Landscape Services Depot, Broad Lane, Wilmington, Kent

Preliminary Ecological Appraisal

17th April 2024 / Ref No 2024/03/03

Client: Mayfair Construction Developments Ltd

Prepared by Katia Bresso CEnv MCIEEM
Trading as 'KB Ecology Ltd' (Reg 7595382)
9 Barleyfields,
Weavering, Maidstone
ME145SW Kent
Tel: 07810 412 773
Email: katia.bresso@kbecology.co.uk

Contents

1 Introduction

1.1 Background to the Scheme

KB Ecology Ltd was commissioned to undertake a baseline ecological survey and a preliminary ecological appraisal with regards to a proposed development at Landscape Services Depot, Broad Lane, Wilmington DA2 7AG Kent, in support of a planning application for the demolition of the existing buildings prior to erection of new dwellings.

1.2 Survey Location/Area

The site is located at approximately TQ 527 720. The location of the site is shown on Figure 1 and Figure 2.

1.3 Survey Objectives

The purpose of this survey is to provide a scoping assessment and to assist in demonstrating compliance with wildlife legislation and planning policy objectives.

The key objectives are as follows:

- Identify all relevant statutory and non-statutory designated sites and features of ecological significance within the site and its surroundings.
- Assess the potential for the presence of protected species and species of principal conservation importance, important habitats or other biodiversity features within the site and its surroundings.
- Provide recommendations for further surveys where assessed as necessary and suggest potential enhancements.
- Present the likely significance of ecological impacts on the proposed development.
- Provide an early indication of potential ecological mitigation and compensation requirements necessary as part of any development proposals.

A summary of wildlife legislation and policy has been included in Appendix A.

