10 Ecology

10.1 Scope of Assessment

10.1.1 This chapter of the ES assesses the likely significant effects of the Proposed Development in terms of ecology and is supported by **ES Volume 3, Appendix F:**

- Appendix F1: Preliminary Ecological Appraisal (PEA)
- Appendix F2: Bat Activity Report
- Appendix F3: Dormouse Report
- Appendix F4: Reptile Report
- Appendix F5: BNG Feasibility Assessment

10.1.2 The chapter describes: the assessment methodology; the baseline conditions currently existing at the Site and in the surrounding area; the likely significant environmental effects; the mitigation measures required to prevent, reduce or offset any significant adverse effects; the likely residual effects after these measures have been employed; and the 'Type 2' ('inter-project') cumulative effects associated with the Proposed Development in combination with other developments within 5 km of the Site.

10.1.3 'Type 1' cumulative ('intra-project') effects, which are combined effects of individual EIA topic effects on a particular receptor, are considered in **ES Volume 2, Chapter 13: Effect Interactions**.

10.2 Key Legislation, Policy and Guidance Considerations

10.2.1 The ecology assessment has been undertaken within the context of relevant planning policies, guidance documents and legislative instruments. These are summarised below.

Legislation and Regulation

10.2.2 This assessment has been conducted considering relevant legislation and guidance set out in national, regional and local planning policy, as described below. Compliance with legislation and policy may require design alterations, licensing and habitat and species assessments.

Wildlife and Countryside Act

10.2.3 The Wildlife and Countryside Act (1981, as amended)[1]. The surveys identify the potential presence within the project's red line of several species or species groups listed on Schedule 5 of the Act, for which the provisions of Section 9 apply. Their presence necessitates surveys and assessments to determine presence/absence, location of activity and in some cases estimates of abundance, from which mitigation measures could, if necessary, be devised to comply with the Act.

The Protection of Badgers Act 1992

10.2.4 The Protection of Badgers Act 1992[2], consolidates and improves previous legislation (including the Badgers (Further Protection) Act 1991). It is a serious offence to kill, injure or take a badger, or to damage or interfere with a sett unless a licence is obtained from a statutory authority.

The Hedgerow Regulations 1997

10.2.5 The Hedgerow Regulations 1997[3]. These regulations were enacted under section 97 of the Environment Act 1995 and came into operation on 1 June 1997. They introduced a new arrangement for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification.

The Natural Environment and Rural Communities (NERC) Act (2006)

10.2.6 The Natural Environment and Rural Communities (NERC) Act (2006)[4]. Section 41 (Biodiversity lists and action (England)) of the Act requires the Secretary of State to "publish a list of living organisms and types of habitat which in the Secretary of State's opinion are of principle importance for the purpose of conserving biodiversity (in England)" and to "take such step as… reasonably practical to further the conservation… or promote the taking by others of such steps" for these (Section 41 List) species and habitats. These habitats are known as priority habitats. The Preliminary Ecological Appraisal (PEA) identified the presence of the Section 41 hedgerows as well as a number of Section 41 species, including bats, breeding birds, and reptiles. Surveys and/or assessments for the species provided information to inform mitigation that could be requested by the local planning authority in relation to Section 41, in addition to meeting legislative requirements.

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[1] https://www.legislation.gov.uk/ukpga/1981/69

[2] https://www.legislation.gov.uk/ukpga/1992/51/contents

[3] https://www.legislation.gov.uk/uksi/1997/1160/contents/made

[4] https://www.legislation.gov.uk/ukpga/2006/16/contents

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

10.2.7 The Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019[5], protects biodiversity through the conservation of natural habitats and species of wild fauna and flora. It outlines the rules for the protection, management and exploitation of such habitats and species. European Protected Species (EPS) are protected under this legislation including all UK bat species. If the development is likely to cause an offence against an EPS which significantly impacts their favourable conservation status, an EPS mitigation licence would be required to permit certain activities that would otherwise be illegal. Special Areas of Conservation (SAC) are selected to protect one or more special habitat and/or species – terrestrial or marine, and are listed in the Habitats Directive.

The Environment Act (2021)

10.2.8 The Environment Act (Nov 2021)[6] introduces a new regime of environmental principles and governance to fulfil the role that will be lost upon Brexit, and includes a new regulator ensure environmental governance through an environmental watchdog, the Office for Environmental Protection (OEP). This act also includes a system of targets and monitoring, including that of biodiversity, with biodiversity net gain targets (10% increase, to come into effect by January 2024) required.

Planning Policy

National Planning Policy Framework

10.2.9 The National Planning Policy Framework (2024)[7] sets out the Government's planning policies for England and how these are expected to be applied. Section 15 of the National Planning Policy Framework is entitled 'Conserving and Enhancing the Natural Environment'. This outlines the need for planning policies and decisions to contribute to and enhance the natural environment, to minimise impacts from the Proposed Development and to provide net gains in biodiversity.

[5] https://www.legislation.gov.uk/ukdsi/2019/9780111176573

[6] https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted

[7] https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf

Planning Practice Guidance on Natural Environment

10.2.10 The Biodiversity, Geodiversity and Ecosystems section of the Planning Practice Guidance (PPG) on Natural Environment[8] provides explanation on the implementation of nature conservation and biodiversity net gain.

25 Year Environment Plan

10.2.11 The Government's 25 Year Environment Plan[9] sets out the aspiration to mainstream biodiversity net gain in the planning system and move towards approaches that integrate natural capital benefits.

Tandridge District Core Strategy

10.2.12 Tandridge District Core Strategy adopted February 2010[10] includes the following policies which are considered relevant to ecology, biodiversity, and nature conservation:

- Policy CP 17 – Biodiversity

Tandridge Local Plan Part 2: Detailed Policies

10.2.13 Tandridge Local Plan Part 2: Detailed Policies adopted July 2014[11] includes the following policies which are considered relevant to ecology, biodiversity, and nature conservation:

- Policy DP19 – Biodiversity, Geological Conservation & Green Infrastructure

Tandridge District Council Plan 2033

10.2.14 The replacement Local Plan was submitted for examination in January 2019 and hearings took place in Autumn 2019.

10.2.15 The Inspector's report, received by the council in early 2024, stated that the plan was not capable of being found sound. The council subsequently resolved on 18 April 2024 to withdraw the submission version of its draft Local Plan under s.22(1) of the Planning and Compulsory Purchase Act 2004.

10.2.16 Work on the new local plan is underway but is at a very early stage so will not have any bearing on the determination of this application. The most recent Local

[8] https://www.gov.uk/guidance/natural-environment#biodiversity-geodiversity-and-ecosystems

[9] https://assets.publishing.service.gov.uk/media/5ab3a67840f0b65bb584297e/25-year-environment-plan.pdf

[10] https://www.tandridge.gov.uk/Planning-and-building/Planning-strategies-and-policies/Adopted-development-plan

[11] https://www.tandridge.gov.uk/LinkClick.aspx?fileticket=O4FDjdEoAbk%3d&portalid=0

Development Scheme refers to submission of the new local plan in 2026 and adoption in 2027.

Technical Standards and Guidance

Guidelines for Ecological Impact Assessment in the UK and Ireland

10.2.17 The assessment has been carried out with reference to the Chartered Institute for Ecology and Environmental Management (CIEEM) 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (CIEEM 2018) (Ref. 12-11).

10.2.18 The ecological reports which support the EIA were produced with reference to current guidelines for preliminary ecological appraisal (CIEEM 2017) (Ref. 12-12) and in accordance with BS 42020:2013 Biodiversity – Code of Practice for Planning and Development (Ref. 12-13).

10.3 Assessment Methodology

10.3.1 This section of this ES chapter presents the following:

- Information sources that have been consulted throughout the preparation of this chapter.
- A step by step guide to the methodology behind the assessment of ecological effects, specifically the criteria for the determination of sensitivity of receptor and magnitude of change from the existing 'baseline' condition.
- An explanation as to how the identification and assessment of potential ecological effects has been reached.
- The significance criteria and terminology applied to the assessment of ecological residual effects.

10.3.2 The following sources of information that define the Proposed Development have been reviewed and form the basis of the assessment of likely significant effects on ecology, these comprise:

- Detailed plans and elevations;
- Southern Water Waste Water Plan;
- Arboricultural Impact Assessment (AIA); and
- Design and Access Statement (informative).

Determination of Baseline

10.3.3 The baseline condition of the Site is documented in section 10.5 of this chapter. The baseline is derived from data (field surveys and desk studies) gathered between 30th March 2022 and 26th September 2024. The study area is defined by the Site boundary

and the zone of influence which extends to 2 km for protected species. Records for notable and/or protected species within 1 - 2 km are usually considered to be of greatest relevance within most studies as this is usually the distance encompassing the typical home ranges of most of the species studied. In terms of designated sites, a 2 km search for Locally and Nationally Designated Sites was considered appropriate, with a 10 km review of International Designated Sites.

