City & Country Group EPS

Land East of Trowes Lane, Swallowfield

Ecological Appraisal

Final report
Prepared by LUC
September 2025

City & Country Group EPS

Land East of Trowes Lane, Swallowfield
Ecological Appraisal

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Chapter 1
Introduction

1.1 In May 2025, LUC was appointed by City & Country Group EPS to undertake an Ecological Appraisal (EA) for the full redevelopment of land east of Trowes Lane, Swallowfieldd, Wokingham, hereafter referred to as 'the Site'. Specifically, this was to inform an outline planning application for up to 79 dwellings (Use Class C3), together with access, landscaping and associated infrastructure, with all matters reserved except access.

1.2 The EA presents the findings of a desk study, an Extended UK Habitat survey, and assessment of the effect on protected species, informed by surveys for great crested newt, breeding birds, bats and dormouse. It subsequently includes an assessment of the ecological change resulting from the proposals and identifies avoidance and mitigation measures which will be implemented to avoid or mitigate potential. This EA and the surveys which have informed it, have guided the scheme design from the outset to ensure that potential adverse ecological impacts have been avoided wherever possible and to ensure that the significant ecological benefits resulting from the scheme have been maximised. impacts.

1.3 A Biodiversity Net Gain (BNG) assessment, which demonstrates how the site will achieve a minimum of a 10% increase in BNG, has been prepared separately by LUC and should be read in conjunction with this EA[1].

1.4 The site is located within the zone of influence of the Thames Basin Heaths Special Protection Area (SPA), located 2.1km to the southeast of the site. As a result, a ‘report to inform a Habitats Regulations Assessment (HRA)’ has been prepared separately by LUC[2].

1.5 This report has been prepared for the exclusive use of City & County. No part of this report should be considered legal advice.

Site description

1.6 The Site lies within the south of Swallowfield, to the east of Trowe's Lane (National Grid Reference (NGR): SU 72584 64429). The habitats recorded on site were predominantly modified grassland and woodland, with boundary hedgerows.

[1] LUC (2025) Swallowfield Biodiversity Net Gain Report.

[2] LUC (September 2025), *Swallowfields - Report to Inform a Habitats Regulations Assessment*

Surrounding Habitat

1.7 Existing residential development bounds the Site to the north, and residential and farm buildings bound the Site to the east. An off-site dry ditch is present immediately to the east of the Site. Further areas of woodland and grassland bound the Site to the east and south. Within the wider landscape, parcels of woodland, grassland, arable and residential development are common.

1.8 The River Loddon is located within the wider landscape area to the northwest of the Site. Priority Habitats within the wider area include floodplain grazing marsh, lowland mixed deciduous woodland, ponds, traditional orchards, wet woodland and wood-pasture and Parkland.

Legislation and Planning Policy

1.9 This report has been prepared in cognisance of relevant legislation and policy. Further detail is provided in **Appendix A**. The primary documents of relevance are outlined below:

- The Wildlife and Countryside Act of 1981[3] (as amended).
- The Countryside and Rights of Way Act (CRoW Act), 2000[4] (as amended).
- The Natural Environment and Rural Communities Act 2006[5] (NERC Act).
- The Conservation of Habitats and Species Regulations 2017 (SI 2017/1012), as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579)[6].
- The National Planning Policy Framework (updated December 2024)[7].
- The Protection of Badgers Act 1992[8].
- The Environment Act 2021[9].
- Adopted core strategy Development Plan – Wokingham Borough Council (January 2010).

[3] Wildlife and Countryside Act 1981. Available at: https://www.legislation.gov.uk/ukpga/1981/69
[4] Countryside and Rights of Way Act 2000. Available at: https://www.legislation.gov.uk/ukpga/2000/37/contents
[5] The Natural Environment and Rural Communities Act (NERC Act), 2006. Available at: https://www.legislation.gov.uk/ukpga/2006/16/contents
[6] The Conservation of Habitats and Species Regulations 2017 (SI 2017/1012), as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579). Available at: https://www.legislation.gov.uk/uksi/2019/579/contents/made
[7] Ministry of Housing, Communities and Local Government (2024) National Planning Policy Framework. Available at: National Planning Policy Framework - Guidance - GOV.UK
[8] The Protection of Badgers Act 1992. Available at: https://www.legislation.gov.uk/ukpga/1992/51/contents.
[9] The Environment Act 2021. Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents

Chapter 2
Methods

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2.1 The methods adopted in the survey and appraisal are outlined below. They are in accordance with best practice guidance documents produced by the Chartered Institute of Ecological and Environmental Management[10] and the British Standards Institute[11].

Desk Study

2.2 To provide additional background to the report and to highlight likely features or species of interest, a study of available biological records was undertaken to identify sites designated for their nature conservation value, and existing records of protected or notable species of relevance to the Site. A search of the following resources was undertaken, within a 2km radius from the Site:

a. Thames Valley Environmental Records (TVERC).

b. Multi-Agency Geographical Information for the Countryside (MAGIC) – records of statutory designated sites.

c. Ordnance Survey (OS) mapping.

d. Aerial photography.

Extended Habitat Survey

2.3 A habitat survey was undertaken within the Site boundary in line with the UK Habitat System survey methodology[12]. This survey method forms the ecological baseline and involves mapping habitats within a site and recording target notes relating to the nature and condition of the habitats.

2.4 The survey also considered the suitability of the Site to support notable or protected flora or fauna. Species considered included those identified during the desk study, or those considered appropriate by the surveyor during the survey. Based on an understanding of species ecology, consideration was given to the Site's potential to provide sheltering or foraging habitat and/or connectivity to allow dispersal between populations. An invasive species search

[10] CIEEM (2017). Guidelines for Preliminary Ecological Appraisal. 2nd Edition. Chartered Institute for Ecology and Environmental Management, Winchester.

[11] 3 BSI (2021). BS 8683:2021: Process for designing and implementing Biodiversity Net Gain. British Standards Institution, Bristol.

[12] UKHab Ltd (2023) UK Habitat Classification Version 2.0. Accessible at: https://www.ukhab.org.

was also conducted during the Site visit. Further information is provided in the 'Results' section below in **Chapter 3**.

2.5 The survey was undertaken on the 20th June 2025 by Rebecca Turner BSc (Hons) MSc ACIEEM and Calista Collins BSc MRes. Weather conditions during the survey were warm and dry, with an average temperature of 26°C.

2.6 A habitat map of the Site can be found in **Figure 1, Appendix B.**

Dormouse

2.7 Woodland, hedgerow and treeline habitat within the site were identified as having potential to support dormouse.

2.8 Suitability was based on professional judgement, by reviewing several factors including the potential for foraging and sheltering, habitat connectivity and the presence of possible barriers to movement.

2.9 Habitats typically suitable for dormouse include:

- Deciduous woodland, with a dense understory, species-rich shrub layer and thick ground cover.
- Hazel or sweet chestnut coppice.
- Species rich hedgerows and scrub, particularly when connected to nearby suitable woodland, such as the ancient woodland to the east.

2.10 It should be noted that dormice may also be present in habitats considered to be sub-optimal such as conifer plantation and species-poor hedgerows, if such habitats are ecologically connected to more suitable dormouse habitat.

Habitat Quality Assessment

2.11 For each habitat identified to have suitable potential to support dormouse, a habitat quality assessment was undertaken in line with best practice[13]. These included recording the diversity of species favoured by dormouse and the structural complexity. This data is used to determine the habitat quality as shown in **Table 2.1.**

Table 2.1. Habitat quality assessment

		Diversity		
		High	Medium	Low
Complexity	High	Excellent	Good	Fair
	Medium	Good	Good	Poor
	Low	Fair	Poor	Poor

Baseline Data Collection

2.12 Dormouse nest tubes were deployed along the western, northern and eastern hedgerows and within the mixed woodland in the south of the Site.

2.13 Following best practice guidelines[14] a total of 50 dormouse tubes were deployed across the Site on the 13th of June 2025. These were installed at intervals of 10m in areas of suitable habitat, the locations of which are detailed in Appendix B, **Figure 2**.

2.14 In line with the best practice guidance, the tubes were checked monthly. As the date of issue of this report, the final October survey had not been completed. The report will be updated following the completion of the surveys and this limitation has been factored into this assessment.

