation of biodiversity. This species should therefore be considered during planning and development. No surveys have been undertaken at the site that specifically target common toad but a record has been made if they are found during any other site visit/survey.

2.8 Reptiles

The common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis* grass snake *Natrix natrix* and adder *Vipera berus* are widespread species that can be found in many semi-natural habitats, such as rough grassland, scrub, heathland and open woodland where there is good vegetation cover, an abundance of invertebrate, amphibian or small mammal prey and areas of open ground for basking.

Standard reptile presence/likely absence surveys involve setting out artificial refugia (reptile 'mats' or 'tins') in potentially suitable habitat. Reptile mats are pieces of roofing bitumen felt and reptile tins are pieces of corrugated metal sheet approximately 1m x 0.5m in size, which absorb heat from the sun more rapidly than the surrounding vegetation and provide cover and basking places attractive to reptiles. These are then checked for presence of animals under suitable weather conditions. There are no up-to-date best practice guidelines for reptile surveys, but a minimum of seven survey visits under suitable weather conditions is generally considered to be adequate when determining their presence/likely absence, and 15–20 visits are used to calculate a 'peak count' for population size class assessment.

A total of 66 roofing felt mats were used in this survey (see Figure 5). The mats were left *in situ* for a minimum of one week to 'bed in' and allow reptiles to locate them before the first check. The mats were checked at least seven times between August and September 2025 and all observations of reptiles were recorded, together with the weather conditions, temperature and time of day.



Figure 5. Location of reptile refuges (identified with red dots). Images produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0).

2.9 Invasive Non-native Species

No specific surveys for invasive non-native species (INNS) were undertaken. However, the presence of any invasive non-native species encountered during other fieldwork, was recorded.

2.10 Other Notable Species

The site's habitats were broadly assessed for their potential to support species of principal importance for nature conservation (Section 41 NERC Act 2006) and other notable species. This includes mammals such as harvest mouse *Micromys minutus*, hedgehog *Erinaceus europaeus*, brown hare *Lepus europaeus*, and many bird species. The site was broadly assessed for its potential to support important invertebrate assemblages with specific attention paid to features such as standing dead-wood, wet flushes, bare earth banks and botanically rich areas.



2.11 Impact Assessment Methodology and Mitigation

The assessment of ecological impacts and mitigation recommendations in this report follow CIEEM Guidelines for Ecological Impact Assessment (EclA)². This involves evaluating the importance of an 'ecological feature' (habitat, vegetation community, population of a single species or assemblages of species) in terms of nature conservation priority, followed by the application of the 'mitigation hierarchy'.

2.11.1 Importance of Ecological Features

A level of importance was assigned to all existing ecological features through consideration of the rarity and distribution of a habitat or species, the population size, ecological function, and trends (declining/expanding), together with any designations, legal status, or conservation policies. CIEEM recommend that the importance of an ecological feature, in terms of nature conservation priority, should be considered within a defined geographical context (for definitions used by The Ecology Co-op, see Appendix 3):

- international and European
- national
- regional
- county
- local or parish
- site/negligible.

Where protected species are present and there is the potential for a breach of the legislation as a result of the development proposals, those species are considered as 'important' features and included in the EclA. However, the level of importance assigned to the affected population of a protected species will vary depending on contextual information about the population size, distribution, abundance and trends across the range of geographical scales.

Similarly, irreplaceable habitats such as ancient broadleaved woodland are considered as important features and included in the EclA. The level of importance will vary depending on the size of the habitat parcel, its distribution and abundance at different geographical scales.

Features that are considered to be important at site level only or are of negligible importance (such as paved ground or amenity grassland) are excluded from this EclA and it should be reasonable to assume that if a feature is not mentioned, it is not ecologically important.

2.11.2 Significance of Effects

In accordance with EclA (CIEEM 2018)², a significant effect is defined as "an effect that either supports or undermines biodiversity conservation objectives for important ecological features". Conservation objectives may be specific (e.g., for a designated site) or broad (e.g., national/local nature conservation policy). The effects may be described as significant at a range of geographic scales as defined above.

