

AEWC^{Ltd}

Animal Ecology & Wildlife Consultants

Extended Phase 1 Habitat Survey

Land adjoining to Hawthorns

**Maidstone Road
Borden
Kent
ME9 7QA**

Natalie Arscott

**24-027
June 2024**

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Summary

- AEWCLtd were commissioned by Wyndham Property Group on behalf of their client to undertake an extended Phase 1 habitat survey at Land adjoining to Hawthorns, Maidstone Road, Borden, Kent, ME9 7QA at grid reference TQ 85987 62692 to help inform the proposed development of the site.
- This report details the results of the survey, which was carried out on the 16th May 2024 qualified ecologist Natalie Arscott, to record and map the habitats present, assess the site for the potential presence of any protected species or species of conservation concern and identify habitats of conservation importance.
- Additional information regarding the present and historical ecological interest of the site and within a 2km radius was provided by Kent and Medway Biological Records Centre. This helps to inform the likelihood of protected species occurring within the site boundary.
- The site is approximately 0.5ha in size and comprises modified grassland, artificial unvegetated, unsealed surface, developed land; sealed surface, lowland mixed deciduous woodland, mixed scrub, tall forbs, non-native and ornamental hedgerow, and individual trees.
- **Further survey will be required for badgers, reptiles, and any trees to be impacted regarding roosting bats, to determine whether these species are present and inform site-specific mitigation where required.**
- **It is also recommended that the deciduous woodland (a Habitat of Principal Importance) is retained and protected as far as possible, with the access road designed to involve only one break through the woodland and any loss compensated for, lighting is carefully designed and kept to a minimum, vegetation and the outbuilding are removed outside of nesting bird season or with an immediately preceding survey, a dormouse mitigation strategy is produced to cover any woodland clearance, works are undertaken sensitively to avoid impacting burrowing mammals, and hedgehogs are considered in the clearance works and development design.**

This report has been prepared by AEWCLimited, with all reasonable skill, care and diligence within the terms of the Contract with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

The information and data which has been prepared and provided is true and has been prepared and provided in accordance with the 'Guidelines for Preliminary Ecological Appraisal' and 'Code of Professional Conduct' issued by the Chartered Institute of Ecology and Environmental Management (CIEEM). We confirm that the opinions expressed are our true and professional bona fide opinions.

1 Introduction

- 1.1 AEWCLtd were commissioned by Wyndham Property Group on behalf of their client to undertake an extended Phase 1 habitat survey at Land adjoining to Hawthorns, Maidstone Road, Borden, Kent, ME9 7QA to help inform the proposed development of the site.
- 1.2 This survey comprised a desktop study of biological records within the vicinity of the site, an ecological walkover survey to record and map the habitats present and an assessment for protected wildlife and species of conservation importance, including habitats, and was carried out by a qualified ecologist Natalie Arscott on the 16th May 2024.
- 1.3 This report presents the results of the following:
 - Desktop Biodiversity Report
 - UK Habs Habitat Survey
 - Protected Species Walkover Survey
- 1.4 In addition, the report outlines any recommendations/further surveys that may be necessary. This will ensure that any protected species are not detrimentally impacted by the proposed development works on site, that there is no loss of ecological viability and that the favourable conservation status of the species in the local area are not affected.

2 Background

- 2.1 The proposed development site is located at Land adjoining to Hawthorns, Maidstone Road, Borden, Kent, ME9 7QA at central grid reference TQ 85987 62692.
- 2.2 The site is located in a semi-rural area to the south of Maidstone Road, 110m to the southeast of the A249 and 450m to the north of the M2. The surrounding landscape predominantly comprises a combination of residential properties, agricultural land, a network of major roads, and a golf course. See Figure 1.
- 2.3 The site is approximately 0.5ha and largely comprises a grass field surrounded by a narrow belt of woodland. Scattered trees are also present within the field. See Figure 2.
- 2.4 The proposed development plan involves construction of four new dwellings on the site. See Figure 3.



FIGURE 1: SHOWING THE SITE LOCATION



FIGURE 2 : AERIAL VIEW OF THE SITE SHOWING THE SITE BOUNDARY



FIGURE 3 : PROPOSED PLANS

3 Methods

Desk Study

- 3.1 The Multi Agency Geographic Information for the Countryside (MAGIC) website provided by the Department for Environment, Food and Rural Affairs (Defra) was consulted to obtain information about any international or European level designated nature conservation sites within 2km of the site boundary, afforded protection either directly by the Conservation of Habitat and Species (Amendment)(EU Exit) Regulations 2019 or to the same level of protection through planning policy (the National Planning Policy Framework and Local Development Framework). Information regarding statutory designated sites, such as Sites of Special Scientific Interest (SSSI) within a 2km radius of the site, were also obtained from MAGIC.
- 3.2 Aerial photos of the site (Google Earth, 2023) were examined to determine habitats surrounding the site and hence species likely to be present in order to make appropriate recommendations in the wider landscape context.

- 3.3 Records of protected and notable species and non-statutory designated sites within 2km of the site were requested from the local biological records centre (Kent & Medway Biological Records Centre).
- 3.4 Records were screened for relevance and age with only those from the last 10 years and of species that could occur on site considered further.
- 3.5 A search for waterbodies within 500m of the site boundary was undertaken using MAGIC mapping in order to assess their connectivity to the site.