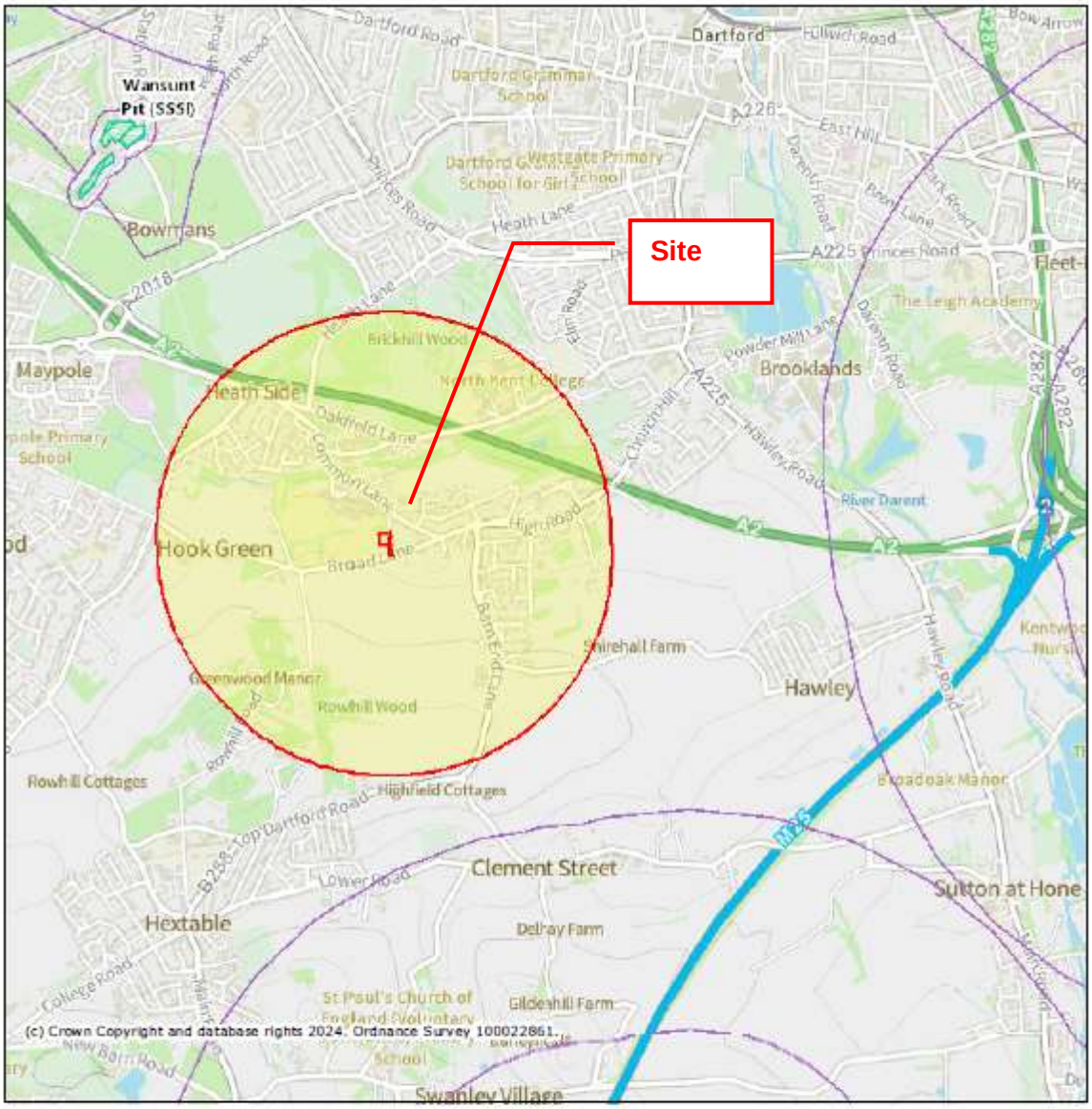
1.4 Limitations

This report has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct and the opinions expressed are true and professional bona fide opinions. It records the potential for flora and fauna evident on the days of the site visits. It does not record any flora or fauna that may appear at other times of the year and, as such, were not evident at the time of visit.

The findings of this report represent the professional opinion of a qualified ecologist and do not constitute professional legal advice. The client may wish to seek professional legal interpretation of the relevant wildlife legislation cited in this document.

MAGIC

Figure 1



Legend

- Ramsar Sites (England)
- Sites of Special Scientific Interest (England)
- SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Special Areas of Conservation (England)
- Special Protection Areas (England)

0 0.75 1.5
km

Projection = OSGB36
xmin = 547100
ymin = 168900
xmax = 559800
ymax = 175000

Map produced by MAGIC on 17 April, 2024.
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Site
0
50
100m
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Figure 3: indicates location of ponds from KRAG data search

2 Methodology

2.1 Desk Study

Internet-based resources were consulted to identify designated nature conservation sites within 1km of the site and habitats of potentially high ecological importance and sensitivity within 500m of the site (e.g. ancient woodlands, ponds).

A data search was carried out with the Kent Reptile and Amphibian Group KRAG[1],[2].

2.2 Scoping Survey

The site and its immediate surroundings were considered in terms of habitats, protected species and species of principal conservation importance during a walkover survey undertaken on 28th March 2024 by Megan Austin, who has ten years of experience in ecological surveying and checked by Katia Bresso CEnv MCIEEM, a qualified professional consultant ecologist with over 20 years of experience, licensed bat surveyor (Class Licence CL19, Level 3, Registration Number: 2016-27133-CLS-CLS) and Registered Consultant of the Bat Mitigation Class Licence (BMCL) WML-CL21 with Natural England (Registered Consultant Reference Number RC056, since May 2015), licensed dormouse surveyor (Class Survey Licences Registration Number 2016-22060-CLS-CLS) and licensed great crested newt surveyor (Class Licence registration number 2020-50030-CLS-CLS). Evidence of the use of the site by species was recorded (i.e. field signs).

The habitat survey was undertaken in general accordance with the UK Habitat Classification[3],[4].

The survey and report aim at following the guidance and recommendations in the 'British Standard Biodiversity Code of Practice for Planning and Development (BS 42020: 2013)'.

Particular attention was given to signs of use by bats and barn owls. A visual survey was undertaken looking for evidence of roosting bats and roosting/nesting barn owls, including signs such as live or dead bats/owls, feathers, droppings, pellets, nest debris and eggs, using an endoscope[5], high powered torch (Cluson CB1 Clubman Standard High Power, 500,000 candle power), night vision scope and binoculars where needed.

All trees were checked for suitability for roosting bats (Ground Level Tree Assessment) and any accessible cavity was checked using an endoscope.

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[1] Please note that absence of records should not be taken as confirmation that a species is absent from the search area.

[2] Due to the scale of the project, it was judged disproportionate to undertake a costly data search with the local Biological Record Centre as the data would be unlikely to be relevant to this site.

[3] https://ukhab.org/

[4] training courses followed on UK Habitat Classification (held by UK Hab Ltd) in October 2020 and in February 2021 (held by by Dr L Mason of Wildwood

[5] RIDGID CA-350x Inspection Camera System 63888 and DDENDOCAM Endoscope Inspection Camera Dual-Lens Endoscope 4.3" Screen Borescope 1080P HD

Bat roosting potential of all impacted structures, buildings and trees was classified according to the following criteria set out in the Table below, taken from the Bat Conservation Trust Good Practice Guidelines (2023).

Potential suitability	**Roosting Habitats in Structures**
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, the potential roost sites do not provide enough space, shelter, protection appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger number of bats (i.e. unlikely to be suitable for maternity and not a classis cool/stable hibernation site, but could be used by individual hibernating bats)
Moderate	A structure which one or more potential roost sites that could be used by bats due to their size, shelter, protection, soncditions and surrounding habitats but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in the table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.

3 Baseline Ecological Conditions

3.1 Designated Nature Conservation Sites

The site is not part of, nor directly adjacent to, any statutory designated sites and none are located within 1km of the site.

3.2 Habitats

The site is surrounded by arable land, pasture, a large secondary school and some dwellings.