The impacts are identified and described in relation to the following characteristics:

- *adverse or positive* – does the impact result in the loss or gain in biodiversity/quality of the environment?
- *extent, magnitude* – the spatial area over which the impact may occur, the area of habitat lost, or the



- number of individuals/populations affected
- *timing* – in relation to the life cycle of the ecological feature (e.g., nesting bird season)
- *duration, frequency* – is the impact temporary or permanent, frequently repeated or a one-off event?
- *reversibility* – is the impact temporary or permanent? Would the ecological feature recover after the impact?
- *cumulative impacts* – in combination with other plans/projects.

2.11.3 The 'Mitigation Hierarchy'

The assessment of the significance of an effect is made initially in the absence of mitigation. This is followed by a sequential process of determining the most appropriate way to remove or minimise significant effects. The preferred option is to avoid impacts in the first place, for example by redesigning the scheme to retain an important area of habitat, or timing works sensitively. Mitigation measures such as translocation or displacement of populations is only applied as a last resort where significant effects are unavoidable.

When residual significant adverse effects remain after all practicable measures to avoid and/or minimise impacts have been applied, compensation measures are required. Compensation measures include habitat creation in alternative locations that offset unavoidable habitat loss.

Finally, enhancements are proposed that do not relate to a specific impact and effect but provide net gains in biodiversity – taking advantage of opportunities in the design and operation of the proposed development. These measures are intended to ensure that the proposed development contributes towards national and local biodiversity objectives.

2.12 Constraints/Limitations to Surveys

Surveys record any flora or fauna that is present at the time of the survey visits. It is therefore possible that some species may not have been present during the surveys but may be evident at other times of the year and may appear or disappear from the site if habitat conditions change. For this reason, the surveys are considered valid for up to eighteen months for badgers and bats, two years for reptiles and three years for great crested newts and dormice. If the habitat conditions change significantly in the intervening period, then it is recommended that the surveys be updated.

3 ECOLOGICAL BASELINE

3.1 Designated Sites

There are three designated sites within 2km of the site, with the closest of these; Stanford End Mill and River Loddon Site of Special Scientific Interest (SSSI), situated approximately 1.1km to the west (see Figure 6). The site is also situated within the 5km buffer zone of Thames Basin Heath Special Protection Area (SPA), which is approximately 2.3km east of the site.

The HBIC records search identified four Sites of Importance for Nature Conservation (SINCs) sites within 1km of the land north of Sun Lane, Riseley. The closest of these is Coldharbour Wood located approximately 0.2km southwest of the site. TVERC additionally identified four Local Wildlife Sites (LWSs) within proximity to the site,



with the closest of these being St Leger's Copse, Collins Copse located approximately 0.3km north-west of the site. Full details of the statutory and non-statutory designated sites are provided below in Table 1.

Table 1. Designated sites within 5km of the land north of Sun Lane, Riseley.

