

Chapter 7: Ecology

ECOLOGY	
AUTHOR	The Ecology Consultancy
SUPPORTING APPENDIX	ES Volume 3, Appendix: Ecology - Annex 1: Legislation, Planning Policy and Guidance; Annex 2: Preliminary Ecological Appraisal report Annex 3: Ground Level Roost Assessment (Bats) report; Annex 4: Bat Activity Survey report; Annex 5: Great Crested Newt Assessment report; Annex 6: Reptile Survey report.
KEY CONSIDERATIONS	The ecological impact assessment will consider the following potential effects on ecological receptors, including: <ul style="list-style-type: none"> • Effects on deciduous plantation woodland habitat as a result of site clearance and construction works; • Effects on the Thames Basin Heaths Special Protection Area (SPA) through increased recreation; • Effects on protected species (i.e. bats, birds and reptiles) through loss of suitable habitat and potential killing, injury or disturbance during site clearance and construction works; and • Effects on Species of Principal Importance (e.g. soprano pipistrelle, hedgehog and stag beetle) through loss of suitable habitat and potential killing, injury or disturbance during site clearance and construction works.
CONSULTATION	An EIA Scoping Report was formally issued to Woking Borough Council (WBC); following this, a meeting with WBC was undertaken to discuss the EIA and scope of the ES. The EIA Scoping Report and WBC's EIA Scoping Opinion is presented in ES Volume 2, Appendix: EIA Methodology (Annex 3) .

ASSESSMENT METHODOLOGY

Defining the Baseline

Current Baseline Conditions

- 7.1 The existing baseline conditions have been determined and characterised based on desk studies and field surveys that have been undertaken, as set out below.

Desk Study

- 7.2 The Surrey Biodiversity Information Centre (SBIC), the local Biological Records Centre, provided information in December 2018 on important ecological features (including statutory designated sites, non-statutory designated sites, legally protected species, Species and Habitats of Principal Importance, and other notable species and notable habitats) that have been recorded within a 2 kilometre (km) radius of the site. This information has been collected in order to define the baseline conditions and ecological value of the site.
- 7.3 The Multi-Agency Geographic Information Centre (MAGIC – the Government’s online mapping service) was used to identify the presence of statutory designated nature conservation sites and current or historic European Protected Species Mitigation (EPSM) licences for bats within a 5km radius of the site. The increased search area, i.e. 5km radius of the site, was used to account for the larger Zone of Influence (Zoi – further detailed in paragraphs 7.16 to 7.18) for statutorily designated nature conservation sites and bats.
- 7.4 A search on WBC’s Planning Portal returned documents associated with the development of land to the north of the site (planning application ref: PLAN/2015/0703 – Hoe Valley School), including ecology reports. The redline site boundary of Hoe Valley School included the northern part of the site. Protected species surveys were carried out in 2015, across part of the site, including surveys for dormouse, reptiles, badger, grayling butterfly, and bat surveys.

¹ Joint Nature Conservation Committee (JNCC, 2010). *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council. Reprinted by Joint Nature Conservation Committee, Peterborough.

² BRIG (2011). UK Biodiversity Action Plan - *Priority Habitat Descriptions*. JNCC, Peterborough.

³ Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines. 3rd edition*. The Bat Conservation Trust, London.

- 7.5 Records returned within the desk study have been assessed and reported on within the Preliminary Ecological Appraisal (PEA) report, see **ES Volume 2, Appendix: Ecology (Annex 2)**.

Field Surveys

Extended Phase 1 Habitat Survey

- 7.6 The Extended Phase 1 habitat survey was undertaken in February 2019, and covered the entire site within the redline boundary (as displayed on Figure 1.2 of **ES Volume 1, Chapter 1: Introduction**) and included boundary features. Habitats were described and mapped following the standard Phase 1 habitat survey methodology provided by the Joint Nature Conservation Committee (JNCC)¹. Habitats were also assessed against descriptions of Habitat of Principal Importance (HPI), as set out by the JNCC². Habitats recorded on-site included:

- Plantation woodland;
- Semi-improved grassland;
- Amenity grassland;
- Continuous scrub;
- Continuous bracken; and
- Scattered trees.

- 7.7 See **ES Volume 3, Appendix: Ecology (Annex 2)** for the results of the Extended Phase 1 Habitat Survey, set out within the PEA report.

- 7.8 The habitats on-site were considered suitable to support a range of noteworthy species, including protected species, Species of Principal Importance (SPIs), species identified as a priority for the borough, and as reported in the desk study. The following species were scoped in for further survey and detailed assessment, to determine the potential impacts likely to result from the Proposed Development, and design suitable mitigation, where appropriate:

- Bats;
- Great crested newt (*Triturus cristatus*); and
- Widespread reptiles.

Bat Surveys

- 7.9 Bat species were identified within 2km of the site and suitable habitat to support roosting bats was identified on-site during the PEA. As a result, the following further surveys were recommended and were carried out in accordance with the Bat Conservation Trust (BCT) Guidelines³:

- Bat ground-level roost assessments of trees on-site, and any subsequently required dusk/dawn presence/likely absence surveys, have been used to identify any bat roosts on-site. Further details are set out in the Ground Level Roost Assessment Report (presented in **ES Volume 2, Appendix: Ecology (Annex 3)**).
- The assemblage of bats using the site and foraging and commuting routes have been ascertained through night-time activity surveys. Bat activity surveys comprised one dusk or dawn visit per month from April through to October (transect), and the use of static bat detectors in two locations on the site for five nights per month. Further details are set out in the Bat Activity Survey report (presented in **ES Volume 2, Appendix: Ecology (Annex 4)**).

Great Crested Newt Assessment

- 7.10 The data search returned records of great crested newt within 2km of the site, and a pond (located approximately 90m to the south of the site) was identified. On this basis, a Habitat Suitability Index (HSI)

assessment and an environmental DNA (eDNA) survey were completed on the pond to the south of the site using methodology accepted by Natural England⁴. Detailed results are set out in the Great Crested Newt Survey Report (provided in **ES Volume 2, Appendix: Ecology (Annex 5)**).

Widespread Reptile Surveys

- 7.11** Widespread reptile species were identified within 2km of the site and suitable habitat to support these species was identified on-site during the PEA. Reptile surveys using artificial refugia were subsequently recommended to confirm the presence/likely absence of widespread reptiles on-site and provide an estimate of the population sizes of these species (if present on-site). Survey work was conducted in accordance with best practice guidelines⁵, with seven reptile surveys conducted in suitable weather conditions between August and mid-October. Further details are set out in the Reptile Survey Report (presented in **ES Volume 2, Appendix: Ecology (Annex 6)**).

