Russettings & Lytlewood, Riding Lane, Hildenborough, Kent

Preliminary Ecological Appraisal

22nd June 2023 / Ref No 2023/03/16

Client: The Estate of Pamela Olley

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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 Russettings & Lytlewood, Riding Lane, Hildenborough TN11 9LR Kent, in support of a planning application to demolish 2 existing, detached bungalows and erect 3 new houses.

1.2 Survey Location/Area

The site is located at approximately TQ795749. 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.

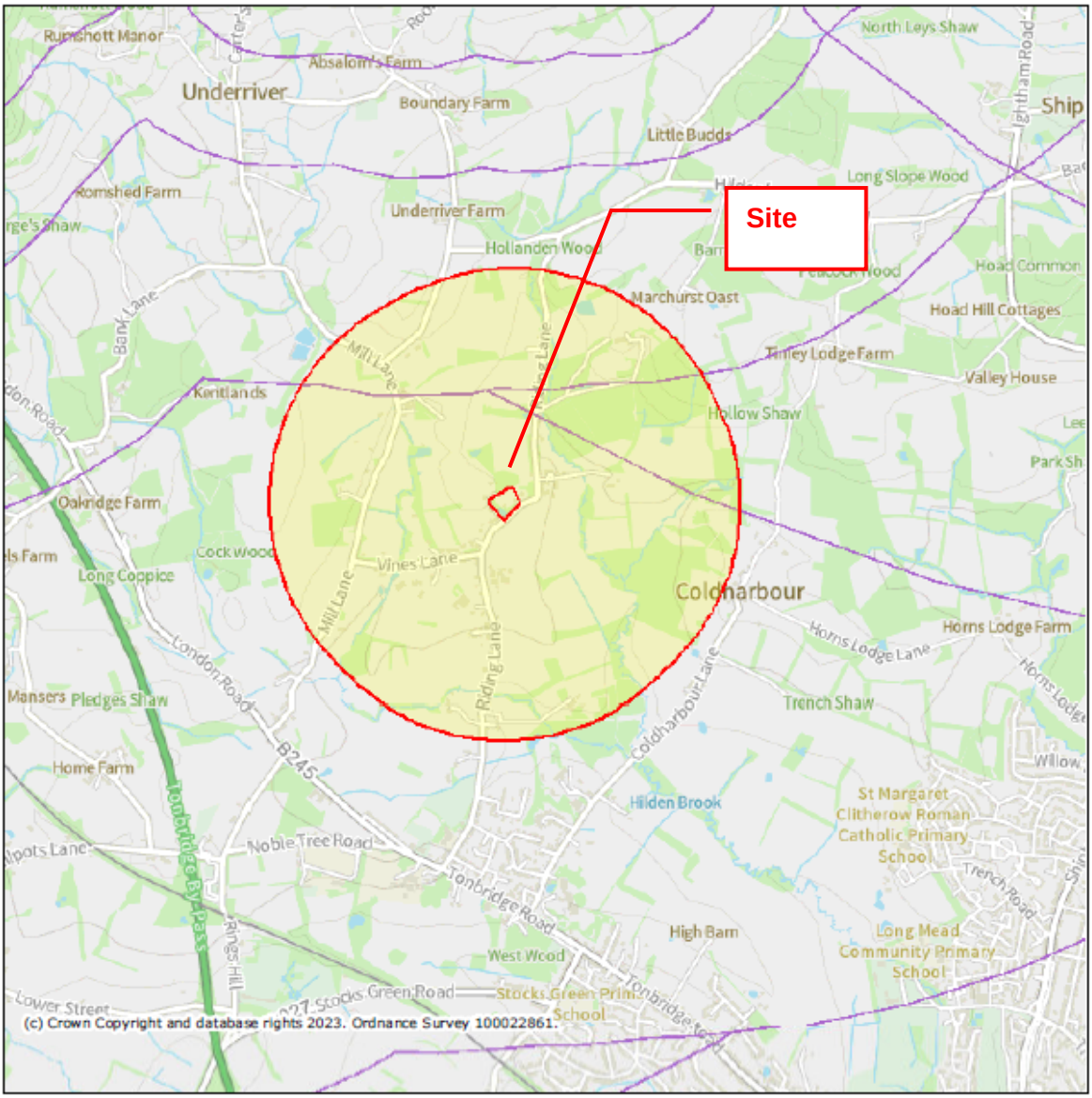
1.4 Limitations

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 = 550700
ymin = 147300
xmax = 563400
ymax = 153100