Site name	Designation	Features listed on citation	Proximity
Statutory designated sites			
Stanford End Mill and River Loddon	SSSI	The site comprises a series of seasonally waterlogged hay meadows as well as a 4km stretch of the River Loddon. The site is of interest particularly for nationally important populations of fritillary <i>Fritillaria meleagris</i> and Loddon pondweed <i>Potamogeton nodosus</i> , the latter of which the site represents a national stronghold. The site additionally supports a variety of coarse fish species, water voles <i>Arvicola amphibius</i> and nesting birds, including kingfisher <i>Alcedo atthis</i> and little grebe <i>Tachybaptus ruficollis</i> .	1.2km west
The Marshes	Local Nature Reserve (LNR)	A former gravel pit that is partly woodland and partly marshland, with two new ponds created and 1,500 native trees and shrubs planted to establish a wildlife haven.	1.5km east
Swallowfield Meadow	LNR	Measuring 0.7ha, the site contains a wide variety of habitats including native hedgerows, ditches, seasonal ponds and a small copse, as well as the meadows themselves. The site also supports the endangered water vole.	1.7km north
Thames Basin Heath	SPA	Large swathes of heathland which support the following Annex II species: Dartford warbler <i>Sylvia undata</i> , Nightjar <i>Caprimulgus europaeus</i> and Woodlark <i>Lullula arborea</i> .	2.3km east
Non-statutory designated sites			
Coldharbour Wood	SINC	Ancient Semi-natural Woodlands, Other Woodland with Significant Element of Surviving Ancient Woodland or Ancient Woodland Characteristics.	0.2km southwest
St Leger's Copse, Collins Copse	LWS	The site comprises ancient woodland, however the majority has been replanted with conifers, beech <i>Fagus sylvatica</i> and red oak <i>Quercus rubra</i> . There are 22 woodland indicator species on site, with most of these concentrated in the southern end of the site where semi-natural woodland remains.	0.3km north-west
New Inn Copse	SINC	Ancient Semi-natural Woodlands	0.4km south
Highgrove Copse	LWS	This wood has been recorded as hazel <i>Corylus avellana</i> coppice with a central area of oak, with an area in the north previously recorded as wet woodland. Hazel dominates the sub-canopy of this woodland, with bluebell <i>Hyacinthoides non-scripta</i> and dog's mercury <i>Mercurialis perennis</i> frequent.	0.8km north
Birchen Copse & Mill Wood	SINC	Ancient Semi-natural Woodlands, Other Woodland with Significant Element of Surviving Ancient Woodland or Ancient Woodland Characteristics.	0.9km southeast
Wellington Country Park Lakes	SINC	Areas of Open Freshwater, Agriculturally Unimproved Grasslands Notable Species: thread-leaved water-crowfoot <i>Ranunculus trichophyllus</i> , blunt-leaved pondweed <i>Potamogeton obtusifolius</i> , lesser pondweed <i>Potamogeton pusillus</i> , six-stamened waterwort <i>Elatine hexandra</i> .	1.1km southeast
The Marshes	LWS	The site supports a small area of wet woodland, wet semi-improved grassland, semi-improved mown grassland and several boundary hedges. Blackcap <i>Sylvia atricapilla</i> , chiffchaff <i>Phylloscopus collybita</i>	1.6km east



		and green woodpecker <i>Picus viridis</i> have all been recorded on site.	
Beaumont's Castle Wood and Moat	LWS	The site is a ring of woodland on a bank around a waterbody, with an island of scrub in the middle. Several ancient woodland indicator and lowland fen species have been recorded on site, including bluebell, wood-sedge <i>Carex sylvatica</i> , wild angelica <i>Angelica sylvestris</i> and water figwort <i>Scrophularia auriculata</i> .	1.8km north-west