10.3.4 The survey work, which develops the baseline conditions, included a Preliminary Ecological Appraisal (PEA) and species-specific assessments including surveys for dormouse, bats and reptiles.

Prediction Methodology

Determining Construction Effects

10.3.5 The standard approach applied in the UK to Ecological Impact Assessment (EcIA) is that developed by the Chartered Institute of Ecology and Environmental Management (CIEEM) in 2016 and revised in 2018[12]. This methodology has been used to evaluate existing conditions, and to assess the significance of likely effects on ecological features that may arise during construction of the Proposed Development. This involves determining the importance of each ecological feature and undertaking an impact assessment (pre- and post-implementation of mitigation measures).

10.3.6 The construction of the Proposed Development could result in the direct loss of the arable habitats on Site and the associated grassland edges. The loss of arable habitats and the grassland margins will be considered in relation to the species which reside within, for example, reptiles and breeding birds.

10.3.7 Hedgerows and individual tree loss may also be expected to occur. These features provide linear habitat and landscape connectivity which may impact mobile species such as bats. Furthermore, the loss of such habitats could impact upon bird species that may use such habitats for nesting. Hedgerows and linear features can also be utilised by species such as hedgehogs, and reptiles.

Determining Complete and Occupied Scheme Effects

10.3.8 The Chartered Institute of Ecology and Environmental Management (CIEEM) in 2016 and revised in 2018 methodology has been used to evaluate the significance of likely effects on ecological features that may arise during operation of the Proposed Development.

10.3.9 Long term impacts resulting from the Proposed Development are likely to result in impacts resulting from an increase in the local human population. This increase in

[12] https://cieem.net/wp-content/uploads/2019/02/Combined-EclA-guidelines-2018-compressed.pdf

local population can result in recreational pressure causing 'wear and tear' of protected and retained habitats.

10.3.10 Recreational impacts can impact upon the integrity of protected habitats (such as those present within Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSIs)) resulting in the loss of the integrity of qualifying features.

10.3.11 Furthermore, recreational pressure can impact upon retained habitats, such as unmanaged grassland edges, woodland, trees and hedgerows.

10.3.12 Operational impacts such as changes to light levels have the potential to impact flight paths of bats (and impact other nocturnal species).

Significance Criteria

10.3.13 For the purposes of inclusion of this Ecology Chapter within the wider Environmental Statement, which uses generic criteria, CIEEM classifications have been translated as set out in Table 10.1 below. These are provided in order to allow the Ecology Chapter to be integrated into the wider EIA methodology without compromising the CIEEM best practice approach. However, it should be noted that the two criteria do not precisely align, and professional judgement is undertaken in translating CIEEM's geographical criteria into EIA significance.

10.3.14 Important ecological features are those for which the decision maker (in this case DDC) needs the Environmental Impact Assessment (EIA), to help to assess the effects (adverse, beneficial or no change) and to guide the determination of the planning application.

10.3.15 Important ecological features, as defined by the characteristics below, should therefore be considered. These are generally defined by whether legislation or policy requires their consideration:

- Animal or plant species which are rare or uncommon, either internationally, nationally or more locally;
- Habitats which provide the habitats required by the above species;
- Species that are afforded legal protection;
- Endemic or locally distinct sub-populations of a species;
- Species or habitats of Principal Importance (i.e. priority habitats or species) under the NERC Act;
- Plant communities that are considered to be typical of valued natural/ semi-natural vegetation types;
- Species at the edge of their range; and
- Species-rich assemblages of plants (or animals).

10.3.16 Habitats and species identified in the Baseline Conditions are attributed an ecological importance. The importance or potential importance of an ecological feature is described according to its importance in a geographical context i.e. (International, National, Regional, Metropolitan/County, and Local importance). Furthermore, a category of 'Site' importance is applied to a feature which is present or potentially present at the Site, but where the importance to nature conservation of the feature is of relatively low value in the context of the wider landscape. A further 'Negligible' category is assigned to features of no particular intrinsic nature conservation importance.

10.3.17 The importance of habitats and species which are given special protection under domestic or international legislation is considered within the assessment of the importance of an ecological feature. Non-statutory designated sites are also be identified as important ecological features.

10.3.18 The criteria used to determine the importance of ecological features is indicated below in **Table 10.1**. In this ES 'importance' has been defined as 'sensitivity' in line with other chapters and therefore sensitivity is used with exacting effect.

10.3.19 To arrive at a judgement on the significance of effect on ecology, the assessment considers the relative sensitivity of individual elements and how these are likely to be affected by the proposals. The criteria for assessing the sensitivity of biodiversity are set out in **Table 10.1.**

Table 10.1: Criteria for Assessing the Sensitivity for Biodiversity

Sensitivity	Description
Very High	Internationally designated sites - SPA, SAC and Ramsar. Extensive areas of Annex 1 habitats or smaller areas of habitat of strategic importance in terms of supporting larger areas. Populations of species of international importance, for example species listed on Annex IV of Habitats Directive or ICUN Red list species listed as critically endangered.
High	Nationally designated sites – SSSI, NNR. Large areas of Priority Habitat. Nationally important populations of species listed on Schedule 5 and 8 of the Wildlife and Countryside Act 1981. Sites supporting more than 1% of a national population.
Medium	High or medium importance and rarity, regional scale, limited potential for substitution. Areas of habitat that fall short of SSSI selection criteria but form substantial areas of Priority Habitat. Sites designated for nature conservation value by county or local planning authority. Sustainable populations of species included within regional BAPs.

Sensitivity	Description
Low	Low or medium importance and rarity, local scale. Areas of Priority Habitat identified within the LBAP. Sustainable populations of species listed within LBAP and/or red data book. Species and habitats of limited ecological value and rarity, smaller populations of species listed within LBAP.
Negligible	Very low importance and rarity.

Impact Assessment

10.3.20 The assessment of the impact of the Proposed Development and changes to the baseline conditions on the Site, has been determined by the sensitivity of the features in relation to the impacts and effects of construction and operation of the Proposed Development, the mobility of species, the sensitivity of species, and the importance of any particular species or habitats as keystone features within local ecological networks.

10.3.21 Each potential impact and effect on a sensitive habitat or species has been assessed at its respective geographical scale and, where appropriate, using the following parameters:

- Beneficial (positive in the CIEEM guidance) or adverse (negative in the CIEEM guidance) - whether the impact leads to an adverse, beneficial or neutral effect;
- Extent – the spatial area over which the impact occurs;
- Magnitude – change in for example the amount of habitat or the size of population;
- Duration – both in relation to the life cycle of the ecological feature and of the life of the project;
- Frequency and timing – for example the number of disturbance incidents to birds and their timing in relation to the breeding cycle; and
- Reversibility – if and at what timescale recovery is possible.

Assessment of Significance of Effect

10.3.22 Following the methodology described by CIEEM, an ecologically significant effect is defined as an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local'. Significance of effects are described as 'major', 'moderate', 'minor' or 'neutral'.

10.3.23 Where there is no likelihood of significant effect, i.e. the effect is considered 'neutral' the receptor has been scoped out of the assessment.

10.3.24 The significance of effect matrix is set out in **Table 10.2** and has been used alongside professional judgement to determine the significance of effect. It is assumed for the purposes of this assessment that any effects which are moderate or greater are considered significant, those that are minor or neutral are considered not significant

Table 10.2: Significance of Effect Matrix

Sensitivity	Magnitude of Impact (Degree of Change)					
	No Change	Negligible	Small	Medium	Large	Very Large
Very High.	Neutral	Minor	Moderate or Major	Major or Very Major	Very Major	Very Major
High	Neutral	Minor	Minor or Moderate	Moderate or Major	Major or Very Major	Very Major
Medium	Neutral	Neutral or Minor	Minor	Moderate	Moderate or Major	Major
Low	Neutral	Neutral or Minor	Neutral or Minor	Minor	Minor or Moderate	Moderate
Negligible	Neutral	Neutral	Neutral or Minor	Neutral or Minor	Minor	Minor

10.3.25 In the context of the Proposed Development, short to medium term (temporary) effects are generally considered to be those associated with the construction phase, and long term (permanent) effects are generally those associated with the complete and occupied scheme.

10.3.26 The embedded mitigation measures will aim to reduce the overall significance of effect. It is not always possible to fully mitigate an adverse effect to neutral levels. An assessment is then made of residual effects which takes account the proposed embedded and any additional mitigation.

Limitations and Assumptions

10.3.27 The specific protected species surveys were undertaken at the appropriate time of year and during suitable weather conditions to an appropriate level of survey effort. Any specific limitations are noted in the protected species reports appendices (ES Volume 3 Appendix F2, F3, & F4).

10.4 Scoping and Consultation

10.4.1 An EIA Scoping Report (presented in **ES Volume 3, Appendix A1**) was submitted to TDC on 22nd August 2024 with a formal request for a Scoping Opinion on the

proposed scope of the EIA and assessment methodologies. TDC subsequently issued their Scoping Opinion on the proposed scope and methodology of the topics for assessment within the EIA. A copy of TDC's Scoping Opinion is provided in **ES Volume 3, Appendix A2**.