Likely Evolution of the Baseline Conditions

- 7.12** The likely evolution of the baseline conditions has been assessed based on assumptions regarding future site management (in the absence of the Proposed Development) and predicted climate change. As there are no cumulative schemes within 1km of the site (as set out in **ES Volume 1, Chapter 2: EIA Methodology**), cumulative schemes have not been taken into consideration in the assessment of the likely evolution of the baseline conditions.

Impact Assessment Methodology

- 7.13** This section sets out the methodology for determining potential effects that may arise as a result of the Proposed Development. It should be noted that the methodology for determining potential effects anticipated to arise from the demolition and construction of the Proposed Development is the same as that for the completed Proposed Development.

Methodology for Defining Effects

- 7.14** The effect of the Proposed Development on ecological features and attributes has been assessed in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines for an Ecological Impact Assessment (EclA)⁶.
- 7.15** In accordance with the CIEEM EclA guidelines, a Zol from the Proposed Development, i.e. the area over which an ecological feature may be subject to effects as a result of the Proposed Development, was established. Following this, the ecological features which may be subject to effects arising from the Proposed Development were assigned a geographical scale of importance. Once the Zol and geographical scale of importance of each ecological feature was determined, the potential effects of the Proposed Development were predicted, taking into account the different stages and activities in the development process (i.e. demolition and construction, or operation). The scale of significance of the identified effects was then assessed.

Identification of the 'Zone of Influence'

- 7.16** The Zol considered within the assessment includes the physical extent of land associated with the Proposed Development, as well as areas outside the site, subject to indirect effects such as disturbance and habitat fragmentation/degradation. The Zol has been determined for each impact based on the potential spatial extent of the impact in question on important ecological features.
- 7.17** The Zol for the Proposed Development varies and is as follows:
- A 5km radius of the site in terms of the potential effects on bats, based on the Core Sustenance Zones (CSZs) attributed to the bat species present on-site;
 - A 5km radius of the site in respect of statutory sites of nature conservation importance, to take account of the potential effects of disturbance from recreational activity on any sensitive habitats present; and
 - A 2km radius of the site in relation to potential effects on non-statutory sites.

⁴ Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F 2014. *Analytical and methodological development for improved surveillance of the Great Crested Newt. Defra Project WC1067*. Freshwater Habitats Trust: Oxford.

⁵ Froglife (1999). *Reptile Survey; an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

- 7.18** Effects on other habitats and species are unlikely to extend beyond the immediate vicinity of the site, due to the site's location in a suburban area, the vulnerabilities of the ecological receptors identified and the nature of effects associated with the Proposed Development.

Assessment of Importance of Ecological Features

- 7.19** This evaluation of ecological importance includes consideration of the following:

- Presence of sites or features designated for their nature conservation interest. Examples include internationally, nationally or locally designated sites;
- Large areas of important habitats or population of species, which are rare, species-rich assemblages, species which are endemic or on the edge of their range, large populations or concentrations of uncommon or threatened species and/or plant communities that are typical of important natural/semi-natural vegetation types;
- Secondary and supporting importance, for example, habitats or features which provide a buffer to important features or which serve to link otherwise isolated features;
- Habitats and Species of Principal Importance and regional (Surrey/Woking Borough) priority habitats and species;
- Presence of International Union for Conservation of Nature Red List species⁷; and
- UK Birds of Conservation Concern⁸.

- 7.20** Taking the above into consideration, each of the identified ecological features (i.e. statutory and non-statutory sites, habitat types and associated species assemblages and populations) have been attributed a scale of importance reflecting their geographic significance, examples of which are provided below:

- International and European e.g. ecological feature that is designated or meets criteria for designation/classification as a SAC, SPA, or Ramsar Site;
- National e.g. ecological feature that is designated, or meets criteria for designation, as a SSSI;
- Regional e.g. ecological feature which is one of the best examples of its type in the south-east of England;
- County e.g. SNCIs or habitats, or populations and assemblages of species, that meet the criteria for designation at this level;
- District - ecological features considered important at this geographic scale;
- Local, e.g. ecological feature which is one of the best examples of its type in the local context;
- Habitats and populations or assemblages of species of value in the context of the site only; and
- Ecological features of negligible importance.

Assessment of Effects and Determining Significance

- 7.21** Effects related to loss, fragmentation or degradation of habitats, death or disturbance of animals and potential changes in species range have been defined and described, taking into account:

- Magnitude - the size of an effect, in quantitative terms where possible;
- Extent - the area over which an effect may occur;
- Duration - the period of time for which an effect is expected to last;

⁶ CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.

⁷ IUCN 2019. The IUCN Red List of Threatened Species. Version 2019-2. <http://www.iucnredlist.org>. Downloaded on 23 October 2019.

⁸ Eaton, M., Aebischer, N., Brown, A., Hearn, R., Lock, L., Musgrove, A., Noble, D., Stroud, D. and Gregory, R. (2015). Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man. *British Birds* **108** pp. 708-746. British Birds Rarities Committee.

- Reversibility - a permanent effect is one that is irreversible for which there is no reasonable chance of action being taken to reverse it; a temporary effect is one from which short-term recovery is possible; and
- Timing and frequency - whether effects are constant and ongoing, separated but recurrent or single events, and whether they occur during critical seasons or life-stages of habitats and fauna.

7.22 Effects have been defined as significant if they affect the integrity of a site or ecosystem and/or the conservation status for habitats or species population within a given geographical area. The levels of significance are categorised as detailed below:

- International and European;
- National;
- Regional e.g. south-east England;
- County e.g. Surrey;
- Borough e.g. Woking Borough; and
- Local.

7.23 These geographical scale effects are then converted to major (international and national), moderate (regional or county) or minor (borough and local).

Assumptions and Limitations

7.24 Even where data for a particular species group is provided in the desk study, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest, the area may simply be under-recorded.

7.25 The extended Phase 1 habitat survey of the site was carried out in February 2019, when some plant species could not be readily identified. As such, the different plant species recorded during the survey are unlikely to be comprehensive, but, due to the nature of habitats present on-site, this has not affected the habitat classification or assessment of their ecological importance.