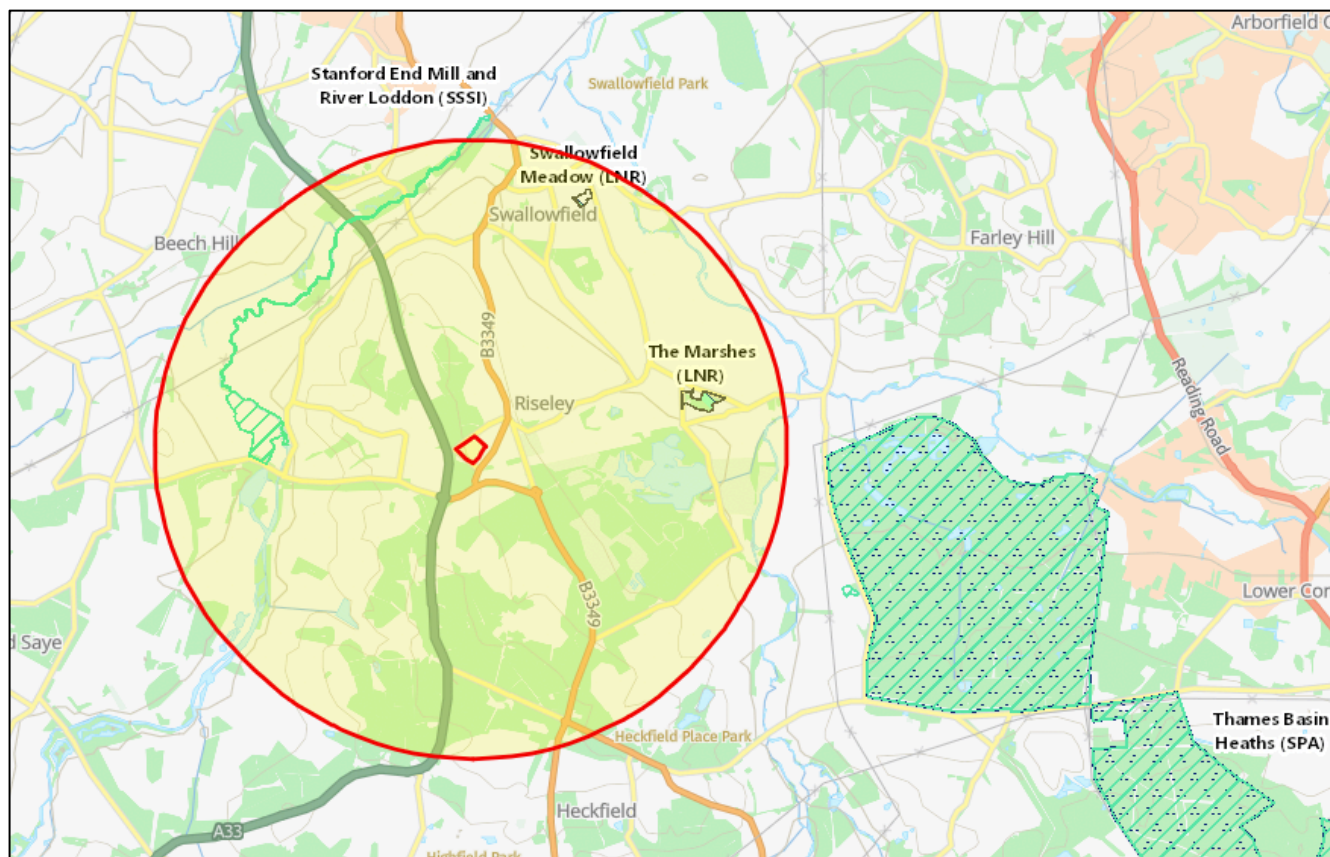


Figure 6. Statutory designated sites within a radius of 2km of the application site, with the proximity of Thames Basin Heath SPA to the site also indicated. Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0).

The site is immediately bordered by a parcel of ancient woodland to the north, and a parcel of priority deciduous woodland to the south-west (see Figure 7). Further parcels of ancient and priority woodland are present in the wider landscape in all directions.