UK Habs Habitat Survey

- 3.6 A daytime ecological walkover assessment was carried out on the 16th May 2024 to record and map the habitats present, evaluate the site for its potential to support protected species in addition to other species of conservation importance that could be relevant in respect of planning policies.
- 3.7 The survey involved a UK Habitat Classification System Survey which was carried out based on the standard methodology produced by UKHab Ltd (2023) and included searches for signs of protected species, as described in the Guidelines for Preliminary Ecological Assessment (CIEEM, 2017). This involves the following elements:
 - Habitat mapping using a set of standard colour codes to indicate habitat types on a UK Habitat Classification Map.
 - Description of features of ecological or nature conservation interest in notes relating to numbered locations on the UK Habitat Classification Map, called Target Notes (for habitat and features of possible interest).
 - A plant species list with subjective estimates of the relative abundance of species in selected habitat parcels using a modified DAFOR scale. The DAFOR scale ranks species according to their relative abundance in a given parcel of land as follows: d – dominant, a – abundant, f – frequent, o – occasional, r – rare. In addition, the following prefixes are used: l – locally, v – very.
- 3.8 Plant nomenclature in this report follows Stace (2010) for native and naturalised species of vascular plant. Nomenclature for mosses and liverworts follow the Checklist for British and Irish Bryophytes 2009. Plant names in the text are given with the English name first, followed by the Latin name. Latin names for all species are given just once and not repeated.

Protected Species Walkover

- 3.9 An assessment was made of habitat suitability in and around the site for those protected species that occur in the region. Obvious signs and incidental sightings of protected species are noted when encountered, but walkover surveys do not usually confirm species presence or absence.
- 3.10 Taking into consideration the geographical region and habitat type, species that could be encountered are:
 - badger;

- barn owl;
 - bats;
 - breeding birds;
 - great crested newt;
 - hazel dormice;
 - reptiles;
 - other mammals; and
 - other Species of Principal Importance (SPI) (e.g. hedgehog, stag beetle etc).
- 3.11 In addition, observations of any invasive species, important plant communities, plant species of note, Habitats of Principal Importance (HPI) or other valuable ecological features will be recorded and detailed.
- 3.12 Details of the initial survey method for each species are given below.
- 3.13 **Badger** – an initial assessment was carried out to identify areas that might be used by badgers (*Meles meles*). Signs of badgers including setts, incidental foraging signs, runs, hairs and latrines are recorded if encountered during the survey. Where possible the area within 30m of the site is also searched for badger setts.
- 3.14 **Barn owl** – The buildings were subject to a full external and internal inspection for evidence of use by barn owl, namely live/dead owls, pellets, droppings, feathers, nest debris, nestling fluff and eggs or eggshells.
- 3.15 **Bats** – The site was assessed for bat roosting potential and the surrounding area was assessed for the suitability of the habitat to support bats. Any buildings were examined and assessed for evidence of bats, such as rub marks, staining or droppings or for features that have good potential to be used by bats, such as loft voids, raised tiles, hanging tiles, gaps in soffits and lead flashing cracks, crevices and mortise joints. Trees were assessed for their potential to be used by bats such as woodpecker holes, splits, cracks and crevices or loose bark plates which can be used as roost features by bats. Such features are noted and examined by using equipment such as a high-powered torch and binoculars, in order to determine their suitability for bats.
- 3.16 **Breeding Birds** - habitats were assessed for their suitability for nesting birds. This would centre on birds that favour hedgerows, areas of longer grassland, scrub, trees as well as buildings.
- 3.17 **Great Crested Newt** - initial surveys centre on identifying suitable habitat within the site. If breeding ponds are present within the locality then great crested newt (*Triturus cristatus*) could potentially be using the terrestrial habitat on the site. Maps are used to identify any ponds (that are not isolated by unsuitable habitat or physical barriers) within 500 metres of the site. A Habitat Suitability Index (HSI) is used to quantifiably assess whether a pond is suitable, this is undertaken for any onsite ponds during the walkover survey.
- 3.18 **Hazel Dormice** – scrub and areas of dense vegetation are assessed for their suitability for foraging and nesting hazel dormice (*Muscardinus avellanarius*).

Favoured berry and nut bearing species such as hawthorn, hazel and bramble were looked for in particular. Additionally, the connectivity of this habitat and to suitable habitat beyond the site is also assessed. If hazel nuts are present a brief search for nuts that have been chewed by hazel dormouse (i.e. displaying the characteristic smooth round hole) was conducted.

- 3.19 **Reptiles** - the site was assessed for habitat suitable for reptiles, such as long grassland and areas of scrub, with particular attention paid to those features that provide suitable basking areas (e.g. south-facing slopes and walls), hibernation sites (e.g. banks, log piles and piles of rotting vegetation) and opportunities for foraging (e.g. rough grassland and scrub).
- 3.20 **Other mammals** – any signs of occupancy by other mammals (e.g. Rabbit warrens) are recorded.
- 3.21 **Other Species of Principal Importance (SPI)** – the habitats present on site were assessed for the likelihood of presence for species of regional and national importance.
- 3.22 **Invasive species** - Any invasive plant or animal species identified during the site walkover are recorded.
- 3.23 **Plant species of note** – Any plant species of conservation concern found on the site are recorded.
- 3.24 **Habitats of Principal Importance** - Habitats of Principal Importance within or adjacent to the site (such as arable field margins, traditional orchards, ponds, rivers, wet woodlands) are recorded.
- 3.25 **Other valuable ecological features** - Other ecological features e.g. ancient woodland, veteran trees, bird feeding stations etc, habitat enhancements etc. within or adjacent to the site are recorded.