BASELINE CONDITIONS

Current Baseline Conditions

Designated Sites

Statutory Sites

7.26 The site is not subject to any statutory nature conservation designations. There are two European designated statutory sites within a 5km radius of the site, the closest of which is Thames Basin Heaths Special Protection Area (TBH SPA), situated approximately 2.6km to the south-west of the site. There are two nationally designated statutory sites located within a 2km radius of the site. The closest statutory site is the Mayford Meadows Local Nature Reserve (LNR), located approximately 220 metres (m) to the south-east of the site. Further details are set out in Table 7.1).

Table 7.1 Statutory Designated Sites Located within 5km of the Site

Site Name	Distance from Site and Orientation	Reason for Designation
Mayford Meadows (LNR)	220m south-east	Wetland management has encouraged the establishment of a rich, wet grassland flora and numerous trees have been coppiced and pollarded in order to enhance its biodiversity interest and provide suitable habitats for water vole.
Smart's and Prey Heaths Site of Special Scientific Interest (SSSI)	560m south-west	The site consists of a mosaic of heathland habitats including wet and dry heath, scrub and fringing woodland. The heathland supports characteristic heathland birds, including occasional breeding nightjar. The heathlands are predominantly damp, the sward being dominated by ling heather, cross-leaved heath, and purple moor grass. Other plants include creeping willow, dwarf gorse, deergrass, and long-leaved and round-leaved sundews.

Site Name	Distance from Site and Orientation	Reason for Designation
Thames Basin Heaths Special Protection Area (TBH SPA)	2.6km south-west	The site consists of tracts of heathland, scrub and woodland. Less open habitats of scrub, acidic woodland and conifer plantations dominate, within which are scattered areas of open heath and mire. The site supports important breeding populations of a number of birds of lowland heathland, especially Nightjar and Woodlark, both of which nest on the ground, often at the woodland/heathland edge, and Dartford Warbler, which often nests in gorse. Scattered trees and scrub are used for roosting. Together with the nearby Wealden Heaths SPA and Ashdown Forest SPA, the Thames Basin Heaths form part of a complex of heathlands in southern England that support important breeding bird populations.
Thursley, Ash, Pirbright & Chobham Special Area of Conservation (SAC)	3.1km south-west	This site represents lowland northern Atlantic wet heaths, and contains several rare plants, including great sundew, bog hair-grass, bog orchid and brown beak-sedge. There are transitions to valley bog and dry heath. Thursley Common is an important site for invertebrates, including a significant dragonfly assemblage, and the site supports an important assemblage of animal species including European nightjar, Dartford warbler, sand lizard and smooth snake.

Non-Statutory Designated Sites

7.27 The site is not subject to any non-statutory nature conservation designation. There are ten non-statutory sites, designated as SNCIs, within 2km of the site. The closest is Barnsbury Meadow & Bonsey Lane Woods (Inc. Barnsbury School) SNCI, located approximately 90m to the east of the site, separated by Egley Road. Mayford Meadows SNCI is located adjacent to the east of the Barnsbury Meadow & Bonsey Lane Wood SNCI, approximately 180m to the east of the site and also separated by Egley Road. A summary of the non-statutory sites located within 2km of the site is presented in Table 7.2.

Table 7.2 Non-statutory Designated Sites Located within 2km of the Site

Site name	Distance from Site and Orientation	Reason for Designation
Barnsbury Meadow & Bonsey Lane Woods (including school) SNCI	90m east	The site contains wet grassland, broadleaved wet and dry woodland. The site forms an important part of a corridor of sites along the Hoe Valley and is important for its habitat diversity including wet grassland and wet woodland. It supports an important invertebrate site and good populations of warblers and other passerines of damp meadows. The site has been identified as having potential to support otter.
Mayford Meadows SNCI	180m east	The site includes marsh, swamp, fen, scrub, woodland and mesotrophic grassland. It supports a range of wetland habitats and is an important site for invertebrates (nationally scarce invertebrates are present) and passerines of damp meadows.
Hoe Stream SNCI	190m east	The stream is important in the Borough and provides a valuable link and habitat corridor for the SNCI sites in the Hoe Valley SNCI corridor.
Kemishford Bridge to Railway – Hoe Valley SNCI	850m south-west	The site contains damp meadows, pasture fields, rough grassland and streamside vegetation. It has high species and habitat diversity. The damp meadows support common spotted orchid and marsh orchids as well as 11 species typical of grassland of conservation interest in Surrey. The site is a valuable link between Smarts Heath and Prey Heath SSSIs.
Hook Heath Golf Course Pond SNCI	1km north-west	The pond supports rare and uncommon plant species in the County and it is a good site for invertebrates.
Westfield Common SNCI	1km south-east	The site contains woodland, scrub, wetland, grassland and ponds. It supports nationally scarce plant species, and there are records of great crested newt in two of the ponds. There are species-rich areas of wet woodland, drains and ponds. This area has been selected for inclusion within the improvement plan for great crested newts in Woking Borough (ADAS, 2016).
West of Kemishford Bridge – Hoe Valley SNCI	1.6km south-west	The site was selected for rush dominated grassland with a good unimproved meadow and a small alder carr.
Blackhorse Road Woods and Meadow SNCI	1.7km west	This site contains alder woodland, marshy areas bordering a stream, ditches and unimproved meadow. It was selected for its wet woodland habitat, part of which has been wooded since at least 1871. There have been 13 ancient woodland indicator species recorded.
Whitmoor Pond SNCI	1.74km south	The site contains wet woodland, a pond and wet tussocky grassland. It was selected for its wet woodland and wet grassland habitat. The site supports two species shown on the Surrey Rare Plant Register as Surrey Scarce; Water-violet and Spiked Water-milfoil. The site is an important protective buffer for Whitmoor Common SSSI. Past records indicate it is an important bryophyte site.

Site name	Distance from Site and Orientation	Reason for Designation
Mill Moor SNCI	1.8km east	The site is situated on the floodplain of the River Wey, largely composed of semi-improved mesotrophic grassland, including central stands of wet grassland. Two ponds are present on site, and the site was selected for its species-rich wetland and ponds. Past records include at least 19 species typical of grassland of conservation interest in Surrey including 7 on the current draft Surrey Rare Plant Register. Although a recent survey has found it to have declined, with appropriate management it is thought that the site could regain some of its lost species.

