

Preliminary Ecological Appraisal

Land at Tiltwood East

Hophurst Lane

Crawley Down

For: Aidan Cook

Date: November 2023

Version: Original

1 Summary

Site	Land at Tiltwood East, Hophurst Lane, Crawley Down, RH10 4LL
Central OS Grid Reference	TQ 35272 38280
Report Commissioned by	Aidan Cook
Report Purpose	To inform a full Planning Application.
Date of Survey	25 th October 2023
Author	Caitlin Laver BSc (Hons) MSc, Ecologist
Reviewed & Approved by	Claire Munn BSc (Hons) MSc MCIEEM, Associate Director (Ecology)

Considerations	Description	Comments & Recommendations
Ecological Importance of the Site	The site comprises bramble scrub and other neutral grassland with scattered trees	The bramble scrub is of site importance due to adding structural diversity to the site. The other neutral grassland is of negligible importance due to the high level of species indicative of sub-optimal conditions. The scattered trees are of site importance.
Further Assessments / Surveys	Badger survey	A pre-construction badger survey, c. six weeks before site clearance / construction commences, is recommended.
Avoidance and General Mitigation	Statutory sites	Payment into existing SANG and SAMM schemes to offset impacts to the Ashdown Forest SPA will be required.
	Scattered trees	Retain and protect native trees where possible and replant any trees lost to development with native species of local provenance.
	Great crested newts, common toads and reptiles	Two log piles will be constructed within the site prior to clearance of scrub. An ecologist will be present during a destructive search.
	Birds	Clear the bramble scrub between September and February inclusive or following a check by an ecologist if this is not possible.
	Bats (foraging and commuting) and hazel dormice	Implement a sensitive lighting strategy.
	Hedgehog	Cover any trenches/holes overnight or use secured plants to allow animals that fall in to escape.
	Schedule 9 non-native invasive species <i>Rhododendron ponticum</i>	<i>Rhododendron ponticum</i> in the north of the site should be removed to an approved disposal facility, to avoid its spread.

Considerations	Description	Comments & Recommendations
Enhancements	To increase the ecological value of the site.	Plant a native hedgerow on each site boundary, install wildlife boxes for birds and bats and homes for insects and hedgehogs. Create a swathe of uncut grassland, a log pile and a dedicated grass heap within the north of the site.
Conclusion	Financial contributions are required to offset impacts of increased residential units on the Ashdown Forest SPA. Avoidance and mitigation measures for other ecological receptors are possible to secure by condition, as is the pre-commencement badger survey. The proposal offers opportunities for biodiversity enhancements within the site.	

Contents

1	Summary.....	1
2	Introduction	4
2.1	Background	4
2.2	Site Location and Description	4
2.3	Scope of Survey	4
2.4	Development Proposal	4
2.5	Objective	4
3	Methodology	6
3.1	Surveyor	6
3.2	Desk Study.....	6
3.3	Habitat Survey	6
3.4	Protected and Notable Species Assessment.....	7
3.5	Evaluation	9
3.6	Limitations and Assumptions	9
4	Results and Evaluation	11
4.1	Designated Sites	11
4.2	Habitats.....	12
4.3	Protected and Notable Species	14
5	Further Surveys, Avoidance, Mitigation and Enhancement Recommendations	21
5.1	Further Surveys	21
5.2	Avoidance and Mitigation.....	21
5.3	Enhancements.....	23
6	Conclusion	25
7	References.....	26

Appendix 1 Legislation and Planning Policy

Appendix 2 UK Habitat Map

Appendix 3 Reptile Mitigation

Appendix 4 Wildlife Friendly Planting

2 Introduction

2.1 Background

David Archer Associates was commissioned by Aidan Cook to undertake a Preliminary Ecological Appraisal (PEA) at Land at Tiltwood East, Hophurst Lane, Crawley Down, herein referred to as 'the site'. This report will support a planning application for one residential unit and associated private garden and infrastructure.

2.2 Site Location and Description

The site is located to the east of Crawley Down at central Ordnance Survey Grid Reference TQ 35272 38280. The site totals c. 0.2ha, comprising bramble scrub and other neutral grassland with scattered trees.

The site is situated within a suburban location and surrounded by Hophurst Lane to the north, a single-track lane to the south and the east and a residential dwelling and garden to the west. The wider area comprises suburban settlement, pastoral land, hedgerows, deciduous woodland and watercourses.

2.3 Scope of Survey

The PEA comprised a single visit to the application site. The study area was also extended to consider the following ecological features according to certain distances around the site boundary:

- 5km for statutory designated sites for nature conservation that form part of the National Site Network (NSN) and Ramsar sites;
- 2km for statutory sites of national and local importance designated for nature conservation;
- 2km for non-statutory sites designated for nature conservation;
- 2km for protected and notable species records;
- 2km for granted European Protected Species Mitigation (EPSM) licences;
- 500m for Priority Habitats;
- 250m for water-bodies (in relation to great crested newts); and
- 30m for badger setts.

2.4 Development Proposal

The proposed development includes construction of one residential unit, with associated private garden and infrastructure (**Figure 2.1**). This requires the removal of three trees within the site and the removal of the bramble scrub and other neutral grassland across the site. However, four trees on-site will be retained.

2.5 Objective

The objective of this PEA is to identify any further ecological surveys and / or mitigation required, and potential enhancement opportunities in accordance with planning policy, and European and UK wildlife legislation (**Appendix 1**).

Figure 2.1: Proposed Development Plan (B+C Architecture., 2023; Drawing Number 101)



3 Methodology

3.1 Surveyor

The site was surveyed by Ecologist Caitlin Laver, who is licensed to survey for great crested newts (licence number: 2023-11402-CL08-GCN). Caitlin has amassed over 100 hours of bat survey and training time since beginning bat work (including Preliminary Roost Assessments (PRAs), nocturnal roost emergence/re-entry surveys, activity surveys and hibernation surveys) in 2021. Caitlin has also been specifically trained on conducting PRAs and undergoes regular in-house assessment of these by Associate Director (Ecology) Claire Munn, under whose bat licence Caitlin is accredited.

3.2 Desk Study

Natural England's Multi-Agency Geographic Information for the Countryside (MAGIC) database was accessed on 22nd September 2023 for information on statutory sites designated for nature conservation within a 2km radius of the site. Consideration for NSN sites was extended to a 5km radius where the potential risk of impact to interest features of such sites may extend over a wider area. Such sites include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). A 5km search radius was also applied to internationally designated Ramsar sites, as well as sites currently under public consultation for future designation as SACs, SPAs and Ramsar sites.

The MAGIC Impact Risk Zones (IRZs) were used to assess whether the proposed development may impact on any Sites of Special Scientific Interest (SSSI), and thus whether consultation with Natural England is needed to discuss how impacts might be avoided or mitigated.

The Sussex Biodiversity Records Centre (SxBRC) was also consulted on 21st September 2023 for the following information for a 2km radius around the application site:

- Non-statutory nature conservation designations, such as Local Wildlife Sites (LWS);
- Legally protected species, such as great crested newts, reptiles, birds and bats; and
- Notable / priority species, such as those listed under Section 41 of the NERC Act, 2006.

3.3 Habitat Survey

The survey involved a site visit on 25th October 2023 to record and map habitat types and ecological features within the site. The survey was undertaken in accordance with *Guidelines for Preliminary Ecological Appraisal* (CIEEM, Guidelines for Preliminary Ecological Appraisal, 2017). The habitats present on-site have been characterised under the UK Habitat Classification Habitat Definitions V1.0 (The UK Habitat Classification Working Group, 2018) and the Biodiversity Metric 4.0 Technical Supplement (Natural England, 2023). A minimum habitat parcel size of 25m² was employed, and wherever possible, habitats were characterised to Level 5, the most detailed level available. Habitats were plotted on a Habitat Plan (**Appendix 2**). Features of interest were identified as target notes on the Habitat Plan (**Appendix 2**).

Aerial photographs, maps and field observations were used to identify habitats in the wider landscape which could be impacted by development of the site.

Weather conditions during the survey were 11°C, gentle air (Beaufort 1), 100% cloud cover and dry.

3.4 Protected and Notable Species Assessment

The site was inspected for evidence of and assessed for potential to support protected and notable species. This included species listed under the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*, the *Wildlife and Countryside Act 1981 (as amended) (WCA)*, and those given extra protection under the *Natural Environment and Rural Communities (NERC) Act 2006*, *Countryside and Rights of Way (CROW) Act 2000*, and the *Protection of Badgers Act 1992*.