4 Constraints/Limitations

- 4.1 An initial site assessment such as this is only able to act as a snapshot to record any flora or fauna that is present at the time of the survey. It is therefore possible that some species may not have been present during the survey but may be evident at other times of the year. For this reason, habitats are assessed for their potential to support some species, even where no direct evidence (such as droppings) has been found.
- 4.2 Some protected species records are confidential and therefore not included within the data search results provided by the records centre. Absence of records does not automatically correspond to absence of species within the impact zone of the development.

5 Results

Desk Study

Sites and Habitats

Statutory Designated Sites:

- 5.1 There are no statutory designated sites located within 2km of the proposed site.

Non-statutory Designated Sites

- 5.2 There are two Roadside Nature Reserves located within 2km of the proposed site. The nearest is Honeycrook Hill RNR, located 1.32km to the southwest. There are no other non-statutory sites within 2km.

Habitats of Principal Importance

- 5.3 Habitats data available via MAGIC was reviewed for the presence of Habitats of Principal Importance (HPI). There are no HPI located within or immediately adjacent to the site. There are blocks of deciduous woodland priority habitat in the surrounding area. See Figure 4.



FIGURE 4: HABITATS OF PRINCIPAL IMPORTANCE ON AND ADJACENT TO THE SITE

Waterbodies within 500m of the site boundary

- 5.4 The Ordnance Survey map available via MAGIC was reviewed for ponds within the accepted dispersal distance of 500m that are not separated from the site by significant barriers to dispersal such as main roads. No ponds or other waterbodies were identified within 500m of the site. See Figure 5.

Protected Species

5.5 Several records of badger were found within 2km of the site.

5.6 No records of barn owl were found within 2km of the site.

5.7 Records of serotine (*Eptesicus serotinus*), Daubenton's bat (*Myotis daubentonii*), Natterer's bat (*Myotis nattereri*), Leisler's bat (*Nyctalus leisleri*), noctule (*Nyctalus noctula*), Nathusius' pipistrelle (*Pipistrellus nathusii*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), and brown long-eared bat (*Plecotus auritus*) were found within 2km of the site. Two maternity roosts have been plotted within 2km of the site. These are located 1.9km to the north and 1.6km to the south, both separated from the site by major roads.

5.8 Records of a range of bird species were recorded within 2km of the site, including green woodpecker (*Picus viridis*), dunnock (*Prunella modularis*), and song thrush (*Turdus philomelos*).

5.9 No records of great crested newts were found within 2km on the site.

Hazel dormice

- 5.10 No records of hazel dormouse were found within 2km on the site.

Reptiles

- 5.11 Records of slow worm (*Anguis fragilis*), common lizard (*Zootoca vivipara*), and adder (*Vipera berus*) were recorded within 2km of the site.

Other Mammals

- 5.12 Records of other mammals including weasel (*Mustela nivalis*) and European rabbit (*Oryctolagus cuniculus*) were recorded within 2km of the site.

Other Species of Principal Importance (SPI)

- 5.13 Records of west European hedgehog (*Erinaceus europaeus*) were recorded within 2km of the site.

Field Survey

Habitats and Plants

- 5.14 A UK Habs Habitat map and list of target notes are included in Figure 6 and Table 1 respectively and a species list is given in Appendix 3. The habitats present on the site are described below.

Modified grassland

- 5.15 The majority of the site is covered by modified grassland. At the time of the survey, this had a moderate sward length. Meadow (*Poa* sp.) is the dominant grass species across this habitat, however perennial ryegrass (*Lolium perenne*), barren brome (*Anisantha sterilis*), cock's-foot (*Dactylis glomerata*), and sweet vernal grass (*Anthoxanthum odoratum*) are also present. Forbs include germander speedwell (*Veronica chamaedrys*), ribwort plantain (*Plantago lanceolata*), dock (*Rumex* sp.), creeping buttercup (*Ranunculus repens*), common daisy (*Bellis perennis*), dandelion (*Taraxacum* sp.), common chickweed (*Stellaria media*), cleavers (*Galium aparine*), herb-Robert (*Geranium robertianum*), ragwort (*Jacobaea vulgaris*), white clover (*Trifolium repens*), self-heal (*Prunella vulgaris*), creeping thistle (*Cirsium arvense*), field woodrush (*Luzula campestris*), and yarrow (*Achillea millefolium*).



Photograph 1 – modified grassland covering most of the site.



Photograph 2 – modified grassland covering most of the site.

Artificial unvegetated, unsealed surface

- 5.16 In the northern corner of the site is a small, fenced area of cleared ground, within which a timber shed sits. A low number of ruderal plants are present.



Photograph 3 – artificial unvegetated, unsealed surface in the northern corner.