7.28 There were four areas of ancient semi-natural woodland identified within 2km of the site, and three other HPI habitats within 2km of the site (including on-site, see below), as identified by a search of MAGIC's Priority Habitat Inventory. The records for these habitats identified as being the closest to the site are summarised in Table 7.3 below. The area of woodland located on the site is shown on MAGIC's Priority Habitat Inventory as an HPI for lowland mixed deciduous woodland, although the Phase 1 habitat survey detailed in the following section confirmed that the woodland on site did not meet the criteria for an HPI.

Table 7.3 Summary of the closest records for Ancient Woodland and HPIs

Habitat	Distance from site and orientation
Ancient semi-natural woodland	0.5km south
Lowland heathland (HPI)	0.38km south
Lowland Fens (HPI)	2km south-west
Traditional orchards (HPI)	2km south-west

Habitats and Flora

- 7.29 A brief description of habitats within the site is provided below. Further details are provided in the PEA report, presented in **ES Volume 3, Appendix: Ecology (Annex 2)**.
- 7.30 The site comprises an area of broadleaved plantation woodland, semi-improved grassland, amenity grassland, and areas of dense/continuous scrub, continuous bracken and scattered trees, and an existing storage shed and areas of hardstanding. The habitats within the site, with the exception of the woodland, are considered to be of biodiversity importance at the site level.
- 7.31 The woodland on-site contains species that are characteristic of the lowland mixed deciduous woodland HPI, including pedunculate oak, beech and other native tree species. However, it is a plantation woodland that is semi-mature and contains many non-native species. Additionally, the understorey of the woodland is species poor; therefore, it is not considered to be an HPI. However, the woodland on-site provides a stepping-stone to other areas of woodland in the area, including the designated sites Barnsbury Meadow & Bonsey Lane Woods SNCI and Blackhorse Road Woods and Meadows SNCI. The broadleaved plantation woodland is considered to be of local importance.
- 7.32 The remainder of the site contains areas of habitat types that are common and widespread within the surrounding landscape. Although relatively common, the habitats are of value to wildlife as these act as a stepping-stone between larger green areas. The site is connected to adjacent habitats, including semi-improved grassland and woodland, and the adjacent railway line to the west of the site, which could provide a commuting corridor for wildlife through the landscape.

Fauna

- 7.33 A summary of the closest record for each species of conservation concern (with potential to be present on-site) identified by the desk study is provided in Table 7.4. Records that are older than 10 years have not been included and no records were returned for badger (*Meles meles*) and hazel dormouse (*Muscardinus avellanarius*). Many of the records returned were for species associated with lowland heathland habitats, which is not present on-site.

Table 7.4 Summary of Records returned in the Desk Study

Species	Date	Distance from Site and Orientation	Notes
Common pipistrelle bat (<i>Pipistrellus pipistrellus</i>) Soprano pipistrelle bat (<i>Pipistrellus pygmaeus</i>)	2016	0.2km north	Tree roosts were identified on land to the north of the site when bat surveys were undertaken for planning consent. For further information please see the PEA Report presented in ES Volume 3, Appendix: Ecology .
Daubenton's bat (<i>Myotis daubentonii</i>), brown long-eared bat (<i>Plecotus auratus</i>), natterer's bat (<i>Myotis nattereri</i>), whiskered bat (<i>Myotis mystacinus</i>) and serotine bat (<i>Eptesicus serotinus</i>)	2016	Within 2km of the site	Records are to an accuracy of 1km only.
Kingfisher (<i>Alcedo atthis</i>)	2002	1.5km north-west	Records are to an accuracy of 1km only.
Red kite (<i>Milvus milvus</i>)	2009	1.5km north-west	Records are to an accuracy of 1km only.
Peregrine (<i>Falco peregrinus</i>)	2018	1.5km north	Records are to an accuracy of 1km only.
Great crested newt	2016	0.5km east	Records are to an accuracy of 1km only.
Grass snake (<i>Natrix Helvetica</i>)	2015	0.5km south-west	Records are to an accuracy of 1km only.
Slow worm (<i>Anguis fragilis</i>)	2015	0.5km south-west	Survey reports associated with the development of the land adjacent to the north of the site in 2015 included the site and indicated a medium population of slow-worm.
Common lizard (<i>Zootoca vivipara</i>)	2015	0.5km south-west	Survey reports associated with the development of the land adjacent to the north of the site in 2015 included the site and indicated a medium population of common lizard.
Hedgehog (<i>Erinaceus europaeus</i>)	2010	0.5km east	Also anecdotally recorded adjacent to the site. Records are to an accuracy of 1km only
Common toad (<i>Bufo bufo</i>)	2016	1.5km south	Records are to an accuracy of 1km only
Stag beetle (<i>Lucanus cervus</i>)	2009	1.5km north	Records are to an accuracy of 1km only
Bluebell (<i>Hyacinthoides non-scripta</i>)	2013	0.5km south-east	Records are to an accuracy of 1km only

Bats

- 7.34 The data search returned 28 records of bats from within 2km of the site. Trees with features suitable to support roosting bats were recorded on-site (as referred to in the Ground Level Roost Assessment Report presented in **ES Volume 3, Appendix: Ecology (Annex 3)**) and the habitats on, and adjacent to, the site have the potential to support foraging and commuting bats. Bat activity surveys have been undertaken on site, which confirmed that the site is used by at least eight species of bat, including the more light-sensitive *Plecotus* and *Myotis* bats. Bat activity was recorded across the site, although at higher levels in association with the woodland on site. The assemblage of bats is considered to be of importance up to the Borough level.

Great Crested Newt

- 7.35 The data search returned four records of great crested newt from within 2km of the site. The woodland, scrub and semi-improved grassland areas on-site have the potential to support great crested newt during its terrestrial phase and there is a waterbody located approximately 90m to the south of the site. A great crested newt eDNA survey of this waterbody was undertaken on 15 April 2019 and was returned as negative. A great crested newt survey report which provides greater detail is presented in **ES Volume 3, Appendix: Ecology (Annex 5)**. As there were no confirmed breeding ponds for great crested newt within 500m of the site, great crested newt were considered likely to be absent from site and are therefore not considered further in this assessment.

Widespread Reptiles

- 7.36 A reptile survey of the site has been completed; one common lizard was recorded on the site in the boundary habitat adjacent to the railway in the north of site. Therefore, indicating low populations of common lizard are likely to be present on site. See the reptile report in **ES Volume 3, Appendix: Ecology (Annex 6)** for more

detail. The reptile population on site is considered to be of local importance as Surrey supports a large number of high importance reptile assemblages and only one individual was recorded during the survey.