Map produced by MAGIC on 1 June, 2023.
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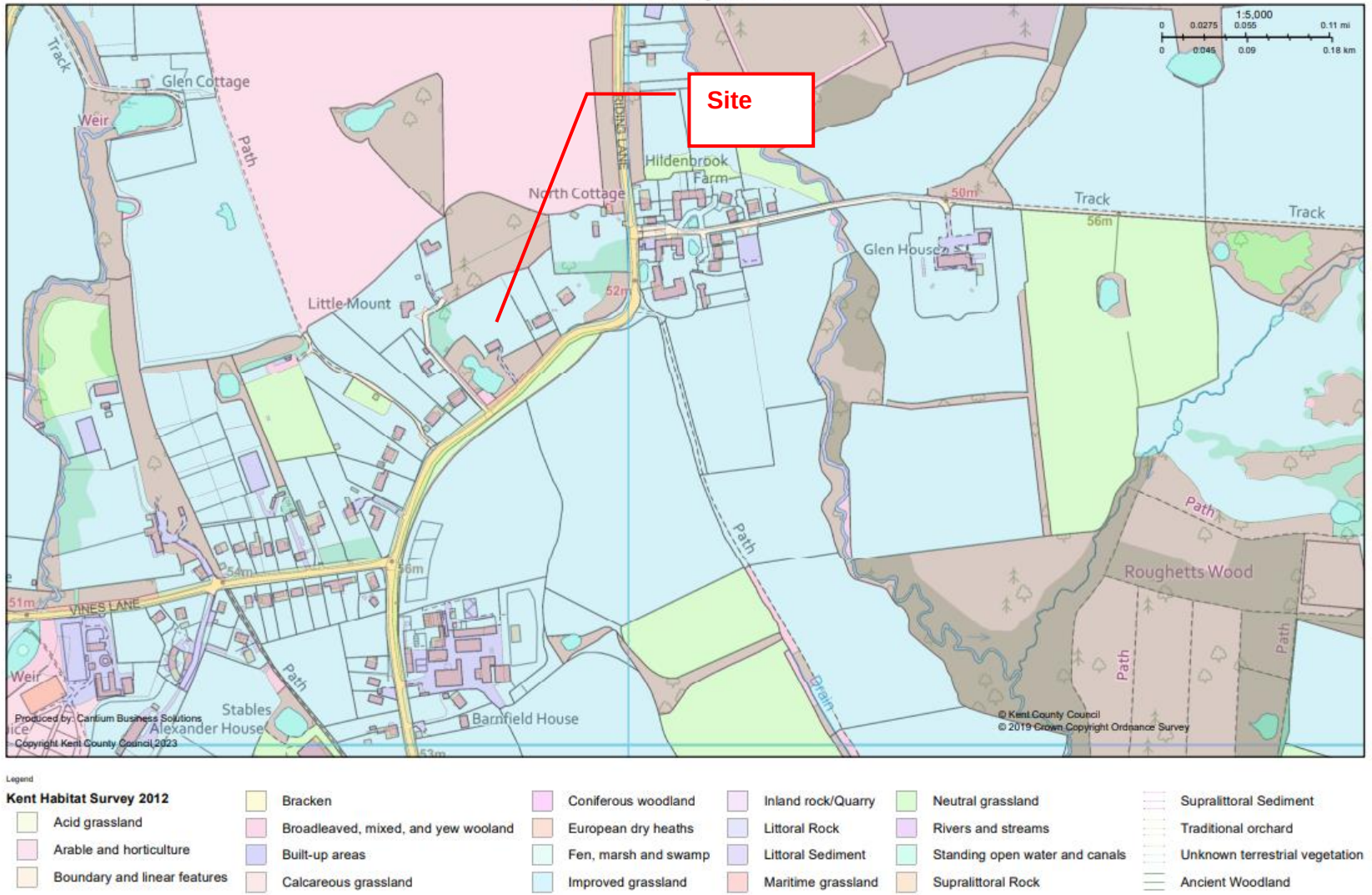
K-LIS - Figure 2