Photograph 4 – fenced off area with artificial unvegetated, unsealed surface, containing a small timber shed.

Developed land; sealed surface

- 5.17 In the east of the site is an area of concrete hardstanding, which was heavily moss covered. Situated on this, close to the eastern boundary, is a small timber-boarded outbuilding with a corrugated metal roof. Adjoining the northern boundary in the north of the site there is also a small greenhouse with a concrete base.



Photograph 5 – concrete hardstanding in the east of the site.



Photograph 6 – concrete hardstanding and a small outbuilding in the east of the site.

Introduced shrub

- 5.18 In the north of the site is a small area of ornamental planting with an associated timber frame. Species include dog rose (*Rosa canina*), Portuguese laurel (*Prunus lusitanica*), and etruscan honeysuckle (*Lonicera etrusca*).



Photograph 7 – introduced shrubs in the north of the site.



Photograph 8 – introduced shrubs in the north of the site.

Lowland mixed deciduous woodland

- 5.19 Around the northwestern, southwestern, and southeastern site boundaries is a narrow belt of deciduous woodland. The woodland is mostly dense. The woodland belts along the southwestern and southeastern site boundaries are dominated by young and semi-mature trees, whilst the belt along the northwestern boundary, adjacent to the road, has a higher proportion of mature trees. Tree species include hawthorn (*Crataegus monogyna*), elder (*Sambucas nigra*), ash (*Fraxinus excelsior*), field maple (*Acer campestre*), Lawson's cypress (*Chamaecyparis lawsoniana*), and hazel (*Corylus avellana*). The shrub layer and ground flora comprise ivy (*Hedera helix*), bramble (*Rubus fruticosus* agg.), common nettle (*Urtica dioica*), garlic mustard (*Alliaria petiolata*), Mexican orange blossom (*Choisya ternata*), dog's mercury (*Mercurialis perennis*), lords-and-ladies (*Arum maculatum*), and St John's wort

(*Hypericum perforatum*). Three-cornered leek (*Allium triquetrum*) was also present on the southwestern boundary.



Photograph 9 – deciduous woodland belt at the site boundaries.



Photograph 10 – deciduous woodland belt at the site boundaries.

Mixed scrub

5.20 In the centre of the site is a small block of mixed scrub. This appears to have historically been a planted garden that has been unmanaged and become overgrown. Species include bramble, elder, ash, field maple, dock, and rusty foxglove (*Digitalis ferruginea*).



Photograph 11 – mixed scrub in the centre of the site.



Photograph 12 – mixed scrub in the centre of the site.

Tall forbs

5.21 In the east of the site, between the woodland and concrete hardstanding, is an area of dense tall forbs. Species include common nettle, garlic mustard, dock, red campion (*Silene dioica*), and greater burdock (*Arctium lappa*).



Photograph 13 – tall forbs in the east of the site.



Photograph 14 – tall forbs in the east of the site.

Non-native and ornamental hedgerow

- 5.22 In the east of the site, between modified grassland and hardstanding, an approximate 10m length of hedge has grown around the fence. This is composed of garden privet (*Ligustrum ovalifolium*), buddleia (*Buddleja davidii*), and elder.
- 5.23 Being predominantly non-native and recently established, this hedgerow does not qualify as an 'important hedgerow' under the 1997 Hedgerow Regulations or as native hedgerow priority habitat.



Photograph 15 – non-native hedgerow in the east of the site.



Photograph 16 – non-native hedgerow in the east of the site.

Individual trees

- 5.24 There are a small number of individual trees scattered within the northern half of the site. Most of these are small in size. Species include myrobalan plum (*Prunus cerasifera*), field maple, apple (*Malus* sp.), walnut (*Juglans* sp.), and hazel.



Photograph 17 – an individual tree on the site.







Photograph 18 – individual trees on the site.



FIGURE 6: UK HABS HABITAT MAP

Table 1 - Target Notes from Figure 6 - Habitat Plan

Target Note	Description & Photograph
1	<p>One of the individual trees was noted to have a hollow trunk and nesting birds could be heard inside.</p> 
2	<p>A mammal hole, potentially created by badger, was identified in the woodland belt on the southeastern site boundary.</p> 
3	<p>A cluster of mammal holes was present in the southeast corner of the site. From the size and shape of some of the holes, they may have been created by badgers. However, there was no definitive evidence at the time of the survey that they were in active use by badgers.</p> 
4	<p>Three cornered leek was found in the woodland on the southwest boundary. This is an invasive species listed on Schedule 9 of the Wildlife and Countryside Act.</p> 

Habitat evaluation

- 5.25 The habitats present on site are widespread and common. The highest ecological value is within the belt of woodland that surrounds the site. The remaining habitats have been modified by human activity and are of lower ecological value.

Plant species of note

- 5.26 No plant species of note were identified.

Invasive species

- 5.30 Three-cornered leek was recorded on the site (see Target Note 4), which is an invasive species listed on Schedule 9 of the Wildlife and Countryside Act.

Protected species and species of conservation concern

Badger

- 5.31 Potential badger setts were identified in the southeast corner and on the eastern boundary of the site, within the deciduous woodland. It could not be determined at the time of the survey whether the holes were in active use by badgers. The belt of woodland provides suitable habitat for sett building and foraging, and badgers could also forage across the modified grassland covering the site.