MAGIC was also accessed on 22nd September 2023 to identify any European Protected Species Mitigation (EPSM) licences granted by Natural England within a 2km radius of the site.

The following protected / notable species were considered within the assessment.

3.4.1 Great Crested Newts and Common Toads

The site was assessed for suitability to support the legally protected great crested newt *Triturus cristatus* and the notable common toad *Bufo bufo*. The assessment was undertaken in accordance with the *Herpetofauna Workers' Manual* (Gent & Gibson, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, Beckett, & Foster, 2001).

Based on Natural England (2015) guidance, surveys of land greater than 250m from the nearest water-body are normally appropriate in relation to great crested newts when all of the following conditions are met:

- a) Maps, aerial photos, walkover surveys or other data indicate that the water-bodies have potential to support a large great crested newt population;
- b) The development footprint contains particularly favourable habitat, especially if it constitutes the majority available locally;
- c) The development would have a substantial negative effect on that habitat; and
- d) There is an absence of dispersal barriers.

The proposed development does not meet criteria a and c above, and therefore consideration was given to water-bodies on and within 250m of the site using OS maps and aerial images.

Sites within 250m of the application site were located within private gardens, therefore, no HSI assessments were carried out during this survey. However, an HSI has previously been carried out of Pond 1 (AWEC, 2017a).

3.4.2 Reptiles

The site was assessed for suitability to support reptiles with reference to the *Herpetofauna Workers' Manual* (Gent & Gibson, 2003) and *Froglife Advice Sheet 10 An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation* (Froglife, 1999).

3.4.3 Badgers

The site and a 30m zone around the site (where accessible), were surveyed for badger *Meles meles* evidence such as setts, latrines, pathways, footprints, snuffle holes and badger hairs. Any setts recorded were classified according to published criteria (Harris, Cresswell, & Jeffries, 1989).

3.4.4 Bats

Potential for the site to support roosting, foraging and commuting bats was assessed in line with the Bat Conservation Trust (BCT) *Bat Surveys for Professional Ecologists Good Practice Guidelines* (Collins, 2016).

3.4.4.1 Roosting

Trees were surveyed for evidence of bats and Potential Roost Features (PRFs), and then assigned a level of suitability for roosting bats as outlined in **Table 3.1**. PRFs include woodpecker holes, rot holes, hazard beams, cracks and splits, knot holes, cavities, loose bark, and partially detached ivy (Andrews, 2013).

Table 3.1: Classifying the bat roosting suitability of trees (Collins, 2016).

Negligible roosting suitability	Trees with few, if any, features suitable for roosting.
Low roosting suitability	A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Moderate roosting suitability	A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat. These trees are unlikely to support a roost of high conservation status.
High roosting suitability	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

3.4.4.2 Foraging and Commuting

The site was assessed for its suitability to support foraging and commuting bats according to **Table 3.2**.

Table 3.2: Classifying the suitability of bat foraging and commuting habitat (Collins, 2016).

Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated or poorly connected to habitat in the surrounding landscape. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in parkland) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that bats may use for commuting such as tree-lines and scrub or linked back gardens. Habitat that connects to the wider landscape that bats may use for foraging such as trees, scrub grassland and water.

High	Continuous, high quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, tree-lines and woodland edge. High quality habitat that is well-connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
------	---

3.4.5 Hazel Dormouse

The site was assessed for potential to support the hazel dormouse *Muscardinus avellanarius*, in accordance with the *Dormouse Conservation Handbook* (Bright, Morris, & Mitchell-Jones, 2006). Dormice typically use connected woodland, hedgerows and scrub that contain suitable food plants. Aerial images were used to assess the connectivity of any suitable habitat on the site to woodland and hedgerows within the wider area.

3.4.6 Other Species

The site was assessed for suitability to support other protected and notable fauna species / assemblages including birds, invertebrates and mammals.

3.4.7 Invasive Species

The site was searched for invasive plants such as giant hogweed *Heracleum mantegazzianum*, Himalayan balsam *Impatiens glandulifera*, Japanese knotweed *Fallopia japonica* and rhododendron *Rhododendron ponticum*.

3.5 Evaluation

Designated sites, habitats and species (where presence has been identified) have been evaluated in accordance with the *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2018).

These guidelines aim to give consistency in evaluating the importance of the ecological features within and around a site, which help inform any effects or impacts a scheme will have upon them.

A value of the ecological features (designated sites, habitats or species) has been assigned according to their level of importance using the following terms:

- International and European
- National
- Regional
- Local
- Site
- Negligible

3.6 Limitations and Assumptions

Access was available to the entire site and the baseline conditions reported represent those identified at the time of the survey. The survey date falls outside the optimal season for botanical work. However, the habitat descriptions and evaluations are considered to be accurate due to the common and widespread habitats recorded and the vegetation being clearly visible at the time of survey.

Although a reasonable assessment of the site can be made during a single survey, seasonal variations are not observed.

This PEA provides an overview of the likelihood of protected / notable species occurring on the site (negligible, low, moderate, or high). Absence of a species cannot be presumed where no evidence was found. Further surveys have been recommended where there is reasonable likelihood of a protected species being present and impacted by the development proposal. This is based on the suitability of the habitat and any evidence observed.

This PEA does not constitute a full botanical survey or a Phase 2 pre-construction survey for Japanese knotweed.

The results of this assessment will remain valid for 12 months from the date of the survey i.e. until October 2024, after which the assessment should be updated, if a planning application has not been submitted within this timeframe.

4 Results and Evaluation

The following section presents the results, evaluation and discussion of the designated sites, habitats and protected / notable species, which may be impacted by the proposed development.

4.1 Designated Sites

4.1.1 Statutory Sites

No Ramsar or National Site Network (NSN) sites are located within 5km of the site. No SSSI or Local Nature Reserves are located within 2km of the site.

The site falls within the Hedgecourt SSSI, Wakehurst and Chiddingly Woods SSSI and Weir Wood Reservoir SSSI Impact Risk Zones (IRZs), however the development does not meet criteria for impacts that would likely lead to a significant effect on these SSSIs. Therefore, no consultation with Natural England and no mitigation is required for these SSSIs.

The site does, however, lie just within the 7km buffer zone surrounding the Ashdown Forest SPA, within which mitigation is required to offset impacts of increased residential use of the area on the designated features of the SPA.

There are no habitats or species within the site that serve as qualifying features of the nearby statutory sites. The application site is not ecologically linked to these sites due to the intervening land including open farmland and built development (OS, 2023). The development is also highly unlikely to indirectly impact any designated sites in the local area due to its small-scale size and only one new residential dwelling being proposed. No significant impacts on statutory sites are expected, beyond the potential impacts arising from the site lying just within the Ashdown Forest SPA buffer zone.

Further action is therefore recommended in **Section 5** in relation to the Ashdown Forest SPA, but no further action is recommended is required in relation to other statutory designated sites.

4.1.2 Non-Statutory Sites and Priority Habitats

Non-statutory sites designated for nature conservation that are located within 2km of the application site are provided in **Table 4.1**. LWSs are of are of **local importance**.

The development will be small enough and located far enough from any of these sites for there to be any direct or indirect impacts on their habitats.

Further, there does not appear to be any direct public path, hydrological link or other habitat connectivity between these sites and the application site (OS, 2023). No significant impacts on non-statutory sites are expected.

Table 4.1: Non-statutory sites within 2km of the application site.

Site Name	Distance & Direction from Site	Area (ha)	Reasons for Designation
Worth Way LWS	c. 0.4km S	34	Worth Way LWS follows the route of a former railway line, now used as a footpath known as Worth Way. The embankments and cuttings of the former railway line contain deciduous woodland that connects to a number of other woods, some of which contain ancient woodland. This provides an important corridor of woody habitat, enabling the movement of species across the

			local landscape. The deciduous woodland across the LWS has a canopy of mature ash <i>Fraxinus excelsior</i> and pedunculate oak <i>Quercus robur</i> , also with occasional beech <i>Fagus sylvatica</i> and sycamore <i>Acer pseudoplatanus</i> . The understorey contains hazel <i>Corylus avellana</i> , hawthorn <i>Crataegus monogyna</i> , field maple <i>Acer campestre</i> and holly <i>Ilex aquifolium</i> . The field layer vegetation is fairly species-rich, particularly in the areas of ancient woodland and includes bluebell <i>Hyacinthoides non-scripta</i> , wood anemone <i>Anemone nemorosa</i> , three-nerved sandwort <i>Moehringia trinervia</i> , wood speedwell <i>Veronica montana</i> , thin-spiked wood-sedge <i>Carex strigosa</i> and wood melick <i>Melica uniflora</i> . Other habitats, including acid grassland, ponds and a swamp, add further diversity to the LWS.
Lobbs Wood & Furnace Pond LWS	c. 0.5km N	30.9	Lobbs Wood forms part of an ancient woodland complex situated north of Crawley Down. The gill, or steeply incised stream valley is a very valuable feature. Furnace Pond, presumably a hammer pond created for the Wealden iron industry, is a large area of open water surrounded by ancient woodland. Its considerable ornithological importance is well documented.