2.15 The surveys were carried out by licensed dormouse surveyor Tom Hicks BSc ACIEEM on the following dates:

- Set up: 13th June 2025
- Survey 1: 25th June 2025
- Survey 2: 23rd July 2025
- Survey 3: 21st August 2025
- Survey 4: 18th September 2025
- Survey 5: 15th October 2025

Bats

2.16 A detailed ground level assessment (GLTA) of trees for roosting bats was not undertaken as the scheme has been designed to retain all trees of suitable age and structure to support bats.

Nocturnal Bat Activity Surveys - Static Monitoring

2.17 The scheme was designed to avoid habitats of high suitability for bats, including treelines, woodland and trees with roosting potential. Nevertheless, to provide additional data on bat activity at the Site, a single Static Monitoring Point (SMP) survey was carried out in July, August and September 2025.

2.18 The SMP location was chosen to provide an informative sample of the bat activity within the site, being position at the

[13] Wells, D., Chanin, P. & Gubert, L. (2025) Hazel Dormouse Mitigation Handbook. The Mammal Society.

[14] Wells, D., Chanin, P. & Gubert, L. (2025) Hazel Dormouse Mitigation Handbook. The Mammal Society.

interface between the open grassland and the woodland in the south of the site. A Song Meter Mini Bat 2 static bat detector was deployed (grid reference: SU 72532 64380) with the aim of gaining a representative sample of the bat species present and the relative importance of the Site for bats.

2.19 Under best practice guidelines, the static was collected after at least five consecutive nights over two collection periods, during suitable prevailing weather conditions (minimal heavy rain or strong wind)[15].

2.20 Bat sonograms were logged for subsequent analysis and species identification using Kaleidoscope bat analysis software.

2.21 The first static deployment occurred in late July/early August, and the second deployment occurred early in September. This EA will be updated when the full suite of survey data analysis has been completed.

Breeding Bird Survey

2.22 A breeding bird survey (BBS) was completed by experienced ornithologist David Green MCIEEM, comprising of visits on the following dates:

- 30th May 2025
- 6th June 2025

2.23 The BBS survey method was completed in line with the standard British Trust for Ornithology (BTO) survey method and involved walking a dawn survey transect of the site which incorporated all key habitat types.

2.24 All birds seen and heard were recorded and where applicable their location within the Site recorded. Given the simplicity of the site and its constituent habitats detailed mapping was not completed because the primary purpose of the survey was to identify the presence of priority species and to gain an understanding of the breeding bird assemblage at the Site to inform scheme design.

2.25 The survey recordings paid particular attention to the presence of birds or conservation concern and/or those listed on schedule 1 of the W&CA.

2.26 Weather during both of the surveys was dry and sunny with minimal wind.

Limitations and Constraints

2.27 Due to thick areas of bramble scrub, localised sections of the woodland were not accessible, however, this is not considered as a limitation to the survey as the majority of the woodland was visible and a detailed species list was recorded.

2.28 The breeding bird survey missed the 'early' part of the breeding season when certain species are typically more prevalent and easier to detect. Nevertheless, given the simplicity of the site's constituent habitats, it is considered unlikely that notable species were missed and this minor limitation was factored into assessing the importance of the site for breeding birds.

2.29 It is important to note that ecological surveys provide information regarding the ecological baseline of a site for only a 'snapshot' of time. Therefore, if significant time lapses between the surveys and the further development or implementation of proposals, updated ecological surveys may be required to identify any change in the baseline, such as natural succession of habitats, or local extinction or colonisation of species.

2.30 Ecological surveys can generally be considered as up to date for 1 to 3 years dependent on the nature of the Site, ecological baseline, development proposals and likely impact. Therefore, if a year lapses between the progression of development proposals, it is recommended that ecological advice is sought regarding the applicability of the survey findings.[16]

2.31 At the time of the first issue of this the completion of the final dormouse survey and final analysis of bat data was outstanding; however, this has been factored into the assessment, and the scheme has been designed from the outset to protect and enhance habitats which are likely to be of importance for bats and dormouse. Therefore, this is not a significant constraint.

[15] Bat Conservation Trust (2023). Bat Surveys for Professional Ecologists, Good Practice Guidelines.

[16] CIEEM (2019) Advice Note on the Lifespan of Ecological Reports and Surveys. Chartered Institute for Ecology and Environmental Management, Winchester.

Chapter 3
Results

Desk Study

3.1 The findings of the desk study are presented in the tables below. **Table 3.1** summarises statutory designated sites within 5km of the Site and non-statutory designated sites within 1km of the Site. **Table 3.2** summarises records of relevant protected or notable species, and invasive species within 1km of the Site.

Table 3.1 Designated Sites

Site Name	Designation	Qualifying Features / Description	Distance / Orientation
Statutory Designated Sites within 10km			
Standford End Mill and River Loddon	Site of Special Scientific Interest	A series of traditionally managed seasonally waterlogged hay meadows and a 4km stretch of the River Loddon. The meadows supports important populations of two rare plants: the fritillary *Fritillary meleagris* and Loddon pondweed *Pontamogeton noddosus.* The grazing regime allows species, such as fritillaries, to complete their lifecycles, and the base-rich conditions of the river provide high water quality which supports two rare pea mussels.	0.84km northwest
Thames Basin Heaths	Special Protection Area (SPA)	An open heathland which supports wet heath and dry heath. The site supports breeding Nightjar *Caprimulgus europaeus*, woodlark *ullula arborea* and Dartford warbler *Sylvia undata* for which the site is designated.	2.1km southeast
Bramshill (encompassed by Thames Basin Heath)	SSSI	A component of the Thames Basin Heaths SPA. An extensive area of conifer plantation which support the same Annex I bird species as the SPA, alongside acidic ponds, wet heath and unimproved grassland which support nationally scarce species such as *Odonata* sp., needle spike rush *Elecharis acicularis* and woodland grasshopper *Omocestrus rufipes.*	3.2km southeast
Hazeley Heath	SSSI	A component of the Thames Basin Heaths SPA, the SSSI encompasses a range of heathland, including dry and wet heath, alongside bog communities due to the topography of the area.	5km southeast
Longmoor bog	SSSI	A base-poor valley mire which supports wet and dry heath, carr woodland and a small stream. The bog supports a number of breeding bird species and is an important site for insects, such as silver-studded blue butterfly *Plebejus argus* which is declining in southern Britain.	5.2km northeast
Castle Bottom to Yateley and Hawley Commons	SSSI	Lowland heathland and conifer plantation located in the Thames Basin, which supports internationally important populations of Dartford warbler and important populations of nightjar and woodlark. The site also supports rare plant and invertebrate species due to the mosaic of habitats.	7.4km southeast
Pamber Forest and Silchester Common	SSSI	Extensive ancient Oakwood, Pamber Forest, heathland commons and a series of unimproved wet meadows which support many nationally rare Annex I bird species, such as woodlark, nightjar and Dartford warbler.	9.7km southwest
Non-statutory Designated Sites within 2km[17]			
Swallowfield Meadow	Local Nature Reserve (LNR)	A meadow of c0.7ha which contains a variety of habitats including native hedgerows, a small copse, ditches and seasonal ponds and meadow. The meadow is rich in plant and wildlife such as oxeye daisy, field scabious, silver birch, field maple and hazel. As the site incorporates four balancing ponds and ditches to prevent flooding, they have attracted water voles, which are an endangered species	95m north
St Leger's Copse and Collin's Copse	LNR	This site is ancient woodland. However, most of it has been replanted with conifers, beech and red oak except for the southern end which is semi-natural woodland. Here there is a mixture of field maple and hazel coppice and birch woodland with some pedunculate oak standards. There are some small	890m southwest

[17] Descriptions provided by TVERC (2025).