June 1, 2023

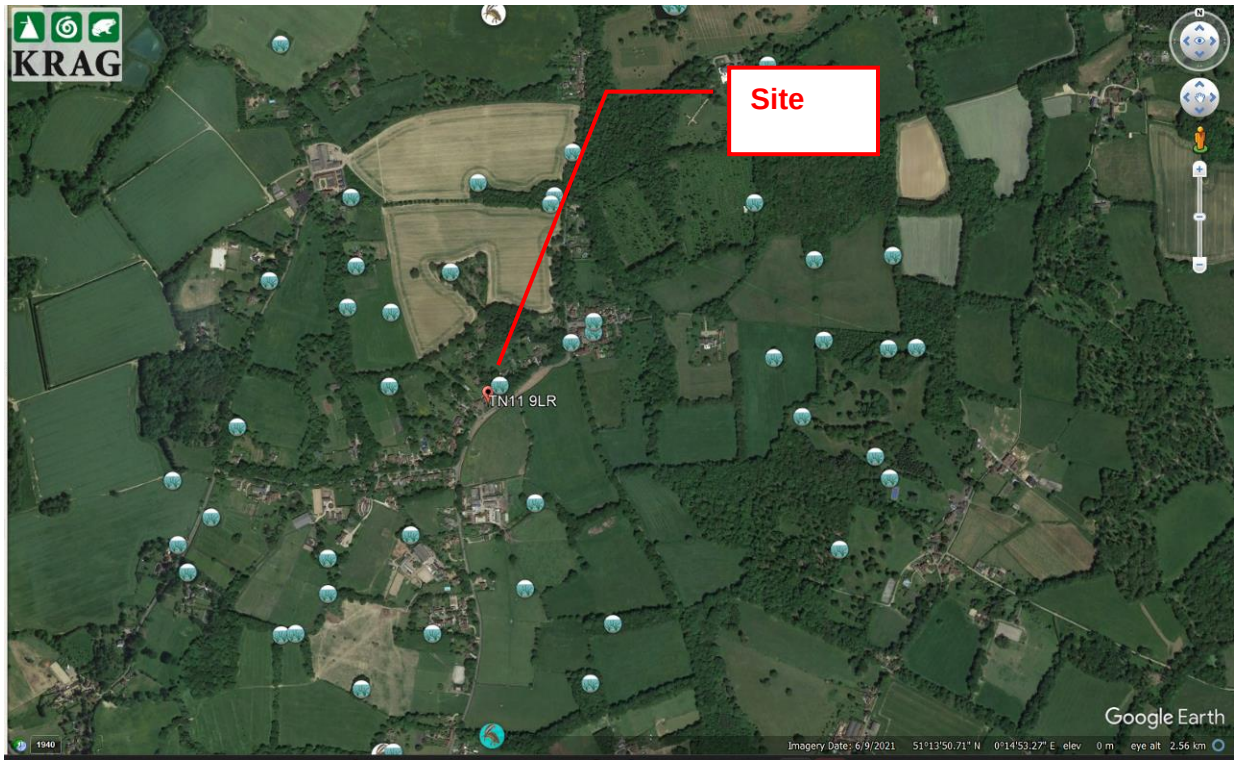


Legend

Kent Habitat Survey 2012

- Acid grassland
- Arable and horticulture
- Boundary and linear features
- Bracken
- Broadleaved, mixed, and yew wooland
- Built-up areas
- Calcareous grassland
- Coniferous woodland
- European dry heaths
- Fen, marsh and swamp
- Improved grassland
- Inland rock/Quarry
- Littoral Rock
- Littoral Sediment
- Maritime grassland
- Neutral grassland
- Rivers and streams
- Standing open water and canals
- Supralittoral Rock
- Supralittoral Sediment
- Traditional orchard
- Unknown terrestrial vegetation
- Ancient Woodland

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 24th April 2023 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 Phase 1 Habitat Survey (JNCC 2010), i.e. within the survey area every parcel of land is classified, recorded and mapped in accordance with a list of ninety specified habitat types using standard colour codes to allow rapid visual assessment of the extent and distribution of different habitat types.

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[3], high powered torch (Cluson CB1 Clubman Standard High Power, 500,000 candle power), night vision scope and binoculars where needed.

All trees were also checked for suitability for roosting bats.

Bat roosting potential of all 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 (2016).

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

Suitability	Criteria
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these 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 a larger number of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only - the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree 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, protections, conditions and surrounding habitats.

2.3 Great crested newt survey

Submerged vegetation was searched for the presence of great crested newt eggs in Pond P1 (the eggs are usually wrapped in the leaves of aquatic plants, such as water mint and water forget-me-not).

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 pasture and arable land with hedgerows, woods and some dwellings.

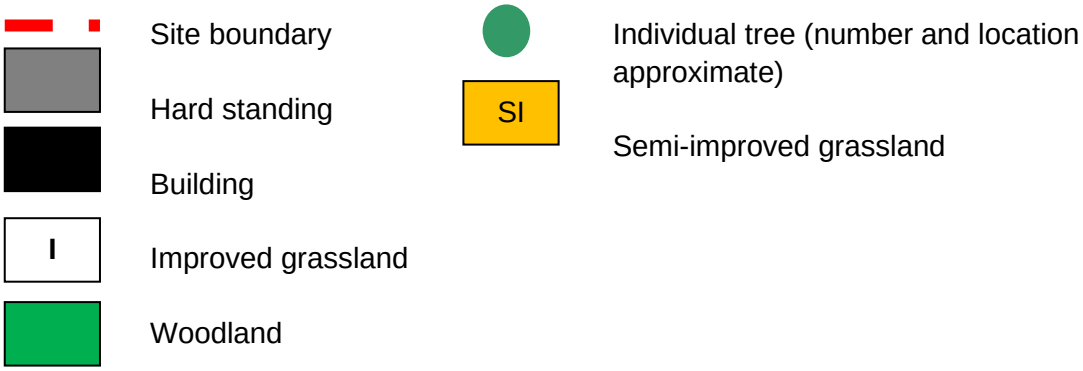
The Integrated Habitat System (IHS) classification of the Kent Habitat Survey 2012 describes the site as:

- *Built-up areas,*
- *Improved grassland,*
- *Standing open water and canals,*
- *Broadleaved, mixed, and yew woodland.*

Indeed the site consists of two houses and outbuildings, set back from the road by a little copse, with a pond in the south-west corner. The gardens are mainly well-maintained with short-mowed grass and some trees, including fruit trees (cherry and apple) and some ornamental shrubs. Disused vegetable beds, greenhouse, container, polytunnel and chicken run are present in between the two dwellings. A hawthorn hedge lines the road, with some holly and yew. A hedge with mixed yew and ornamental species lines the east boundary. The copse comprises birch, cherry laurel, hawthorn, holly, hornbeam, field maple, oak, yew and some rhododendron, as well as traveller's joy. English bluebells were present, as were dog's mercury and wood anemone ('ancient woodland indicator' species[4]). Cuckoo flower and primrose were present near the pond.