Priority habitats (Section 41, NERC Act 2006) are present within 500m. These include ancient and deciduous woodland. The nearest of these is ancient woodland, located c. 50m to the south-east of the site. No impacts are expected to priority habitats due to the distance between them and the site. No further action is required.

4.2 Habitats

The habitats below were recorded within the site during the survey. No protected, Habitats of Principal Importance (HPIE) or locally important floral species or habitats were recorded within the site during the survey. Habitat types are described below and shown on the UK Habitat Map (**Appendix 2**).

Table 4.2: Habitats recorded on-site (UK Habitats Classification).

Primary Habitat (code)	Secondary Habitat within Primary Habitat (code)
Other Neutral Grassland (g3c)	Scattered rush (14) Scattered trees (32) Ruderal and ephemerals (81) Earth bank (112) Seasonally wet (502) Bare ground (510)
Bramble scrub	Scattered trees (32) Ruderal and ephemerals (81) Seasonally wet (502) Fence (612)
Unvegetated, artificial, unsealed surface (u1c)	Track (839)

4.2.1 Other Neutral Grassland

Other neutral grassland was recorded within the site (**Photo 4.1**). Species comprise annual meadow grass *Poa annua*, perennial ryegrass *Lolium perenne*, common bent *Agrostis capillaris*, creeping bent *Agrostis stolonifera*, Yorkshire fog *Holcus lanatus*, creeping soft-grass *Holcus mollis*, cock's foot *Dactylis glomerata*, false oatgrass *Arrhenatherum elatius*, tufted hairgrass *Deschampsia cespitosa*, pendulous sedge *Carex pendula*, hedge woundwort *Stachys sylvatica*, common nipplewort *Lapsana communis*, common sorrel *Rumex acetosa*, creeping buttercup *Ranunculus repens*, self-heal *Prunella vulgaris*,

marjoram *Origanum majorana*, herb-Robert *Geranium robertianum*, cleavers *Galium aparine*, tufted vetch *Vicia cracca*, common bird's-foot trefoil *Lotus corniculatus*, bittercress *Cardamine* sp., spear thistle *Cirsium vulgare*, creeping thistle *Cirsium arvense*, common nettle *Urtica dioica*, dandelion *Taraxacum officinale* agg., white clover *Trifolium repens*, bristly oxtongue *Helminthotheca echinoides*, purple toadflax *Linaria purpurea*, wild carrot *Daucus carota*, black nightshade *Solanum nigrum*, bittersweet *Solanum dulcamara*, broad-leaved dock *Rumex obtusifolius*, greater plantain *Plantago major*, ribwort plantain *Plantago lanceolata*, green alkanet *Pentaglottis sempervirens*, dove's-foot crane's-bill *Geranium molle*, petty spurge *Euphorbia peplus*, common fleabane *Pulicaria dysenterica*, Canadian fleabane *Erigeron canadensis*, early dog-violet *Viola reichenbachiana*, common columbine *Aquilegia vulgaris*, scentless mayweed *Tripleurospermum inodorum* and various moss species *Bryophyta*. Wild teasel *Dipsacus fullonum*, bramble *Rubus fruticosus* agg., common foxglove *Digitalis purpurea*, holly *Ilex aquifolium*, dog rose *Rosa canina* and broad buckler fern *Dryopteris dilatata* were also present as well as saplings of Canada yew *Taxus canadensis*, cherry laurel *Prunus laurocerasus*, elder *Sambucus nigra* and sycamore *Acer pseudoplatanus*.

Scattered trees within the grassland include a semi-mature and over mature pedunculate oak *Quercus robur* (**T3** and **T6** respectively, **Appendix 2**), a mature Indian bean tree *Catalpa bignonioides* (**T2**, **Appendix 2**), two mature western hemlock trees *Tsuga heterophylla* (**T4** and **T7**, **Appendix 2**) and a mature wellingtonia *Sequoiadendron giganteum* (**T5**, **Appendix 2**). Of these, Trees T2 (mature Indian bean tree), T3 (semi-mature oak) and T4 (mature western hemlock) are to be removed to facilitate the development, with all other trees being retained.

The grassland is dominated by species indicative of sub-optimal condition and has little structural diversity due to the abundance of bare ground. It is therefore of **negligible** importance.

The scattered trees add diversity and structure to the site and are therefore of **site** importance.

No further action is required for the grassland, but further action is required for the proposed loss of three trees in **Section 5**.

Photo 4.1: Other neutral grassland, facing south



4.2.2 Bramble scrub

The southern area of the site is dominated by bramble scrub, with other species present including pendulous sedge, false oatgrass, cock's foot, creeping thistle, common sorrel, creeping buttercup and ivy (**Photo 4.2**).

A mature pedunculate oak tree (T1, **Appendix 2**) is located within the area of scrub. This tree is proposed to be retained.

The bramble scrub and oak tree provide structural diversity. They are both therefore of **site** importance.

As Tree T1 is to be retained and the bramble scrub is of limited extent and is a common habitat in the wider landscape, no further action is required.

Photo 4.2: Bramble scrub and Tree T1, facing south



4.3 Protected and Notable Species

Records of protected / notable species for the last ten years have been considered within the assessment below. None of the records pertain to the site.

4.3.1 Invertebrates

SxBRC returned no records for protected invertebrates.

Numerous records of Section 41 (NERC Act, 2006) moths and butterflies were returned. Most of these records originate from Dormers Wood which is located c. 600m from the site.

Habitats to be significantly impacted by the proposals (other neutral grassland and a small area of bramble scrub) are unlikely to support rare or notable species. Limited nectaring opportunities are available for butterflies, and no deadwood was noted within the site. The site therefore holds **negligible** potential for rare / notable invertebrates.

No further action is required.

4.3.2 Great Crested Newts and Common Toads

SxBRC returned 21 records of great crested newt *Triturus cristatus* with the most recent being located c. 0.2km to the south of the site from 2022 and the nearest being located c. 0.1km to the south-east

from 2017. The majority of the great crested newt records returned relate to those that formed part of the AWEC surveys in 2017, as described further below. In addition to these, other great crested newt records were obtained from 2019, which were all over 700m south-west of the site, and from 2016, which were 1km west of the site.

Two records were returned for common toad *Bufo bufo*, both located c. 0.7km south. Work carried out by DAA at a nearby site confirmed the presence of common toad c. 65m to the south-east in 2021.

Five ponds are located within 250m (OS, 2023). Refer to **Figure 4.1** and **Table 4.4** below. These ponds were not accessed due to being situated on private land, therefore they are unable to be ruled out as being suitable for great crested newts. However, Pond 1 was previously assessed using a Habitat Suitability Index (AWEC, 2017a) as was determined to be of 'poor' quality for great crested newts.

Surveys reported in 2017 (AWEC, 2017a) found a medium metapopulation of great crested newts within a cluster of three of ponds (Ponds 1 and two ponds further to the south outside of the 250m buffer zone) and a low population in one other pond (Pond 5). Whilst Pond 1 is within close proximity to the site, this a small garden pond that showed no evidence of breeding in 2017, nor is it likely to support a sustainable breeding population of great crested newts due to its small size. The results of the 2017 survey show that only one adult great crested newt was recorded on three surveys. It is therefore likely that this pond forms a 'sink' for a metapopulation centred around two ponds located further south (c. 300m south of the site), where breeding and regular higher numbers of great crested newts were recorded. Movement of newts from Pond 1 is therefore most likely to occur in a southerly direction and away from the development site to the north.

Table 4.3: Granted great crested newt mitigation licence applications within 2km of the site.