Site Name	Designation	Qualifying Features / Description	Distance / Orientation
		remnants of semi-natural woodland elsewhere at the edge of the plantations. This southern end also contains the greatest quantity of the 22 indicator woodland species for the site. These include wood spurge, wood sorrel, yellow pimpernel, hairy wood rush and primrose. The rides have been wet in places with species recorded including rushes, water mint, creeping jenny, marsh thistle and lesser spearwort.	
The Marshes	LNR and Local Wildlife Site (LWS)	The site supports a small area of wet woodland (including small patches of swamp-woodland vegetation), moist and wet semi-improved mesotrophic horse-grazed grassland, semi-improved amenity-mown grassland and a number of boundary hedges. Wet woodland stands, oriented about a stream/ditch, are composed of W1 Grey Willow and W6b Crack Willow stands over patches of fen-swamp vegetation with drier stands of *Urtica dioica* and *Oenanthe crocata*. Central-south-eastern areas have recently been cut to open up conditions around the stream/ditch. The pasture grassland supports semi-improved MG6b *Agrostis-Holcua-Anthoxanthum grassland* and wetter stands of MG10a *Juncus effusus* rush-pasture with inundation *Alopecurus geniculatus-Agrostis stolonifera* swards (MG13). The mown amenity grassland is generally species-poor. Hedges are similarly species-poor, although add to overall habitat diversity and include a number of mature Pedunculate Oak trees.	1.1km southeast
Cuckoo Pen	LWS	At the time of the last survey this small area of woodland had been cleared in the centre but retained a fringe of ash dominated semi-natural woodland with field maple, hornbeam and hazel coppice. Primrose is locally abundant. Other species associated with long established woodland that have been recorded here include pignut, bluebell and wood melick. The central area had been replanted but this had failed.	1.2km northeast
Highgrove Copse	LWS	Hazel coppice with areas of wet woodland with areas of scrub and bracken. Groundflora identified include bluebell, dog's mercury, solomon's-seal, three-nerved sandwort, wood millet, woodruff, wood anemone, wood-sedge, wood sorrel, bluebell, wood melick and yellow pimpernel.	1.3km southwest
Great Wood	LWS	This is an ancient woodland site. It has an oak and ash dominated canopy with abundant hazel coppice in the understorey. The woodland has been modified by the introduction of coppiced sweet chestnut, some poplar planting and sycamore invasion. There is also a conifer plantation in the centre of the site. There are some small areas of alder dominated wet woodland. Bluebell is abundant in the ground flora. The southern part of the site is more acidic in nature with bracken abundant on the ground.	1.3km northeast
Beaumy's Castle Wood and Moat	LWS	A little Lowland Mixed Deciduous Woodland and a waterbody that connects to the River Loddon floodplain. It also has significant historical interest as a Scheduled Ancient Monument.	1.4km west
Farley Hill Woods, Great Copse and New Plantation	LWS	This site is largely ancient woodland with extensive semi-natural areas and some parts replanted with conifers. There are also areas of more recent woodland and mixed plantation. Great Copse has gullies and pools with wet alder dominated woodland. The semi-natural stands are dominated by ash, oak and birch. Hazel coppice is frequent in the understorey. In total 29 ancient woodland indicator plants have been recorded, including alder buckthorn and southern woodrush. A pond in the south-east of the site supports a reedmace bed and at least four species of dragonfly. Silver-washed fritillary is present in good numbers across the Copse. Common spotted orchid is also present. The purple hairstreak butterfly has also been seen here.	1.8km northeast

Table 3.2 Relevant Protected and Notable Species Records

Site Name	Status	Distance / Orientation (m)
Amphibians		
Great crested newt *Triturus cristatus*	HSD[18] Cons Regs 2010 Sch2[19] W&CA Sch5 Sec 9.1[20] NERC Act Section 41	250m north
Palmate newt *Lissotriton helveticus*	W&CA Sch5 Sec 9.1	20m north (to the nearest 10m^2)
Smooth newt *Lissotriton vulgaris*	W&CA Sch5 Sec 9.1	1330m northwest
Reptiles		
Grass snake *Natrix Helvetica*	W&CA Sch5 Sec 9.1 NERC Act Section 41[21]	450m northwest
Birds		
Barn owl *Tyto alba*	W&CA Sch5 Sec 9.1	465m southeast (to the nearest 100m^2)
Bullfinch *Pyrrhula pyrrhula*	NERC Act Section 41 Bird-orange[22]	500m southeast (to the nearest 1000m^2)
Cuckoo *Cuculus canorus*	NERC Act Section 41 Bird-red[23]	1390 southwest (to the nearest 100m^2)
Dunnock *Prunella modularis*	NERC Act Section 41 Bird-orange	635m southeast (to the nearest 100m^2)
Fieldfare *Turdus pilaris*	W&CA Sch5 Sec 9.1 Bird-red Bird-Dir Anx 1[24]	On-Site
Greenfinch *Chloris chloris*	Bird-red	1295m northwest (to the nearest 10m^2)
Grey wagtail *Motacilla cinerea*	Bird-amber	600m southwest (to the nearest 10m^2)
House martin *Delichon urbicum*	Bird-red	565m southwest (to the nearest 100m^2)
House sparrow *Passer domesticus*	NERC Act Section 41 W&CA Sch5 Sec 9.1 Bird-red	1464m northwest

[18] Habitats and Species Directive
[19] The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 2)
[20] Wildlife and Countryside Act 1981 (as amended) Schedule 5 section 9.4b and 9.4c
[21] Natural Environment and Rural Communities Act 2006 – Species of Principal Importance in England
[22] Bird Population Status: Orange
[23] Bird Population Status: Red
[24] The Birds Directive – European Commission Annex 1

Site Name	Status	Distance / Orientation (m)
Kestrel *Falco tinnunculus*	W&CA Sch5 Sec 9.1	603m northeast (to the nearest 100m^2)
Mistle thrush *Turdus viscivorus*	Bird-red Bird-Dir Anx 1	535 m southwest (to the nearest 100m^2)
Red kite *Milvus milvus*	W&CA Sch5 Sec 9.1 Bird-Dir Anx 1	186m west
Redwing *Turdus ilacus*	W&CA Sch5 Sec 9.1 Bird-amber Bird-Dir Anx 1	460 m southeast (to the nearest 100m^2)
Rook *Corvus grugilegus*	Bird-amber	1300m west
Skyark *Alauda arvensis*	NERC Act Section 41 W&CA Sch5 Sec 9.1 Bird-Dir Anx 1 Bird-red	860m northwest (to the nearest 10m^2)
Song thrush *Turdus philomelos*	NERC Act Section 41 W&CA Sch5 Sec 9.1 Bird-amber Bird-Dir Anx 1	670m northeast (to the nearest 10m^2)
Spotted flycatcher *Muscicapa striata*	NERC Act Section 41 Bird-red	410m northeast
Starling *Sturnus vulgaris*	NERC Act Section 41 Bird-red Bird-Dir Anx 1	1320m northwest (to the nearest 10m^2)
Swift *Apus apus*	Bird-red	480m northwest (to the nearest 10m^2)
Tawny owl *Strix aluco*	Bird-amber	535m southwest (to the nearest 10m^2)
Wren *Troglodytes troglodytes*	Bird-amber	885m south
Yellowhammer *Emberiza citrinella*	NERC Act Section 41 W&CA Sch5 Sec 9.1 Bird-red	540m southwest (to the nearest 10m^2)
Mammals (excluding bats)		
Badger *Meles meles*	Protection of Badgers Act 1992	Confidential
Brown hare *Lepus europaeus*	NERC Act Section 41	1800m southwest
Hazel dormouse *Muscardinus avellanarius*	NERC Act Section 41	1440m southwest (record over 10 years old, dated from 2024)

Site Name	Status	Distance / Orientation (m)
	W&CA Sch5 Sec 9.1	
Hedgehog *Erinaceus europaeus*	NERC Act Section 41	260m north
Bats		
Barbastelle *Barbastella barbastella*	Hab&Spp Dir Anx 4[25] Cons Regs 2010 Sch2[26] W&CA Sch5 Sec 9.4b and 9.4c RL_GB_VU[27]	50m west
Brown long-eared bat *Plecotus auritus*	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b and 9.4c	170m west
Common pipistrelle *Pipistrellus pipistrellus*	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b and 9.4c	On-Site
Myotis *Myotis sp.*	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b and 9.4c	170m west
Noctule *Nyctalus noctula*	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b and 9.4c	170m west
Serotine *Eptesicus serotinus*	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b and 9.4c RL_GB_VU	170m west
Soprano pipistrelle *Pipistrellus pygmaeus*	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b and 9.4c	On-Site