Breeding Birds

7.37 Three Schedule 1 birds (kingfisher, red kite, peregrine) were listed in the data search as occurring within 2km of the site. The site is not considered to provide opportunities for breeding by these species. The woodland, scrub, bracken and scattered trees on-site have potential to support common species of breeding bird and SPI bird species listed in the data search as occurring within 2km of the site including house sparrow, song thrush, bullfinch and starling. The site also has potential to support bird species listed as UK Birds of Conservation Concern which includes the SPI species listed above. The assemblage of birds likely to be using the site is unlikely to exceed local importance as larger areas of better value bird habitat such as broadleaved and coniferous woodland and lowland heath is abundant in the Woking Borough and beyond, and the site is not suitable for heathland birds such as nightjar and Dartford warbler.

Other Species of Conservation Concern

7.38 Records for SPI species listed under Schedule 41 of the NERC Act (2006)⁹ have been returned in the data search. The site has the potential to support SPIs including hedgehog, common toad and stag beetle. These species are considered to be of local importance as they are relatively common and widespread in the county but with numbers declining nationally.

IDENTIFICATION OF RECEPTORS AND RECEPTOR SENSITIVITY

7.39 The identified important ecological features (receptors), their locations and their level of importance on the geographic scale are presented in Table 7.5 below.

Table 7.5 Assessment of Importance of Ecological Features

Important Ecological Feature	Location	Importance
Thames Basin Heaths Special Protection Area (SPA)	2.6km south-west	European
Thursley, Ash, Pirbright & Chobham Special Area of Conservation (SAC)	3.1km south-west	European
Smart's and Prey Heaths Site of Special Scientific Interest (SSSI)	560m south-west	National
Mayford Meadows (LNR)	220m south-east	County
Barnsbury Meadow & Bonsey Lane Woods (including school) SNCI	90m east	County
Mayford Meadows SNCI	180m east	County
Hoe Stream SNCI	190m east	County
Kemishford Bridge to Railway – Hoe Valley SNCI	850m south-west	County
Hook Heath Golf Course Pond SNCI	1km north-west	County
Westfield Common SNCI	1km south-east	County
West of Kemishford Bridge – Hoe Valley SNCI	1.6km south-west	County
Blackhorse Road Woods and Meadow SNCI	1.7km west	County
Whitmoor Pond SNCI	1.74km south	County
Mill Moor SNCI	1.8km east	County
Crastock Woods – Hoe Valley SNCI	1.9km south-west	County
St John's Lye and Ponds SNCI	1.9km north-west	County
Basingstoke Canal SNCI	2km north	County
Broadleaved plantation woodland	On site	Local
Semi-improved grassland	On site	Site
Amenity grassland	On site	Site
Continuous scrub	On site	Site

Important Ecological Feature	Location	Importance
Continuous bracken	On site	Site
Scattered trees	On site	Site
Common pipistrelle	On site	Local
Soprano pipistrelle	On site	Local
Nathusius' pipistrelle	On site	Borough
Serotine bat	On site	Borough
Leisler's bat	On site	Borough
Noctule bat	On site	Local
<i>Plecotus</i> species / Brown long-eared bat	On site	Local
<i>Myotis</i> bat species	On site	Up to Borough (precautionary)
Common lizard	On site	Local
Breeding birds	On site	Local
Hedgehog	Adjacent to site and likely to be present on site	Local
Common toad	Within 2km and potentially on site	Local
Stag beetle	Within 2km and potentially on site	Local

7.40 Ecological features with site-level importance are not discussed further in the report as any effects on these features would be negligible and not significant.

POTENTIAL EFFECTS

Demolition and Construction

Designated Sites

Statutory Sites

7.41 No impacts on statutory designated sites during construction are predicted.

Non-statutory sites

7.42 No impacts on non-statutory designated sites during construction are predicted.

Habitats

7.43 The broadleaved plantation woodland on site is of local importance, which is also subject to an area-wide Tree Preservation Order (TPO). The majority of the woodland on site will be retained as part of the Proposed Development. Approximately 0.4ha of woodland, constituting approximately 25% of the total woodland area will be permanently removed to facilitate the Proposed Development. The removal of this section of woodland is not considered to adversely affect the conservation status of broadleaved plantation woodland beyond the site level. Therefore, the partial removal of the broadleaved plantation woodland would constitute a **negligible (not significant)** effect on the conservation status of the habitat.

7.44 All other habitats 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 semi-improved grassland, amenity grassland, dense/continuous scrub, continuous bracken and scattered trees would be **negligible (not significant)**.

⁹ HMSO (2006). *Natural Environment and Rural Communities Act*. HMSO

Species

- 7.45 **Bats:** At least eight bat species, as listed in Table 7.5, were recorded on site during bat activity surveys. The assemblage on site is considered to be of Borough importance. Three trees with low potential to support roosting bats were recorded in the northern extent of the woodland within the construction area of the site during the GLRA survey. Irreversible effects on potential bat roosts could occur from the removal of trees potentially supporting a bat roost. Reversible effects on commuting/foraging bats could occur from artificial lighting of commuting corridors and foraging areas at dusk and through the night. In the absence of mitigation, there could be a negative locally **significant (minor adverse)** effect on the assemblage of roosting bats, assessed on a precautionary basis as the status of roosting bats within the three low potential trees has not been confirmed, although any roosts are unlikely to exceed low conservation significance.
- 7.46 **Reptiles:** A small population of common lizard, considered to be of local importance, was recorded during the reptile survey. Reptiles could be permanently affected by killing/injury and loss of habitat during vegetation clearance. In the absence of mitigation this would constitute a negative locally **significant (minor adverse)** effect.
- 7.47 **Birds:** The assemblage of birds likely to use the site is considered to be of local importance. Birds could be directly impacted by the Proposed Development through the clearance of trees and scrub while nesting or indirectly due to the loss of woodland and grassland which forms foraging habitat and noise or visual disturbance. The killing/injury of any nesting birds would constitute a significant negative effect. The woodland and grassland to be lost forms a small proportion of the foraging habitat in the local area and its loss is not thought likely to have a significant effect on the bird assemblage. Disturbance of birds during construction will be temporary and localised and is therefore not considered to cause a significant effect on the bird assemblage. In the absence of mitigation these impacts would result in a temporary negative effect, **significant** at the local level (**minor adverse**).
- 7.48 **Hedgehog:** Hedgehog is likely to use the site and is considered to be of local importance. Hedgehog could be impacted through killing/injury during site clearance and loss of foraging habitat in the form of semi-improved grassland and woodland. In the absence of mitigation there is the potential for a negative locally **significant (minor adverse)** effect on hedgehog.
- 7.49 **Common toad:** Although not recorded on the site, common toad could be present and if so, would be of local importance. Common toad could be impacted through killing/injury during site clearance and loss of foraging habitat in the form of semi-improved grassland and woodland. In the absence of mitigation there is the potential for a negative locally **significant (minor adverse)** effect on common toad.
- 7.50 **Stag beetle:** Habitat suitable for stag beetle larvae (standing and partially buried dead-wood) is present on site. Any population of stag beetle on site would be of local importance. Stag beetle could be impacted by removal of dead-wood during site clearance. However, there is abundant woodland in the wider area and the majority of the dead-wood habitat, located within the woodland on site, will be retained. Therefore, any effects on stag beetle would be **negligible (not significant)**.