Barn owl

- 5.32 There is a small timber shed, an outbuilding, and a greenhouse on the site. The only building that could offer access to barn owls would be the outbuilding in the east of the site, which has an opening on the western elevation. However, there are no features, such as ledges or beams, that would be suitable for perching, roosting, or nesting barn owls within this building. No evidence of barn owls was identified on the site.

Bats

- 5.33 The belt of woodland around the site boundaries provides a small area of sheltered commuting and foraging habitat for bats. It is noted that there is no habitat connectivity to the south, with the woodland belt coming to an end 170m south of the site where the habitat becomes open. This may reduce the likelihood of bats utilising the onsite woodland to commute.
- 5.34 The trees on the site have not been individually assessed for roosting potential as part of this survey as it was unknown which trees would be removed. Several trees with rot holes and cavities were identified within the site, which may provide roosting opportunities for bats.
- 5.35 There are three small buildings on the site, all of which were considered to be unsuitable for roosting bats.
- 5.36 The timber shed in the north of the site has a gable roof covered by bitumen felt and is boarded inside. The shed is in excellent condition and all components are tightly fitting. No crevices or potential routes of ingress were identified on the external structure. Internally there is an absence of crevices or tight spaces that may be used by bats, and the structure appeared very well sealed. The shed was thoroughly inspected, and no evidence of bats found. Internally the shed was heavily cobwebbed throughout, indicating it had not been recently used by bats, if ever.

- 5.37 The greenhouse in the north of the site is a sealed glass structure with a complete absence of any features of potential suitability to roosting bats.
- 5.38 The outbuilding in the east of the site is a partially brick-built structure with a corrugated metal gable roof, corrugated metal panels on the west elevation, and timber boarding internally. No crevice features were present on the external structure of the building. There is a small overlap between the corrugated metal and an old stable door on the west elevation, however the gap between the two features was wider than would be favoured by roosting bats, and the gap was inspected and found to be heavily cobwebbed with no evidence of use. There is a large opening on the west elevation which would allow open access into the outbuilding. However, there is no roof void or suitable crevices or tight spaces internally that would be used by roosting bats.



Photograph 19 – the timber shed in the north of the site.



Photograph 20 – inside the timber shed in the north of the site.



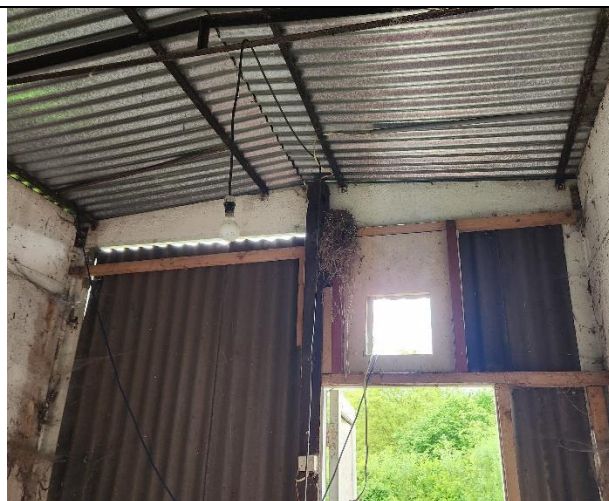
Photograph 21 – the greenhouse in the north of the site.



Photograph 22 – the outbuilding in the east of the site.



Photograph 23 – inside the outbuilding in the east of the site.



Photograph 24 – inside the outbuilding in the east of the site.

Breeding birds

- 5.39 There is habitat suitable for a range of breeding birds in the deciduous woodland around the site boundaries, the mixed scrub in the centre of the site, the scattered individual trees, and the outbuilding in the east of the site. Nesting birds could be heard in one of the individual trees which had a trunk cavity (see Target Note 1). Two old bird's nests were also present within the outbuilding in the east of the site.

Great Crested Newt (GCN)

- 5.40 There are no waterbodies onsite or within 500m of the site, which is considered the accepted dispersal distance for GCN. The closest identified waterbody is a pond located 800m to the north. As such, it is considered highly unlikely that GCN are present within the vicinity of the site. Whilst the terrestrial habitats onsite would be suitable for GCN, due to the absence of potential breeding ponds in the surrounding area it is considered that the site has negligible potential to support GCN.

Hazel dormice

- 5.41 The belt of woodland around the site boundaries is considered to have some suitability to support hazel dormouse due to the presence of edible plant species which would provide foraging opportunities. However, connectivity to suitable habitat in the surrounding area is limited, which reduces the likelihood that dormice would use the onsite woodland. There are no substantial blocks of habitat in close proximity and connected to the site which would be likely to support core populations of dormice. The site is surrounded by roads, including the A249 to the northwest which would be a major dispersal barrier. The tree lines and hedgerows that are directly connected to the site all appear to meet dead ends, and the surrounding area is dominated by residential properties and large expanses of open land. As such, continuous habitat connectivity which would promote the movement of dormice to the site is limited.

Reptiles

- 5.42 There is a suitable mosaic of habitats on the site to support common reptiles such as slow worms, common lizards and grass snakes. The modified grassland and tall forbs would offer foraging opportunities, whilst the mixed scrub and boundary woodland provide sheltering opportunities.