The Integrated Habitat System (IHS) classification of the Kent Habitat Survey 2012 describes the site as:

- *Built-up areas,*
- *Improved grassland.*

Indeed, at the time of site visit, the habitats present were as such (as per the UK Habitat Classification System):

- Parcel 1 - *Urban - developed land; sealed surface*. Four buildings, an area of hardstanding and four shipping containers.

- Parcel 2 - *Urban - Bare Ground*. Former yard area used for storing of machinery and waste materials. Some limited ruderal vegetation as detailed in the species list in Appendix C. Recent work on site to clear some of the waste involved the clearance of some bramble from the north-west corner of the site.

- H1 - *Line of trees* - overgrown *Leylandii* hedge, with gaps and dead trees.

Some bramble scrub had recently been cleared from the site, leaving areas of bare ground but historic satellite images show that bare ground was present at the same location in 1990 through to early 2020 and thus this bare ground baseline is judged adequate.

Plates are present in Appendix B. Figure 4 below shows the location of the habitats.


Baseline habitats
Red Line Boundary
HEDGEROWS
Hedgerow Baseline
Line of trees
HABITATS
Habitats Baseline
Developed land; sealed surface
Bare ground
BASE MAPS
Google Satellite:
KB Ecology
A Kent Based Ecological Consultancy
2
1
0
10
20
30
40 m

3.3 Amphibians

The data search carried out with KRAG (Enquiry No: CES/24/041) revealed that the closest recorded Great Crested Newt *Triturus cristatus* site is located at 0.81 km to the NE (record id: 78025).

Great crested newts favour areas of high pond density and occupancy levels can exceed 40% of ponds when conditions are favourable. KRAG's database risk assessment indicates that the likelihood of presence of great crested newts *in the overall area* is *'Possible'*[6], with only five ponds present within 1km.

Like nearly all amphibians, the great crested newt is dependent on water-bodies for breeding but usually spends most of its life on land.

The 'Great Crested Newt Mitigation Guidelines' (English Nature 2001) state the following:
'Great crested newts have been found to move over considerable distances (up to 1.3km from breeding sites). However, the vast majority of newts will inhabit an area much closer to the pond, and the exact distribution and migration patterns of newts on land depends on a variety of factors. The quality of terrestrial habitat near to breeding ponds is important, as are the lack of barriers to dispersal (such as fast-flowing rivers, or very busy roads). The distribution of ponds and hibernation opportunities may also influence movements. […] Several studies have been conducted which reveal a great deal of variation, but great crested newts commonly move between ponds that are within around 250m of each other.'

In *Advice for land managers,* Natural England (2007) states:

[6] Likelihood of Presence Scores are described using the following categories: Unlikely<Possible<Likely<High

'Great crested newt may disperse several hundred metres, sometimes over 1km, from the breeding pond, though at most sites the majority of the population is normally found within around 100m of it.'

No ponds are present on site or within 250m. Thus, due to the paucity of ponds in the general area and the distance to the nearest pond, it is judged unlikely that great crested newts would be present on site.

3.4 Reptiles

The site is regularly disturbed and doesn't provide any suitable habitat for reptiles.

3.5 Birds

It is considered that the site has potential to support breeding birds within the *Leylandii* hedge and inside the buildings.

All species of bird whilst actively nesting are afforded legal protection under the Wildlife & Countryside Act 1981 (as amended) and special penalties are available for offences related to birds listed on Schedule 1. Some species are also listed as species of principal conservation importance, including sky lark, common cuckoo, house sparrow, tree sparrow and song thrush (See Appendix A).

For more information, guidance from Natural England is available at https://www.gov.uk/wild-birds-protection-surveys-and-licences

3.6 Hazel Dormouse

It is considered that the site has no potential to support the hazel dormouse due to lack of suitable habitat and lack of connection to suitable woodlands.

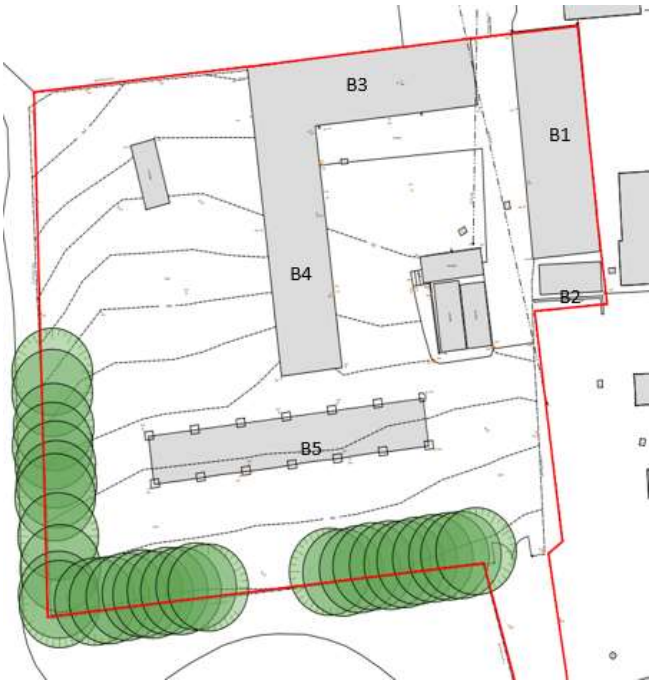
3.7 Badger

No setts or signs of badgers were identified during the survey.