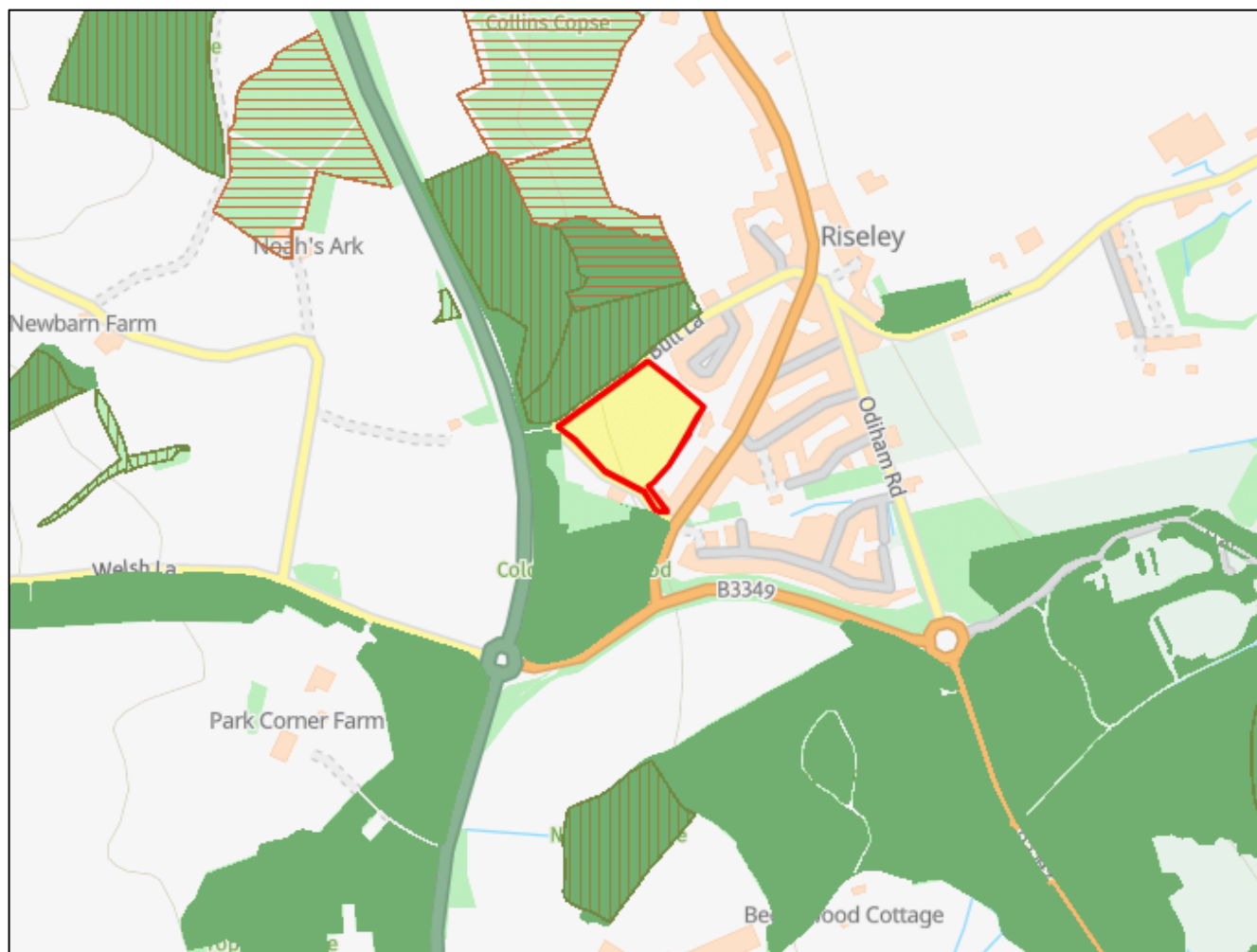


Figure 7. Habitats of importance for nature conservation, including ancient woodland (red and green hatching) and priority habitat deciduous woodland (dark green parcels). Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0).

There are three granted EPS licences for mitigation projects within 1km of the site boundary, all situated approximately 0.2km south-east of the site and all concerning dormice (see Table 2 and Figure 8).

Table 2. EPS Licences granted within 1km of the site.

Licence reference	Species	Dates	Actions permitted	Proximity to site
2018-34337-EPS-MIT	Hazel or common dormouse	14/05/2018- 14/05/2023	Damage of a resting place. Destruction of a resting place.	0.2km south-west
2018-34337-EPS-MIT-1	Hazel or common dormouse	09/10/2018- 31/05/2023	Damage of a resting place. Destruction of a resting place.	0.2km south-west
2018-34337-EPS-MIT-2	Hazel or common dormouse	18/12/2018- 01/05/2023	Damage of a resting place. Destruction of a resting place.	0.2km south-east