Completed Development

Designated Sites

Statutory Sites

- 7.51 Thames Basin Heaths SPA is a site of European importance. The features for which it is designated (Dartford warbler, nightjar and woodlark) are sensitive to increases in recreational pressure and reduction in air quality (through increased emissions). The Proposed Development is likely to indirectly result in increases in recreational pressure on the Thames Basin Heaths SPA. In the absence of mitigation, the Proposed Development is likely to result in a reversible negative effect on the Thames Basin Heaths SPA which would be **significant** at the European level (**major adverse**).
- 7.52 Thursley, Ash, Pirbright and Chobham SAC is a site of European importance designated for supporting three internationally rare Annex I habitats: Northern Atlantic wet heaths with *Erica teralix*, European dry heaths and depressions on peat substrates of the *Rhynchosporion*. The site is sensitive to recreational pressure and air quality impacts. In the absence of mitigation, the Proposed Development is likely to result in a reversible adverse effect on the SAC which would be **significant** at the European level (**major adverse**).
- 7.53 Smart's and Prey Heaths SSSI is a site of national importance. It is designated for the wet and dry heathland and woodland fringes and heathland birds including nightjar which it supports. The designated site is sensitive to recreational and air quality impacts. In the absence of mitigation, the Proposed Development is likely to result in a reversible adverse effect, **significant** at the national level (**major adverse**).

- 7.54 Mayford Meadows LNR is a site of county importance. It supports wet grassland and woodland; both of the habitats are sensitive to recreational pressure. In the absence of mitigation, the Proposed Development is likely to have an adverse effect through increased footfall; this effect is considered to be **significant** at the county level (**moderate adverse**).

Non-statutory sites

- 7.55 Ten non-statutory sites are located within 2km of the site as shown in Table 7.5 and are of county importance. The closest is located 90m to the east of the Proposed Development. The only impacts on these sites likely to be caused by the Proposed Development are indirect relating to increased recreational pressure. Although some very minor habitat degradation and disturbance may occur through increased footfall, no effects are considered likely to be significant (**negligible, not significant**) as the habitats and species for which the sites are designated should be able to tolerate such impacts.

Habitats

- 7.56 The retained broadleaved plantation woodland on site will be of local importance. There is the potential for some degradation of the habitat through increased recreation; however, the woodland is currently low quality with untypical woodland ground flora, and any recreational degradation is unlikely to exceed a **negligible (not significant)** effect.
- 7.57 All other habitats 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 semi-improved grassland, amenity grassland, dense/continuous scrub, continuous bracken and scattered trees would be **negligible (not significant)**.

Species

- 7.58 **Bats:** Eight bat species were recorded on site during bat activity surveys. The assemblage on site is considered to be of importance up to the borough level. Bats could be impacted during the operation of the Proposed Development by artificial lighting at dusk and night and disturbance or vandalism of trees that may contain a bat roost by new residents. No floodlighting will be used in any part of the Proposed Development. Lighting will be restricted to standard external lighting, i.e. street lighting and car park lighting. A lighting scheme has not yet been produced. In the absence of a lighting scheme it is precautionarily assumed that there could be lighting impacts on bats through the lighting of key commuting and foraging routes. Lighting of potential bat roosts is unlikely as all retained trees with bat roosting potential are sufficiently distant from the developed areas and buffered by retained woodland. Overall, in the absence of mitigation, there is considered to be a negative effect, **significant** up to the borough level (**minor adverse**), on bats as a result of the operation of the Proposed Development.
- 7.59 **Reptiles:** No further impacts on reptiles during the operation of the Proposed Development are considered likely following implementation of appropriate mitigation during construction.
- 7.60 **Birds:** The assemblage of birds likely to use the site is considered to be of local importance. Birds could be impacted during the operation of the Proposed Development through predation by cats and disturbance by new residents and artificial lighting at night. The existing site is situated adjacent to residential properties with further development in the vicinity; therefore, the bird assemblage using the site should be resilient to cat predation. Disturbance and lighting will be low-intensity and localised and the birds likely to use the site, which is located in a suburban area, should be tolerant of some disturbance and lighting. Any effects are considered to be **negligible (not significant)**.
- 7.61 **Hedgehog:** No further impacts on hedgehog during the operation of the Proposed Development are likely following implementation of appropriate mitigation during construction.
- 7.62 **Common toad:** No further impacts on Common toad during the operation of the Proposed Development are considered likely following implementation of appropriate mitigation during construction.
- 7.63 **Stag beetle:** Habitat suitable for stag beetle larvae (standing and partially buried dead-wood) is present on site. Any population of stag beetle on site would be of local importance. Stag beetle could be impacted during the operation of the Proposed Development by disturbance or killing through vandalism of deadwood habitats potentially occupied by stag beetle larvae by new residents. The adult stage could also be negatively affected as they are attracted to artificial light. Given the abundance of woodland in the wider area any impact is unlikely to affect the conservation status of stag beetle above the site level and therefore any effect is considered to be **negligible (not significant)**.