Case Reference	Licensed Impact	Distance & Direction	Licence Start & End Dates
2020-44432- EPS-MIT	Damage and destruction of a resting place	0.8km S	21/08/2020 – 31/12/2030
2017-30804- EPS-MIT	Destruction of a resting place	1.0km W	29/09/2017 – 31/12/2029
EPSM2011- 3224	Destruction of a resting place	1.3km SW	06/08/2012 – 31/10/2015

The site contains a pile of wooden pallets (**Photo 4.3; Target Note 1, Appendix 2**) that provides a possible place of shelter and hibernation for amphibians, including great crested newts. However, these pallets appear to have been discarded on site relatively recently, thus making their likely use by amphibians much less likely. These are also not a permanent habitat feature and could be removed at any point as part of regular site management activities. The site does, however, include bramble scrub that represents potentially suitably terrestrial habitat for foraging, sheltering and hibernating great crested newts. This area of scrub is, however, very small particularly in the context of the available habitat in the wider landscape. If great crested newts are present in the five ponds within 250m, there is a possibility that they may move across the site. However, the ponds located to the north within close proximity to each other and are surrounded by woodland, which is highly likely to provide optimal habitat for amphibians, with the same being true for those located to the south. It is therefore

highly unlikely that great crested newts or common toad would travel across or along Hophurst Lane and then through the site.

The site therefore holds **low** potential for great crested newts and common toads.

Precautionary action for great crested newts have therefore been recommended in **Section 5**.

Figure 4.1: Water-bodies (blue circles) within 250m of the site (red-line).

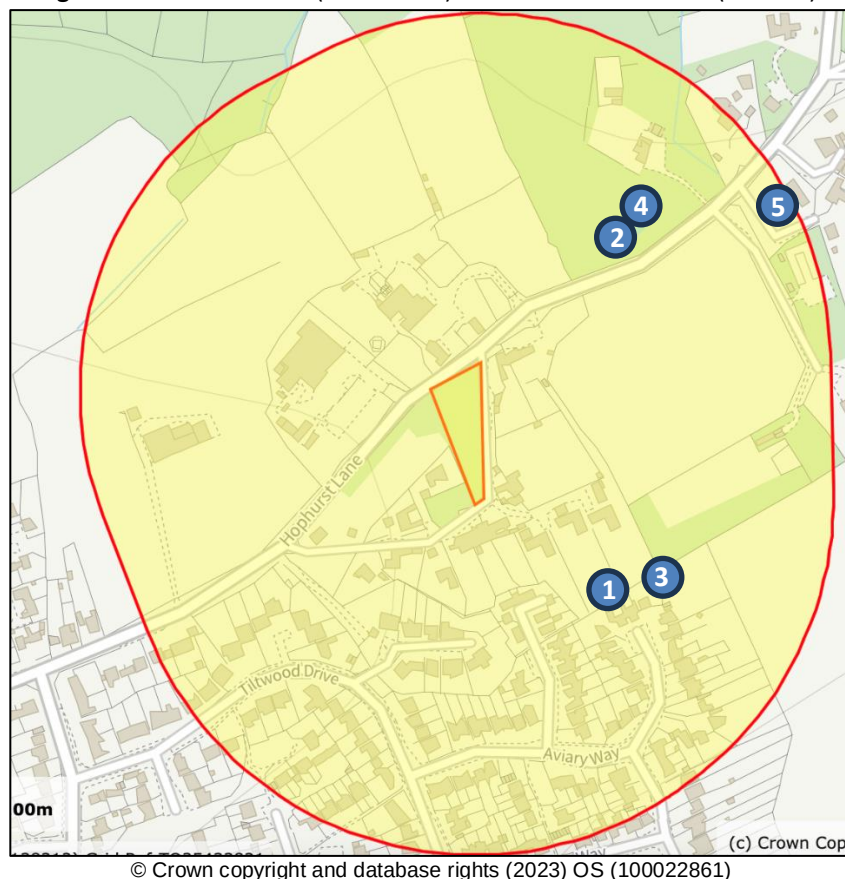


Table 4.4: Location and description of waterbodies on and within 250m of application site.

Waterbody Number	Distance & Direction from Site	Connectivity to the Site	Further Surveys Required?
1	120m SE	Located across a number of private gardens.	No
2	135m NE	Located across a small B-road and across a number of private gardens.	No
3	140m SE	Located across a number of private gardens.	No
4	150m NE	Located across a small B-road and across a number of private gardens.	No
5	240m NE	Located across a number of private gardens and a large field.	No

Photo 4.3: Wooden pallets recently discarded on the eastern site boundary.



4.3.3 Reptiles

The SxBRC returned six records of grass snake *Natrix helvetica*, the nearest record is located c. 0.4km south of the site from 2014 with the most recent record being located c. 0.7km to the south. Work carried out at a nearby site c. 65m to the south-east in 2021 by DAA, found no reptiles to be present there during supervised vegetation removal and top soil strip.

The other neutral grassland and the bramble scrub interfaces provide the habitat structure that slow-worms *Anguis fragilis* and common lizard *Zootoca vivipara* typically require. However, the site is relatively isolated. This, combined with the very nearby site of equally, if not better, habitat showing reptiles to be absent in 2021, means that on balance the site holds **low** potential for reptiles.

Precautionary action for reptiles have therefore been recommended in **Section 5**.

4.3.4 Birds

The SxBRC returned no records of bird species listed as Annex I (Birds Directive) and / or Schedule 1 (WCA) that would be likely to breed on-site. The records included species of Amber-listed Birds of Conservation Concern (BoCC) (Stanbury *et al.*, 2021) that could breed on-site as follows: dunnock *Prunella modularis* and wren *Troglodytes troglodytes*.

The following birds were recorded during the survey: woodpigeon *Columba palumbus*, blackbird *Turdus merula* and robin *Erithacus rubecula*.

Bird interest (nesting / foraging) is likely to be confined to the trees. The trees on site therefore hold **high** potential for widespread species of nesting bird. The site overall is, however, considered to hold **negligible** potential for bird species listed as Annex I (Birds Directive) and / or Schedule 1 (WCA). The small nature of the site, lack of connectivity to open areas of fields or water, and heavy levels of disturbance mean that the site has **negligible** potential for notable wintering bird species and assemblages.

Precautionary action for nesting birds is recommended in **Section 5**.

4.3.5 Badgers

SxBRC returned no records of badgers. No badger setts were recorded on or within 30m of the site boundary, where access was possible. No mammal paths were recorded within the site. However, the site provides potentially suitable foraging and commuting habitat for badgers in the form of bramble scrub and other neutral grassland. An earth bank suitable for digging was also noted on site (**Target Note 2, Appendix 2**).

A pre-construction badger survey has therefore been recommended in **Section 5**.

4.3.6 Bats

The SxBRC returned records for at least five bat species: brown long-eared *Plecotus auritus*, *Plecotus* sp., common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, *Myotis* sp., *Nyctalus/Eptesicus* sp. and noctule *Nyctalus noctula*.

The table below provides a list of bat Mitigation Licences granted by Natural England within 2km of the site (MAGIC, 2023). Whilst not listed on MAGIC, DAA also held a bat licence for land c. 65m to the south-east for destruction of a brown long-eared feeding roost; the licence reference is 2021-50966-EPS-MIT and the licence was valid during 2021.

Table 4.5: Granted bat mitigation licence applications within 2km of the site.

Case Reference	Bat Species	Type of Roost	Distance & Direction	Licence Start & End Dates
2014-3084-EPS-MIT	Brown long-eared, common pipistrelle	Damage of a day roost	0.2km S	16/09/2014 – 01/10/2016
2017-31276-EPS-MIT	Brown long-eared	Damage of a breeding and day site a	1.0km S	25/10/2017 – 31/10/2027
2014-965-EPS-MIT	Barbastelle, brown long-eared	Damage and destruction of a day roost	1.0km NE	20/03/2024 – 30/09/2014
EPSM2012-4307	Brown long-eared, common pipistrelle	Destruction of a breeding and day roost	1.2km W	24/04/2012 – 01/04/2014

4.3.6.1 Roosting (Trees)

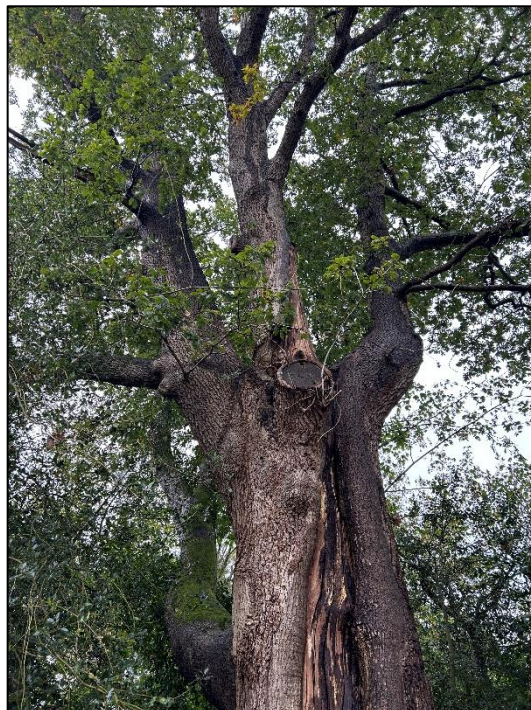
Mature pedunculate oak trees with **high** suitability for roosting bats during the active and/or hibernation season were recorded within the site due to holes, cracks, and fissures present on the trunks and / or limbs of the trees (**T1 and T6, Appendix 2**). Other trees surveyed on site are of **negligible** suitability for roosting bats during both the active and hibernation seasons as they lack suitable features.