10.4.2 A summary of the key points raised in TDC's Scoping Opinion, relevant to ecology, are presented in **Table 10.3**, including a response as to where the comments have been addressed.

Table 10.3: TDC Scoping Opinion Comments and Response

Summary of Comment	Response or location within the ES where comments are addressed
Protection of ancient woodland within The Bogs (pSNCI)	The Bogs pSNCI and associated ancient woodland will be fully protected throughout construction and operational stages of development. See paragraphs: 10.7.11, 10.7.12, 10.7.30, & 10.7.35
Assessment of importance of hedgerows	The species-poor hedgerow was confirmed to be an important hedgerow owing to presence of a protected species (slow worm). Suitable compensatory species-rich hedgerow planting will be established see paragraph 10.7.14, & 10.7.39

10.5 Baseline Assessment and Identification of Key Receptors

Desktop Study

10.5.1 A desktop study was completed using an internet-based mapping service[13] for statutory designated sites and to understand the habitats present in and around the survey area as well as habitat linkages and features within the wider landscape. Biological Records for the Site and local area (up to 2 km) were purchased from the Surrey Biodiversity Information Centre (SBIC) in 2022.

10.5.2 The Site does not fall within or adjacent to any nationally or internationally designated sites. There are no internationally designated statutory sites within 10 km.

10.5.3 There is one nationally designated statutory site within 2 km, which is Woldingham & Oxted Downs Site of Special Scientific Importance (SSSI), located *c.*1 km north of the Site. The site is designated for its chalk grassland, orchids and rare invertebrates.

10.5.4 In terms of non-statutory designations, there are seven Local Wildlife Sites (LoWS), and two Conservation Verges (CV), within 2 km of the Site. Also of note is a potential Site of Importance for Nature Conservation (pSNCI), adjacent to the south-western

[13] https://magic.defra.gov.uk/

boundary of the site known as 'The Bogs'. The location and selection criteria for these areas is presented in **Table 10.4.**

Table 10.4: TDC Non-statutory designated sites within 2 km of the Site

Site name	Distance and orientation from the Site	Selection criteria
The Bogs pSNCI	Adjacent to south-west boundary	None given. Assumed it is due to its ancient/wet woodland habitat.
Five Acre Shaw and Lodge Wood SNCI	150 m north-west	Ancient woodland
Armitage Wood and Hamfield Shaw SNCI	430 m north	Ancient woodland
Chalkpit Wood SNCI	500 m north	Ancient woodland
Robins Grove Wood & Rye Wood SNCI	730 m west	Ancient woodland
Titsey Plantation SNCI	1 km north	Extensive priority woodland habitat
Chalkpit Lane CV	1.3 km north	Supports rare/scarce plant species: Lesser Hairy-brome *Bromopsis benekenii* & Greater Burnet-saxifrage *Pimpinella major.*
Limpsfield Common SNCI	1.3 km south-east	Mosaic of woodland, scrub, unimproved acid grassland, & relict heath.
Hell Shaw SNCI	1.7 km north	Ancient Woodland
Oast Road CV	1.7 km south	Important crossing point for significant population of common toad *Bufo bufo*.

10.5.5 The Site is surrounded by a number of priority habitats including:

- Numerous parcels of ancient woodland, including a c.2.2 ha area adjacent to the southern boundary.
- A greater number of priority deciduous woodland parcels, including an area which overlaps the southern site boundary.
- Two areas of traditional orchards priority habitat, the closest being 20 m north of the Site on the opposite side of Barrow Green Road, and the other located c.90 m to the west.
- An extensive area of woodpasture and parkland is located at Barrow Green Court, and Barrow Green Gardens, approximately c.220 m west of the Site.

10.5.6 OS mapping found no waterbodies on Site and two waterbodies within 250 m of the Site . One appears to be a stream on the western site boundary and the other a pond within the woodland 14 m south-west of the Site.

10.5.7 Four European Protected Species Mitigation (EPSM) licences were issued within 2 km of the Site. These were for destruction of a common pipistrelle roost (resting place) in 2016, 325 m south of the Site; destruction of a common pipistrelle resting place in 2016, 630 m south of the Site; destruction of a hazel dormouse breeding site/ resting place in 2020, 700 m north of the Site; and destruction of a common pipistrelle resting place in 2017, 740 m east of the Site.

10.5.8 A 2 km records search was requested from Surrey Biodiversity Information Centre (SBIC). These records were purchased in 2022. The records closest to Site, recorded within the last 10 years and relevant to the habitats on Site have been presented in **Table 10.5.**

Table 10.5: Notable species records within 2 km of the Site in the last 10 years

Species	Status	Distance from site	Date of record
White admiral *Limenitis camilla* (1 record)	NERC Act (2006) Section 41	1.5 km west	07/02/2018
Roman snail *Helix pomatia* (6 records)	Wildlife and Countryside Act 1981 (as amended);	1 km north	04/07/2019
Adder *Vipera berus* (1 record)	Wildlife and Countryside Act 1981 (as amended); NERC Act (2006) Section 41	1.2 km west	June 2010
Common lizard *Zootoca vivapera* (3 lizard)	Wildlife and Countryside Act 1981 (as amended); NERC Act (2006) Section 41	775 m north	June 2010
Grass snake *Natrix natrix* (2 records)	Wildlife and Countryside Act 1981 (as amended); NERC Act (2006) Section 41	1.2 km west	June 2010
Slow worm *Anguis fragilis* (3 lizard)	Wildlife and Countryside Act 1981 (as amended); NERC Act (2006) Section 41	775 m north	June 2010

Species	Status	Distance from site	Date of record
Dormouse *Muscardinus avellanarius* (6 records)	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5; NERC Act (2006) Section 41	570 m south-west	09/01/2009
Brown long-eared bat *Plecotus auratus* (3 records)	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	800 m north	September 2010
Common pipistrelle *Pipistrellus pipistrellus* (5 records)	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	320 m south	08/04/2014
Soprano pipistrelle *Pipistrellus pygmaeus* (2 records)	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	1.1 km west	September 2010
Noctule *Nyctalus noctula* (1 record)	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	1.3 km west	September 2010
Bullfinch *Pyrrhula pyrrhula* (1 record)	Wildlife and Countryside Act 1981 (as amended); Amber BoCC	1.6 km south-east	16/08/2017

On Site Habitats

10.5.9 The Ecology Partnership undertook an initial UK Hab Habitat survey on the 30th March 2022, which was updated following a update walkover on 26th September 2024.

10.5.10 The Site is primarily made up of a large single arable field intersected from north to south-east by a footpath, bordered by bands of linear scrub, as well as a small block of woodland in the north, and the edge of an extensive woodland to the south, and an ephemeral stream along the western boundary.

10.5.11 The habitats present within the Site boundary are listed below:

- The majority of the Site was made up of arable land used for cereal crop production, primarily maize. This habitat is common and widespread and is of **negligible** environmental value/sensitivity.
- The margins of the field including either side of the central footpath that runs through the Site were comprised of tall sward other neutral grassland. This comprised abundant false oat-grass and perennial rye grass, with frequent cock's-foot. Flowering species included frequent greater burdock, cow parsley, white clover, and common nettle, with occasional creeping thistle, broad-leaved dock, cleavers, common hogweed, white dead-nettle, pineapple weed, and scentless mayweed. This habitat is common and widespread and is of **negligible** environmental value/sensitivity.
- The northern corner of the Site featured an area of broad-leaved woodland, with an informal footpath running through it. The canopy comprised abundant pedunculate oak, with occasional ash and sycamore. The understorey was relatively sparce and comprised occasional hawthorn, hazel, field maple, holly, and elder. The ground flora included frequent wood anemone, British bluebell, cow parsley, ivy, wood meadow grass and bramble, with occasional garlic mustard, ramsons, false woodbrome, enchanter's nightshade, herb Robert, wood avens, ground ivy, dog's mercury, lesser celandine, and creeping buttercup. The woodland in the south of the Site was similar in the drier areas in its western and eastern extents, however, changes to alder dominated wet woodland in the southern corner of the Site, with nettles dominating the ground flora along with frequent pendulous sedge and under-story restricted to rare occurrences of elder. These woodlands, whilst common in the local area, are relatively small in size and therefore considered to be of **low** environmental value/sensitivity.
- Whilst evidence of historic hedgerows were noted along the northern and southern site boundaries, these had largely grown out and exceeded the minimum 5m width for a hedgerow. The only exception to this was a single native species-poor hedgerow located along the eastern end of the northern site boundary adjacent to Barrow Green Road. This was short, heavily managed from both sides and dominated by hawthorn with rare occurrences of field maple, dog rose, wayfaring tree, and ash and sycamore saplings. Traveller's joy and ivy were also occasional within the hedge. This habitat is common and widespread in the local area, species poor, and not in good condition, however it is considered a

priority habitat and an important hedgerow, owing to presence of a protected species (slow worm) and is therefore of **low** environmental value/sensitivity.