Other Mammals

- 5.43 No evidence of other mammals was recorded within the site.

Other Species of Principal Importance

- 5.44 The habitats onsite, including woodland, mixed scrub, and modified grassland, would provide suitable foraging opportunities for hedgehogs.

6 Conclusions & Recommendations

- 6.1 In line with Natural England's Standing Advice, where further survey for protected species is recommended these should be conducted prior to submitting a planning application and appropriate mitigation measures be incorporated into the development design.

Invasive species

- 6.1 Care must be taken to prevent the further spread of three-cornered leek. Ideally efforts should be made to remove this species from the site.

Plant species of note

- 6.2 No plant species of note were identified, therefore no further action is required.

Habitats of Principal Importance

- 6.3 **The deciduous woodland habitat within the survey area is an HPI and therefore should be retained and protected as far as possible. It is recommended that the new access onto the site involves only one break through the woodland on the northwest boundary, with the access road splitting within the modified grassland area to service each dwelling. Where loss of woodland is unavoidable, this must be compensated for.**

Badger

- 6.4 **The survey has identified the potential presence of badger setts on the site. Further survey for badgers will therefore be required to determine whether the mammal holes are used by badgers and inform any mitigation required.**

Barn owl

- 6.5 The survey did not identify any suitable buildings for or evidence of barn owls on the site, therefore no further action is required.

Bats

- 6.6 Lighting can have notable negative impacts on commuting bats, that are known to be present locally. There is potential for lighting during and post-development to cause indirect disturbance in these areas. **External lighting should be avoided or kept to the minimum necessary, and preferably on a motion sensor to reduce lighting time. The deciduous woodland surrounding the site should not be illuminated since this may be an important habitat feature for bats.**

- 6.7 **Due to the potential for trees on the site to support roosting bats, a Ground Level Tree Assessment of all trees to be removed or pruned as part of the proposed development will be required in the first instance, to determine whether any of these trees have features of potential suitability for roosting and whether further surveys are required.**

- 6.8 The buildings were considered to have negligible potential to support roosting bats and, as such, there are no known constraints regarding these species and the removal of any of these buildings.

Breeding birds

- 6.9 **Vegetation or tree removal should be undertaken outside the breeding bird period from March to August. Should any vegetation clearance be scheduled to take place between the beginning of March and the end of August, this must be immediately preceded by a survey to check for nesting birds. No vegetation can be cleared whilst a nest is occupied, regardless of species.**

- 6.10 **If the outbuilding in the east of the site is to be demolished, this must be inspected for nesting birds immediately prior to demolition. No works to the building can be carried out whilst active nests are present.**

Great Crested Newt (GCN)

- 6.11 The site is considered to have negligible potential to support GCN due to the absence of waterbodies within 500m, therefore no further action is required.

Hazel dormice

- 6.12 The deciduous woodland in the site boundaries has some potential suitability for hazel dormice, however this potential is considered to be limited due to the nature of the surrounding habitat. It is understood that the woodland is to be largely unimpacted by the proposed development except for through the creation of new access on the northwest boundary. Removal of woodland here is not expected to impact on any habitat connectivity for dormice, since the woodland belt comes to an end at the northern corner of the site where it meets a residential property. Continuous habitat connectivity will be retained through the southwest and southeast boundaries, with suitable habitat extending offsite.

- 6.13 **A dormouse mitigation strategy must be produced to cover any woodland clearance works at the site. This will include ecological supervision by a licensed ecologist and appropriate timing of works to avoid impacts to dormice.**

Reptiles

- 6.14 **A reptile presence survey will need to be undertaken to assess whether reptiles are using the site. This will involve placing several refugia mats (usually roofing felt or corrugated tin) in suitable locations on the site and checking them for basking reptiles on seven occasions in suitable weather conditions. These surveys can be conducted between March and September / October and will ascertain reptile presence and population size and thus inform the level of mitigation required.**

Other Mammals

- 6.15 Site clearance work should be undertaken carefully (by hand if necessary) to avoid crushing any small mammals within their burrows.

Other Species of Principal Importance

- 6.16 The west European hedgehog is an SPI, therefore it is recommended that any vegetation, such as the mixed scrub, should be cleared sensitively by destructive search with a qualified ecologist present on site. If close board fencing is to be fitted it should be raised above ground level to allow hedgehogs to pass underneath, some habitat areas should also be left un-landscaped to provide shelter and foraging opportunities. Good building practice recommended for badgers above will ensure that any hedgehogs traversing through the site are not trapped during the works. Additional habitat for hedgehogs could be provided through relaxation of mowing and seeding with an appropriate wildflower meadow mix in some areas of the site.

Impact Assessment

- 6.17 The potential impacts on tree roosting bats, badgers, and reptiles cannot be determined until further survey has been completed. If these species are identified as present, site-specific mitigation will be required.
- 6.18 Overall, it is considered that there are no likely significant impacts to the other fauna or flora populations within the local area from the proposed works provided the recommendations above are adhered to.