As the two trees with bat roost potential are to be retained, but may be indirectly impacted through artificial lighting, precautionary action for roosting bats has been recommended in **Section 5**.

Photo 4.4: Pedunculate oak in the south of the site (T1, Appendix 2) with multiple cracks, fissures and woodpecker holes present.



Photo 4.5: Pedunculate oak in the north of the site (T6, Appendix 2) with a large fissure and multiple cracks and woodpecker holes present.



4.3.6.2 Foraging and Commuting

A small area of suitable habitat for foraging and commuting bats was recorded within the site including other neutral grassland and scattered trees, although more suitable habitats are located within the wider area. The site is therefore of **low** suitability for foraging and commuting bats.

Precautionary action for foraging and commuting bats has been recommended in **Section 5**.

4.3.7 Hazel Dormice

The SxBRC did not return any records for dormice. The site is, however, located within the dormouse natural range and the scrub on the site is dominated by bramble, a suitable food plant, however it is fairly isolated.

According to aerial images, the area beyond the site boundary is connected to a relatively small hedgerow network, leading to a larger area of woodland in the wider area. The site is therefore considered to hold **low** potential for dormice.

Precautionary action for dormice has therefore been recommended in **Section 5**.

4.3.8 Hedgehogs and Other Section 41 Priority / Rare Species

SxBRC returned four records of hedgehog *Erinaceus europaeus* with the nearest and most recent being located c. 0.5km to the south-west of the site from 2018.

Some areas of habitat had **high** potential for hedgehogs, including the other neutral grassland for foraging and the dense scrub and pallet pile for shelter. Suitable habitat is also present in the surrounding landscape.

Precautionary action for hedgehogs has therefore been recommended in **Section 5**.

4.3.9 Invasive Plants

Small patches of rhododendron *Rhododendron ponticum* was recorded within the northern part of the site (**Target Note 3, Appendix 2**). The arboriculture report (David Archer Associates, 2023) also states that the site previously supported further rhododendron prior to site maintenance activities. This invasive plant species is listed under Schedule 9 of the WCA.

Further action has therefore been recommended in **Section 5**.

5 Further Surveys, Avoidance, Mitigation and Enhancement Recommendations

This section discusses recommendations for further surveys, avoidance, mitigation, and possible enhancements in line with relevant wildlife legislation and planning policy (see **Appendix 1**).

5.1 Further Surveys

5.1.1 Statutory Sites: Ashdown Forest SPA

As the site lies within the 7km impact zone surrounding the Ashdown Forest SPA, financial contributions will be required to offset impacts of increased residential units in the form of Sustainable Alternative Natural Greenspace (SANG) and Strategic Access Management and Monitoring (SAMM) contributions. The amount required to be paid is based on the number of bedrooms per dwelling. The currently required SANG contribution is £5,253 and SAMM contribution is £1,170.

5.1.2 Badgers: Setts

No badger setts were recorded within the site. However, badger setts can appear at any time where suitable habitat has been identified. A badger survey on and within 30m around the site by an ecologist c. six weeks before clearance / construction begins is recommended. This should allow time for any mitigation / avoidance measures to be designed, and preparation of a Natural England badger Development Licence application if required.

5.2 Avoidance and Mitigation

5.2.1 Scattered Trees

Use the following measures to minimise impacts to scattered trees:

- Retain native trees where possible and protect where required during construction with Heras fencing in line with *Trees in Relation to Design, Demolition and Construction – Recommendations BS5837:2012* (British Standards Institution, 2012); and
- Replace any trees lost to the development with native specimens of local provenance (refer to **Appendix 4** for suitable species).

5.2.2 Great Crested Newts and Reptiles

Two log piles will be constructed within the site, one located on the north-eastern site boundary and one located on the southern site boundary. The piles will be 2x2m wide and 1m high and constructed from a mixture of large and small native hardwood logs (see **Appendix 3**).

In order to avoid the possibility of harm to great crested newts, common toads and/or reptiles the following working practices should be adhered to:

- During mild (>10°C), dry weather in mid- March – October (inclusive), the vegetation within the construction zone should be carefully cut using hand-held tools to 15cm in height, working in an east to west direction. Note that a nesting bird survey by an ecologist will be required prior to this work if carried out during March – August (inclusive).
- 24-48 hours after the first strim, the remaining vegetation should be strimmed by hand to ground level, also in mild (>10°C), dry weather in an east-west direction.

-
- 24-28 hours after the final trim, a destructive search will be carried out whereby an ecologist will supervise a skilled operative with max. 8 tonne excavator using a toothed bucket. The top c. 30cm of soil within the construction zone will be carefully and slowly stripped back with the ecologist checking for any reptiles or amphibians as works progress. Any reptiles or common toads found will be carefully moved by the ecologist to one of the pre-installed log piles. If any great crested newts are found, works will be stopped and the ecologist will assess if a derogation licence and/or amendment to the mitigation strategy is required. The ecologist present will be suitably licensed to handle great crested newts in the unlikely event that any are found and need to be moved to a safe area where the log piles will have been previously installed.
 - Within 24 hours of completion of the destructive search, a reptile exclusion fence will be installed along the site boundaries of the construction zone (excluding the area where log piles are to be installed in advance and subsequently retained) so that no reptiles or amphibians can move into the site during works. This is to comprise durable plastic with a return at the top, with 30cm buried below the ground and 60cm above ground, secured by timber battens. A purpose-made fence such as Herpetosure Reptile fencing is recommended. The reptile fence is to be checked daily by a designated person to ensure it remains intact until completion of the works. Any damage is to be immediately repaired.
 - Regular strimming is to be carried out from installation of the fence until its removal to ensure no vegetation grows up on either side of it to allow reptiles and/or amphibians to climb over the fence.
 - On completion of the works, the reptile fence will be carefully removed from site, with removal by hand so that any reptiles or amphibians that may be present along the base on the outer side are not injured during removal.

5.2.3 Reptiles

Measures included in **Section 5.2.2** in relation to great crested newts and common toads will also be applicable in ensuring no harm comes to reptiles as a result of the proposed works.

5.2.4 Birds

Clear the bramble scrub between September and October (inclusive) to avoid the main breeding bird season and to fall in line with reptile and amphibian recommendations. Alternatively, an ecologist should check potential nesting habitat immediately before clearance that is scheduled during the breeding season (March to August inclusive). Any active nests identified must be retained *in situ* with a suitable buffer (to be determined by an ecologist) until the chicks have fledged and the nest is no longer active.

5.2.5 Bats (Foraging and Commuting):

The following measures should be implemented within the development to reduce impacts on foraging and commuting bats caused by artificial lighting (BCT & ILP, 2018; BCT, 2022):

- Direct any task lighting used during construction away from trees (retained and new) and any newly installed hedgerows and bat boxes;
- Set any necessary security lighting on short timers with a sensitivity to large moving objects only;

- Consider installing internal light fittings in a recess where installed in proximity to windows facing the retained trees and new trees and hedgerows in order to reduce glare and light spill;
- Limit lighting times to provide dark periods;
- LED light sources should be used wherever possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capabilities. A warm spectrum light (ideally <2700 Kelvin) should be used to reduce the blue light component. Lights should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012). Luminaires should be mounted on the horizontal, i.e. with no upward tilt. Avoid the use of UV light and do not use metal halide, fluorescent light sources; and
- As a last resort, use hoods or cowls to avoid light being directed at the sky or towards the trees and new hedgerows.