- An unnamed stream is present along the western boundary of the Site. This is fed by a pipe that connects to a network of pipes capturing surface water runoff for a significant area of roads in the north-west of Oxted. The stream is heavily shaded by dense scrub and woodland and supported no riparian plant species. However, this is considered likely to be the primary source of water for the ancient/wet woodland to the south of the Site, and is therefore of **medium** environmental value/sensitivity.
- There were bands of mixed scrub along the western, and southern boundaries of the Site as well as a smaller area in the north of the site. This featured abundant hawthorn, with frequent bramble, and occasional field maple, hazel, ash, holly, blackthorn, dog rose, goat willow and elder. This habitat is common and widespread and is of **negligible** environmental value/sensitivity.
- The boundaries in the east and north-west of the Site were dominated by bramble and common nettle, with abundant greater burdock and frequent cleavers, cow parsley, and hedge bindweed. This habitat is common and widespread and is of **negligible** environmental value/sensitivity.

10.5.12 The arable fields, bare earth (footpath) and grassland margins that could be impacted by the Proposed Development do not exceed site-level importance and therefore significant adverse effects can be ruled out, i.e. any adverse effects on the grassland margins, arable habitats and bare earth would be **negligible (not significant).**

10.5.13 As such only certain habitats (hedgerows, stream, woodland) within the Site are considered within the next stages of the EIA.

Protected Species

10.5.14 Additional protected species surveys were conducted in 2022 and are detailed in **Table 10.6** below.

Table 10.6: Species Surveys undertaken in 2022

Faunal Group	Survey Methodology	Date of Surveys and Appendices	Guidance
Bats – Tree Inspection	Any trees at risk of impact and supporting particular features likely to be of value to bats, such as splits, cracks, rot holes, coverings of ivy, peeling bark or similar, were recorded.	As part of the PEA 30th March 2022 and update visit on 26th September 2024 ES Volume 4: Appendix F1 PEA.	Bat Surveys – Good Practice Guidelines 3rd edition (Collins 2016)
Bats – Commuting and Foraging	Bat activity surveys supported by static detectors in three locations for least five consecutive nights per surveyed month.	May, June, July, August, September, October 2022 ES Volume 4: Appendix F2 Bat Activity Report.	Bat Surveys – Good Practice Guidelines 3rd edition (Collins 2016)
Badgers	A search for badger evidence was carried out with particular attention paid to areas where the vegetation and/or the topography offered suitable sett sites such as embankments and wooded areas.	As part of the PEA 30th March 2022 and update visit on 26th September 2024. ES Volume 4: Appendix F1 PEA	National Survey of Badgers (Cresswell et al. 1990)
Reptiles	Seven survey visits to check artificial refugia (roofing felts) for the presence of reptiles.	Between April and May 2022 ES Volume 4: Appendix F4 Reptile Report.	Herpetofauna Workers Manual (Gent and Gibson 2003)
Dormice	Monthly surveys of dormouse tubes set up in suitable habitat (woodland and treelines)	Between April and October 2022 ES Volume 4: Appendix F3 Dormouse Report	Bright, P., Morris, P. & Mitchell-Jones, T. (2006) The Dormouse Conservation Handbook. 2nd edition. English Nature.

Bats

10.5.15 The Site is dominated by arable habitat which is considered of negligible value to foraging/commuting bats. The edge habitats, which support a range of tree lines, woodland edge and hedgerows, are of greater interest for bats. Tree lines and hedgerows provide landscape features which can provide foraging and commuting networks across the landscape.

10.5.16 In general, low levels of bat activity was recorded during the walked transect surveys, with the highest amount of activity recorded along the northern boundary hedgerow, the southwest corner adjacent to the ancient woodland and in the woodland parcel in the northeast. The lowest amount of activity was in the south and southeast, closest to the residential areas of Oxted. Activity was dominated by common pipistrelle, with occasional serotine and noctule passes and low numbers of soprano pipistrelles, Leisler's and one brown long-eared bat (BLE) pass.

10.5.17 Higher levels of bat activity were recorded across the Site on the Anabat detectors in comparison with the walked transect surveys, with the highest levels of activity overall being recorded in July and August. In total 2291 bat passes were recorded over the survey period, comprising at least seven species, with average total counts of *c.*51, 21, & 12 passes per night at the northern southern and western anabats. The most frequently recorded species was the common pipistrelle, with a peak average of 22 passes per night recorded by the northern anabat. The next most frequently recorded species was the soprano pipistrelle with a peak average of 18.5 passes per night recorded by the northern anabat. Together these two species accounted for *c.*76% of all bats recorded on site. The remaining *c.*24% of passes were made up of noctule (5.5 average passes/night), myotis (3 average passes/night), Leisler's (2 average passes/night), serotine (1.2 average passes/night), and brown long-eared bats (0.7 average passes/night). Given the low number of bat species recorded and their relatively low levels of activity within the Site, the populations of bats using the Site are considered to be of **low** environmental value/sensitivity.

Dormouse

10.5.18 The woodland and scrub habitats are considered to have moderate potential to support dormice. The commuting habitat provides connectivity between the Site and extensive ancient woodland habitats in the wider surrounding area to the south-west and north-west of the Site.

10.5.19 A total of 54 dormice nest tubes were established on Site, within the red line boundary in 2022 and surveyed between April and October. These surveys did not record any dormice or evidence of dormice within the Site, confirming their likely absence. As such, they are scoped out of the assessment

Great Crested Newt (GCN)

10.5.20 No ponds are present on Site, and one was identified within 250 m of the Site boundary, however this was confirmed to be part of an ephemeral stream adjacent to the north-west of the Site and was completely dry in both March and May and not suitable to support GCN. The data search returned no recorded for great crested newts (GCN) within 2 km of the Site boundary. The Site itself is dominated by arable land, which is of negligible value for GCNs. As such, it is considered the Site has negligible potential for GCN presence. As such, they are scoped out of this assessment.

Badger

10.5.21 No evidence of badgers was identified during the surveys, with no setts identified and no latrines or evidence of foraging. It is considered that badgers are likely present within the wider landscape, however it is unlikely they would be residing within the Site boundary. Considering the lack of evidence of badgers, impacts to badgers are scoped out of the assessment.

Reptiles

10.5.22 The boundary habitats such as woodland edge, tree lines and hedgerows have some potential to support common reptile species. The surveys undertaken in April and May 2022 (19th April – 25th May 2022) identified a good population of slow worms, concentrated around the boundary habitats of the Site, particularly in the northeast, south and west. While not identified on the survey, the wet woodland also has the potential to support suitable habitat for grass snakes. Whilst a good population was recorded, suitable habitat is limited to the narrow site margins, and the vast majority of the Site is considered unsuitable for reptiles. As such, the population recorded on site was determined to be of **low** environmental value/sensitivity.

Nesting birds

10.5.23 The scrub, woodland and trees on Site provide suitable nesting habitat for breeding birds. During all survey work significant numbers of dog walkers were observed around the edges and along the footpath which runs through the centre of the field. As such, the arable habitat on Site was considered unlikely to support significant numbers of ground nesting and farmland birds, owing to the high levels of disturbance on site from dogs and people. Overall, it is considered that the likely bird assemblage utilising the Site would be of **low** environmental value/sensitivity.

Hedgehog

10.5.24 Due to the suitable tree lines, scrub and woodland habitat on site in addition to records in the local area, the site is considered to have potential to support hedgehog and are considered to be of **low** environmental value/sensitivity.

Summary of Ecological Features and their Sensitivity

10.5.25 **Table 10.7** provides a summary of the ecological features within the Site, surrounding study area and justification for their level of sensitivity.