3.8 Bats

No bats were found during the internal/external inspection of the buildings, as description of which is given below.

Building	Description	Potential suitability	Individual Potential Roosting Features
B1	Single skin block construction with single skin corrugated asbestos roof, light conditions inside	Negligible	none
B2	Small garage	Negligible	none
B3	Brick construction with wood panel lined slate roof	Low	small number of cracks in the brickwork, gaps under ridge-tiles
B4	Single skin brick and block construction with single skin tin roof	Negligible	none
B5	Open tin barn	None	none



None of the trees present on site offered suitability for roosting bats. But the surrounding area is likely to be used by foraging and commuting bats.

All species of bat are afforded full legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). They are also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 and are therefore a "European Protected Species" (EPS). Some species of bats (noctule, soprano pipistrelle, brown long-eared bat, barbastelle) are also listed as species of principal conservation importance.

Bats rarely use the same roosting place all year round as they need different conditions for breeding and hibernating. But bats are creatures of habit and tend to return to the same sites at the same time year after year. For this reason, roosts are legally protected even if bats don't seem to be living there at certain times of year.

The legislation makes it a criminal offence to:

- Deliberately capture, injure or kill a bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat;
- Intentionally or recklessly obstruct access to a bat roost.

For more information, guidance from Natural England is available at
https://www.gov.uk/bats-protection-surveys-and-licences

3.9 Other Species

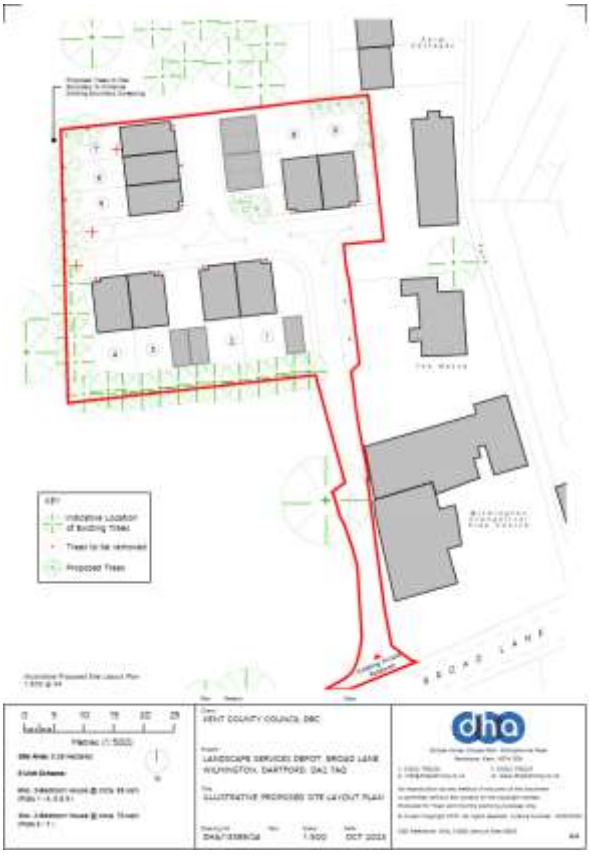
It is considered that the surroundings have potential to support hedgehogs (*Erinaceus europaeus*), which are a Species of Principal Importance under Section 41 of the NERC Act (2008 updated list) and an Indicator Species under the Kent Biodiversity Strategy[7].

All mammals are afforded protection against unnecessary suffering by the Wild Mammals (Protection) Act 1996 (see Appendix A).

[7] http://kentnature.org.uk/uploads/files/Nat-Env/Kent%20Biodiversity%20Strategy%202020.pdf

4 Ecological constraints and opportunities, recommendations for mitigation, compensation and further survey

The details of the proposed development were as below at the time of writing this report.



The ecological mitigation hierarchy should be applied when considering development which may have a significant effect on biodiversity. Such hierarchy should follow these principles[8],:

1. Avoidance – development should be designed to avoid significant harm to valuable wildlife habitats and species[9].

[8] https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications#agree-avoidance-mitigation-or-compensation-measures

[9] Avoidance is always the preferred form of mitigation. It involves steps taken to avoid deliberate killing, injury or disturbance to bats and to existing roosts. The great majority of roosts are used only seasonally so there is usually some period when bats are not present and works can occur without impacting bats. By gathering ecological data about a bat roosting site at the start of development or maintenance works, it may be possible to 'design out' the impacts of a development by retaining the roosting site and building around it. Care should be given to ensure commuting routes to and from the roost are also retained and indirect impacts controlled for, such as the impact from the addition of artificial lighting.

2. Mitigation – where significant harm cannot be wholly or partially avoided, it should be minimised by design or through the use of effective mitigation measures.
3. Compensation – where, despite whatever mitigation would be effective, there would still be significant residual harm, as a last resort, compensation should be used to provide an equivalent value of biodiversity.