[25] Habitat and Species Directive: Annex 4
[26] The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 2)
[27] Red List – Great Britain: Vulnerable

Site Name	Status	Distance / Orientation (m)
Nathusius' pipistrelle *Pipistrellus nathusii*	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b and 9.4c RL_GB_NT[28]	170m west
Invertebrates		
Stag beetle *Lucanus cervus*	W&CA Sch5 Sec 9.4b and 9.4c NERC Act Section 41	500m north
Invasive species		
Himalayan balsam *Impatiens glandulifera*	W&CA Sch9 Sec 14 and 22[29]	200m west

[28] Red List – Great Britain: Near Threatened
[29] Wildlife and Countryside Act 1981 (as amended) Schedule 9 section 14 and 22

Habitat Survey

3.2 Habitat descriptions are set out below. While considering this information, reference should be made to the habitat map presented in **Figure 1, Appendix B.** Corresponding Site photographs are presented in **Appendix C.**

Modified grassland

3.3 The majority of the Site consisted of a seeded modified grassland abundantly comprising perennial rye grass *Lolium perenne*, timothy *Phleum pratense,* white clover *Trifolium repens* and creeping buttercup *Ranunculus repens.* Frequently occurring species included soft brome *Bromus hordeaceus*, cock's-foot *Dactylis glomerata,* Yorkshire fog *Holcus lanatus* and meadow grass *Agrostis* sp. Species occasionally and rarely occurring included ivy *Hedera helix*, herb Robert *Geranium robertianum*, dandelion *Taraxacum* ag., curled dock *Rumex crispus*, lesser trefoil *Trifolium dubium*, selfheal *Prunella vulgaris*, soft rush *Juncus effusus*, hoary willowherb *Epilobium parviflorum* and vetch *Vicia* sp.

3.4 The grassland field was recently mown at the time of survey, however a comprehensive species list was possible due to uncut areas of the sward at the field margins.

3.5 A review of satellite imagery indicates that the field has a history of use as arable cereal crop and that the grassland currently in-situ is the result of seeding with an agricultural commercial seed mix.

Hedgerow

3.6 Hedgerows are present within the Site and formed the Site boundaries. All hedgerows comprised native species. The western boundary hedgerow was outgrowing in nature, and consisted of hawthorn *Cretaegus monogyna,* bramble *Rubus fruticosus,* blackthorn *Prunus spinosa,* dogrose *Rosa canina,* field maple *Acer campestre,* hazel *Corylus avellana* and ash *Fraxinus excelsior.* Mature trees were present in the hedgerow, including pedunculate oak *Quercus robur* and ash.

3.7 The northern boundary hedgerow was gappy in nature and dominated by blackthorn, with bramble, hawthorn, goat willow *Salix caprea* and pedunculate oak also present. The eastern boundary hedgerow also consisted of blackthorn, bramble, hawthorn and a mature oak tree, alongside grey willow *Salix cinerea.* The ground fora comprised species identified within the modified grassland sward.

Other Woodland; mixed

3.8 An area of woodland forms the southern section of the Site. The woodland varied in character throughout, however, not drastically enough to be recorded as distinct woodland types. Conifer species were more commonly recorded within the eastern section of the woodland, whereas the northern area of the woodland was largely dense with deciduous trees. Within the central area of woodland a field maple plantation dominated. A young pedunculate oak plantation silver birch *Betula pendula* was located to the west of the woodland.

3.9 Overall, field maple dominated the canopy of the woodland, while Scot's pine *Pinus sylvestris,* pedunculate oak, goat willow and larch sp. *Larix* sp were frequently occurring in the canopy.

3.10 Hazel, hawthorn and elder *Sambucus nigra* were formed an understorey within the woodland, particularly to the east. The understorey was sparse towards the western and central areas of woodland.

3.11 Common nettle *Urtica dioica,* ground ivy *Glechoma hederacea* and creeping buttercup were abundant in the ground flora of the woodland. Cleavers *gallium aparine* was frequently occurring and curled dock, hedge woundwort *Stachys sylvatica*, hemlock water dropwort *Oenanthe crocata*, pendular sedge *Carex pendula,* and remote sedge *Carex remota* were occasionally and rarely occurring.

Invasive Non-native Species (INNS)

3.12 Himalayan balsam *Ipatients glandulifera* was noted within the south of the Site, encroaching into the southeastern area of the woodland.

3.13 No other INNS were recorded within the Site boundary, as the habitat was conducted within the optimal survey window, signs of INNS would likely have been identified if present.

Protected and Notable Species

Bats

3.14 The following bat records were provided by TVERC within 2km of the Site:

- Barbastelle.
- Brown long-eared bat.
- Myotis.
- Common pipistrelle.
- Noctule.
- Soprano pipistrelle.
- Serotine.
- Nathusius's Pipistrelle

Habitat Appraisal

3.15 The Site was comprised of modified grassland, mixed woodland and hedgerows, habitats of varying ecological value for roosting and foraging and commuting bats, from low (grassland) to high (hedgerow and woodland). The woodland in the south of the Site is connected to parcels of woodland within the wider landscape, providing a link to further suitable habitats for bat species.

Static Monitoring

3.16 Full SMP data is provided within **Table C.5, Appendix D**.

Species Composition

3.17 **Table 3.3** summarises the species which were recorded during static monitoring surveys across the July SMP deployment.

Table 3.3 Species Composition During July Static Monitoring Survey

Species
Common[17]
Common pipistrelle *Pipistrellus pipistrellus*
Soprano pipistrelle *Pipistrellus pygmaeus*
Unidentified *Pipistrellus* sp.
Brown long-eared *Plecotus auritus*
Rarer[17]
Noctule *Nyctalus noctule*
Leisler *Nyctalus leislerii*
Serotine *Eptesicus serotinus*
Unidentified *Myotis* sp.
Barbastelle *Barbastella barbastellus*

3.18 Common Pipistrelle were the most frequently recorded species, accounting for 91.8% of the total calls. Noctule was the second most frequent species and accounted for 3.6% of total bat passes recorded. Leisler and Nathusius pipistrelle comprised 1.3% and 1.0% of the total bat passes, respectively. All other species recorded accounted for less than 1% of total bat passes.

3.19 The species composition recorded across all transect surveys is summarised in **Table 3.4** below.

Table 3.4 Species Composition Recorded During Static Monitoring Surveys

Bat Species / Group	Total Bat Passes	% of Total Bat Passes
Common pipistrelle	463	78.3%
Soprano pipistrelle	37	6.3%
Noctule	68	11.5%
Serotine	11	1.9%
Leisler	5	0.8%
Myotis sp.	3	0.5%
Barbastelle	3	0.5%
Brown long-eared	1	0.2%

[redacted]

3.20 [redacted]

Badger Sett Survey

3.21 No signs of badger were recorded during the habitat survey. No evidence of badger was recorded during a 2023

ecological appraisal of an adjacent planning application site, located to the west of Trowes Lane[30]

Birds

Habitat Appraisal

3.22 The hedgerows, woodland and grassland present within the Site provide suitable habitat for common and widespread suburban, garden and woodland birds.

Field Survey

3.23 The breeding bird survey recorded a typical assemblage of common and widespread bird species. Bird species recorded are summarised in **Table 3.5** below.