The loss of a three trees within the south of the site, which represents potential bat foraging and commuting habitat, should be mitigated for by planting native, locally sourced trees within the north of the site. **Appendix 4** provides a table of suitable species that can be included within any new tree-planting / hedges or other planting to encourage bats to continue foraging and commuting within the site.

5.2.6 Hedgehog

Cover any trenches, holes or deep pits overnight, or use secured planks to allow any animals that fall in to escape during construction. A member of staff should check the site at the end of each working day to ensure that these provisions to protect nocturnal species

5.2.7 Invasive Species: Rhododendron

Rhododendron ponticum was recorded within the site (**TN3, Appendix 2**). The small saplings and bushes recorded on-site should be dug out of the ground, either by hand-pulling or by using a Lever and Mulch technique. If larger shrubs are to be removed, mechanical flailing and/or herbicide application is required. Plants should then be disposed of at an appropriately licensed waste-disposal facility to ensure that this invasive non-native species is not spread off-site. *Rhododendron* is present within the wider area and has previously covered more of the site and therefore may still be present. If this is the case, it should be continually managed and removed.

5.3 Enhancements

The recommendations below are designed to enhance the value of the site for wildlife, as encouraged through the National Planning Policy Framework (2021), and to help achieve meaningful biodiversity net gain in the context of both national and local biodiversity priorities and targets:

- 1) Plant a native hedgerow along the site boundaries to increase habitat connectivity around the site. Locally sourced, native fruit and berry bearing species such as hazel *Corylus avellana*, apple *Malus* spp., hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, guelder rose *Viburnum opulus*, gorse *Ulex europaeus* and spindle *Euonymus europaeus* are recommended. Refer to **Appendix 4** for further suitable species.
- 2) Install one Schwegler 1B General Bird Box and / or Sparrow Terrace (or suitable long-lasting alternative) onto a retained suitably mature tree and / or the new building at least 3m above the ground, avoiding direct sunlight (not directly south-facing) and prevailing wind.

-
- 3) Install one Greenwood Half and Half Bat Box (or suitable long-lasting alternative) onto a retained suitably mature tree and / or the new building. Install the bat box at least 5m above the ground and face in a southerly direction, so that it receives sun for part of the day. Place the box clear of any obstructions to allow access for bats (e.g. over-hanging branches).
 - 4) Provide one insect house in sheltered, warm location e.g. within any new flower beds to provide over-wintering sites for beneficial insects such as lady birds and lacewings, which typically prey on pest species.
 - 5) Provide a hedgehog house within a sheltered location e.g. at the base of the newly installed hedgerow or at the base of a retained tree, preferably a distance away from estate roads.
 - 6) Create and maintain a swathe of infrequently cut grassland along the northern site boundary to provide relatively undisturbed habitat for small mammals, invertebrates, birds and reptiles. The swathe should be a minimum of 1m wide and sown with a wildflower seed mix (e.g. Emorsgate EL1).
 - 7) Create a dedicated grass heap and compost heap on the development's northern boundary.

6 Conclusion

The development can proceed with minimal impact to habitats and protected / notable species if the avoidance and mitigation measures outlined within **Section 5**, and the financial contributions of the Ashdown Forest SPA, are implemented.

There is also the opportunity to enhance the development for local wildlife in the long-term by implementing the enhancement measures.

7 References

AEWC, 2017a. Great Crested Newt Survey Report – Tiltwood East.

Andrews, H., 2013. *Bat Tree Habitat Key*. Bridgewater: Andrews Ecology.

ARG UK, 2010. *ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index*, UK: Amphibian and Reptile Groups of the United Kingdom.

Bat Conservation Trust, 2004. *Gardening for bats*, London: Bat Conservation Trust.

Bat Conservation Trust, 2022. *Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys*.

Bat Conservation Trust (BCT) & Institute of Lighting Professionals (ILP), 2018. *Bats and Artificial Lighting in the UK. Bats and the Built Environment Series. Guidance Note 8/18*. Bat Conservation Trust & Institute of Lighting Professionals.

Bright, P., Morris, P. & Mitchell-Jones, A., 2006. *The Dormouse Conservation Handbook*. 2nd ed. Peterborough: English Nature.

British Standards Institution, 2012. *BS 5837:2012 Trees in relation to design, demolition and construction. Recommendations*. United Kingdom: British Standards Institution.

CIEEM, 2017. *Guidelines for Preliminary Ecological Appraisal*. Winchester: CIEEM.

CIEEM, 2018. *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Winchester: CIEEM.

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

David Archer Associates, 2023. *Arboricultural Implications Assessment*.

DCLG, 2021. *National Planning Policy Framework*,. [Online] Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

English Nature, 2001. *Great Crested Newt Mitigation Guidelines*. Peterborough: English Nature.

Froglife, 1999. *Froglife Advice Sheet 10 Reptile Survey: An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation*. Peterborough: Froglife .

Gent, A. & Gibson, S., 2003. *Herpetofauna Workers' Manual*. Peterborough: Joint Nature Conservation Committee.

Harris, S., Cresswell, P. & Jeffries, D., 1989. Surveying Badgers. In: *An occasional publication of the mammal society - No. 9*. London: Mammal Society.

HMSO, 1981. *The Wildlife and Countryside Act*, London: HMSO.

HMSO, 1992. *Protection of Badgers Act*, London: HMSO.

HMSO, 1997. *The Hedgerow Regulations*, London: HMSO.

-
- HMSO, 2000. *The Countryside and Rights of Way (CROW) Act*, London: HMSO.
- HMSO, 2006. *Natural Environment and Rural Communities Act (NERC Act)*, London: HMSO.
- HMSO, 2019. *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations*, London: HMSO.
- Langton, T., Beckett, C. & Foster, J., 2001. *Great Crested Newt Conservation Handbook*. Halesworth: Froglife.
- Natural England, 2008. *Gardening With Wildlife in Mind*. London: Natural England.
- Natural England, 2012. *Badgers and Development. A guide to Best Practice and Licensing*. Peterborough: Natural England.
- Natural England, 2023. *The Biodiversity Metric 4.0: User Guide – Technical Annex 2*.
- Natural England, 2023. *MAGIC Map Application*. [Online]
Available at: <http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx>
- Oldham, R., Keeble, J., Swan, M. & Jeffcote, M., 2000. Evaluating the Suitability of Habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal*, Volume 10, pp. 143-155.
- OS, 2023. *Wheres The Path 3: Ordnance Survey*. [Online]
Available at: <http://wtp2.appsport.com/wheresthepath.htm>
- Reason, P.F. and Wray, S., 2023. *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Chartered Institute of Ecology and Environmental Management, Ampfield.
- Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D. and Win, I., 2021. *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. *British Birds* 114, 723–747.
- UKHab Ltd, 2023. *UK Habitat Classification Version 2.0*. [Online]. Available at <https://www.ukhab.org/>
- Wray, S., Wells, D., Long, E. & Mitchell-Jones, A., 2010. Valuing Bats in Ecological Impact Assessment.. In: *Chartered Institute of Ecology and Environmental Management - In Practice 70*. Winchester: CIEEM, pp. 23-25.

Appendix 1 Legislation & Planning Policy

Legislation

Conservation of Habitat and Species (Amendment) (EU Exit) Regulations (CHSR) 2019

The *CHSR 2019* transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

The purpose of the 2019 amendments applied to the legislation were to ensure the continued functionality of the Regulations once the UK has left the European Union, with no policy changes included.

Wildlife & Countryside Act (WCA)

The *WCA 1981*, as amended by the *Countryside and Rights of Way Act (CROW) 2000* and the *Natural Environment and Rural Communities Act (NERC) 2006*, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act; intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act; intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act.

Sites of Special Scientific Interest (SSSI) are designated under this Act.

Special Protection Areas (SPA) are strictly protected sites, designated under the Birds Directive, for rare and vulnerable birds and for regularly occurring migratory species.

Natural Environment & Rural Communities (NERC) Act

The *NERC Act 2006* amends the *CROW Act*, by further extending the requirement to have regard for biodiversity to all public authorities, which includes local authorities and local planning authorities and requires that the Secretary of State consults Natural England (NE) in the publication of the list of living organisms and habitat types deemed to be of principal importance in conserving biodiversity.