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

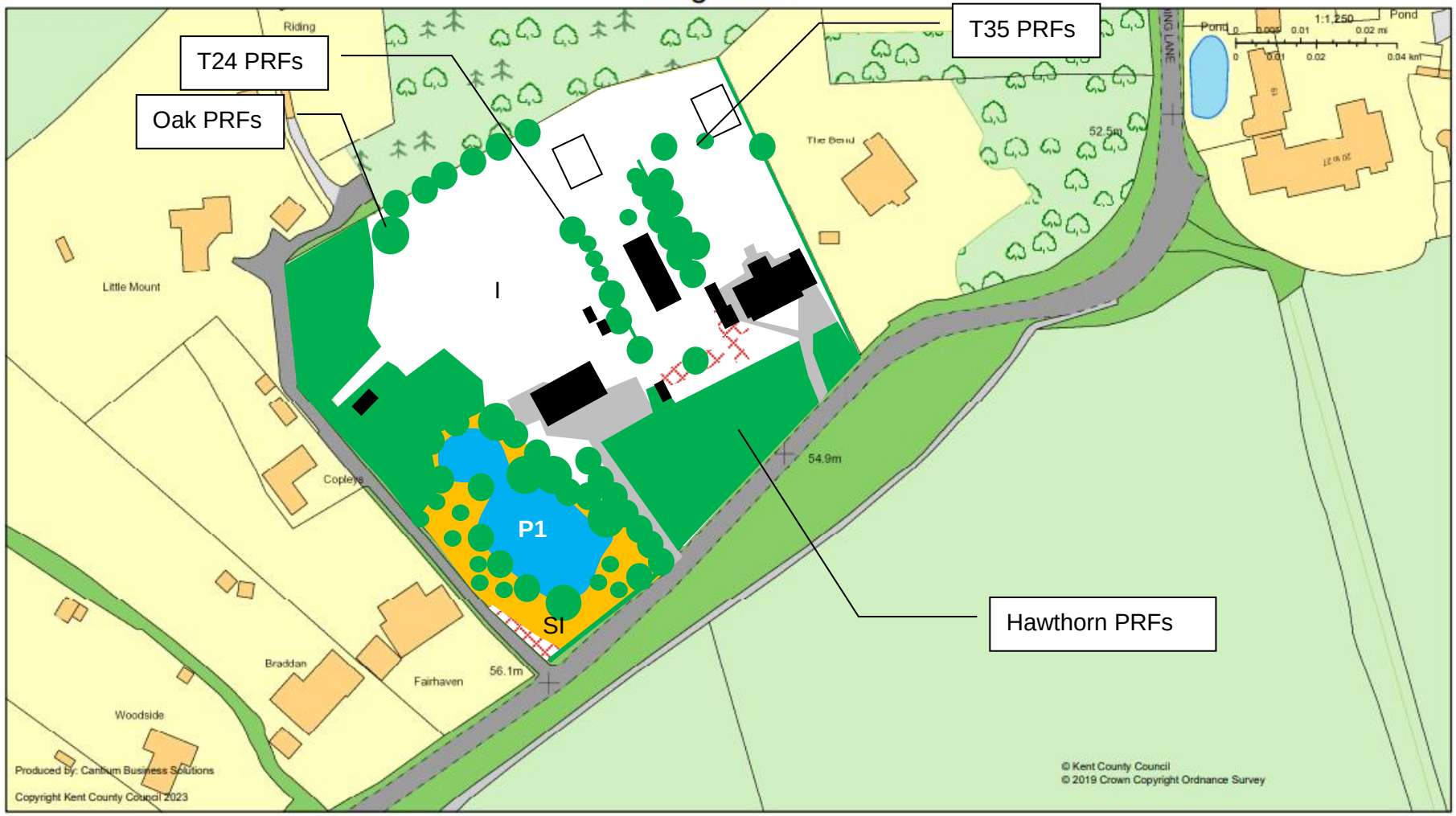
Legend of Phase 1 habitat survey map hereafter:



[4] ancient woodland indicator – see https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/habitats/ancient-woodland/ and https://pad.basingstoke.gov.uk/documents/4753/01/02/76/01027625.PDF

Figure 4

June 1, 2023



3.3 Amphibians

The data search carried out with KRAG (Enquiry No: CES/23/150) revealed that the closest recorded Great Crested Newt *Triturus cristatus* site is a historical record located 0.9 km to the S (record id:2087).

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 '*High*'[5], with 48 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:

[5] 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.'

Great crested newt eggs were found on submerged vegetation in the pond, meaning there is a breeding population on site.

The Great Crested Newt Conservation Handbook, 2001 states that 'very short pasture is easily traversed by newts, and provides night time foraging, but little in the way of shelter' (Great Crested Newt Conservation Handbook, 2001). More optimal habitats include woodland, scrub, ditches, hedgerows, taller/rougher grassland.

Thus, great crested newts are likely be present throughout the site, foraging in the grass at night and taking shelter under tree roots, rocks and vegetation during the day and winter.

Common amphibian species are afforded limited legal protection under the Wildlife & Countryside Act 1981 (as amended). 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 2017 and are therefore a European Protected Species (EPS). Great crested newts and common toads are also listed as species of principal conservation importance (See Appendix A).

For more information, guidance from Natural England is available at https://www.gov.uk/guidance/great-crested-newts-surveys-and-mitigation-for-development-projects

3.4 Reptiles

The KRAG datasearch revealed that the closest recorded reptile is historical record for Grass Snake, located 0.9 km to the S (record id:2088). The likelihood of reptiles to be present *in the overall area* is judged as per table below:

Reptiles

	Likelihood of Presence	
	Score	Dist (km)
Viviparous Lizard:	Possible	2.51
Slow-worm:	Possible	1.92
Sand Lizard:	*unlikely*	*79.11*
Grass Snake:	Likely	1.75
Adder:	Possible	4.16
Smooth Snake:	n/a	n/a

Reptile survey effort in local area is considered to be below average. Results should be interpreted with caution.

Most of the grassland around the dwellings and within the area of proposed ground works consists of grassland, which is species poor, heavily managed and kept at a short sward, without a thatch layer. This habitat is considered unsuitable for common reptile species, due to a lack of cover from predators and foraging opportunities.

However reptiles are likely to be present along the boundary habitats where there is less disturbance and within the disused vegetable beds, if left to grow wild. Besides, grass snakes, a species normally found close to water, could be present in and around the pond.

If present locally, some reptiles could be hibernating under tree and hedge roots and under any vegetated banks.

Common reptiles are afforded limited legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). They are also listed as species of principal conservation importance (See Appendix A). The adder is also a Priority Species under the Kent Biodiversity Strategy[6].

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

3.5 Birds

It is considered that the site has high potential to support breeding birds within the trees, hedges and shrubs.

No signs of barn owl *Tyto alba* were found during the survey.

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).

The turtle dove, swift, nightingale and Sandwich tern are also Priority Species under the Kent Biodiversity Strategy[7].