Table 10.7: Ecological Features and Level of Importance/Summary of Sensitivity of Receptors

Ecological feature	Level of Sensitivity	Justification	Distance from Site
Woldingham & Oxted Downs (SSSI)	High	SSSI sites are selected in the context of national wildlife legislation.	c. 1 km north
Five Acre Shaw and Lodge Wood (SNCI)	High	Significant area of irreplaceable priority habitat (NPPF 2024).	c. 150 m north-west
Armitage Wood and Hamfield Shaw (SNCI)	High	Significant area of irreplaceable priority habitat (NPPF 2024).	c. 430 m north
Chalkpit Wood (SNCI)	High	Significant area of irreplaceable priority habitat (NPPF 2024).	c. 500 m north
Robins Grove Wood & Rye Wood (SNCI)	High	Significant area of irreplaceable priority habitat (NPPF 2024).	c. 730 m west
Titsey Plantation (SNCI)	High	Significant area of irreplaceable priority habitat (NPPF 2024).	c. 1 km north
Chalkpit Lane (CV)	Medium	Supports rare/scarce plant species	c. 1.3 km north
Limpsfield Common (SNCI)	High	Extensive area including multiple priority habitats	c. 1.3 km south-east
Hell Shaw (SNCI)	High	Significant area of irreplaceable priority habitat (NPPF 2024).	c. 1.7 km north
Oast Road (CV)	Medium	Strategically significant location for a priority species	c. 1.7 km south
The Bogs (PSNCI) Ancient woodland	High	Significant area of irreplaceable priority habitat (NPPF 2024).	Adjacent to the southern boundary

Ecological feature	Level of Sensitivity	Justification	Distance from Site
Arable	Negligible	This is common and widespread and of site value only. Disturbed and altered. Dominant habitat across the Application Site.	On Site
Other Neutral Grassland	Negligible	Common and widespread habitat, poor species diversity. Minimal area where present.	On Site
Lowland mixed deciduous woodland	Low	Areas of priority habitat on northern and western site boundaries. Northern area highly disturbed, western area harbours invasive species. All small in extent.	On site
Wet woodland	Low	Small extent of priority habitat in the southern corner of the site.	On site
Hedgerows	Low	Single important hedgerow and priority habitat, however, very short, highly managed and a poor example of its type.	On Site
Stream	Medium	Small in extent and not a priority habitat, however primary source of water into wet/ancient woodland to south of the site.	Adjacent to western site boundary
Mixed scrub	Negligible	Common and widespread	On Site
Bramble scrub	Negligible	Common and widespread	On Site
Bats	Low	The Application Site supports foraging and commuting populations comprised largely of common species.	On Site
Badgers	Low	Legislative importance only.	No evidence on Site
Breeding birds	Low	Site supports suitable habitat	On Site
Reptiles	Low	Good population of slow worm. A widespread species and limited only to boundary habitats.	On Site
Other species – hedgehogs	Low	Moderate potential to be present on Site	No evidence on Site

Future Baseline (the 'do nothing' scenario)

10.5.26 Future baseline conditions are conditions which would be likely to arise if present conditions continue and the Proposed Development does not come forward.

10.5.27 Without the Proposed Development, the Site will remain under agricultural use, with the associated habitats continued to be managed under the existing crop rotation. The hedgerows will continue to be managed and retained as they are at present.

10.5.28 Bats will continue to utilise the trees and hedgerows for foraging and commuting, reptiles will use the boundary scrub and woodland for foraging and commuting, birds will be using the Site for nesting and foraging across the season.

10.5.29 It is unlikely that Great Crested Newts would colonise the Site due to absence of suitable breeding ponds in the surrounding area. Dormouse may colonise the less disturbed areas of woodland in time, if populations in the surrounding areas expand. Badgers are highly mobile species and therefore there is the potential for setts to become established in the future.

10.5.30 In terms of wider protected habitats and designated sites, these are considered unlikely to be impacted by future management of the Site as arable farmland, as it has been farmed in this way for a significant period of time.

10.6 Identification and Description of Changes Likely to Generate Effect

Construction Phase

10.6.1 The construction phase will result in the permanent loss of all arable farmland on site, and permanent loss of a section of hedgerow in the north-east and linear scrub on the southern boundary to accommodate site access, which are expected to generate the main construction effects.

10.6.2 The increased construction traffic will lead to localised minor temporary changes to air quality and dust and construction processes may affect the local water runoff although this will be strictly controlled through a CEMP, and are therefore not anticipated to generate any likely effects. Construction activities will increase noise on a temporary basis which may lead to some localised disturbance.

Operational Phase

10.6.3 The operational phase will result in an increase in the number of houses within the local area and a localised increase in population. This will lead to an increase in recreational pressure on the surrounding landscape (although balanced from amenity provided on site), changes to artificial light levels within the Site, increased possibility of predation from the numbers of cats and dogs.

10.7 Assessment of Likely Significant Effect

10.7.1 The potential impacts and significance of the effects on ecology, are characterised in the absence of mitigation measures, beyond those identified and described in **ES Volume 2, Chapter 5: The Proposed Development and Construction Overview** as embedded into the Proposed Development.

Construction Phase

10.7.2 The effects during construction are anticipated to be short to medium term duration (temporary) while effects during complete and occupied stage are anticipated to be of long term duration (permanent) unless otherwise stated.

10.7.3 Impacts are only considered in detail where there is a reasonable likelihood of an effect on a receptor of importance.

10.7.4 Further details on the Proposed Development and construction activities are provided in **ES Volume 2, Chapter 5: The Proposed Development and Construction Overview** and are therefore not reproduced in detail in this chapter.

10.7.5 The following sections detail the predicted likely effects to occur to important ecological features during the construction phase. The important ecological features are those which are considered above 'site' level.

Embedded Mitigation Measures

10.7.6 The embedded mitigation measures consist of Primary mitigation (mitigation by design and Secured secondary mitigation through conditions)

10.7.7 The following embedded mitigation measures are considered:

- Layout of the development to concentrate construction within the arable land and retain all woodland habitat and majority of boundary habitats.
- Implementation of a Construction Environmental Management Plan (CEMP), which will include an Ecological Mitigation Strategy, which would be adhered to during the construction phase. The CEMP would consider the following aspects, vehicle access, working hours, dust, air quality, ecology and communications with the public. This will detail how timing and methodology of works will be carried out to avoid impacts on ecological receptors on site and within the zone of influence, during the construction phase. The CEMP will be secured via a condition.
- Implementation of the Landscape Strategy/Masterplan. This will include the detailed planting scheme for the development and the open space planting, as well as details of specific ecological features, such as bird/bat boxes, hedgehog highways and reptile hibernacula. This will be secured via condition.

Anticipated Effects

Designated Sites

10.7.8 Woldingham & Oxted Downs SSSI is located approximately *c.*1 km to the north of the Site and is considered to be of very high ecological value. Due to its positioning on the opposite side of the M25, it is considered to be of sufficient distance from the construction works and earth works to not be impacted by dust, noise or pollution events. On the basis of the above, as the sensitivity of receptor is classified as high and the magnitude of impact is considered to be **negligible**, this is assessed to result in a **neutral** effect.

10.7.9 There are seven SNCIs within 2 km, with the closest being Five Acre Wood, approximately 150 m north-west of the application area. This SNCI is considered to be of high ecological value. There will be no loss of habitat resulting from construction, and this and other SNCIs are to be of sufficient distance from the construction works and earth works to not be impacted by dust, noise or pollution events. On the basis of the above, as the sensitivity of receptor is classified as high and the magnitude of impact is considered to be **negligible**, this is assessed to result in a **neutral** effect.

10.7.10 There are two Conservation Verges (CV), with the nearest CV located 1.3 km north of the Site, on the opposite side of the M25, whilst the other is on the opposite side of Oxted 1.7 km to the south-east. Therefore, both are a sufficient distance from the Site to avoid direct and indirect impacts during construction works and earth works. On the basis of the above, as the sensitivity of receptor is classified as medium and the magnitude of impact is considered to be **negligible**, this is assessed to result in a **neutral** effect.

10.7.11 There are eight Potential SNCIs within 2 km, with the closest being the Bogs, adjacent to the south of the application area. This pSNCI is considered to be of high ecological value. There will be no loss of habitat resulting from construction, and all works will be conducted outside a 15 m buffer from the designation. The effective implementation of the CEMP will prevent indirect impacts from dust, water, noise and light on this SNCI and the ancient woodland and wet woodland. The construction impacts are temporary in nature albeit construction will involve earth works resulting in the potential to produce dust and pollution events. However, due to the CEMP, construction works are considered low risk to the Bogs and other pSNCIs. On the basis of the above, as the sensitivity of receptor is classified as high and the magnitude of impact is considered to be **negligible**, this is assessed to result in a **neutral** effect.

Habitats

10.7.12 Ancient woodland is considered to be of high ecological value. The nearest ancient woodland is located in the Bogs pSNCI located adjacent to the south of the Site. With the implementation of measures in the CEMP construction works are considered low risk to the ancient woodland ecological receptors, as all works fall outside the 15 m ancient woodland buffer, with the majority 40-50m from the ancient woodland boundary. On the basis of the above, as the sensitivity of receptor is classified as high and the magnitude of impact is considered to be **negligible**, this is assessed to result in a **neutral** effect.

10.7.13 Other priority habitats include small parcels of lowland mixed deciduous woodland located in the northern and western boundaries of the Site. An area of priority wet woodland habitat is located in the southern corner of the Site. The effective implementation of the CEMP will prevent indirect impacts from dust, water, noise and light, and adherence to tree protection measures within the root protection areas (RPA's) of associated trees, will ensure degradation of the habitats is avoided during construction. On the basis of the above, as the sensitivity of receptor is classified as low and the magnitude of impact is considered to be **negligible**, this is assessed to result in a **neutral** effect.