Should the scope of the proposed works be amended following the completion of this scoping survey, or be deferred for an extended period of time, there may be a requirement to update this scoping report and its recommendations.

4.1 Designated Nature Conservation Sites

A site check report was generated for the site using the Impact Risk Zones on the Magic website[10]:

Site Check Report Report generated on Wed Apr 17 2024
You selected the location: Centroid Grid Ref: TQ52737207
The following features have been found in your search area:

SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?	2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:
All Planning Applications	
Infrastructure	Airports, helipads and other aviation proposals.
Wind & Solar Energy	
Minerals, Oil & Gas	
Rural Non Residential	
Residential	
Rural Residential	
Air Pollution	Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t.
Combustion	
Waste	
Composting	
Discharges	Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.
Water Supply	
Notes 1	
Notes 2	
GUIDANCE - How to use the Impact Risk Zones	/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf

The type of development proposed is not listed as being a category for which the LPA should consult Natural England. The proposal is not judged detrimental to any protected sites.

4.2 Habitats

Trees to be retained should be protected during any construction work and guidance is given in the 'BS 5837:2012 Trees in relation to design, demolition and construction. Recommendations' document. This standard requires a tree protection plan to be developed which involves erecting physical barriers to prevent damage to existing trees, with an exclusion area around the trees. It also looks at defining a root protection area and requires consideration when compulsory work is carried out within the root protection area.

[10] The Impact Risk Zones (IRZs) dataset is a GIS tool which maps zones around each SSSI according to the particular sensitivities of the features for which it is notified and specifies the types of development that have the potential to have adverse impacts.

Natural England uses the IRZs to make an initial assessment of the likely risk of impacts on SSSIs and to quickly determine which consultations are unlikely to pose risks and which require more detailed consideration. Publishing the IRZs will allow LPAs, developers and other partners to make use of this key evidence tool.

http://www.naturalengland.org.uk/ourwork/planningdevelopment/impactriskzonesgistoolfeature.aspx

4.3 Amphibians

No impact is expected onto great crested newts and thus no further work is recommended for this species.

4.4 Reptiles

No impact is expected onto reptiles.

4.5 Birds

Although a breeding bird survey is not deemed to be necessary, on the basis that the site contains suitable habitat for breeding birds, consideration must be given to the timing of the clearance works, if any is to take place.

The effect on birds can be avoided by undertaking any vegetation clearance and by demolishing the buildings outside of the nesting season (which extends from March – August inclusive[11]) or only after a survey has confirmed the absence of nesting birds[12]. New hedgerow/trees/scrub planted and bird nesting boxes erected as part of the proposed development can replace the habitat lost.

4.6 Hazel Dormouse

No impact is expected onto dormice.

4.7 Badger

No impact is expected onto badgers and thus no further work is recommended for this species. However, as sett use can fluctuate (with setts becoming active when were not previously and new setts appearing over time), a pre-commencement of works badger survey is recommended if they works take place less more than one year after the date of the site visit of this report.

4.8 Bats

Should bats be roosting on site, the proposed development would lead to a loss of habitat and animals could be killed or injured during the works.

The Bat Conservation Trust's guidelines provide a table stating the 'minimum number of presence/absence survey visits required to provide confidence in negative preliminary roost assessment from buildings, built structures and trees in summer.

[11] It should be noted however that certain species are known to breed throughout the year (e.g. collard dove) and remain protected.

[12] Inspection by a qualified ecologist must first be completed a maximum of 48hrs before clearance works commence. If during the inspection a nest considered to be in use is discovered, works must be delayed until the young have fledged.

Table 7.2. Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
One survey visit. One dusk emergence survey[a] (structures). No further surveys required (trees).	Two separate dusk emergence survey visits[b].	Three separate dusk emergence survey visits[b].

a Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis (see para 5.2.44). In some cases, more than one survey may be needed, particularly where there are several buildings in this category.

b Multiple survey visits should be spread out to sample as much of the recommended survey period (see Table 7.1) as possible; it is recommended that surveys are spaced at least three weeks apart, preferably more.

Table 7.1. Recommended timings for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees where other methods such as PRF inspection are not possible, but unlikely to give confidence in a negative result). To be used in tandem with Table 7.2.

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
May to August (structures) No further surveys required (trees)	May to September[a], with at least one of surveys between May and August[b]	May to September[a], with at least two of surveys between May and August[b]

a September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season. September surveys are likely to miss maternity roosts due to dispersal before this time, but may pick up mating roosts.

b Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at **least three weeks apart**, preferably more. Survey timings **should consider the prevailing conditions in the year of survey, which will vary geographically**. In years with a cold spring, the surveys should not be started in early May or all completed in May. The surveys should maximise the possibility of detecting maternity roosts, which can switch roosts between pregnancy and lactation, and the **optimum coverage includes the pre-parturition, post-parturition and mating periods**.