MITIGATION AND MONITORING MEASURES

Demolition and Construction

- 7.64 CEMP:** A Construction Environmental Management Plan (CEMP) will be produced prior to the start of demolition and construction works, which will detail all mitigation measures to be undertaken during the construction of the site and will include the mitigation measures outlined below.
- 7.65 Bats:** In the absence of mitigation there could be a negative locally significant (minor adverse) effect on bats. Best practice guidance for low potential trees is for them to be removed following precautionary mitigation measures, typically by soft-felling the trees under ecological supervision. While the potential for effects cannot be ruled out, the risk of killing/injury is significantly reduced, and appropriate roost compensation can be provided as necessary. Lighting at night will be strictly controlled during construction and no trees or hedges will be lit. With these mitigation measures in place, there is considered to be a **negligible (not significant)** effect on bats.
- 7.66** Although there will be no significant effects on bats, prior to the felling of trees with low bat roosting potential, at least five bat boxes suitable for a variety of species and roost types will be installed on retained trees within the woodland at least 15m from the edge of the woodland. In the unlikely event that roosting bats are disturbed during vegetation clearance the bat boxes can be used to put the bat(s) in if captured and would form compensatory roosts. Assuming no roosts are disturbed/destroyed as part of the vegetation clearance the bat boxes would form an enhancement (**negligible (not-significant)** benefit) for bats.
- 7.67 Reptiles:** In the absence of mitigation there would be a negative locally significant (minor adverse) effect on reptiles. Standard mitigation in the form of a supervised two-stage vegetation cut March-October will be undertaken to reduce the risk of killing or injuring of reptiles to displace them to adjacent suitable habitat.
- 7.68** To further mitigate effects, any log or brash piles and scrub will be removed by hand under the supervision of an ecologist. The pulling up of the root balls of any removed trees or scrub on or near the northern boundary of the site will be undertaken outside of the hibernation season for reptiles (i.e. root removal works will be undertaken March to October inclusive in temperatures 10°C or higher) under the supervision of an ecologist, who will also be checking for stag beetle larvae. New log and brash piles and potentially a hibernaculum will be created in the woodland or on the boundary with the railway using material from the clearance of the site. Following these measures, the effect on reptiles would be **negligible (not significant)**.
- 7.69 Birds:** In the absence of mitigation there would be a negative locally significant (minor adverse) effect on birds. Mitigation will be employed in the form of avoiding clearing trees and scrub during the nesting bird season or where not possible, only clearing trees and scrub following a nesting bird check by an ecologist who confirms that no active nests are present. Any effects on the bird assemblage likely to use the site following this mitigation would be **negligible (not significant)**.
- 7.70** At least five bird boxes erected in the woodland and ten bird boxes for house sparrow on new buildings would constitute an enhancement for birds, although this is not considered to change the residual effect (negligible (not significant)).
- 7.71 Hedgehog:** In the absence of mitigation there is the potential for a locally significant negative (minor adverse) effect on hedgehog. Any log or brash piles and thick scrub within the construction zone will be cleared by hand under the supervision of an ecologist to mitigate the potential killing/injury of hedgehog. New log and brash piles will be created using material from site, to be located in undisturbed areas of retained woodland to ensure suitable refuge for hedgehog exists on site following construction. Following this mitigation there would be a **negligible (not significant)** effect on hedgehog.
- 7.72 Common toad:** In the absence of mitigation there is the potential for a locally significant negative (minor adverse) effect on common toad. Any log or brash piles, thick scrub and leaf litter within the construction zone will be cleared by hand under the supervision of an ecologist to mitigate the potential killing/injury of common toad. New log and brash piles will be created using material from site, to be located in undisturbed areas of retained woodland to ensure suitable refuge for common toad exists on site following construction. Following this mitigation there would be a **negligible (not significant)** effect on common toad.
- 7.73 Stag beetle:** Although there will be no significant effects (i.e. negligible effect) on stag beetle, any deadwood within the construction zone will be carefully moved by hand to an unaffected area of the site within the woodland under the supervision of an ecologist and stumps removed from site partially reburied at the margin

of retained woodland. Partially buried (upright, at least half their length) log piles using wood from the clearance of trees on site will be added to unaffected areas of the woodland, which is unlikely to alter the effect (**not significant (negligible)**) on stag beetle and other invertebrates. If logs from outside the site are used, they will be untreated.

Completed Development

Statutory Sites:

- 7.74 Thames Basins Heaths SPA:** In the absence of mitigation there would be a negative effect significant at the European level (major adverse). The appropriate payment to WBC towards strategic Suitable Alternative Natural Greenspace (SANG) will be made. The SANG provision is intended to reduce the frequency of new residents visiting the SPA to acceptable levels and mitigate any adverse effect on the designated site to a negligible (not significant) level. WBC produced a Habitats Regulations Assessment (HRA) for their draft site allocations (of which the Egley Road site is one) and concluded that there is sufficient opportunity for SANG provision and significant effects from increased recreation can be avoided. The HRA also concluded that significant air quality effects could be avoided including in-combination effects. Given the above, it is considered that significant effects on the European site are unlikely (**negligible, not significant effect**) and a Habitats Regulations Assessment is not required.
- 7.75 Thursley, Ash, Pirbright and Chobham SAC:** In the absence of mitigation there would be a negative effect significant at the European level (major adverse). The WBC Site Allocations DPD HRA concluded that potential recreational effects on the European site would be mitigated under the umbrella of the SANG provision for Thames Basin Heaths SPA, which is being implemented as part of the Proposed Development, and air quality effects would not be significant. Therefore, significant effects on Thursley, Ash, Pirbright and Chobham SAC are considered to be avoided (**negligible, not significant effect**) and an HRA is not required.
- 7.76 Smart's and Prey Heaths SSSI:** In the absence of mitigation there would be a negative effect significant at the national level (major adverse). Recreational impacts will be mitigated through SANG provision as described for Thames Basin Heaths SPA. Potential air quality impacts have been assessed within **ES Volume 1, Chapter 6: Air Quality**, which concluded that there would be no significant air quality effects on Smart's and Prey Heaths SSSI. Following mitigation there would be a **negligible (not significant)** effect.
- 7.77 Mayford Meadows LNR:** In the absence of mitigation there would be a negative effect significant at the county level (moderate adverse). Recreational impacts will be mitigated through SANG provision as described for Thames Basin Heaths SPA. Following mitigation there would be a **negligible (not significant)** effect.
- #### Habitats
- 7.78 LEMP:** A Landscape Ecological Management Plan (LEMP) will be produced, which will set out how new and retained habitats will be managed for the benefit of ecological features.
- 7.79 Bats:** In the absence of mitigation, there is considered to be a negative effect, significant up to the borough level (minor adverse), on bats as a result of the operation of the Proposed Development. Barriers to public access into the woodland in the form of scrub planting on the boundaries of the woodland will be put in place, which will mitigate the possible disturbance/vandalism of potential bat roosts within the woodland. A lighting scheme will be produced, which will be reviewed by an ecologist to ensure lighting impacts on bats are minimised. Where necessary, the lighting scheme will be adjusted in accordance with Institute of Lighting Professionals (ILP) and Bat Conservation Trust (BCT) guidance on lighting¹⁰. No floodlighting will be used in any part of the Proposed Development including the tennis courts. Additionally, there will be no lighting of retained vegetation such as the woodland. Following mitigation there is considered to be a **negligible (not significant)** effect on bats.
- 7.80 Reptiles:** No additional mitigation for reptiles following construction is proposed or required.
- 7.81 Birds:** Other than minor general management measures such as cleaning of bird boxes, which will be detailed in the LEMP, no additional mitigation for birds following construction is proposed or required.
- 7.82 Hedgehog:** There will be no significant effects on hedgehog following completion of the development. However, holes/gaps approximately 10x10cm in garden and other boundaries will allow movement of hedgehogs, which have large ranges, through vegetated parts of the new development. Following these measures, the effect on hedgehog would remain as **negligible (not significant)**.