Relevant Protected Species Legislation

Species	Relevant Legislation	Level of Protection
Great Crested Newt	European protected species under the <i>Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019</i> . Full protection under <i>Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended)</i> .	It is an offence to: - intentionally kill, injure, or take great crested newts intentionally or recklessly disturb great crested newts. - intentionally or recklessly disturb great crested newts. - intentionally or recklessly damage destroy or obstruct access to any place used by the animal for shelter or protection.
Reptiles (adder, grass snake, common lizard & slow-worm)	Partially protected under <i>Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended)</i> .	It is an offence to: - intentionally kill or injure these animals. - sell, offer for sale, advertise for sale, possess or transport for the purposes of selling any live or dead animals or part of these animals.
Birds	Protection under the <i>Wildlife and Countryside Act, 1981 (as amended)</i> .	It is an offence to: - intentionally kill, injure or take any wild bird. - intentionally take, damage or destroy nests in use or being built (including ground nesting birds). - intentionally take, damage or destroy eggs. - Species listed on Schedule 1 of the WCA or their dependant young are afforded additional protection from disturbance whilst they are at their nests.
Badger	<i>Protection of Badgers Act, 1992</i> .	It is an offence to: wilfully kill, injure, take, possess, or cruelly ill-treat a badger, or to attempt to do so. intentionally or recklessly interfere with a sett.
Bats	European protected species under the <i>Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019</i> . Full protection under <i>Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended)</i> . Protected by the <i>Wild Mammals (Protection) Act 1996</i> .	It is an offence to: - intentionally kill, injure, or take any species of bat. - intentionally or recklessly disturb bats. - intentionally or recklessly damage destroy or obstruct access to bat roosts.

Species	Relevant Legislation	Level of Protection
Hazel Dormouse	European protected species under the <i>Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019</i>. Full protection under <i>Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended)</i>.	It is an offence to: - deliberately capture, injure or kill hazel dormice. - damage or destroy a dormouse resting place or breeding site. - deliberately or recklessly disturb a hazel dormouse while it's in a structure or place of shelter or protection. - block access to structures or places of shelter or protection. - possess, sell, control or transport live or dead hazel dormice, or parts of hazel dormice.
Wild Mammals	The <i>Wild Mammals (Protection) Act 1996</i>.	This makes it an offence to: crush or asphyxiate any wild mammal with intent to inflict unnecessary suffering. This may apply during site clearance for development, particularly where burrowing animals such as foxes and rabbits are present, since such animals could be crushed or asphyxiated in their burrows by heavy machinery.

National Planning Policy

National Planning Policy Framework (NPPF)

The NPPF sets out current government policy on biodiversity and nature conservation and places a duty on planners to make material consideration to the effect of a development on legally protected species when considering planning application (MHCLG, 2021). The NPPF also promotes sustainable development by ensuring that developments take account of the role and value of biodiversity and that it is conserved and enhanced within a development, following the principles of the mitigation hierarchy. The goals set out within the NPPF are for developments to minimise impacts on and provide net gains for biodiversity, including at the catchment or landscape scale.

The NPPF works in conjunction with Government Circular *06/2005 'Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System.'*

Regional and Local Planning Policy and Guidance

Local Structure Plans

County, District and Local Councils have Structure Plans and other policy documents that include targets and policies which aim to maintain and enhance biodiversity. These are used by Planning Authorities to inform planning decisions.

Biodiversity Action Plans

The UK Biodiversity Action Plan (UKBAP) was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. A 'UK Post-2010 Biodiversity Framework' was published in July 2012, and succeeded the UKBAP. Much of the work for the UK BAP is now focussed at a country level due to devolution and the creation of country-level biodiversity strategies.

The UKBAP lists of priority species and habitats are still valuable reference sources. Notably, they have been used to help draw up statutory lists of priority species and habitats as required under Section 41 of the NERC Act (2006).

UK Post-2010 Biodiversity Framework

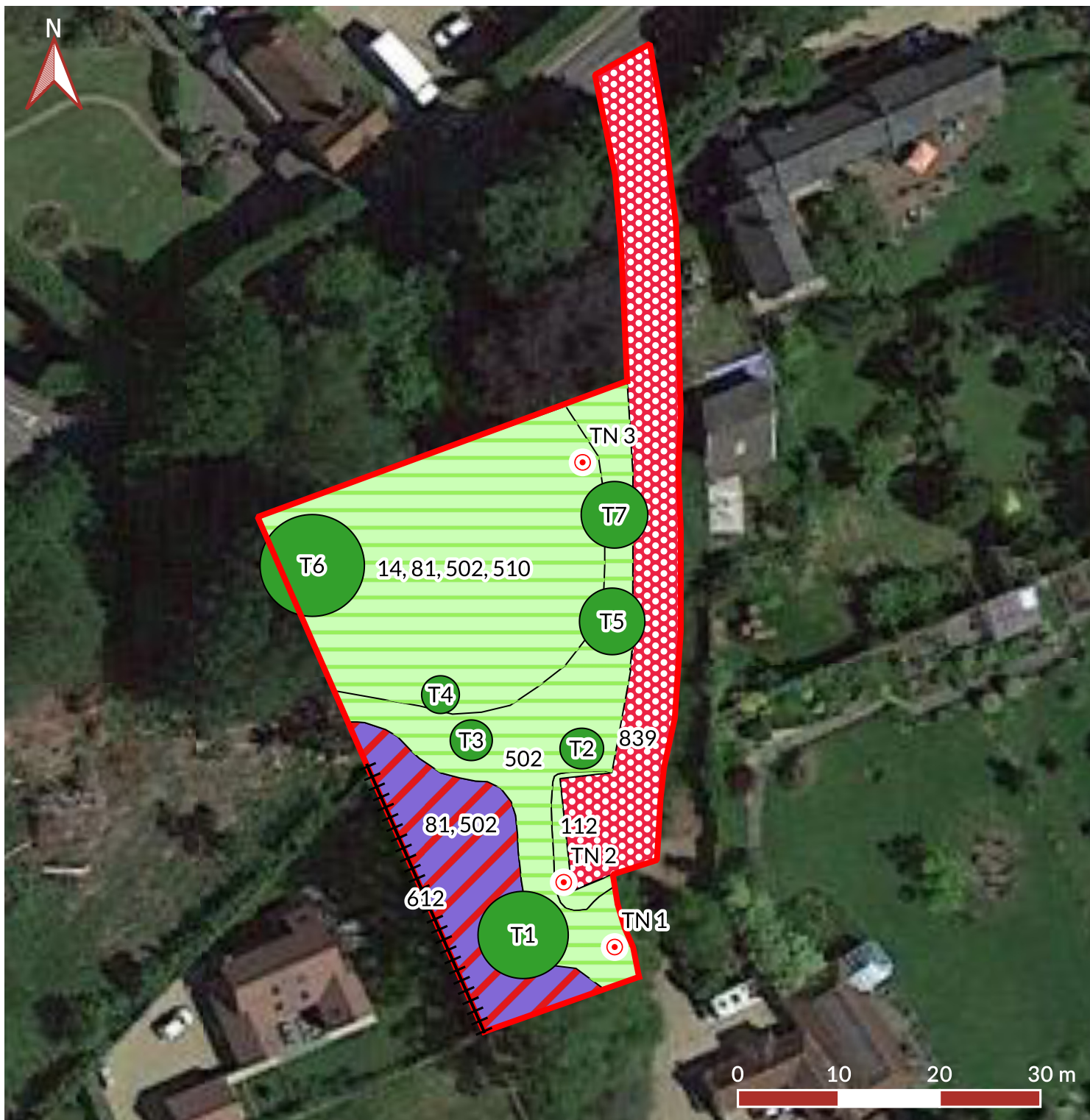
The UK Post-2010 Biodiversity Framework (2012) was produced in response to a change in strategic thinking following the publication of the Convention of Biological Diversity's Strategic Plan for Biodiversity 2011–2020. The Strategic Plan consists of 20 new biodiversity targets for 2020, termed the 'Aichi biodiversity targets' and the launch of the new EU Biodiversity Strategy in May 2011.

The framework sets a structure for action across the UK between now and 2020, including a shared vision and priorities for UK-scale activities to help deliver the Aichi targets and the EU Biodiversity Strategy. A major commitment by Parties to the Convention of Biological Diversity is to produce a National Biodiversity Strategy and/or Action Plan (NBSAP).

Natural England Standing Advice

Natural England has adopted national standing advice for protected species. It provides a consistent level of basic advice which can be applied to any planning application that could affect protected species. It replaces some of the individual comments that Natural England has provided in the past to local authorities.