Thus one emergence survey of Building B3 is recommended, as per above.

Besides, as lighting can be detrimental to roosting, foraging and commuting bats[13], the recommendations from the Bat Conservation Trust and the Institution of Lighting Professionals, titled 'Guidance Note 8 Bats and Artificial Lighting'[14], should be considered, when designing any lighting scheme for the proposed development.

4.9 Other Species

There is some potential for hedgehogs to be present on site. Therefore any areas where mammals could be sheltering should be hand searched prior to disturbance. Excavations should be backfilled, covered overnight, or ramps placed in to allow any animals to escape.

[13] https://www.bats.org.uk/about-bats/threats-to-bats/lighting

[14] https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

4.10 Additional Recommendations: Enhancements

Ecological enhancements should where possible be incorporated into the proposed development to contribute towards the objectives of planning legislation.

Under section 40 of the NERC Act (2006), paragraph 174 of the NPPF (2021) and the Environment Act (2021), biodiversity must be maintained and enhanced through the planning system. Additionally, in alignment with paragraph 180 of the NPPF 2021, the implementation of enhancements for biodiversity should be encouraged.

The design and implementation of habitat enhancements could also be used to contribute towards the 'Home Quality Mark' or similar accreditation, should this be a consideration for this site.

Suggested biodiversity enhancements are listed below, as a palette for the developer to choose from:

- Provision of hedgehog nesting boxes[15].
- If any close board fencing is to be installed around the new development, we recommend that at least 13 x 13 cm holes should be cut into the base of the fences (one per garden) to allow greater permeability across the site to benefit ground-based terrestrial animals (such as hedgehog)[16].
- Provision of ready-made bird boxes[17] on retained trees;
- Provision of integrated 'swift bricks' in new buildings (as these are often occupied by other small cavity-nesting birds[18],[19])[20]. A ratio of at least two per residential dwelling, or one per 50sqm of commercial floor space is generally accepted now as good practice (see BS 42021:2022). It is suggested better to install them in small groups of 2/6 approx. one metre+ apart in suitable locations at a minimum height of 4 metres (5 metres is better).
- Provision of integrated bat boxes on new buildings or bat boxes on retained mature trees[21].
- Establish climbing plants on walls and other vertical structures[22].
- Establish wildflower plug/bulb planting in amenity grassland and private gardens [23].

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[15] http://www.hedgehogstreet.org/pages/hedgehog-homes.html

[16] https://www.hedgehogstreet.org/wp-content/uploads/2019/03/Hedgehogs-and-developers-ZR.pdf

[17] Integrated nest boxes in new buildings are preferred as they provide longer term nesting opportunities.

[18] https://drive.google.com/file/d/1ljcJ7rIkNMrr4lxd41XcBU3YC6IFKM6z/view

[19] https://www.actionforswifts.com/

[20] Boxes integrated into buildings offer much greater longevity but need to be considered in the design process. One study found that incorporating bird/bat boxes into walls could cause cold spots on the interior, leading to condensation and possibly mould. They recommend additional insulation to prevent this; advice from an architect is advisable.

[21] https://www.bats.org.uk/our-work/buildings-planning-and-development/bat-boxes

[22] More information can be found here: http://www.greenblueurban.com/climbing-plant-guide.php and http://www.london.gov.uk/priorities/environment/urban-space/parks-green-spaces/green-roofs-walls

[23] Spring flowering bulbs and plugs of nectar rich flowering plants should be embedded into amenity grassland to increase the biodiversity and amenity value of the grassland and to provide early sources of nectar for insects. Suitable bulbs include Snake's head fritillary *Fritillaria meleagris*, Ramsons *Allium ursinum*, Snowdrop *Galanthus nivalis*, Primrose *Primula vulgaris*, Bluebell *Hyacinthoides non-scriptus*, Wild daffodil *Narcissus pseudonarcissus*, Lesser celandine *Ranunculus ficaria*

- Hedge planting[24]
- Integration of green or grey roofs[25],[26],[27].
- Consider using grid mesh system (or Ground Reinforcement Grids) with topsoil and seeding with a wildflower species mix, to car parking areas and new access drives to retain some vegetation as well as drainage, or Gravel turf[28].
- Planting of trees, with species suitable for planting in gardens, such as birch and rowan[29].
- Establish Fruit Espaliers[30].

Priority should be given to habitats and species present on the Kent Biodiversity Strategy[31].

The project team should follow advice from the recently published 'Biodiversity in new housing developments: creating wildlife-friendly communities'[32], which sets out approaches to design and development that work with nature to deliver multiple benefits – for people and wildlife.