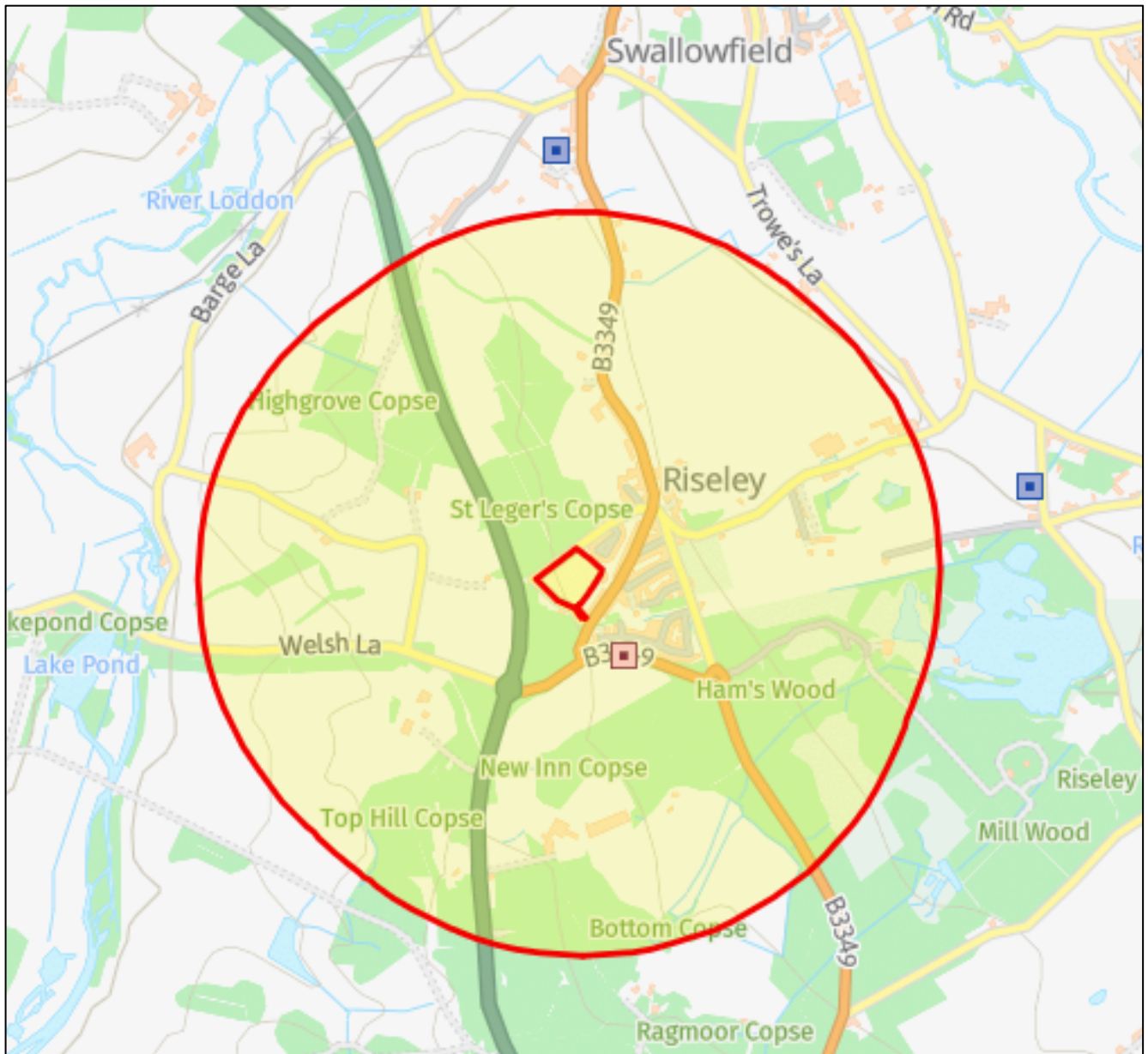


Figure 8. Granted EPS licences within 1km of the application site. Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0).

3.2 Habitats

Table 3 below lists the UKHab habitats found at the site with the general species composition of these habitats. The habitat map for the site and key to the standard mapping symbols used is presented in Figure 9. Photographs of important areas of habitat are presented below.

Table 3. The UKHab habitat contained within the site. Respective areas of the habitats on site will be provided once the Biodiversity Impact Calculation has been completed for the site.