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 woods and hedges have potential to support the hazel dormouse *Muscardinus avellanarius* due to connection to suitable woodlands (some being ancient woodlands[8]) and known presence of the species near-by. However, due to the small size of the suitable habitat, it would only be a small part of an individual dormouse's range (Natural England/DEFRA indicate that the range of one dormouse home is 1 to 1.5 hectares of woodland or 300 metres of hedge[9]).

The 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 2017 and are therefore a "European Protected Species" EPS) . The dormouse is also listed as species of principal conservation importance (See Appendix A).

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

Map showing known presence of dormice in Kent (from Mammals of Kent, 2015):

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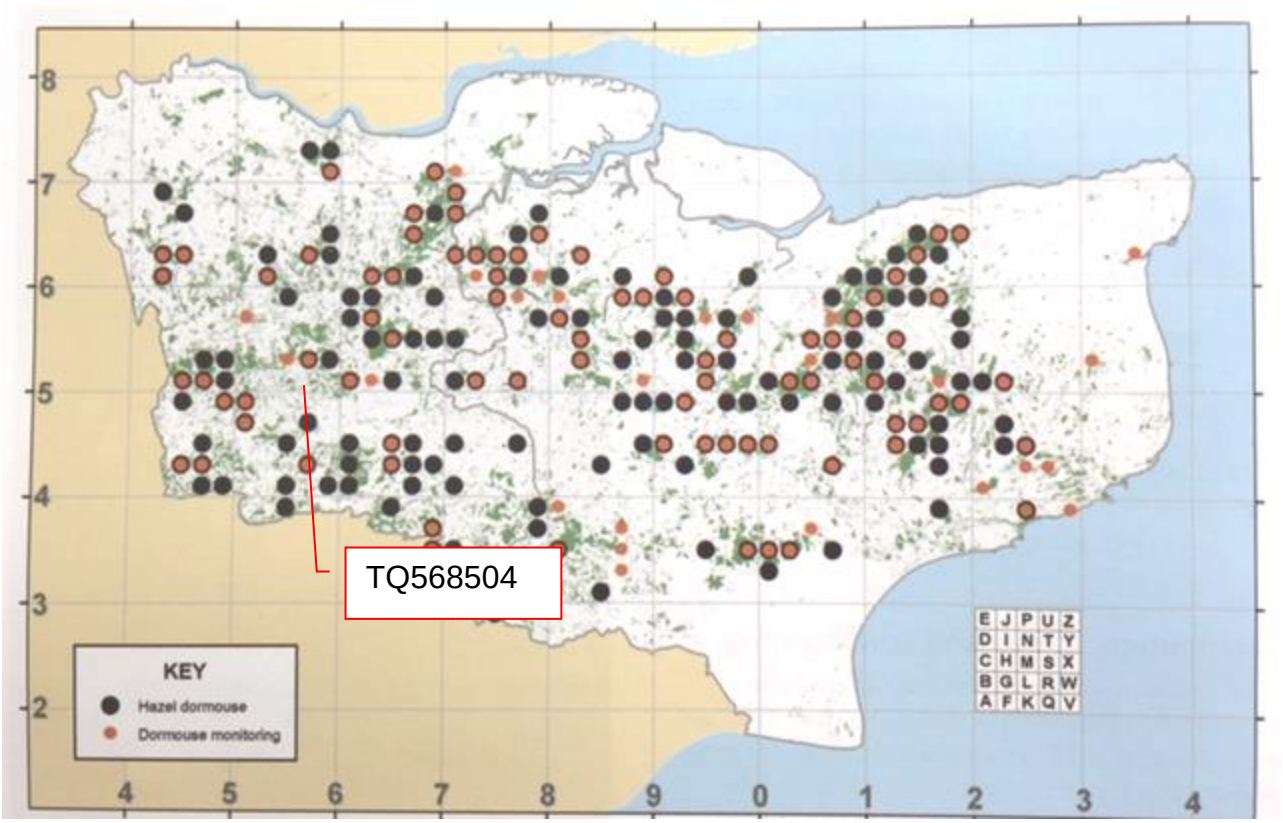
[6] http://kentnature.org.uk/uploads/files/Nat-Env/Kent%20Biodiversity%20Strategy%202020.pdf

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

[8] Land that has had continuous woodland cover since at least 1600 AD

[9] https://www.gov.uk/guidance/hazel-or-common-dormice-surveys-and-mitigation-for-development-projects)



3.7 Badger

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

3.8 Bats

No bats nor signs of bats were found during the internal/external inspection of the buildings.

The two dwellings are of brick construction with concrete tiles with timber sarking and felt below, and are judged as offering moderate suitability for roosting bats, due to a number of gaps providing Potential Roosting Features under some of the tiles (near the dormer windows in particular).

All the outbuildings were judged as offering negligible suitability for roosting bats, being of single skin timber and felt construction with no suitable cavities.

Apple trees T24 and T35 are judged as offering high suitability for roosting bats due to presence of cavities in limbs and trunk.

Ona small hawthorn tree present within the front copse and one oak tree present in the north west corner (not surveyed by the arboricultural survey as outside the area of impact) also offer moderate suitability for roosting bats due to presence of dead wood and a frost crack.

The site 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[10].