[24] https://www.kentwildlifetrust.org.uk/actions/how-make-hedge-wildlife

[25] http://www.environment-agency.gov.uk/business/sectors/91967.aspx, http://www.london.gov.uk/priorities/environment/urban-space/parks-green-spaces/green-roofs-walls and http://publications.naturalengland.org.uk/publication/31036 for more information

[26] An example of a company with extensive experience in designing biodiverse roofs in Central London: the Green Roof Consultancy http://www.greenroofconsultancy.com

[27] 'Creating green roofs for invertebrates – a best practice guide' by Buglife https://www.buglife.org.uk/sites/default/files/Creating%20Green%20Roofs%20for%20Invertebrates_Best%20practice%20guidance.pdf

[28] http://www.schotterrasen.at/e_index.htm

[29] https://www.rspb.org.uk/birds-and-wildlife/advice/gardening-for-wildlife/plants-for-wildlife/garden-trees/best-trees/

[30] http://apps.rhs.org.uk/advicesearch/profile.aspx?PID=319 for more information

[31] https://kentnature.org.uk/wp-content/uploads/2022/01/Kent-Biodiversity-Strategy-2020.pdf

[32] https://www.nhbcfoundation.org/publication/biodiversity-in-new-housing-developments-creating-wildlife-friendly-communities/

5 References and Bibliography

- Butcher B, Carey P, Edmonds R, Norton L and Treweek J (2020) – *UK Habitat Classification – Habitat Definitions V1.1*
- Collins, J. (ed) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn). Bat Conservation Trust, London.
- English Nature (2004). *Research Reports Number 576: An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt Triturus cristatus*. English Nature, Peterborough

Websites Visited:

- http://webapps.kent.gov.uk/KCC.KLIS.Web.Sites.Public/ViewMap.aspx
- http://www.magic.gov.uk/magicmap.aspx (contains public sector information licensed under the Open Government Licence v3.0)
- http://www.kentbap.org.uk/species/
- https://ati.woodlandtrust.org.uk/

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Appendix A – Wildlife Legislation & Policy

The following is a summary of wildlife legislation and planning policy which affords protection to plants and animals and seeks to conserve, enhance and restore biodiversity. This section is provided for general guidance only. While every effort has been made to ensure accuracy, this section should not be relied upon as a definitive statement of the law.

For further information, please see:
https://www.gov.uk/protected-species-and-sites-how-to-review-planning-proposals

Commonly encountered protected species

Many species of plants, invertebrates and animals receive protection under the legislation detailed above. However, of these, the following are the most likely to be affected by development in the southeast:

Species	Legal Protection
Great crested newts and other amphibians	The great crested newt is afforded full legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). It is also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2019 (as amended) and is therefore a European Protected Species (EPS); further protection is afforded by the Countryside and Rights of Way Act 2000. Taken together, the legislation makes it a criminal offence to: • Deliberately capture (or take), injure or kill GCN • Deliberately or recklessly disturb GCN, in particular (i) any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young; (ii) any disturbance which is likely to impair their ability to hibernate or migrate; or (iii) any disturbance which is likely to affect significantly the local distribution or abundance of the species. • Damage or destroy a breeding site or resting place - even if GCN are not occupying the place at the time; • Intentionally or recklessly obstruct access to a sheltering or resting place. An EPS licence is required from Natural England before works can be undertaken which will impact on GCN and/or their habitat (such as any damage to or removal of ponds, grassland, hedgerow bases or dense scrub in which they are likely to occur). Great crested newts and common toads are also listed as Species of Principal Importance under Section 41 of the NERC Act 2006.
Hazel dormice	The hazel dormouse is afforded full legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). It is also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2019 (as amended) and is therefore a European Protected Species (EPS); further protection is afforded by the Countryside and Rights of Way Act 2000. Taken together, the legislation makes it a criminal offence to: • Deliberately capture (or take), injure or kill hazel dormouse • Deliberately or recklessly disturb hazel dormouse, in particular (i) any

	disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young; (ii) any disturbance which is likely to impair their ability to hibernate or migrate; or (iii) any disturbance which is likely to affect significantly the local distribution or abundance of the species. • Damage or destroy a breeding site or resting place - even if dormice are not occupying the place at the time; • Intentionally or recklessly obstruct access to a sheltering or resting place. An EPS licence is required from Natural England before works can be undertaken which will impact on dormouse and/or their habitat (such as any damage or removal of hedgerows, woodland or dense scrub in which they are likely to occur). Hazel dormouse is also listed as a Species of Principal Importance under Section 41 of the NERC Act 2006.
Bats	All British bat species receive full legal protection in the United Kingdom. The Conservation of Habitats and Species Regulations 2019 (as amended) legally protects all bat species in the UK and further protection is afforded by the Wildlife and Countryside Act 1981 (Schedule 5) and the Countryside and Rights of Way Act 2000. Taken together, the legislation makes it a criminal offence to: • Deliberately capture (or take), injure or kill a bat. • Deliberately or recklessly disturb a bat, in particular (i) any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young; (ii) any disturbance which is likely to impair their ability to hibernate or migrate; or (iii) any disturbance which is likely to affect significantly the local distribution or abundance of the species concerned. • Damage or destroy a breeding site or resting place (roost) of a bat- even if bats are not occupying the roost at the time; • Intentionally or recklessly obstruct access to a roost; • Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat. An EPS Licence for bats is required where works are expected to contravene the above legal protection. Under the law, a roost is 'any structure or place used for shelter or protection'. For example any building or suitable tree. Bats use many roost sites and feeding areas throughout the year. Since bats tend to re-use the same roosts for generations, the roost is protected whether the bats are present or not.
Reptiles	The more widespread species of reptile – slow-worm, viviparous lizard, grass snake and adder - are afforded legal protection against killing and injury under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). All six UK reptile species are listed as Species of Principal Importance under Section 41 of the NERC Act 2006.
Badgers	The Protection of Badgers Act 1992 was introduced in recognition of the additional threats that badgers face from illegal badger digging and baiting. Under the Act, it is an offence to: • Wilfully kill, injure or take a badger, or to attempt to do so; • Cruelly ill-treat a badger; or • Intentionally or recklessly interfere with a badger sett by (a) damaging a sett or any part of one; (b) destroying a sett; (c) obstructing access to or