10.7.14 A single species-poor native hedgerow is located along the northern site boundary. The majority of this habitat will be lost. However, a new species-rich native hedgerow will be replanted close to the area set behind the visibility display, and extensive additional species-rich hedgerow planting will be created throughout the Site. On the basis of the above, as the sensitivity of receptor is classified as **low** and the magnitude of impact is considered to be **small**, this is assessed to result in a **neutral** effect**.**

10.7.15 An unnamed stream runs along the western site boundary and continues through the wet woodland and 'The Bogs' pSNCI. The landscape strategy for the site ensures a buffer of 20-60m from the stream from any artificially developed areas, and the CEMP will detail pollution control measures during construction to avoid any related impacts on the stream. This stream is primarily fed by a pipe in the north-west, that links to a large drainage network of ditches to the north and a surface water sewer that covers a significant area of roads across the north-west of Oxted. A small spring is also present within the site and also feeds into the stream, however, the development will not restrict the flow of water from this spring into the stream. As such, the flow associated with the stream will be unaffected by the proposed development. On the basis of the above, as the sensitivity of receptor is classified as **medium** and the magnitude of impact is considered to be **negligible**, this is assessed to result in a **neutral** effect**.**

Protected species

Bats

10.7.16 Bats have been identified as having a low importance and low sensitivity within the Site, due to the low numbers recorded during surveys, the limited nature of the suitable habitats and the species composition.

10.7.17 The most important features are the mature ash tree in the west of the Site and woodland habitats to the north, west and south of the Site, which are all being retained and protected in their entirety. Remaining boundary habitats including scrub, treelines and hedgerows are being largely retained within the Proposed Development, with the exception of a 50 m section of the hedgerow on the northern boundary and a 10 m section of linear scrub and trees from the southern site boundary. This loss of commuting habitat would be compensated through creation of extensive new tree and hedgerow planting across proposed areas of green open space and streets throughout the Site.

10.7.18 There will be no loss of trees with potential to support roosting bats. No significant adverse effects are therefore considered to result for bats from direct loss of roosting habitat during Site clearance.

10.7.19 The construction phase may result in disturbance to foraging and commuting bats through increased noise and light pollution, although it is assumed the majority of works will take place during daytime hours when bats are not likely to be active. The effective implementation of the CEMP will prevent indirect impacts from light and noise.

10.7.20 On the basis of the above, as the sensitivity of receptor is classified as **low** and the magnitude of impact is considered to be **small**, this is assessed to result in a **neutral effect.**

Birds

10.7.21 Breeding birds have been identified as having a **low** sensitivity within the Site, due to the limited nature of the suitable habitats to the site edges and high levels of disturbance.

10.7.22 The site clearance works will result in the loss of suitable nesting habitat for birds in the form of 50 m of hedgerow along the northern boundary and 10 m of mixed scrub and trees along the southern boundary. However, all remaining boundary habitats including the woodland areas will be retained and protected throughout the works. As all nesting bird species are protected under the Wildlife and Countryside Act 1981 (as amended) this would result in legislative implications and disruption to nesting birds, including damage and destruction of nests. Clearance will be undertaken outside nesting bird season or under ecological supervision to avoid any impacts, which will be detailed in the CEMP. The loss of sections of defunct hedgerow and

scrub will be compensated through new planting within the design of the Proposed Development. With the implementation of the Landscape Strategy new nesting and foraging habitat will be provided.

10.7.23 The sensitivity of receptor is classified as **low** and the magnitude of impact is considered to be **small**, this is assessed to result in a **neutral effect**.

Reptiles

10.7.24 The site supports a good population of slow worm, with numbers concentrated along the woodland edge in the north-east, with smaller numbers found along the eastern bramble scrub belt, southern mixed scrub belt, and western woodland belt. Construction will involve the loss of the majority of the northern hedgerow and a 10 m section of scrub from the southern boundary. Although the majority of suitable habitat across the Site will be retained, as slow worm were found in both these areas to be impacted, in the absence of mitigation measures, this could result in the harm to individuals. Through mitigation measures such as sensitive two stage directional clearance, and the use of reptile exclusion fencing to prevent them colonising the main development area once arable operations cease, this will ensure harm to individuals is avoided. These measures will be detailed in the CEMP and the Ecological Mitigation Strategy and will prevent indirect and direct impacts during construction.

10.7.25 As the sensitivity of receptor is classified as **low** and the magnitude of impact following mitigation measures is considered to be **negligible**, this is assessed to result in a **neutral effect**.

Other species

10.7.26 The effective implementation of the CEMP and the Ecological Mitigation Strategy will prevent indirect and direct impacts on other species, such as hedgehogs. As such, this will result in a **neutral effect.**

Anticipated Effects of Applying the Development Parameter Range

10.7.27 A reduction in the parameters, that being the built environment, would result in the provision of additional open space within the development. The reduction in dwellings would not have a material change in the woodland extent, as none is currently lost, nor would the change allow the retention of the hedgerow and scrub areas, as this loss is required for access.

Operational Phase

Embedded Mitigation Measures

10.7.28 The following embedded mitigation measures are considered:

- Implementation of the Landscape Strategy. This will include the detailed planting scheme for the development and the open space planting, as well as details of specific ecological features, such as bird/bat boxes, hedgehog highways and reptile hibernacula. This will be secured via a condition.
- Implementation of the Habitat Management and Monitoring Plan (HMMP) which will detail the long term management of the newly created habitats and ecological features on site. This will be secured via a condition.
- Implementation of the Sensitive Lighting Strategy during the operation phase which will be secured via a condition.

Anticipated Effects

10.7.29 The following section details the predicted likely effects to occur to important ecological features during the complete and occupied phase of the Proposed Development. Only features for which a likely significant effect/s are predicted at the respective geographic scale of reference are discussed.

The Bogs pSNCI

10.7.30 The Bogs pSNCI is located adjacent to the southern boundary of the Site. It is a private site and has no footpaths within it. Furthermore, the wet nature of the woodland and extensive nettles makes traversal difficult, and a fence will be installed in the south of the site to deter entry. As such, recreational impacts on this woodland associated with the development are unlikely to be significant.

10.7.31 The water within the woodland is primarily supplied by a small unnamed stream that runs along the western boundary of the development. The wastewater plan obtained from Southern Water, shows that this stream is fed by a pipe that connects to a surface water gravity sewer that covers an extensive area in the north-west of Oxted. This stream is to be unaffected by the development. The ground water within the Site itself emerges in a small spring in the south-west of the field, and likely seeps into the woodland as well, feeding the stream.

10.7.32 Groundwater monitoring wells were installed in the wet woodland area with trial pits subsequently excavated near the spring. The surveys showed that groundwater levels were below ground both when moving away from the saturated land associated with the spring and when land levels rose. As such, built form has been kept out of the wet area, and no buildings have been located either between the watercourse and the wet area, or within 10m of the wet area. This will minimise any effect upon the ground water flow which will continue in a northwest to southeast direction.

10.7.33 The proposals will not obstruct the flow of water from the spring, and surface water runoff will be directed to SUDS in the south-west of the Site, which will help to filter out any pollutants, before seeping into the woodland. Furthermore, the existing agricultural use of the Site likely contribute potentially significant levels of harmful

runoff of fertiliser, pesticides, and herbicides into the woodland. This may account for the abundance of nettles in the wet areas, as this is an indicator of high nutrients. As such, cease of these agricultural practises with the creation of the development may improve the quality of water feeding from the spring into the woodland.

10.7.34 On the basis of the above, as the sensitivity of The Bogs pSNCI is considered to be classified as **high** and the magnitude of impact is considered to be **negligible**, this is assessed to result in a **minor beneficial effect.**

Other designated sites

10.7.35 Woldingham & Oxted Downs SSSI, is designated for supporting Annex I Habitat: Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia) (orchid rich site).* This site is located *c.*1 km norther of the Site, however, the distance by foot from the development following existing footpaths is 1.85 km, and involves walking down 775 m of Barrow Green Road, which is narrow and has no pavement and frequented by fast moving vehicles. As such, it is considered unlikely that the development would result in any significant increase in recreational pressure on this SSSI. On the basis of the above, as the sensitivity of Woldingham & Oxted Downs SSSI is considered to be classified as **high** and the magnitude of impact is considered to be **no change**, this is assessed to result in a **neutral effect**

10.7.36 Most SNCIs in the surrounding area are private with no public access, including, the two closest sites: Five Acre Shaw and Lodge Wood SNCI: 150m north-west; and, Armitage Wood and Hamfield Shaw SNCI: 430m north. Robins Grove Wood & Rye Wood SNCI has a single linear public bridleway through the centre, however, to reach this by foot would require pedestrians to walk down 775m of Barrow Green Road, which is narrow and has no pavement and frequented by fast moving vehicles. All other SNCIs and CVs are located beyond a reasonable walking distance from the site on the opposite side of Oxted. On the basis of the above, as the sensitivity of these non-statutory sites is considered to be classified as **medium** to **high** and the magnitude of impact is considered to be **no change**, this is assessed to result in a **neutral effect.**

Ancient Woodland

10.7.37 The ancient woodland shares its extent with The Bogs pSNCI and is located adjacent to the southern boundary of the Site. Measures outlined above to protect and avoid impacts on the pSNCI will also protect the ancient woodland within.