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

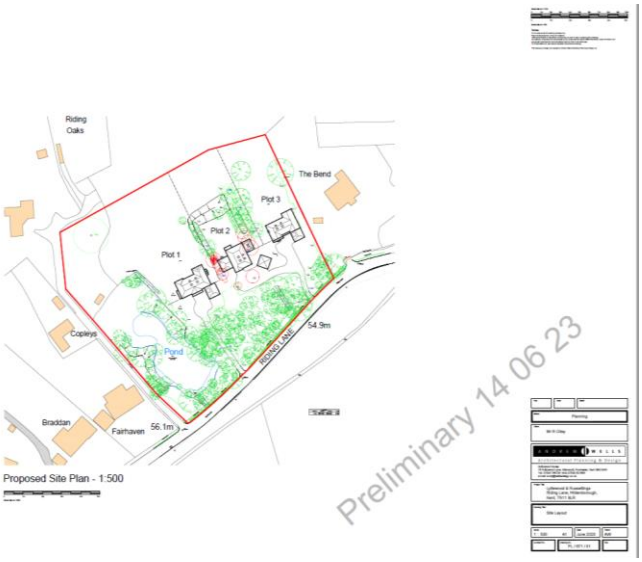
It is considered that the copse has potential to support stag beetles *Lucanus cervus*[11], which are protected against illegal trade under schedule 5 of the Wildlife and Countryside Act 1981 and are a priority Biodiversity Action Plan species in the UK.

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

[11] For more information, see http://ptes.org/campaigns/stag-beetles/stag-beetle-facts/

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[12],:

1. Avoidance – development should be designed to avoid significant harm to valuable wildlife habitats and species[13].
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.

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

13 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.

4.1 Designated Nature Conservation Sites

A site check report was generated for the site using the Impact Risk Zones on the Magic website[14]:

Site Check Report Report generated on Thu Jun 01 2023
You selected the location: Centroid Grid Ref: TQ56855043
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	
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

The pond will remain unimpacted by the works.

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.

4.3 Amphibians

Pond loss is often seen as the most damaging impact on great crested newt populations, but the loss of terrestrial habitat can also have serious consequences. Great crested newts live on land for the majority of their lives, and so loss of terrestrial areas, particularly those close to the breeding pond, can be very damaging. The main effect of habitat loss is reduction in

[14] 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

population size, reduced foraging opportunities, reduced refuge opportunities leading to exposure to predators or harsh conditions, and unsuccessful hibernation.

As the proposed works would result in small scale permanent terrestrial habitat destruction, and the ground works could directly injure or kill animals, the works should only be undertaken once a licence is in place for the project, which can be done in two ways:

A. A Mitigation licence (A14)[15] could be sought from Natural England to permit the proposed works. An application would need to be prepared and submitted to Natural England for determination, once full planning permission has been granted. A decision on the application would be made by Natural England within 30 days of receipt (although it has taken Natural England considerably more time in the last two years). The licence application would need to include full details of the proposed ecological mitigation / compensation and a program for these works.

B. Alternatively, it may be that the site can join a district level licensing scheme (pond surveys are not a requirement). The scheme permits acts, subject to licence conditions, including killing, injury, disturbance, capture and transport of GCN, as well as damage and destruction of their breeding sites and resting places. Impacts of development progressing under the Licence are being fully compensated for by off-site habitat provision that is being paid for by the developer and for this reason the Licence does not specifically require any on-site avoidance or mitigation measures to be undertaken. However, where desirable, reasonable measures can be undertaken to minimise suffering to any GCN which may be present within or immediately adjacent to the development footprint[16].

The applicant would need to let the Local Planning Authority know whether they will pursue the traditional A14 Licencing (if so, great crested newt surveys are needed) or the District Level Licencing (if so, they will need to submit a copy of the Impact Assessment and Conservation Payment Certificate from NE confirming that they have been accepted on to the DLL scheme).

Should Option A be pursued, the mitigation strategy would entail fencing and trapping prior to works to minimise risk to animals and mitigation for lost habitat (long-term management plan, addition of habitat piles/hibernacula).

Natural England requires objective evidence that the proposed activity fits the purpose set out in Regulation 44(2)(e) - “Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment”. If neither public health nor public safety grounds can be met, then Natural England must consider whether other imperative reasons of overriding public interest can be demonstrated. The word “imperative” means that there must be a high degree of “need” for the action concerned. The reason must also be of some significant substance or weight because it has to be judged to be of such public interest that it should override nature conservation interests.

[15] https://www.gov.uk/government/publications/great-crested-newts-apply-for-a-mitigation-licence

[16] see https://www.gov.uk/government/publications/great-crested-newts-district-level-licensing-schemes

The legislation also requires Natural England to be satisfied that there is "no satisfactory alternative" to the activity proposed.

Additional survey work of the two ponds present within 250m would be needed prior to licence application, to work out population estimate.

Full population estimate great crested newt surveys involve undertaking six visits between mid-March and mid-June, with at least three of these visits between mid-April and mid-May. Depending on each individual pond, this may consist of refuge search (looking under log piles and other refuges), egg searching, bottle trapping over-night and torching at night, all activities to be undertaken during suitable weather conditions (i.e. little/no rain, ambient night time air temperatures >5^{o}C).

Should Option B be pursued, the applicant will need to submit a copy of the Impact Assessment and Conservation Payment Certificate from NE confirming that they have been accepted on to the DLL scheme).

4.4 Reptiles

Due to the low likelihood of reptile presence within the areas of ground works and the fact that most of the site will remain unimpacted, the following precautionary mitigation strategy is proposed to minimise any potential impacts: it is recommended to prepare the development site using habitat manipulation as below:

- Any tree/shrub uprooting should be done outside of the hibernation season (taken to be November to March included);
- The works area should be mowed using hand held machinery only[17] (to 15cm height minimum), during sunny conditions, during the reptile active season (April to October), in order to force the animals out of the area;
- A second cut should be given to ground level, 2 days following the first cut, during sunny conditions.