	any entrance of a sett; (d) causing a dog to enter a sett; or (e) disturbing a badger when it is occupying a sett.
Breeding birds	The Wildlife & Countryside Act 1981 (as amended) protects all birds, their nests and eggs – it is an offence to intentionally kill, injure or take any wild bird or its eggs, and/or to take, damage or destroy the nest (whilst being built or in use). There is additional protection for rarer species – making it an offence to disturb any wild bird listed on Schedule 1 (such as hobby) while it is nest building, or at a nest containing eggs or young, or to disturb the dependent young of such a bird. Some species are also listed as species of a Species of Principal Importance under Section 41 of the NERC Act 2006, including skylark, common cuckoo, house sparrow, tree sparrow and song thrush.
Hedgehogs	Hedgehogs are listed on schedule 6 of the Wildlife and Countryside Act (1981) which makes it illegal to kill or capture wild hedgehogs. They are also listed under the Wild Mammals Protection Act (1996), which prohibits cruel treatment of hedgehogs Hedgehogs are a species of 'principal importance' under the NERC Act, the act confers 'a duty of responsibility' on local authorities with regard to the species.
Water voles	The Wildlife and Countryside Act 1981 (as amended). This makes it illegal to intentionally damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection; it is also an offence to intentionally disturb water voles while they are using these places.

Kent Biodiversity Strategy

The Kent Biodiversity Strategy was approved by the Kent Nature Partnership in February 2020. It aims to deliver, over a 25 year period, the maintenance, restoration and creation of habitats that are thriving with wildlife and plants and ensure that the county's terrestrial, freshwater, intertidal and marine environments regain and retain good health.

The Strategy looks to protect and recover threatened species and enhance the wildlife habitats that Kent is particularly important for. It also aims to provide a natural environment that inspires citizen engagement and is well used and appreciated, so that the mental and physical health benefits of such a connection can be realised by the people of Kent.

The Strategy has identified 17 priority habitats and 13 priority species that Kent can play a significant part in the restoration of. It has also identified a handful of species that can act as indicators of the health of our ecosystems. In addition, the Strategy looks to further work addressing overarching considerations affecting biodiversity recovery, including wilding, climate change, natural solutions, soil health and invasive species.

Further information can be found here:
http://kentnature.org.uk/uploads/files/Nat-Env/Kent%20Biodiversity%20Strategy%202020.pdf

Red Data Books

British Red Data Books (RDB) are an additional method for classifying the rarity of species, and are often seen as a natural progression from Biodiversity Action Plans.

RDB species have no automatic legal protection (unless they are protected under any of the legislation previously mentioned). Instead they provide a means of assessing rarity and highlight areas where resources may be targeted. Various categories of RDB species are recorded, based on the IUCN criteria and the UK national criteria based on presence within certain numbers of 10x10km grid-squares (see http://www.jncc.gov.uk/page-3425). As with Biodiversity Action Plans, where possible, steps should be taken to conserve RDB species which are to be affected by development.

Appendix B – Plates

B1a

B1b

B1c

B2 garage

B3a

B3b

B4b

B4c

B5 and Leylandii

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IMG_20240328_112853

IMG_20240328_112905

Appendix C – Species lice

Species list - Plants on bare ground (parcel 2)

Species	Common name
Acer pseudoplatanus	Sycamore (saplings)
Achillea millefolium	Yarrow
Cardamine flexuosa	Wavy Bitter-cress
Carex pendula	Pendulous Sedge
Galium aparine	Cleavers
Geranium robertianum	Herb-Robert
Helminthotheca echioides	Bristly Oxtongue
Holcus lanatus	Yorkshire-fog
Lolium perenne	Perennial Rye-grass
Malva sylvestris	Common Mallow
Parietaria judaica	Pellitory-of-the-Wall
Poa annua	Annual meadow-grass
Poa infirma	Easly meadow-grass
Reseda luteola	Weld
Rubus fruticosus agg.	Bramble
Rumex obtusifolius	Broad-leaved Dock
Rumex patientia x crispus x obtusifolius	Hybrid dock
Urtica dioica	Common Nettle