Appendix 2 UK Habitat Plan



Legend

Application site boundary

H H H Fence

Other neutral grassland

Trees (32 - Scattered trees)

Bramble scrub

Artificial unvegetated unsealed surface

14 - Scattered rush

81 - Ruderal and ephemerals

112 - Earthbank

502 - Seasonally wet

510 - Bare ground

612 - Fence

839 - Track



DAVID ARCHER
ASSOCIATES

ARBORICULTURE | ECOLOGY | LANDSCAPE

Chesham House, Eastbourne Road, Halland,
East Sussex, BN8 6PT

Tel: 01825 346919; 07568 411939

Email: info@davidarcherassociates.co.uk

Web: www.davidarcherassociates.co.uk

Project: Land at Tiltwood East, Hophurst Lane,
Crawley Down, RH10 4LL

Title: UK Habitat Plan

Client: Robin Cook

Date: 25/10/2023

© This drawing is copyright of David Archer Associates. Any
unauthorised reproduction or usage by any person is prohibited.
© The basemap is copyright of Google maps.

Appendix 3 Reptile Mitigation

Log Pile Design

Use native hardwood logs of varying sizes.

The core should be more compact of larger sized logs, with smaller logs surrounding this and then brash laid more loosely on the top. Logs should be arranged in different directions to create different sizes of voids for reptiles to take shelter among.

Photo A3.1: Log pile prior to fresh brash being added

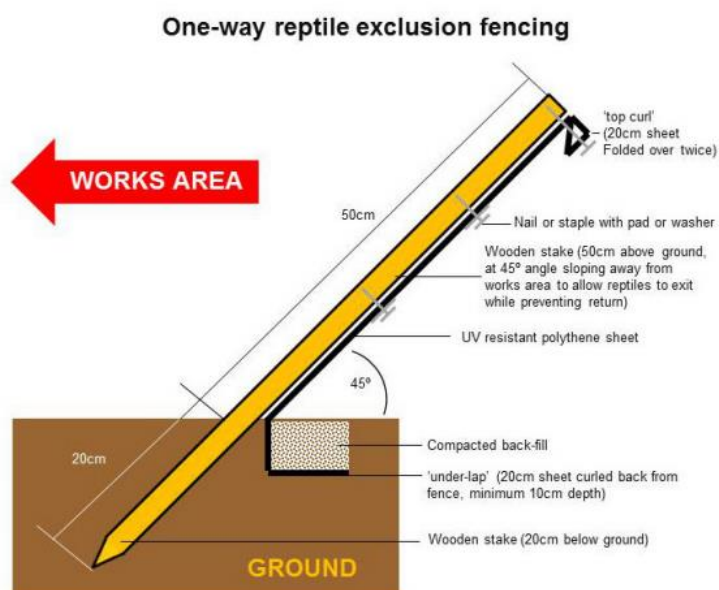


Photo A3.2: Fresh brash added to log pile to make it blend in and be less prone to public disturbance



Reptile Exclusion Fencing

Figure A3.3: Reptile exclusion fencing design (ARG UK, 2018)



Appendix 4 Wildlife Friendly Planting

Table A4.1: Native and wildlife-friendly shrubs (Natural England, Gardening With Wildlife in Mind, 2008).

Common Name	Scientific Name
Hazel	<i>Corylus avellana</i>
Elder	<i>Sambucus nigra</i>
Goat willow	<i>Salix caprea</i>
Hawthorn	<i>Crataegus monogyna</i>
Dog rose	<i>Rosa canina</i>
Guelder rose	<i>Viburnum opulus</i>
Gorse	<i>Ulex europaeus</i>
Broom	<i>Cytisus scoparius</i>
Wayfaring tree	<i>Viburnum lantana</i>
Shrubby cinquefoil	<i>Potentilla fruticosa</i>
Raspberry	<i>Rubus idaeus</i>
Alder buckthorn	<i>Frangula alnus</i>
Wild privet	<i>Ligustrum vulgare</i>
Barberry	<i>Berberis × stenophylla</i>
Barberry	<i>Berberis vulgaris</i>
Bell heather	<i>Erica cinerea</i>
Bilberry	<i>Vaccinium myrtillus</i>
Black currant	<i>Ribes nigrum</i>
Blackthorn	<i>Prunus spinosa</i>
Buckthorn	<i>Rhamnus catharticus</i>
Butcher's-broom	<i>Ruscus aculeatus</i>
Cowberry	<i>Vaccinium vitis-idaea</i>
Cross-leaved heath	<i>Erica tetralix</i>
New Zealand holly	<i>Olearia macrodonta</i>
Daphne	<i>Daphne odora</i>
Dogwood	<i>Cornus sanguinea</i>
Field rose	<i>Rosa arvensis</i>
Firethorn	<i>Pyracanthus angustifolia</i>
Flowering Currant	<i>Ribes sanguineum</i>
Gooseberry	<i>Ribes uva-crispa</i>
Hebe 'Midsummer Beauty'	<i>Hebe</i> sp.
Himalayan honeysuckle	<i>Leycesteria formosa</i>
Holly	<i>Ilex aquifolium</i>
Japanese quince	<i>Chaenomeles japonica</i>
Lilac	<i>Syringa vulgaris</i>
Mexican orange	<i>Choisya ternata</i>
Mezereum	<i>Daphne mezereum</i>
Midland hawthorn	<i>Crataegus laevigata</i>
Oregon grape	<i>Mahonia aquifolium</i>
Osier	<i>Salix viminalis</i>
Portugal laurel	<i>Prunus lusitanica</i>
Privet	<i>Ligustrum ovalifolium</i>
Purple willow	<i>Salix purpurea</i>

Common Name	Scientific Name
Snowy mespilus	<i>Amelanchier canadensis</i> , <i>Amelanchier lamarckii</i>
Spindle	<i>Euonymus europaeus</i>
Spurge laurel	<i>Daphne laureola</i>
Sweet briar	<i>Rosa rubiginosa</i>
Wild privet	<i>Ligustrum vulgare</i>

Table A4.2: Native and wildlife-friendly trees (Natural England, Gardening With Wildlife in Mind, 2008).

Common Name	Scientific Name
Pedunculate oak	<i>Quercus robur</i>
Ash	<i>Fraxinus excelsior</i>
Wych elm	<i>Ulmus glabra</i>
Whitebeam	<i>Sorbus aria</i> agg.
Rowan	<i>Sorbus aucuparia</i>
Aspen	<i>Populus tremula</i>
Apple	<i>Malus domestica</i>
Bird cherry	<i>Prunus padus</i>
Common alder	<i>Alnus glutinosa</i>
Crab apple	<i>Malus sylvestris</i>
Crack willow	<i>Salix fragilis</i>
Downy birch	<i>Betula pubescens</i>
Field maple	<i>Acer campestre</i>
Hornbeam	<i>Carpinus betulus</i>
Juniper	<i>Juniperus communis</i>
Large-leaved lime	<i>Tilia platyphyllos</i>
Small-leaved lime	<i>Tilia cordata</i>
Pear	<i>Pyrus communis</i>
Scots pine	<i>Pinus sylvestris</i>
Sessile oak	<i>Quercus petraea</i>
Silver birch	<i>Betula pendula</i>
Sweet chestnut	<i>Castanea sativa</i>
Wild cherry	<i>Prunus avium</i>
Wild service-tree	<i>Sorbus torminalis</i>
Yew	<i>Taxus baccata</i>

Table A4.3: Moth pollinator species (Butterfly Conservation, 2019).

Common Name	Scientific Name
Honeysuckle	<i>Lonicera periclymenum</i>
Jasmine	<i>Jasminum officinale</i>
Evening primrose	<i>Oenothera biennis</i>
Sweet rocket	<i>Hesperis matronalis</i>
Night-scented stock	<i>Matthiola bicornis</i>
Aubretia	<i>Aubretia</i> sp.
Cuckooflower	<i>Cardamine pratensis</i>
Forget-me-not	<i>Myosotis</i> sp.
Honesty	<i>Lunaria annua</i>

Pansy	<i>Viola</i> sp.
Primrose	<i>Primula veris</i>
Wallflower	<i>Erysimum</i> sp.
French marigold	<i>Tagetes</i> sp.
Ice plant	<i>Sedum</i> sp.
Knapweed	<i>Centaurea</i> sp.
Lavender	<i>Lavendula</i> sp.
Marjoram	<i>Origanum vulgare</i>
Michaelmas daisy	<i>Aster amellus</i>
Mint	<i>Mentha</i> sp.
Scabious	<i>Scabiosa</i> sp.
Thyme	<i>Thymus</i> sp.