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 building demolition outside of the nesting season (which extends from March – August inclusive[18]) or only after a survey has confirmed the absence of nesting birds[19]. New hedgerow/trees/scrub planted and bird nesting boxes erected as part of the proposed development can replace the habitat lost.

[17] strimmer, brush-cutter

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

[19] 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.

4.6 Hazel Dormouse

Natural England/DEFRA indicate that the range of one dormouse home is 1 to 1.5 hectares of woodland or 300 metres of hedge[20].

As a small new section of access/driveway is needed for Plot 2, a small number of trees will be lost to the scheme.

The loss of such a small section of vegetation is therefore not considered to impact onto the local dormouse population. However a precautionary strategy to tree clearance is needed to minimise any potential impacts:

- Phase 1: clearance of vegetation to stump level from November to February[21] using hand-held tools and in a sensitive manner and under supervision by a licenced ecologist;
- Phase 2: clearance of stumps between May and October (inclusive)[22].
- This is in accord with avoidance of impact onto nesting birds and reptiles.

To mitigate for the loss of potential habitat, it is proposed to plant varied species of trees and hedges: hazel, oak, wayfaring tree, hornbeam, cherry, crab apple, holly, elder, dogwood and honeysuckle. These species were chosen to provide food sources for dormice during all the active season[23].

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.

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[20] https://www.gov.uk/guidance/hazel-or-common-dormice-surveys-and-mitigation-for-development-projects)

[21] i.e. during the hibernation season, when dormice are hibernating at ground level.

[22] The rationale is that dormice hibernate close to the ground in the winter months, so the removal of vegetation above this level should not affect dormice at this time of year. Vegetation removal in the winter months also avoids conflicts with the bird nesting season as the main bird breeding season extends from March to August inclusive.

[23] dormice are sequential feeders which feed on nectar, pollen, seeds, fruit, nuts, invertebrates

Table 7.3 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	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey[a] (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey.[b]	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn.[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 Section 5.2.9). If there is a possibility that quiet calling, late-emerging species are present then a dawn survey may be more appropriate, providing weather conditions are suitable. 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 two weeks apart, preferably more. A dawn survey immediately after a dusk one is considered only one visit.

Table 7.1 Recommended timings 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	Moderate roost suitability	High roost suitability
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]

It is therefore recommended that two night-time surveys of the dwellings are undertaken between May and August. Two surveyors will be necessary to cover all sides of the building with potential access points. The surveys should be carried out at 3 weeks interval as a minimum in order to sample a long enough period of bats' active season[24].

None of the trees with PRFs are due to be lost.

Besides, as lighting can be detrimental to roosting, foraging and commuting bats[25], the recommendations from the Bat Conservation Trust and the Institution of Lighting Professionals, titled 'Guidance Note 8 Bats and Artificial Lighting'[26], 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.

The People's Trust for Endangered Species PTES states:

'The major threat to stag beetles in the UK is the removal of larval habitat, i.e. dead wood. The removal of hedges and trees (both of which will have dead portions underground), as well as stumps, causes the greatest habitat loss. If stag beetles and/or stag beetle larvae are known or thought to be present at a site where an application for planning has been

[24] General guidance for carrying out bat surveys suggests that they only take place in optimum weather conditions in order to maximise the likelihood of recording bats if they use the site being surveyed. It is usually advised to avoid very heavy rain, strong winds, mists and dusk temperatures below 7oC.

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

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

submitted, and are likely to be disturbed or destroyed whilst work is carried out at the site, it is recommended that someone with an understanding of the insects' requirements be present to see that any larvae and/or adults are carefully translocated to a suitable natural or purpose-built habitat close by.'

Should any areas of wood be impacted by the proposed works, it would therefore be recommended that an ecologist be on site when any dead wood, wooden posts, shrubs, stumps, hedges or trees are removed, so that larvae or adults that are disturbed/dug up can be spotted, retrieved and placed out of harms way. It will be necessary to ensure that suitable relocation habitat be present or created prior to such translocation works (such as a large log pyramid and beetle buckets[27]).

4.10 Additional Recommendations: Enhancements

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

The Government announced it would mandate net gains for biodiversity in the Environment Bill in the 2019 Spring Statement. The Environment Bill received Royal Assent on 9 November 2021, meaning it is now an Act of Parliament. Mandatory biodiversity net gain as set out in the Environment Act applies in England only by amending the Town & Country Planning Act (TCPA) and is likely to become law in 2023. Biodiversity net gain requires developers to ensure habitats for wildlife are enhanced and left in a measurably better state than they were pre-development. They must assess the type of habitat and its condition before submitting plans, and then demonstrate how they are improving biodiversity – such as through the creation of green corridors, planting more trees, or forming local nature spaces. Green improvements on site would be encouraged, but in the rare circumstances where they are not possible, developers will need to pay a levy for habitat creation or improvement elsewhere[28].

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[29].
- Provision of integrated 'swift bricks' in new buildings (as these are often occupied by other small cavity-nesting birds[30],[31])[32]. A ratio of at least two per residential dwelling,

[27] Full information available here http://ptes.org/campaigns/stag-beetles/

[28] https://deframedia.blog.gov.uk/2019/03/13/government-to-mandate-biodiversity-net-gain/

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

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

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

[32] 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

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).[33]

- Provision of integrated bat boxes on new buildings[34] or bat boxes on retained mature trees[35].
- Provision of owl boxes in trees[36]
- Tree / shrub/ hedgerow planting (native species to be used only).
- Establish climbing plants on walls and other vertical structures[37].
- Establish wildflower plug/bulb planting in private gardens [38].
- 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[39].
- Establish Fruit Espaliers[40].
- Restore or create a meadow[41]

Priority should be given to habitats and species present on the Kent Biodiversity Strategy[42].