Appendix 1 – Survey timetable

Species	Survey	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Badger	Bait marking & sett search												
Bats	Roost assessments												
	Ground level tree assess												
	Emergence and activity												
	Hibernation												
	Trapping												
Birds	Wintering												
	Breeding												
Great crested newt	HSI												
	eDNA												
	Presence/absence & popn												
	Refugia												
Hazel dormouse	Tube												
	Nut search												
Otter	Field signs												
Reptiles	Refugia & search												
Water vole	Field signs												
Invertebrates	Presence & communities												
Vegetation	Phase 1 habitat & NVC												
	Optimal												
	Sub-optimal												
	Outside survey season												

Appendix 2 – legal protection

General

This section briefly describes the legal protection afforded to protected species and habitats. It is for information only and is not intended to be comprehensive or to replace specialised legal advice. It is not intended to replace the text of the legislation but summarises the salient points.

Badger

Badgers are protected under the *Protection of Badgers Act 1992*. Under this legislation it is an offence to kill or injure a badger, to damage, destroy or block access to a badger sett, or to disturb a badger in its sett. The Act also states the conditions for the protection of badger's licence requirements.

Barn Owl

Barn owls are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981 (as amended)* which makes it an offence to:

- intentionally kill, injure or take (capture etc.);
- take, damage or destroy the nest while that nest is in use or being built;
- take or destroy the egg;
- disturb them while they are in, on, or near a nest containing eggs or young, or to disturb their dependent young;
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

The penalty for an offence involving a barn owl, its nest, or egg, includes a fine of up to £5,000, or up to six months imprisonment, or both, per bird, nest or egg.

Bats

All species of bats are listed on *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)* which affords them protection under *Section 9*, as amended. They are also protected under the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.);
- possess;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by a scheduled animal for shelter or protection, or disturb any animal occupying such a structure or place; and
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

A roost is defined as 'any structure or place which a bat uses for shelter or protection'. As bats tend to reuse the same roosts, legal opinion is that a roost is protected whether or not bats are present.

Furthermore, seven bat species (barbastelle, bechstein's, noctule, soprano pipistrelle, brown long-eared, lesser horseshoe and greater horseshoe) are also Species of Principal Importance in England under *Section 41* of the *Natural Environment and Rural Communities Act 2006*.

Breeding Birds

All species of wild bird are protected under Section 1 of the *Wildlife and Countryside Act 1981 (as amended)*. Protection was extended by the *Countryside and Rights of Way (CROW) Act 2000*. Under the above legislation, it is an offence to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take or destroy an egg of any wild bird.

Certain species are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981 (as amended)* and receive protection under *Sections 1(4) and 1(5)*. There are special penalties where the offences listed above are committed for any *Schedule 1* species and it is also an offence to intentionally or recklessly:

- disturb any such bird when it is building its nest or while it is in or near a nest containing dependant young; or
- disturb the dependant young of any such bird.

Amphibians

Natterjack toad, northern pool frog and great crested newt are listed on *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)* which affords them protection under *Section 9*, as amended. They are also protected under the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.);
- possess;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by a scheduled animal for shelter or protection, or disturb any animal occupying such a structure or place; and
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

Palmate newts and smooth newts are also afforded protection against sale only under *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)*.

Natterjack toad, common toad, great crested newt and northern pool frog are also Species of Principal Importance in England under *Section 41* of the *Natural Environment and Rural Communities Act 2006*.

Hazel dormouse

Hazel dormouse is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)* which affords them protection under *Section 9*, as amended. They are also protected under the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.);
- possess;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by a scheduled animal for shelter or protection, or disturb any animal occupying such a structure or place; and
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

Hazel dormouse is also a Species of Principal Importance in England under *Section 41* of the *Natural Environment and Rural Communities Act 2006*.

Otter

Otter is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)*, which affords them protection under *Section 9*, as amended. They are also protected under the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.);
- possess;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by a scheduled animal for shelter or protection, or disturb any animal occupying such a structure or place; and
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

Otter is also a Species of Principal Importance in England under *Section 41* of the *Natural Environment and Rural Communities Act 2006*.

Reptiles

Common lizard (*Lacerta vivipara*), grass snake (*Natrix natrix*), slow worm (*Anguis fragilis*), and adder (*Vipera berus*) are listed under *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)*, in respect of *Section 9(5)* and part of *Section 9(1)*. This protection was extended by the *Countryside and Rights of Way (CROW) Act 2000*. Under the legislation, it is an offence to:

- intentionally or deliberately kill or injure any individual of these species; or
- sell or attempt to sell any part of these species either alive or dead.

Smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) are listed on *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)*, which affords them protection under *Section 9*, as amended. They are also protected under the *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.);
- possess;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by a scheduled animal for shelter or protection, or disturb any animal occupying such a structure or place; and
- sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

All UK reptile species are Species of Principal Importance in England under *Section 41* of the *Natural Environment and Rural Communities Act 2006*.

Water vole

Water vole (*Arvicola amphibious*) is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981 (as amended)*, which affords them protection under *Section 9*, as amended. This makes it an offence to:

- capture, kill or injure;
- damage, destroy or block access to a place of shelter;
- disturb whilst in a place of shelter or possessing, and

- sell any part of a water vole, dead or alive.

Other Mammals

All mammals receive some protection under the *Wild Mammals (Protection) Act 1996*, which makes it an offence to crush or asphyxiate an animal (e.g. within its burrow).