10.7.38 Other ancient woodland in the surrounding area is largely located on private land, is not easily accessible by foot, or is beyond a typical walking distance from the Site.

10.7.39 On the basis of the above, as the sensitivity of the ancient woodland is classified as **high** and the magnitude of impact is considered to be **negligible**, this is assessed to result in a **minor beneficial effect**.

Priority Habitats / Notable Features

10.7.40 The wet woodland in the south of the Site is considered unlikely to be subject to increased recreational pressure or pollution for the reasons outlined for 'The Bogs' pSNCI above. The woodland along the western site boundary is dense and largely inaccessible and so would also be unlikely to be subject to increased recreational pressure. The northern woodland is already subject to reasonably high levels of recreational pressure with well-established informal footpaths through its centre. The development will likely result in an increase in recreational pressure on this woodland. This will be mitigated through the use of woodchip pathways following the existing informal footpath. This will prevent further compaction of the soil along these pathways. Furthermore, as the base layer of the woodchips decomposes, it will encourage earthworms, which will help to aerate the underlying soil and reverse the current levels of compaction. A post and rail fence will be erected around the edge of the woodland helping to ensure people only access to woodland through the newly established pathways. The woodchip will be maintained in the long-term and will be detailed within the HMMP.

10.7.41 The retained tree lines and hedgerows within the Proposed Development will be managed through the effective implementation of the HMMP for their wildlife value and to ensure landscape features are retained.

10.7.42 The retained stream along the western site boundary will be protected from recreational impacts as a result of the dense scrub and nettles surrounding it, as well as a boundary fence which will be established along the edge of the public open space. Water runoff from the development will be directed to SUDS basins, where any minor pollutants will be filtered out, before entering the ground water, and eventually the stream.

10.7.43 Newly created habitats, including wildflower grassland, SUDS networks, newly planted trees and hedgerows, will also be managed for their wildlife value under the direction of the HMMP.

10.7.44 The HMMP will ensure that impacts resulting from recreational pressures on the retained and newly created habitats will be reduced. As such no impacts are predicted and it is considered to be a **neutral effect**.

Protected Species

Bats

10.7.45 There is the potential for impacts from lighting resulting from the Proposed Development due to residential lighting and street lighting. However, much of the habitat within proposed developed areas is of lower existing suitability for bats due to its arable nature. The effective implementation of the Sensitive Lighting Strategy and

HMMP and Landscape Strategy will ensure that ecological networks used by bats are created, enhanced and maintained on the site.

10.7.46 As part of the Landscape and Ecology Mitigation Plan, bat boxes will be integrated into residential dwellings on the edges of the development and installed on retained suitable trees along the boundary.

10.7.47 On the basis of the above, as the sensitivity of bats is classified as **low** and the magnitude of impact is considered to be **small**, this is assessed to result in a **neutral effect**.

Breeding Birds

10.7.48 An increase in local residents is likely to result in the increase of pets, including cats, which are known to predate on birds. Cat predation may result in loss of population of Priority BoCC species which may be using the habitats on the boundary of the Site.

10.7.49 As part of the embedded mitigation set within the Landscape and Ecology Mitigation Plan, bird boxes will be integrated into residential dwellings and boxes will be installed on retained suitable trees. Furthermore, new tree planting and native scrub planting within the Site will provide new opportunities for a number of bird species. The provision of new habitats will result in an uplift of suitable nesting habitat which is currently present. It is considered that the landscape plans and the bird boxes, will result in a net-increase in available nesting, and foraging habitat across the site and ensure there is a neutral impact on nesting birds.

10.7.50 On the basis of the above, as the sensitivity of nesting birds is classified as **low** and the magnitude of impact is considered to be **small**, this is assessed to result in a **neutral effect**.

Reptiles

10.7.51 An increase in local residents is likely to result in the increase of pets, including cats, which are known to predate on reptiles. Cat predation may result in loss of slow worms utilising the habitats on the boundary of the Site.

10.7.52 As part of the embedded mitigation set within the Landscape and Ecology Mitigation Plan, log piles and hibernacula will be integrated into boundary habitats to provide additional refuge for this species. Furthermore, new wildflower grassland and native scrub planting within the application site will provide an increase in suitable habitat across the Site for this species.

10.7.53 On the basis of the above, as the sensitivity of reptiles is classified as **low** and the magnitude of impact is considered to be **small**, this is assessed to result in a **neutral effect**.

Other Species

10.7.54 There are potential impacts from cars on species such as hedgehogs and other small mammals. Impacts from dogs and cats may also result from an increase in pet ownership.

10.7.55 The effective implementation of the HMMP and Landscape Strategy including a hedgehog highway and higher value habitat post-development will ensure future sensitive management for this species. As a result, a neutral effect is predicted.

Anticipated Effects of Applying the Development Parameter Range

10.7.56 As stated above, if the scheme was not built out to the maximum parameters, this would reduce the number of dwelling being provided on site and therefore also reduce the recreational pressure, potential for light spill and predation on surrounding areas. The reduction in dwellings would not have a material change in the woodland extent, as none is currently lost, nor would the change allow the retention of the hedgerow and scrub areas, as this loss is required for access.

10.8 Scope for Additional Mitigation Measures

Potential Additional Mitigation Measures

10.8.1 The significance of effects considered thus far have been based upon a situation where the Proposed Development goes ahead in the absence of suitable mitigation measures beyond those considered to be embedded mitigation. This section outlines the key additional mitigation measures that will be implemented to avoid, reduce or offset the significant adverse effects identified in the previous section.

Construction

10.8.2 During construction, no additional mitigation measures are required as the effective implementation of the CEMP including the Ecological Mitigation Strategy and reptile translocation measures will result in no likely significant effects on the designated sites, habitats or protected species. These secondary mitigation measures will be secured via condition as part of the reserved matters.

Complete and Occupied

10.8.3 Once the Proposed Development is complete and occupied, no additional mitigation measures are required as the effective implementation of the Landscape and Ecology Mitigation Plan will result in no likely significant effects on the habitats or protected species and the HMMP, will ensure that all created habitats are monitored and maintained to their target condition. These secondary mitigation measures will be secured via condition as part of the reserved matters.

Likely Effectiveness of Additional Mitigation Measures

10.8.4 The embedded mitigation is such that impacts assessed have not been considered to be beyond neutral impacts. Considering this, additional mitigation measures would not be required.

10.9 Residual Effects

10.9.1 Following the effective implementation of the embedded mitigation measures proposed above, there are no significant residual effects arising from the Proposed Development during construction or operational phases.

10.10 Cumulative Effects

10.10.1 Cumulative effects are the combined effects of several development schemes (in conjunction with the Proposed Development) which may, on an individual basis be insignificant but, cumulatively, have a significant effect.

10.10.2 Three developments are to be considered as part of the cumulative assessment throughout the ES as detailed below:

Land at Chichele Road, Oxted[14]

10.10.3 This site is located 175m to the north-east and comprises: Proposed residential development 116 Dwellings (Class C3) including affordable housing with associated access, car parking, soft landscaping and play provision. The original application (2023/1345) was refused. Relevant reasons for refusal include not providing a sufficient semi-natural buffer to adjacent ancient woodland habitats, and increased recreational pressure on adjacent ancient woodland habitat, and insufficient information was provided in terms of ecology, including biodiversity net-gain. This site was subject to appeal and has now been refused, although it is noted that the reasons for refusal are not related to ecology.

Land Off Oxted Road (a25), Oxted

10.10.4 This site is located 1.6km to the south west and comprises: Erection of crematorium facility with associated memorial areas, landscaping, parking and infrastructure. The original application (2020/690) was refused, however, reasons for refusal were not related to ecology. This site was subsequently subject to an appeal, which was granted on 6th May 2021 (APP/M3645/W/21/3272384).

[14] Planning App Reference: 2023/1345, APP/M3645/W/24/3345915)

Oxted Quarry, Chalkpit Lane, Oxted

10.10.5 This site is located 1km to the north-west and the application comprises a scheme of restoration of an old chalk quarry to create a natural parkland with public access, footpaths and ecological habitat areas and the erection of 75 dwellings, a proportion of which would be affordable housing, with associated hard and soft landscaping and access, provision of a field study centre, restoration of the historic lime kilns, and works to Chalkpit Lane including traffic calming and a new footway link to Oxted (TA/2023/1135). This application was validated in September 2023 but has not yet been determined. A full suit of ecology surveys were undertaken, and Ecological Impact Assessment carried out as part of the Ecology Chapter for the Environmental Statement. This concluded, minor adverse impacts on foraging/commuting bats, and invertebrates., however, neither residual effects were considered significant.