Habitat type	UKHab Code	Species composition	Ecological importance
Other neutral grassland	g3c	The northern field is dominated by Yorkshire fog <i>Holcus lanatus</i> , with sweet vernal-grass <i>Anthoxanthum odoratum</i> and meadow foxtail <i>Alopecurus pratensis</i> frequent. Chamomile <i>Chamaemelum nobile</i> ,	Medium



		curled dock <i>Rumex crispus</i> , timothy <i>Phleum pratense</i> , perennial ryegrass <i>Lolium perenne</i> , cock's-foot <i>Dactylis glomerata</i> , creeping buttercup <i>Ranunculus repens</i> , creeping bent <i>Agrostis stolonifera</i> , creeping thistle <i>Cirsium arvense</i> , lesser stitchwort <i>Stellaria graminea</i> , false oat-grass <i>Arrhenatherum elatius</i> , bird's-foot trefoil <i>Lotus corniculatus</i> , red clover <i>Trifolium pratense</i> , blackthorn <i>Prunus spinosa</i> , fescue <i>Festuca</i> sp., knapweed <i>Centaurea</i> sp. and tansy <i>Tanacetum vulgare</i> were also identified.	
Other neutral grassland	g3c	The southern field is also dominated by Yorkshire fog as well as sweet vernal-grass, with knapweed and creeping bent frequent. Other species identified include meadow buttercup <i>Ranunculus acris</i> , creeping buttercup, red clover, cock's-foot, blackthorn, white clover <i>Trifolium repens</i> , false oat-grass, ragwort <i>Jacobaea</i> sp., creeping thistle, lesser stitchwort, dwarf spurge <i>Euphorbia exigua</i> , bird's-foot trefoil, creeping cinquefoil <i>Potentilla reptans</i> and chamomile. At the southern corner of the southern field, a small strip of recently mown grassland leads to an access gate on the southern boundary. In this section, false oat-grass, common nettle <i>Urtica dioica</i> , bush vetch <i>Vicia sepium</i> , curled dock, fern <i>Dryopsida</i> sp., Yorkshire fog, herb-robert <i>Geranium robertianum</i> , cock's-foot, creeping buttercup, cleavers <i>Galium aparine</i> and creeping bent were all identified.	Medium
Mixed scrub	h3h	A band of scrub extends along the eastern boundary immediately adjacent to the two fields and contains blackthorn, bramble <i>Rubus fruticosus</i> , bindweed <i>Convolvulus</i> sp., common nettle and remote sedge <i>Carex remota</i> .	Medium
Line of Trees	w22	A line of trees extends from the scrub and runs north-east to south-west through the centre of the site, separating the two fields. The canopy layer comprises a mix of ash <i>Fraxinus excelsior</i> , horse chestnut <i>Aesculus hippocastanum</i> , pedunculate oak <i>Quercus robur</i> and field maple <i>Acer campestre</i> . Blackthorn dominates the understorey with hawthorn <i>Crataegus monogyna</i> , bramble and hazel additionally present.	Low
Hedgerow	h2a	A hedgerow runs along the northern and western boundaries of the site; bramble dominates in the northern section with elm <i>Ulmus procera</i> abundant but later dominating in the western section, with hazel frequent throughout. Also present is holly <i>Ilex aquifolium</i> , black bryony <i>Talis communis</i> , dogwood <i>Cornus sanguinea</i> , blackthorn, pedunculate oak, elder <i>Sambucus nigra</i> , wild privet <i>Ligustratum vulgare</i> , fern <i>Dryopsida</i> sp. and box <i>Buxus sempiverens</i> .	Low
Hedgerow	h2a	Two smaller sections of hedgerow are present on the southern boundary, which form part of larger connected hedgerow that runs along the southern boundary immediately off-site. These sections comprise bramble, blackthorn, hazel, dogwood, field maple, dog-rose <i>Rosa canina</i> , common nettle and ground-ivy <i>Glechoma hederacea</i> as well as non-native Persian ivy <i>Hedera colchica</i> .	Low
Individual Tree	h2	A walnut <i>Juglans regia</i> tree is present in the north-eastern corner of this field.	Medium
Individual Tree	h2	A small blackthorn tree is present within the scrub on the eastern boundary of the site.	Medium