¹⁰ Miles, J., Ferguson, J., Smith, N. and Fox, H. (2018). *Bats and artificial lighting in the UK. Guidance Note 08/18*. Institution of Lighting Professionals.

7.83 Common toad: There will be no significant effects on common toad following completion of the Proposed Development. However, the holes/gaps in garden boundaries provided for hedgehog will also allow movement of common toad, frogs and other wildlife through vegetated parts of the new development. Following these measures, the effect on common toad would remain as **negligible (not significant)**.

7.84 Stag beetle: Although there will be no significant effects on stag beetle, the measures proposed to control vandalism and lighting for roosting bats (i.e. dense scrub planting at woodland edges and no lighting of vegetation) would also mitigate the same impacts for stag beetle, resulting in no change in effect (**negligible, not significant**).

RESIDUAL EFFECTS

7.85 The residual effects resulting from the Proposed Development are summarised in Table 7.6.

Table 7.6 Summary of Residual Effects

Receptor	Receptor Importance	Residual Effect (Nature and Scale)	Geo	D I	P T	R IR	St Mt Lt
Demolition and Construction							
Effects of Vegetation Clearance							
Broadleaved plantation woodland	Local (Low)	Negligible (not significant)	S	D	P	IR	Lt
Other habitats (semi-improved grassland, amenity grassland, dense/continuous scrub, continuous bracken and scattered trees)	Site (Low)	Negligible (not significant)	S	D	P	IR	Lt
Bats	Borough (Low)	Negligible (not significant)	B	D	P	IR	Lt
Reptiles	Local (Low)	Negligible (not significant)	L	D	P	IR	Lt
Birds	Local (Low)	Negligible (not significant)	B	D	P	IR	Lt
Hedgehog	Local (Low)	Negligible (not significant)	L	D	P	IR	Lt
Common toad	Local (Low)	Negligible (not significant)	L	D	P	IR	Lt
Stag beetle	Local (Low)	Negligible (not significant)	S	D	P	IR	Lt
Completed Development							
Effects of Recreation and Emissions							
Thames Basin Heaths SPA	European (High)	Negligible (not significant)	C	I	P	R	Lt
Thursley, Ash, Pirbright and Chobham SAC	European (High)	Negligible (not significant)	C	I	P	R	Lt
Smart's and Prey Heaths SSSI	National (High)	Negligible (not significant)	C	I	P	R	Lt
Mayford Meadows LNR	County (Moderate)	Negligible (not significant)	C	I	P	R	Lt
Ten non-statutory designated sites	County (Moderate)	Negligible (not significant)	C	I	P	R	Lt
Effects of Artificial Lighting							
Bats	Borough (Low)	Negligible (not significant)	B	I	P	R	Lt
Birds	Local (Low)	Negligible (not significant)	B	I	P	R	Lt
Effects of Disturbance/Vandalism							
Bats	Borough (Low)	Negligible (not significant)	B	D	P	R	Lt
Birds	Local (Low)	Negligible (not significant)	B	D	P	R	Lt

Receptor	Receptor Importance	Residual Effect (Nature and Scale)	Geo	D I	P T	R IR	St Mt Lt
Stag beetle	Local (Low)	Negligible (not significant)	S	D	P	R	Lt
Notes:							
Residual Effect							
- Scale = Negligible / Minor / Moderate / Major							
- Nature = Beneficial or Adverse							
Geo (Geographic Extent) = Site (S), Local (L), Borough (B), Regional (R), National (N)							
D = Direct / I = Indirect							
P = Permanent / T = Temporary							
R = Reversible / IR= Irreversible							
St = Short Term / Mt = Medium Term / Lt = Long Term							
N/A = not applicable / not assessed							

LIKELY SIGNIFICANT EFFECTS

7.86 Following mitigation there would be no significant residual ecological effects as a result of the Proposed Development.

CLIMATE CHANGE

7.87 The effects of climate change on biodiversity are potentially beneficial or adverse and depend on specific species and habitats. In the context of this site, the likely effects on habitat will depend more on precipitation than long term changes in average temperature. With regards to species the flora and fauna of the UK is relatively limited with respect to the European mainland. For example, France supports approximately twice as many bat species. It is likely that certain bat species will extend their range if the climate warms. However, this is unlikely to impact on the residual effects and conclusions of this assessment.

ASSESSMENT OF FUTURE ENVIRONMENT

Evolution of the Baseline Scenario

7.88 In the absence of the Proposed Development and assuming no ongoing habitat management of the site, natural succession would cause the habitats on site to gradually develop towards a woodland climax community. Grassland would begin to support more ruderal and scrub species, making it more suitable for reptiles and amphibians, likely allowing their populations to expand and increase in size, and the woodland would be likely to become more mature and dense, with a darker understorey in summer, potentially resulting in changes to the invertebrate assemblage.

Cumulative Effects Assessment

7.89 As set out in *ES Volume 1, Chapter 2: EIA Methodology*, no cumulative schemes were identified within the surrounding area of the site; therefore, a cumulative effects assessment (i.e. an assessment of the effects of the Proposed Development in combination with the effects of other cumulative schemes within the surrounding area) has not been undertaken.