Assessment of cumulative effects

10.10.6 All three application sites are not considered to be ecologically functionally linked to the Site, owing to distance and/or significant dispersal barriers such as the M25, and the built up area of Oxted. Furthermore, it has been determined that development of the Site will not lead to an increase in recreational pressure on designated sites in the surrounding area. As such, no negative cumulative effects are anticipated.

10.11 Summary and Conclusions

10.11.1 The site was made up of a large arable field, bisected by a public footpath and bounded by an informal footpath and belts of scrub with trees, lowland mixed deciduous woodland, wet woodland, and a small stream. An area of ancient woodland known as 'The Bogs' is noted as a potential site of importance for nature conservation (pSNCI). The site supports relatively low numbers of commuting bats and a good population of slow worm along the boundaries. Habitats are likely to also support widespread species of nesting birds and hedgehog. No badger setts have been recorded on site and surveys confirmed absence of dormouse on site. The site was considered to have negligible potential to support other protected species such as great crested newts, otters and water voles.

10.11.2 Baseline data gathered from the desk studies and ecology surveys undertaken on site between 2022 and 2024, have been assessed to determine the relevant ecological receptors on site and within the zone of influence and their sensitivity. Effects of construction and operation of the development on these receptors and their magnitude and significance have been evaluated in accordance with industry recognised methodology for Ecological Impacts Assessment (EcIA) developed by the Chartered Institute of Ecology and Environmental Management (CIEEM). Where potential negative effects were identified, measures to avoid, reduce or compensate have been described, and any residual effects following mitigation documented.

10.11.3 Embedded mitigation for the scheme includes:

- Production and adherence to a Construction and Environmental Management Plan (CEMP), to protect habitats and protected species during construction;
- Implementation of a landscape strategy which will create significant areas of new habitats and wildlife features across the site, such as trees, species-rich hedgerows, wildflower grassland and bird/bat boxes;
- Implementation of a Habitat Management and Monitoring Plan (HMMP) which will detail the long term management of the newly created habitats and ecological features on site; and,
- Implementation of Sensitive Lighting Strategy for Bats.

10.11.4 Potential impacts during the construction phase, relate to potential damage to sensitive habitats and harm/disturbance to protected species. However, mitigation measures to be outlined within the CEMP will ensure these impacts area avoided or significantly reduced and the landscape strategy will ensure adequate compensatory habitat is created across the site.

10.11.5 Potential impacts during the operational phase, relate to potential recreational pressure and pollution of sensitive habitats, harm to protected species associated with domestic pets and people, and disturbance to commuting bats as a result of increased artificial lighting. However, the landscape strategy and HMMP will ensure these impacts are avoided or significantly reduced in the long term.

10.11.6 Following embedded mitigation, no residual effects remaining and therefore no additional mitigation is required.

10.11.7 Following this assessment, it can be concluded that the development will result in no significant effects.

10.11.8 **Table 10.8** summarises the ecology effects resulting from the Proposed Development.

Table 10.8: Summary of Residual Effects

Receptor/ Affected Group	Value or Sensitivity (Significance) of Receptor	Activity or Impact	Embedded Design Mitigation	Magnitude/ Spatial Extent/ Duration/ Likelihood of Occurrence	Significance of effect	Additional Mitigation	Residual Magnitude of Impact	Significance of Residual effect
Construction								
Woldingham & Oxted Downs (SSSI)	High	No predicted impacts	None	No Change n/a n/a n/a	Neutral	None	No change	Neutral
Local SNCIs	High	No predicted impacts	None	No Change n/a n/a n/a	Neutral	None	No change	Neutral
Local CVs	Medium	No predicted impacts	None	No Change n/a n/a n/a	Neutral	None	No change	Neutral
The Bogs pSNCI	High	Pollution	Pollution control measures detailed within CEMP, Cease of	Negligible Local Permanent n/a	Neutral	None	Negligible	Minor beneficial

Receptor/ Affected Group	Value or Sensitivity (Significance) of Receptor	Activity or Impact	Embedded Design Mitigation	Magnitude/ Spatial Extent/ Duration/ Likelihood of Occurrence	Significance of effect	Additional Mitigation	Residual Magnitude of Impact	Significance of Residual effect
			chemical use from farming					
Ancient Woodland	High	Pollution	Pollution control measures detailed within CEMP. Cease of chemical use from farming	Negligible Local Permanent n/a	Neutral	None	Negligible	Minor beneficial

Wet/Lowland mixed deciduous woodland	Medium	Pollution	Pollution control measures detailed within CEMP	**Negligible** Local Permanent Unlikely	Neutral	None	Negligible	Neutral
Native hedgerow	Low	Loss	Compensatory planting	Negligible Site Permanent Likely	Neutral	None	Negligible	Neutral
Unnamed stream	Medium	Pollution	Pollution control measures detailed within CEMP; Cease of chemical use from farming	Negligible Local Permanent Unlikely	Neutral	None	Negligible	Neutral
Bats	Low	Loss of commuting habitat	Compensatory planting	Negligible Local Temporary Likely	Neutral	None	Negligible	Neutral
Breeding birds	Low	Damage to nests	Avoid clearance of suitable	Negligible Site	Neutral	None	Negligible	Neutral

			habitat in nesting bird season	Temporary				
				Unlikely				
		Loss of nesting habitat	Creation of compensatory habitat	Negligible	Neutral	None	Negligible	Neutral
				Site				
				Temporary				
				Likely				
Reptiles	Low	Harm to individuals	Follow sensitive clearance measures outlined in CEMP	Negligible	Neutral	None	Negligible	Neutral
				Site				
				Temporary				
				Unlikely				
		Loss of habitat	Creation of compensatory habitat	Negligible	Neutral	None	Negligible	Neutral
				Site				
				Temporary				
				Likely				
Hedgehog	Low	Harm to individuals	Follow sensitive clearance measures outlined in CEMP	Negligible	Neutral	None	Negligible	Neutral
				Site				
				Temporary				
				Unlikely				
		Loss of habitat	Creation of compensatory habitat	Negligible	Neutral	None	Negligible	Neutral
				Site				
				Temporary				
				Likely				

Operation								
Woldingham & Oxted Downs (SSSI)	High	No predicted impacts	None	No Change n/a n/a n/a	Neutral	None	No Change	Neutral
Local SNCIs	High	No predicted impacts	None	No Change n/a n/a n/a	Neutral	None	No Change	Neutral
Local CVs	Medium	No predicted impacts	None	No Change n/a n/a n/a	Neutral	None	No Change	Neutral
The Bogs pSNCI	High	Recreational pressure	Use of fencing along southern boundary	No Change n/a n/a n/a	Neutral	None	No Change	Neutral
		Pollution	Effective use of SUDS. Cease of chemical use from farming	Negligible Local Permanent Likely	Neutral	None	Negligible	Minor beneficial
Ancient Woodland	High	Recreational pressure	Use of fencing along	No change n/a	Neutral	None	No Change	Neutral

			southern boundary	n/a n/a				
		Pollution	Use of effective SUDS	Negligible Local Permanent Likely	Neutral	None	Negligible	Neutral
Wet woodland	Low	Recreational pressure	Use of fencing along southern boundary	No Change n/a n/a n/a	Neutral	None	No Change	Neutral
		Pollution	Use of effective SUDS	Negligible Local Permanent Likely	Neutral	None	Negligible	Neutral
Lowland mixed deciduous woodland	Low	Recreational pressure	Fencing and use of woodchip pathways along existing informal footpaths	Negligible Site Permanent Likely	Neutral	None	Negligible	Neutral
		Pollution	Use of effective SUDS	Negligible Site Permanent Likely	Neutral	None	Negligible	Neutral

Native hedgerow	Low	No predicted impacts	None	Negligible Site Permanent Likely	Neutral	None	Negligible	Neutral
Unnamed stream	Medium	Pollution	Pollution control measures detailed within CEMP	Negligible Site Permanent Unlikely	Neutral	None	Negligible	Neutral
		Recreational pressure	Use of fencing along boundary of public open space	Negligible Site Permanent Unlikely	Neutral	None	Negligible	Neutral
Bats	Low	Increased artificial lighting	Adherence to sensitive lighting strategy	Negligible n/a n/a n/a	Neutral	None	Negligible	Neutral
Breeding birds	Low	Increased predation from cats	Establishment of additional safe nesting opportunities within bird boxes	Negligible Site Permanent Likely	Neutral	None	Negligible	Neutral

Reptiles	Low	Increased predation from cats	Establishment of additional hibernacula and suitable habitat	Negligible Site Permanent Likely	Neutral	None	Negligible	Neutral
Hedgehog	Low	Increased impact from cars	Use of hedgehog highways and high value habitat	Negligible Site Permanent Likely	Neutral	None	Negligible	Neutral
Cumulative Effects – Construction								
N/A	N/A	N/A	N/A	N/A N/A N/A N/A	N/A	N/A	N/A	N/A
Cumulative Effects - Operation								
N/A	N/A	N/A	N/A	N/A N/A N/A N/A	N/A	N/A	N/A	N/A