Table 3.5 Breeding Bird Survey

Species	Status	Location
Blackbird	BoCC Green	Southern woodland
Blackcap	BoCC Green	Southern woodland Site perimeter treelines
Blue tit	BoCC Green	Southern woodland Site periphery treelines
Carrion crow	BoCC Green	Open field
Chaffinch	BoCC Green	Site periphery treelines
Chiffchaff	BoCC Green	Southern woodland
Dunnock	**BoCC Amber**	Southern woodland Site periphery treelines
Great spotted woodpecker	BoCC Green	Southern woodland
Great tit	BoCC Green	Southern woodland Site periphery treelines
Greenfinch	**BoCC Red**	Southern woodland
House sparrow	**BoCC Red**	Northern edge and residential gardens
Magpie	BoCC Green	Southern woodland Site periphery treelines
Nuthatch	BoCC Green	Southern woodland Site periphery treelines
Pheasant	BoCC Green	Site periphery treelines
Red kite	BoCC Green **Schedule 1 WCA**	Flying over
Robin	BoCC Green	Southern woodland Site periphery treelines
Song thrush	**BoCC Amber**	Southern woodland Site periphery treelines
Stock dove	**BoCC Amber**	Southern woodland
Wood pigeon	BoCC Green	Southern woodland Site periphery treelines
Wren	BoCC Green	Site periphery treelines

Dormouse

Habitat Appraisal

3.24 Suitable habitat for dormice is present within the Site, in the form of hedgerow and mixed woodland. The hedgerows which form the western, northern and eastern Site boundaries were all assessed as good quality habitat for Dormice, while the woodland in the south of the Site was assessed as poor quality habitat for Dormice. The results of which are shown within table **3.6** below.

Table 3.6 Table 3.3. Habitat Quality Assessment Results

Habitat Type	Location	Length / Area	Diversity*	Structural Complexity	Quality
Hedgerow	West	0.15km	High (7 spp)	Medium	Good
Hedgerow	North	0.18km	Medium (5 spp)	Medium	Good
Hedgerow	East	0.17km	Medium (7 spp)	Medium	Good
Woodland	South	1.9ha	Medium (mean of 4 spp per ha)	Low	Poor

Dormouse Population Survey

3.25 Four of the five dormouse presence / absence surveys had been completed at the time of writing this report. To date, no evidence of dormouse was recorded during the June – September surveys inclusive.

[30] CSA Environmental (2023). Land West of Trowes Lane and North Charlton Lane, Swallowfield, Ecological Impact Assessment.

3.26 The final survey is outstanding and will take place in October. This report will be updated following the completion of the survey.

Great Crested Newt (GCN)

Habitat Appraisal

3.27 There are three number of waterbodies located within 250m of the Site which provide suitable breeding habitat for GCN. The woodland and hedgerow habitats within the Site provide ecologically valuable terrestrial habitat for GCN.

3.28 A biological record was recorded 255m to the northwest of the Site, within a woodland pond. Trowe's Lane forms a dispersal barrier between the Site and the biological record.

eDNA Survey

3.29 The waterbodies were subject to an eDNA survey. The results of which recorded all three waterbodies (a ditch located in the southwest of the Site, a pond located in a local nature reserve, and a pond within Brookside Gardens) were negative for the presence of GCN eDNA.

3.30 GCN are known to roam, and despite the presence of a biological record 255m from the Site, the ponds within 250m of the Site tested negative for the presence of GCN.

Reptiles

Habitat Appraisal

3.31 The Site comprised short sward modified grassland, however, longer rank areas of grass where the mower could not reach at the field boundaries provided small rank areas of grassland which provides opportunities for basking and commuting reptiles. The hedgerows also provide some opportunities for commuting and sheltering reptiles, alongside off-site ditches.

3.32 A biological record of grass snake was recorded 450m northwest of the Site, therefore grass snake is present within the wider area.

3.33 As the grassland provides suitable habitat for reptiles between management, reptiles have been considered further in this report.

Hedgehog

Habitat Appraisal

3.34 The main habitats on Site were modified grassland which was undergoing mowing and therefore its suitability for foraging and commuting hedgehog was significantly reduced. The hedgerow and offsite woodland provide suitable habitat for hedgehog.

3.35 The presence of roaming individuals cannot be discounted, and hedgehog are therefore considered further in this report.

Invertebrates

Habitat Appraisal

3.36 The Site supported minimal habitat for common and widespread invertebrates, given it was dominated by modified grassland The Site is unlikely to support more notable species as the habitats utilised by these species are not present on the Site. As a result, invertebrates are not considered further in this report.

Chapter 4
Discussion

Site Proposals

4.1 The proposals include outline planning permission for up to 79 dwellings (Use Class C3), access, landscaping and associated infrastructure, with all matters reserved except access.

Designated Sites

4.2 The designated sites identified during the desk study include ten statutory designated sites within 10km of the Site boundary: Standford End Mill and River Loddon SSSI, Thames Basin Heaths SPA, Brameshill (encompassed by Thames Basin Heath) SSSI, Hazeley Heath SSSI, Longmoor Bog SSSI, Pamber Forest and Silchester Common SSSI, Castle Bottom to Yateley and Hawley Commons SSSI, Pincents Kiln SSSI, Lodge Wood & Sandford Mill SSSI and Decoy Pit, Pools & Woods SSSI.

4.3 The majority of designated sites are not expected to be directly impacted by the proposals due to their distance from the Site and the relatively small scale of the proposed development. As the Site is dominated by modified grassland, and the designated sites are largely comprised of high distinctive heathland, grassland and woodland, no functionally linked habitats are likely to be impacted.

4.4 Standford End Mill and River Loddon SSSI is located c. 800m to the northwest of the Site, while Thames Basin Heaths SPA is located approximately 2.1km southeast of the Site. The SSSI and SPA may be indirectly affected by the proposed development due surface water runoff, pollution and increased footfall due to an increased number of inhabitants within the local area due to new residential development.

4.5 The non-statutory Sites found within 2km of the Site are largely well-separated by existing infrastructure from the Site, and are unlikely to be negatively affected as a result of the proposed development. Swallowfield Meadow LNR is located approximately 95m north of the Site, and therefore indirect adverse effects may negatively impact the LNR through pollution and runoff without mitigation measures in place.

Mitigation

4.6 General appropriate mitigation measures will need to include the following best practice construction measures to

avoid potential indirect impacts such as contamination and surface water run-off. This includes:

- Secure storage and safe disposal of any materials and substances to prevent accidental contamination.
- Prevention or reduction of dust through timing of works to avoid dry times when dust arisings are most likely or damping down.
- Control of surface water runoff, including from damping down, to prevent any contaminated water from leaving the Site and potential soaking into surrounding ground.
- Trees within or in close proximity to the Site will require protection in line with BS 5837:2012: Trees in relation to design, demolition and construction, to ensure that they are not damaged as a result of any proposed works such as through root compaction.

4.7 It is recommended than a Habitats Regulation Assessment (HRA) be carried out in order assess what potential negative effects may occur to the designated sites in the absence of mitigation, and what mitigation can be implemented in order to avoid potential adverse effects.

Habitats

4.8 The Site consisted mainly of modified grassland with field and boundary hedgerows. The grassland present has low ecological value, due to a low species richness and evident regular management regime. However, the hedgerows and woodland are of higher ecological value. The proposed scheme occurs mainly in areas of lower ecological value and will retain hedgerows and woodland that are of high ecological value where possible in order to establish and fulfil its ecological value.

Mitigation

4.9 Appropriate mitigation measures to avoid impacts on retained habitat within or in close proximity to the Site include following best practice construction measures as detailed in section 4.5 above.

4.10 Removal of hedgerow for an access road will be limited where possible, and additional species-rich hedgerow planting will be required to offset losses along the northern boundary of the Site.

Bats

4.11 Legal protection afforded to bats and their roosts is summarised in **Appendix A.** In summary, all bats and their roosts are subject to the highest level of protection afforded to species in the UK as European Protected Species (EPS).

Habitat

4.12 No trees with features suitable for roosting bats within the hedgerows were noted during the habitat survey; however, as a detailed GLTA has not been carried out at the Site, bats may be roosting within woodland trees. The linear hedgerow corridors alongside the woodland within the south of the Site provide opportunity for bats to forage and commute within the Site due to good ecological connectivity of the wooded habitats, and are largely retained under the current scheme.

4.13 The entire woodland within the south of the Site is proposed for enhancement as part of the development, including the provision of bat boxes on trees. This will benefit locally occurring bats, such as barbastelle, due to the improved quality and extent of roosting habitat.

4.14 Crevice-dwelling species, such as common pipistrelle and soprano pipistrelle will also benefit from the increased roosting habitat provided by bat bricks that are proposed to be integrated in the houses.

4.15 As discussed above, the proposed scheme will retain the majority of hedgerows and all woodland on-Site and therefore no impacts are considered in relation to foraging and commuting bats.