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interior, leading to condensation and possibly mould. They recommend additional insulation to prevent this; advice from an architect is advisable.

[33] Please note that there may be a need to provide insulation around the integrated box (thickness of 5 cm of insulation) in order to increase the thermal resistance of this wall and thus avoid the risk of condensation. The project architect should be consulted about such matters.

[34] Please note that there may be a need to provide insulation around the integrated box (thickness of 5 cm of insulation) in order to increase the thermal resistance of this wall and thus avoid the risk of condensation. The project architect should be consulted about such matters.

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

[36] More information can be found here http://www.barnowltrust.org.uk/infopage.html?Id=56

[37] 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

[38] 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*

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

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

[41] http://www.magnificentmeadows.org.uk/advice-guidance?fbclid=IwAR31OSJFE9gEiFafYU4SX18DNXfokW15XJ4ccrb47CgvIQmR3OIA03Npges&fs=e&s=cl

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

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- Bat Conservation Trust (2012). *Bat Surveys - Good Practice Guidelines – 2nd Edition.* Bat Conservation Trust, London.
- Ben Larkham Associates Ltd (2023). Arboricultural survey and constraints - Lytlewood and Russettings, Riding Lane Hildenborough Kent . Date of Report: 15th May 2023, Reference no.: tr-1720-23
- 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/

With kind permission from Google Earth Brand

[43] http://www.jncc.gov.uk/pdf/pub90_HandbookforPhase1HabitatSurveyA5.pdf

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.

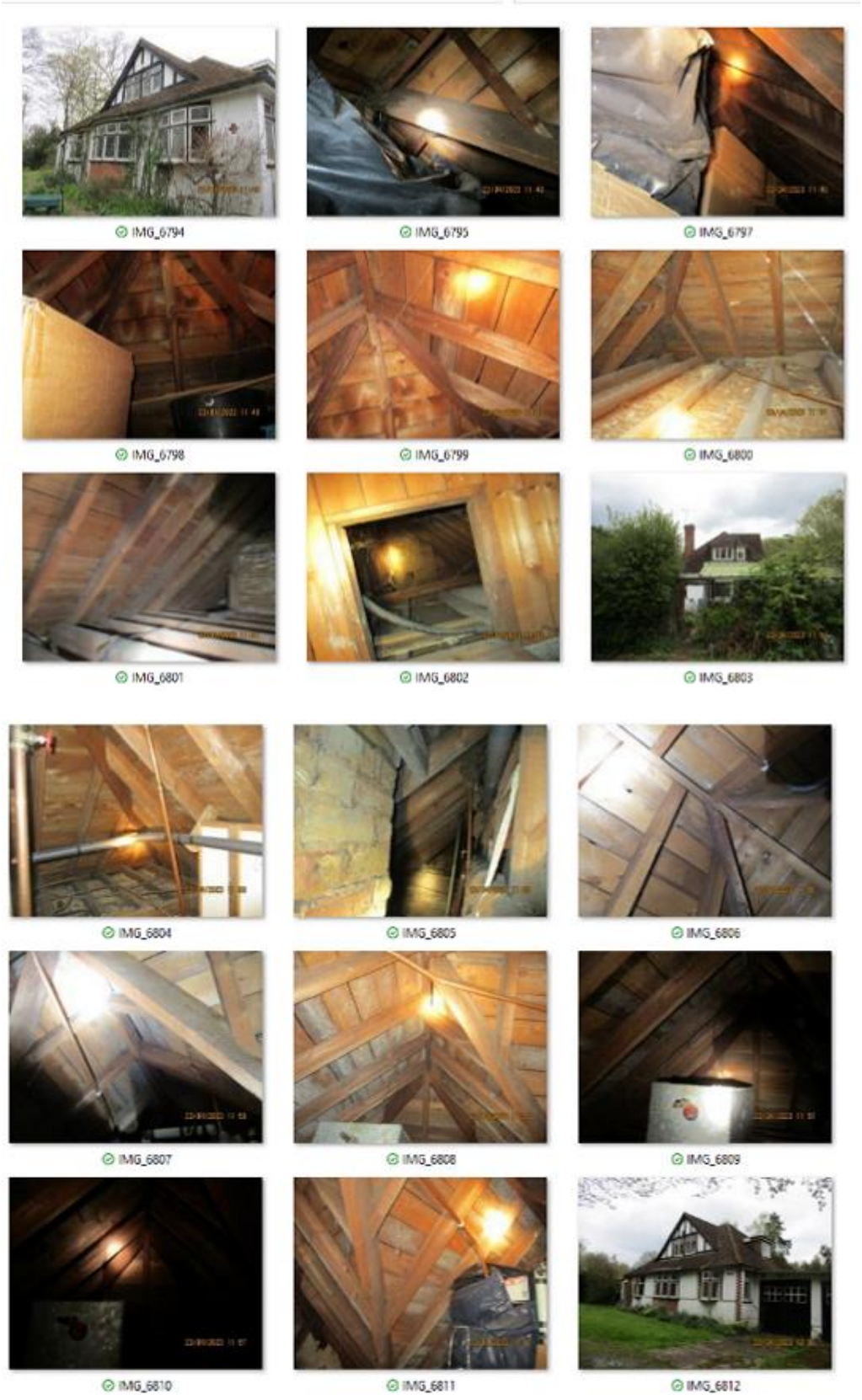
Further information can be found here:
http://kentnature.org.uk/uploads/files/Nat-Env/Kent%20Biodiversity%20Strategy%202020.pdf

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



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