Species and Habitats of Principal Importance

Section 41 of the *Natural Environment and Rural Communities (NERC) (2006)* requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list has 56 Habitats of Principal Importance and 943 species of principal importance listed and has been drawn up in consultation with Natural England.

The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under *Section 40* of the *Natural Environment and Rural Communities Act 2006*, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Invasive species

It is an offence to plant, or otherwise cause to grow in the wild non-native plant species listed under *Schedule 9* of the *Wildlife and Countryside Act 1981 (as amended)*, for which *Section 14* of the Act applies. These include, but are not limited to:

- Himalayan balsam
- *Cotoneaster* sp.
- Japanese knotweed
- Giant hogweed.

Ancient woodland

The *National Planning Policy Framework (2012)* states that ‘*Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss*’. In addition, Natural England’s standing advice for ancient woodland states that *an appropriate buffer zone of semi-natural habitat [be in place] between the development and the ancient woodland (depending on the scale and impact of development), a minimum buffer should be at least 15 metres to avoid root damage and at least 50m for pollution or trampling*”. Ancient woodlands, and ancient and veteran trees, may also be protected by Tree Preservation Orders.

Sites of Special Scientific Interest (SSSI’s)

SSSI’s are areas notified under the *Wildlife and Countryside Act 1981, as amended*, as being of special interest for nature conservation. They are the finest sites for wildlife and natural features supporting many characteristic, rare and endangered species, habitats and natural features. LPAs have a duty to consult Natural England before granting planning permission on any development that is in or likely to affect a SSSI.

National Site Network: Special Protection Areas (SPA), Special Areas of Conservation (SAC) & RAMSAR sites.

Development proposals which will adversely affect these sites are not permitted (except where there are no alternative solutions and the proposal is necessary for imperative reasons of overriding public interest). If a development could possibly impact on a SPA or SAC, the applicant will need to submit an assessment of potential impacts and their significance with their planning application for the local authority to make an 'Appropriate Assessment'.

Local Nature Reserves (LNRs)

These are a statutory designation made by local authorities. LNRs may be given protection against damaging operations and development on and around them via the local plan.

Local Wildlife Sites (LWS)

This is a non-statutory designation for sites identified at a county level. They typically form a network of sites that are recognised of being of conservation importance locally and are often included in Local Authority development plans.

Appendix 3 – Species list

Common Name	Scientific name	DAFOR
Apple	<i>Malus</i> sp.	O
Ash	<i>Fraxinus excelsior</i>	O
Barren brome	<i>Anisantha sterilis</i>	F
Bramble	<i>Rubus fruticosus</i> agg.	O
Buddleia	<i>Buddleja davidii</i>	R
Cleavers	<i>Galium aparine</i>	O
Cock's-foot	<i>Dactylis glomerata</i>	F
Common chickweed	<i>Stellaria media</i>	O
Common daisy	<i>Bellis perennis</i>	O
Common nettle	<i>Urtica dioica</i>	O
Creeping buttercup	<i>Ranunculus repens</i>	F
Creeping thistle	<i>Cirsium arvense</i>	R
Dandelion	<i>Taraxacum</i> sp.	O
Dock	<i>Rumex</i> sp.	F
Dog rose	<i>Rosa canina</i>	R
Dog's mercury	<i>Mercurialis perennis</i>	O
Elder	<i>Sambucas nigra</i>	O
Etruscan honeysuckle	<i>Lonicera etrusca</i>	R
Field maple	<i>Acer campestre</i>	O
Field woodrush	<i>Luzula campestris</i>	O
Garden privet	<i>Ligustrum ovalifolium</i>	R
Garlic mustard	<i>Alliaria petiolata</i>	O
Germander speedwell	<i>Veronica chamaedrys</i>	F
Greater burdock	<i>Arctium lappa</i>	O
Hawthorn	<i>Crataegus monogyna</i>	O
Hazel	<i>Corylus avellana</i>	O
Herb-Robert	<i>Geranium robertianum</i>	O
Ivy	<i>Hedera helix</i>	LF
Lawson's cypress	<i>Chamaecyparis lawsoniana</i>	O

Lords-and-ladies	<i>Arum maculatum</i>	O
Meadow grass	<i>Poa</i> sp.	A
Mexican orange blossom	<i>Choisya ternata</i>	O
Myrobalan plum	<i>Prunus cerasifera</i>	R
Perennial ryegrass	<i>Lolium perenne</i>	F
Portuguese laurel	<i>Prunus lusitanica</i>	R
Ragwort	<i>Jacobaea vulgaris</i>	O
Red campion	<i>Silene dioica</i>	O
Ribwort plantain	<i>Plantago lanceolata</i>	F
Rusty foxglove	<i>Digitalis ferruginea</i>	R
Self-heal	<i>Prunella vulgaris</i>	O
St John's wort	<i>Hypericum perforatum</i>	O
Sweet vernal grass	<i>Anthoxanthum odoratum</i>	F
Three-cornered leek	<i>Allium triquetrum</i>	R
Walnut	<i>Juglans</i> sp.	R
White clover	<i>Trifolium repens</i>	O
Yarrow	<i>Achillea millefolium</i>	O

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