Trees

4.16 No further surveys are required as the trees on Site will not be impacted by the proposals. However, if proposals change and result in direct impact to the tree, a Ground Level Tree Assessment would be required to determine the requirement for emergence surveys and suitable mitigation, including the requirement for Natural England Licensing. Surrounding retained habitats which are likely to be used by bats for commuting, foraging and potentially roosting, have the potential to be impacted by artificial lighting at night.

Lighting

4.17 Lighting negatively impacts bats and their ability to forage and commute. Therefore, a sensitive lighting scheme is advised to ensure no adverse effects occur in relation to any foraging and commuting habitats, namely on-Site hedgerows and woodland, and potential bat roosts within the woodland and adjacent to the Site. It is envisaged a suitable planning condition will be imposed to ensure that an external lighting scheme for the proposed development will be sensitively designed as to minimise adverse effects associated with lighting. In line with best practice guidelines this could include the following and should be implemented where feasible:

- Implementation of dark buffer zones, illumination limits and zonation to separate habitats or features of importance for bats from proposed lighting.

- Use of LED lighting, which does not emit UV, has a warm white light spectrum (ideally <2700 Kelvin), and uses wavelengths higher than 550nm.
- Directional lighting, such as specialist bollards, low-level downward direction lighting or column lighting to minimise light spill.
- Use of motion sensor lighting or timers to restrict lighting to required periods.
- Dimming or part-night lighting to reduce light levels when bats are most active.
- Use of the lowest lux possible.
- Sensitive scheme design to minimise light spill on key habitats and features, in particular onto nearby Pymme's Brook.
- Screening through soft landscaping and installation of walls and fences.

Badger

4.18 Badger and their setts are protected under the Protection of Badgers Act 1992, summarised in **Appendix A.**

4.19 [redacted]

Habitat

4.20 T[redacted]

4.21 [redacted]

4.22 [redacted]

[redacted]

Reptiles

4.23 Reptiles are protected under the Wildlife and Countryside Act 1981 (as amended), summarised in **Appendix A.**

Habitat

4.24 Habitats within the wider area, namely ditches and areas of longer sward grassland provide optimal habitat for grass snake. Despite the high likelihood that grassland is present within the wider area, the development footprint is limited to the area of modified grassland, which is of low suitability for reptiles.

4.25 New native planting of scrub vegetation, other neutral grassland, and wetland area comprised of ruderal/ephemeral vegetation in the east of the Site will provide suitable foraging, basking and sheltering habitat for grass snakes, and other native reptile species.

4.26 Due to the presence of grass snakes in the wider area, there is potential for commuting individuals to disperse through the Site and as such will need to be considered during construction.

Mitigation

4.27 The following mitigation measures will be required during construction to avoid impacts in relation to the reptiles:

- Suitable habitat, particularly longer grassy margins, will be subject to a two-stage vegetation clearance during the reptile active season (April to September inclusive).
- The vegetation should be cut to approximately 15cm which should encourage reptiles to leave the works area.
- A second cut to ground clever can then be completed once a suitably qualified ecologist has checked the vegetation for reptiles.
- If a reptile is found, the ecologist will move the reptile out of the works area into suitable habitat, and the works will cease until the suitably qualified ecologist advises further.

Birds

4.28 Birds and their nests are protected by the Wildlife and Countryside Act, 1981 (as amended) detailed in **Appendix A.**

4.29 The hedgerows on Site provide suitable habitat for common and widespread nesting bird species and the grassland provides foraging opportunities. Proposals do not impact the hedgerows on Site, however if this changes mitigation will be required to ensure no nesting birds are impacted.

4.30 The grassland is of low ecological value to ground nesting birds and foraging birds due to the regular mowing it is subject to. Indeed, no ground nesting birds such as skylark were recorded.

4.31 The woodland habitat on site is likely to support a typical assemblage of woodland bird species and given that the proposals include extensive woodland enhancements (e.g. thinning, coppicing and glade creation), there is a risk of disturbance and nest destruction during works. This can be avoided by implementing the best practice mitigation measures outlined below.

4.32 The habitat creation proposed within the site would be expected to provide a significant enhancement for breeding birds by increasing habitat niche diversity and availability, increasing food sources and nesting sites, and would be expected to attract an increased breeding bird diversity.

4.33 The provision of species specific bird boxes within the residential development in the west of the Site will also increase nesting opportunities for species such as house martin, swift, and house sparrow, all priority species. which would be expected to benefit from the proposals.

Mitigation

4.34 Any suitable bird nesting habitat that is subject to removal (including woodland enhancement) will require the following mitigation measures:

- Clearance of suitable nesting habitat/nesting features to be undertaken between September-February (inclusive) to avoid the nesting season.
- If vegetation/feature clearance cannot be undertaken outside the nesting bird season, an inspection of the vegetation or feature for the presence of nesting birds would be undertaken by a suitably qualified ecologist no more than 24 hours prior to removal. This would then provide a 48hr period for the works to commence prior to another nesting bird check being required.
- If nesting birds are found to be present and likely to be impacted, works must cease within a suitable buffer zone until the young have fully fledged, and the nest is no longer active (to be confirmed by an ecologist). This would result in delays to the programme, the length of which would be determined by the species present.
- Any areas of suitable habitat removed within the proposals should be replaced on a like-for-like basis within the new development, such as provision of native or wildlife-friendly scrub.

Hedgehog

4.35 The Site provided suitable habitat for hedgehog, in the form of hedgerows, and as such there is potential for roaming individuals transiting and foraging on Site.

4.36 Habitat loss as result of the proposals will be restricted to an area of regularly mown amenity grassland, therefore the scheme is not expected to significantly impact upon the ability of hedgehog to commute or forage. There is however potential for hedgehog to be harmed should they be present on-Site during construction and mitigation should be adhered to.

Mitigation

4.37 The following mitigation measures will be required during construction to avoid impacts in relation to the hedgehog:

- Excavations will be covered at the end of each working day. Any excavations or deep pits within the construction site that have to be left open overnight will be provided with a means of escape should a hedgehog enter. This could simply be in the form of a roughened plank of wood placed in the excavation as a ramp to the surface.

Enhancements

A Biodiversity Net Gain (BNG) Assessment has been carried out for the proposal at the Site. The results of the BNG assessment concluded that the proposals would result in a net gain greatly exceeding the mandatory 10% net gain, with a gain of **2.95** habitat units, which is

an increase of **20.35%** from the baseline value of the Site. The proposals will also achieve a gain of **0.52** hedgerow units with is a gain of **10.64%.** Full details of the BNG assessment can be found in the BNG report[31].

4.38 The significant uplift of the habitat units at the Site are the result of proposed enhancement of the whole woodland, planting of higher distinctiveness habitat, namely other neutral grassland, mixed scrub and individual trees, The proposals also entail the provision of a Sustainable Drainage Systems (SuDS), ruderal/ephemeral vegetation and amenity grassland associated with pavements. Grassland and tree planting.

4.39 The woodland in the south of the Site will be enhanced to improve its poor condition. The woodland will undergo management techniques including:

- Selective thinning to reduce areas of thick canopy, particularly of naturalised species such as sycamore. This will enable more sunlight to reach the woodland floor to promote the growth of ground flora plants and young saplings. The understorey layer will improve the quality of the woodland habitat for species such as dormice, which are found within the local area. Due to increased foraging and commuting habitat.
- Creation of brash piles from discarded wooded material as a result of tree thinning / removal will provide areas of refugia for reptiles, amphibians and small mammals such as hedgehog. These areas of refugia will help to offset disturbance caused by increased recreational pressure within and adjacent to the woodland should they be strategically placed to create areas of quiet / less disturbance.
- Introducing coppicing as a management practice within the woodland would further increase the suitability of the woodland for dormouse, and help to encourage dormice into the woodland.
- Implementing deer-fencing will reduce the grazing pressure by herbivores within the woodland. This will provide further help in order to promote the formation of an understorey and ground flora, which will improve the woodland complexity and structure.
- The creation of woodland glades will provide a number of benefits. Invertebrates will benefit from areas of ground warmed by the sun, particularly *Lepidoptera* sp., and areas suitable for burrowing into the ground; reptiles will benefit from increased suitable basking habitat; and a more diverse floral structure will be allowed to form due to less competition for light. A biodiverse ground flora layer will subsequently encourage a more species rich assemblage of invertebrates and bird species into the woodland.
- The removal of non-native species within the woodland, such as larch create more space and encourage the regeneration of native species, such as oak and hazel, that are present within the woodland.
- Removal of INNS within the woodland, namely Himalayan balsam, will improve the quality and condition of the woodland by controlling the spread of INNS to ensure native plants are not out-competed due to heavy shading of Himalayan balsam.
- The restoration of the dry ditch to the south of the Site will provide suitable on-site habitat for small mammals, grass snake, amphibians and invertebrates. The restoration of the ditch will also provide functionally linked habitat to the new wetland area proposed in the east of the Site.