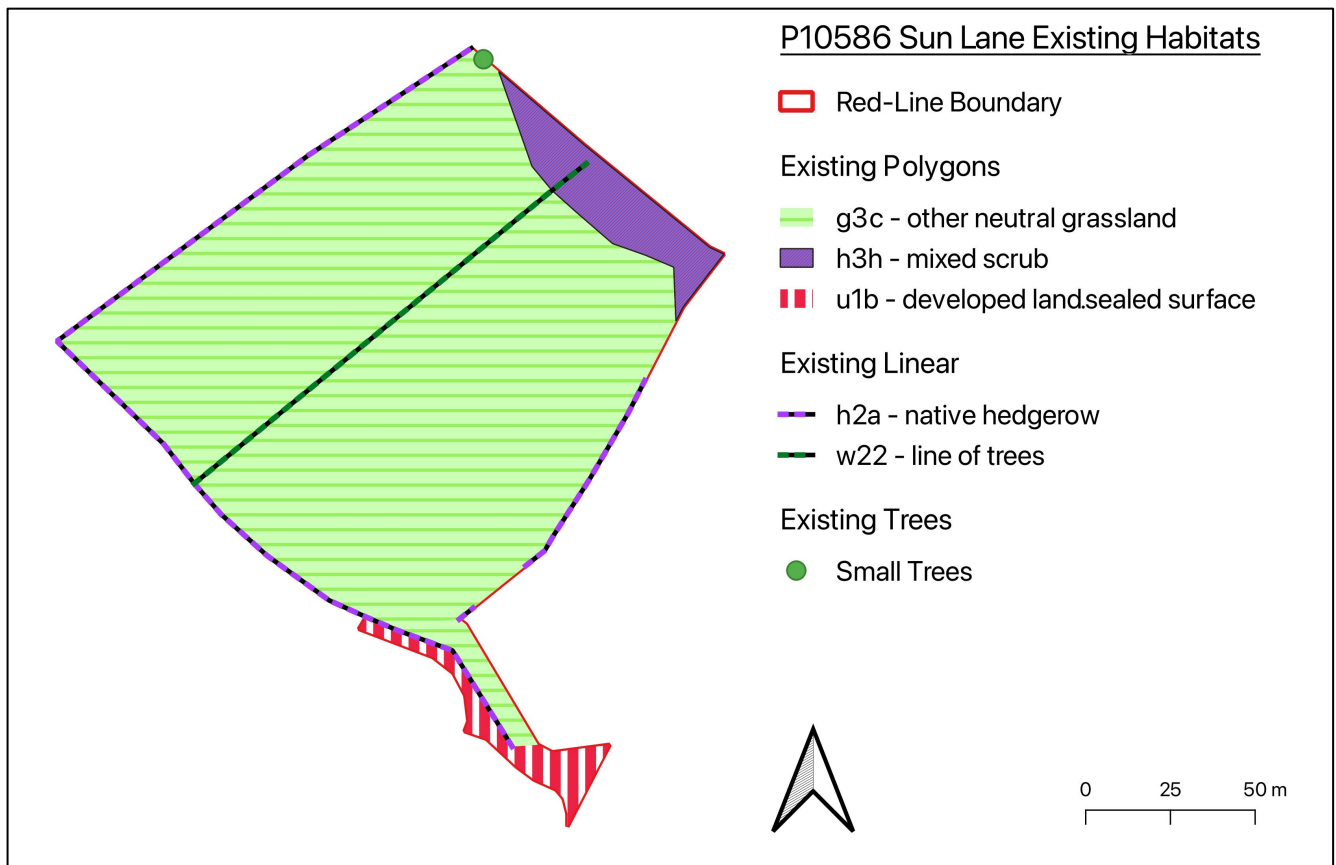


Figure 9. UKHab map of the site with the site boundary is outlined in red. Images prepared using QGIS version 3.16.3 - Hannover.



Photograph 1a & 1b. View of the northern field (left) at the land north of Sun Lane, with a walnut tree in north-eastern corner (right).



Photograph 2a & 2b. Views of southern (left) field at the land north of Sun Lane, with a strip of grassland extending south of this to an access gate (right).



Photograph 3a & 3b. A band of scrub that borders the fields on the eastern boundary (right), with a line of trees that extends from the scrub and runs through the centre of land north of Sun Lane (right).



Photograph 4a & 4b. Views of the hedgerow that runs along the northern (left) and western (right) boundaries of the land north of Sun Lane.