4.40 The provision of new wetland habitat in the east of the Site will improve the suitability habitat and opportunities for wildlife found within the wider area such as water vole and grass snake. Although ponds within 250m of the Site tested negative for the presence of GCN eDNA, the provision of wetland habitat will provide opportunities for breeding GCN and may help to strengthen the metapopulation within the wider landscape.

4.41 The wetlands will also increase the diversity of invertebrate species within the Site due to the increased plant assemblage diversity the SuDS and ruderal/ephemeral vegetation will provide at the Site. The elevated invertebrate assemblage at the Site will provide food sources for bird species and small mammals. In addition to the above, the following enhancement measures are recommended to be incorporated within the wider park area, to provide further opportunities for species within the park:

- **Bat boxes** incorporated on retained or nearby trees provide spaces for bats to roost. Key focus should be on trees within areas of dense shrub that face away from artificial lighting. Bat boxes should be placed on a south-easterly to south-westerly aspect and erected at a minimum height of four metres. Habibat and Schwegler both provide a range of suitable models (such as Schwegler 1FS, 1FF or 2F). Similar models can also be used.
- **Bird boxes** incorporated on retained trees provide nesting spaces for various species. Nest boxes should be installed with a northerly orientation to create a cool

[31] LUC (2025). Land East of Trowes Lane, Swallowfield. Biodiversity Net Gain Assessment.

nesting environment and minimise the risk of chicks overheating. Various designs are available. For example, small hole-fronted nest boxes with a 32mm hole are suitable for house sparrow, which are present near to the Site and are listed as a species of principal importance in England. Similar models can also be used.

4.42 It should be noted that the features listed above should be installed in unlit areas, as this can reduce their suitability store these species, particularly for bats.

- **Log piles and hibernacula** to provide habitat for reptiles which are present within the park southwest of the Site, and for hedgehog which have potential to be present.
- **Mammal gaps** incorporated into any boundaries on Site such as fences to allow for foraging and connectivity throughout the Site for species such as hedgehogs.

4.43 These enhancements will provide new suitable habitat for a range of species, including foraging bats, birds, reptiles and hedgehog.

Appendix A

Policy & Legal Considerations

A.1 The Conservation of Habitats and Species Regulations 2017 transpose the requirements of the European Habitats Directive (Council Directive 92/43/EEC) and Birds Directive (Council Directive 2009/147/EC on the conservation of wild birds, replacing Directive 79/409/EEC) into UK law, enabling the designation of protected sites and species at a European level.

A.2 The Wildlife and Countryside Act 1981 (as amended) forms the key piece of UK legislation relating to the protection of habitats and species.

A.3 The Countryside Rights of Way Act 2000 provides additional support to the Wildlife and Countryside Act 1981; for example, increasing the level of protection for certain species of reptiles.

A.1 The Wild Mammals (Protection) Act 1996 sets out the welfare framework in respect to wild mammals, prohibiting a range of activities that may cause unnecessary suffering.

A.2 Species and Habitats of Principal Importance for Conservation in England and Wales and priority habitats and species listed in the Wandsworth Local Plan (see below) are species which are targeted for conservation. The government has a duty to ensure that involved parties take reasonable practice steps to further the conservation of such species under Section 41 of the **Natural Environment and Rural Communities Act** 2006. In addition, the Act places a biodiversity duty on public authorities who 'must, in exercising their functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity' (Section 40 [1]). Criteria for selection of national priority habitats and species in the UK include international threat and marked national decline.

A.3 The National Planning Policy Framework (December 2023) states (Section 15) that the planning system should Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

A.4 It also states when determining planning applications, local planning authorities should apply the following principles:

- a) 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;
- b) 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 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;
- c) 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
- d) 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.

Bats

A.5 All British species of bat are listed on the **Wildlife and Countryside Act 1981 (as amended) Schedule 5**. It is an offence to deliberately kill, damage, take (Section 9(1)) a bat; to intentionally or recklessly disturb a bat whilst it occupies a place of shelter or protection (Section 9(4)(b)); or to deliberately or recklessly damage, destroy or obstruct access to a bat roost (Section 9(4)(c)). Given the strict nature of these offences, there is an obligation on the developer and owner of a site to consider the presence of bats.

A.6 All British bats are listed on the **Conservation of Habitats and Species Regulations 2017, Schedule 2**. Regulation 43 strengthens the protection of bats under the 1981 Act against deliberate capture, injuring or killing (Regulation 43(1) (a)), deliberate disturbance (Regulation 43 (1) (b)) and damage or destruction of a resting place (Regulation 43(1) (d)).

A.7 A bat roost is defined as any structure or place which is used for shelter or protection, irrespective of whether bats are resident. Buildings and trees may be used by bats for a number of different purposes throughout the year including resting, sleeping, breeding, raising young and hibernating. Use depends on bat age, sex, condition and species as well as the external factors of season and weather conditions. A roost used during one season is therefore protected throughout the year and any proposed works that may result in disturbance to bats, and loss, obstruction of or damage to a roost are licensable.

Application for a Natural England EPS Licence

A.8 Development works that may cause killing or injury of bats or that would result in the damage, loss or disturbance of a bat roost would require a Natural England (NE) Bat Mitigation Licence. For a Mitigation licence to be granted three tests must be met. Evidence is needed to determine these three tests:

2. Whether there is a need for the development which justifies the impact on the European Protected Species (EPS);
3. Whether there is an alternative which would avoid the impact and need for an EPS licence; and
4. Whether mitigation proposed is sufficient to maintain the conservation status of the EPS in question.

A.9 A Mitigation Licence application will generally only be considered by NE on receipt of planning consent, and once any pre-commencement conditions of relevance to ecology have been discharged.

Licensing Routes

A.10 There are two licensing routes now available for bats, outlined below:

Full NE England EPS Mitigation Licence

The application comprises three components including:

5. An application form (broad details of the applicant, site and proposals);
6. A detailed Method Statement providing the survey methods and findings, impact assessment and mitigation measures (including detailed maps and schedule of works); and
7. A Reasoned Statement outlining the “need" for the development and consideration of alternatives.

A.11 NE aim to determine the application within six weeks (although this can take longer).

NE Low Impact Class Licence (LICL)

A.12 This new route provides an alternative, quicker route (with a much-reduced application form, and a target of 10 days to determine an application). LICL is only available to Registered Consultants identified by NE if the following condition is met:

8. Sites which support up to three low status roosts (day roosts, night roosts, feeding roosts and transitional roosts) of a maximum of three common species. The common species which can be covered by this licence include common pipistrelle, soprano pipistrelle, brown long eared, whiskered, Brandts, Daubenton's and Natterer's bat.
9. This licence cannot be used in relation to trees.

A.13 All licensed works require evidence that there is a need for the development and that appropriate mitigation, including seasonal constraints and provision of alternative habitat and/or roosting structures is considered.

A.14 Before Natural England can confirm The Site is registered and licensable works can commence, an assessment of the three tests must be undertaken by the Registered Consultant.

A.15 Although this does not need to be submitted to NE, NE may subsequently undertake a review of the project and request to see all evidence as collected by the Consultant. This can only be undertaken following a survey and impact assessment which must be carried out in accordance with licence conditions and BCT survey guidelines.

Birds

A.16 Birds and their nests are protected by the Wildlife and Countryside Act 1981 (as amended). This Act gives protection to all species of bird with regard to killing and injury, and to their nests and eggs with regard to taking, damaging and destruction. Certain species listed on Schedule 1 of the Act, are afforded additional protection against protection.

Great Crested Newts

4.44 GCN and their places of shelter are subject to the same level of protection as bats as a European Protected Species (see above).

Reptiles

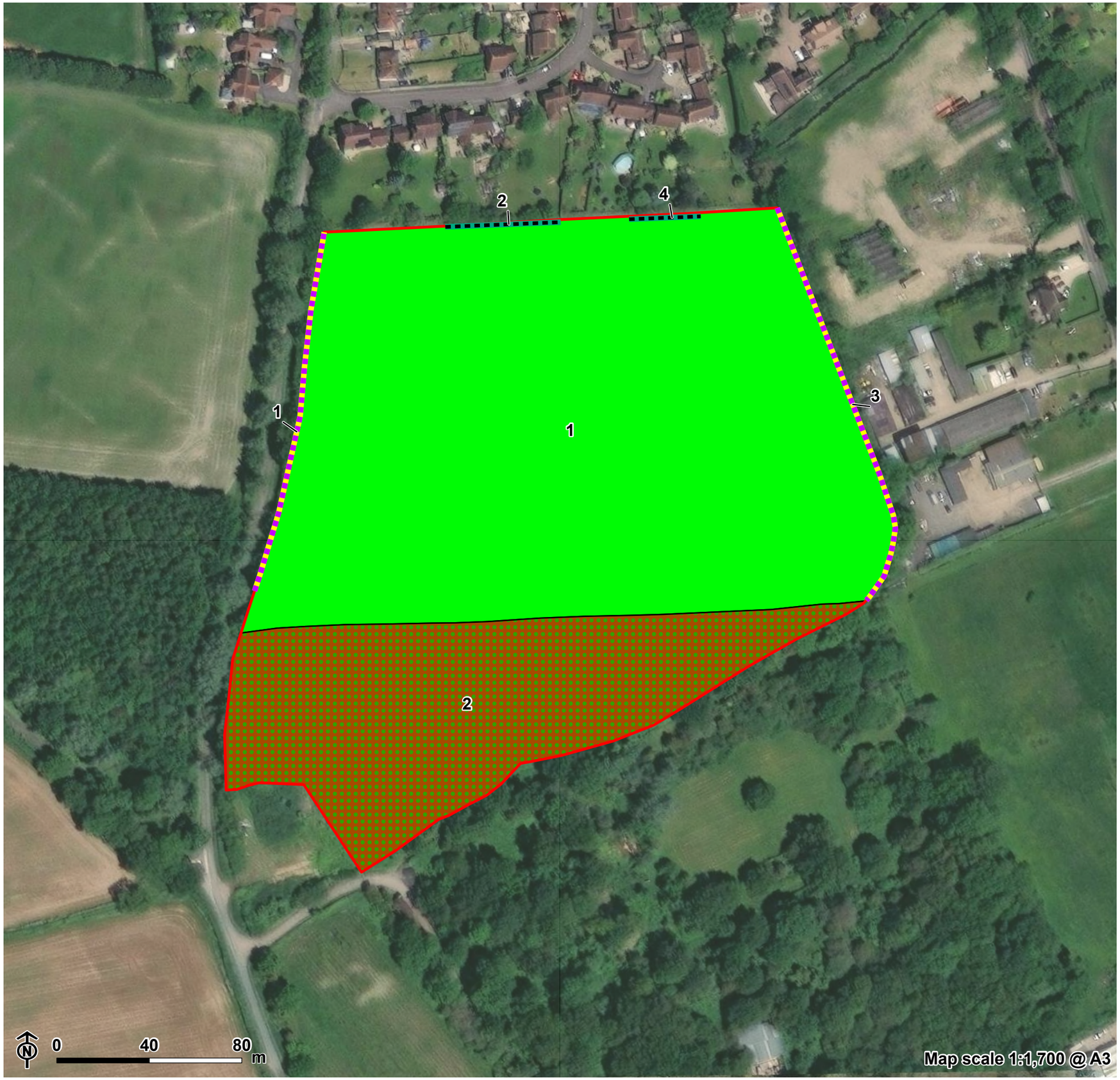
4.45 All UK reptiles and amphibians are legally protected from intentional and reckless killing and injury under the Wildlife and Countryside Act 1981 (as amended).

Appendix B
Figures

Land East of Trowes Lane, Swallowfield
City & Country Bramshill Ltd

LUC

Figure 1: Baseline UKHab Habitat



Site boundary

UKHab (baseline) habitat linear

Native hedgerow

Native hedgerow with trees

UKHab (baseline) habitat area

Modified grassland

Other woodland; mixed

Maxar, Microsoft

13501_001_Swallowfield_BNG/001_r0_Fig01_Baseline_Habitats_A3L 25/09/2025

Land East of Trowes Lane, Swallowfield
City & Country Bramshill Ltd

LUC

Figure 2: Dormouse Tube Locations

Site boundary
Dormouse tube location

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49

0 40 80 m

Map scale 1:1,700 @ A3

Maxar, Microsoft

Appendix C

Site Photographs

Target Note Number	Description	Photograph
1	Heavily managed grassland field of poor modified grassland that dominated the Site. The sward comprised perennial rrye grass *Lolium perenne*, locally buttercup *Ranunculus repens.* Frequently occurring species included soft brome *Bromus hordeaceus*, cock's-foot *Dactylis glomerata,* Yorkshire fog *Holcus lanatus* and meadow grass *Agrostis* sp. Species occasionally and rarely occurring included ivy *Hedera helix*, herb Robert *Geranium robertianum*, dandelion *Taraxacum* ag., curled dock *Rumex crispus*, lesser trefoil *Trifolium dubium*, selfheal *Prunella vulgaris*, soft rush *Juncus effusus*, hoary willowherb *Epilobium parviflorum* and vetch *Vicia* sp.	

Target Note Number	Description	Photograph
2	An area of woodland forms the southern section of the Site. The woodland varied in character throughout, however, not drastically enough to be recorded as distinct woodland types. Conifer species were more commonly recorded within the eastern section of the woodland, whereas the northern area of the woodland was largely dense with deciduous trees. Within the central area of woodland a field maple plantation dominated. A young pedunculate oak plantation silver birch *Betula pendula* was located to the west of the woodland.	

Target Note Number	Description	Photograph
3	Hedgerows are present within the Site and formed the Site boundaries. All hedgerows comprised native specie, including *Cretaegus monogyna,* bramble *Rubus fruticosus,* blackthorn *Prunus spinosa,* dogrose *Rosa canina,* field maple *Acer campestre,* hazel *Corylus avellana* and ash *Fraxinus excelsior.* Mature trees were present in the hedgerow, including pedunculate oak *Quercus robur* and ash.	

Appendix D

Static Monitoring Data

Table A.1 Environmental Conditions During Static

Date	Sunset	Sunrise	Min Temperature (°C)	Max Temperature (°C)	Weather Conditions (night)
Early Summer (July)					
29/07/2025	20:56	05:26	13	18	Dry, moderate breeze
30/07/2025	20:54	05:27	14	20	Dry, moderate breeze
31/07/2025	20:53	05:29	11	19	Dry, moderate breeze, light rain 21:00
01/08//2025	20:51	05:30	11	19	Dry, moderate breeze
02/08//2025	20:49	05:32	12	18	Dry, light rain from 00:00, 4-7mph
03/08/2025	20:48	05:33	14	18	Dry, moderate breeze

July Static Monitoring Data

	Common pipistrelle	Soprano pipistrelle	Noctule	Serotine	Leisler	Myotis sp	Barbastelle	Brown long-eared
29/07/2025	**63**	**-**	**24**	**4**	**4**	**-**	**-**	**-**
30/07/2025	**120**	**9**	**29**	**3**	**-**	**-**	**-**	**-**
31/07/2025	**159**	**12**	**11**	**1**	**1**	**-**	**2**	**-**
01/08//2025	**1**	**7**	**1**	**2**	**-**	**1**	**-**	**-**
02/08//2025	**50**	**8**	**-**	**-**	**-**	**-**	**-**	**1**
03/08/2025	**60**	**4**	**2**	**-**	**-**	**1**	**1**	**-**