

# Darenth Fishing Complex, Darenth Hill, Darenth, Kent

## Preliminary Ecological Appraisal

8<sup>th</sup> December 2023 / Ref No 2023/10/06

Client: Mr P Davis



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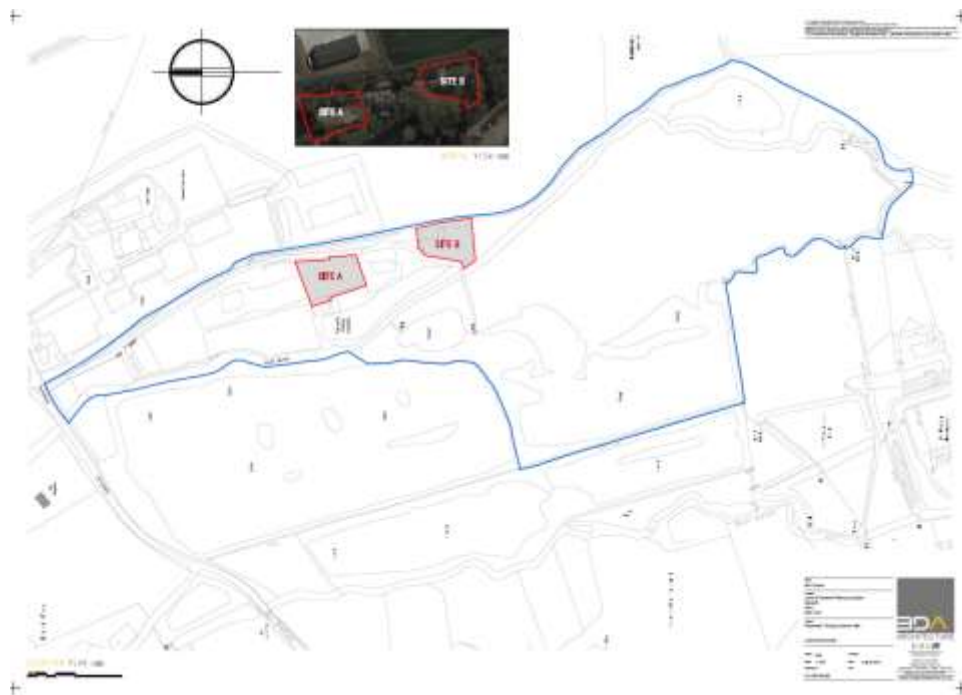
# Contents

- 1** Introduction .....2
- 1.1** Background to the Scheme ..... 2
- 1.2** Survey Location/Area..... 2
- 1.3** Survey Objectives ..... 2
- 1.4** Limitations ..... 3
- 2** Methodology .....7
- 2.1** Desk Study ..... 7
- 2.2** Scoping Survey..... 7
- 3** Baseline Ecological Conditions .....9
- 3.1** Designated Nature Conservation Sites ..... 9
- 3.2** Habitats ..... 9
- 3.3** Amphibians .....12
- 3.4** Reptiles.....13
- 3.5** Birds .....13
- 3.6** Hazel Dormouse .....14
- 3.7** Badger .....14
- 3.8** Water voles.....14
- 3.9** Bats .....14
- 3.10** Other Species .....15
- 4** Ecological constraints and opportunities, recommendations for mitigation,  
compensation and further survey ..... 16
- 4.1** Designated Nature Conservation Sites .....16
- 4.2** Habitats .....18
- 4.3** Amphibians .....18
- 4.4** Reptiles.....18
- 4.5** Birds .....18
- 4.6** Hazel Dormouse .....19
- 4.7** Badger .....19
- 4.8** Water voles.....19
- 4.9** Bats .....19
- 4.10** Other Species .....19
- 4.11** Additional Recommendations: Enhancements .....19
- 5** References and Bibliography .....21

# 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 Darenth Fishing Complex, Darenth Hill, Darenth Kent DA2 7QY, in support of a planning application for change of use of two parcels of land to provide touring caravan sites for 29 No. Pitches and provision of associated facilities including toilet/shower blocks and refuse stores.



## 1.2 Survey Location/Area

The site is located at approximately TQ 560 711. 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.

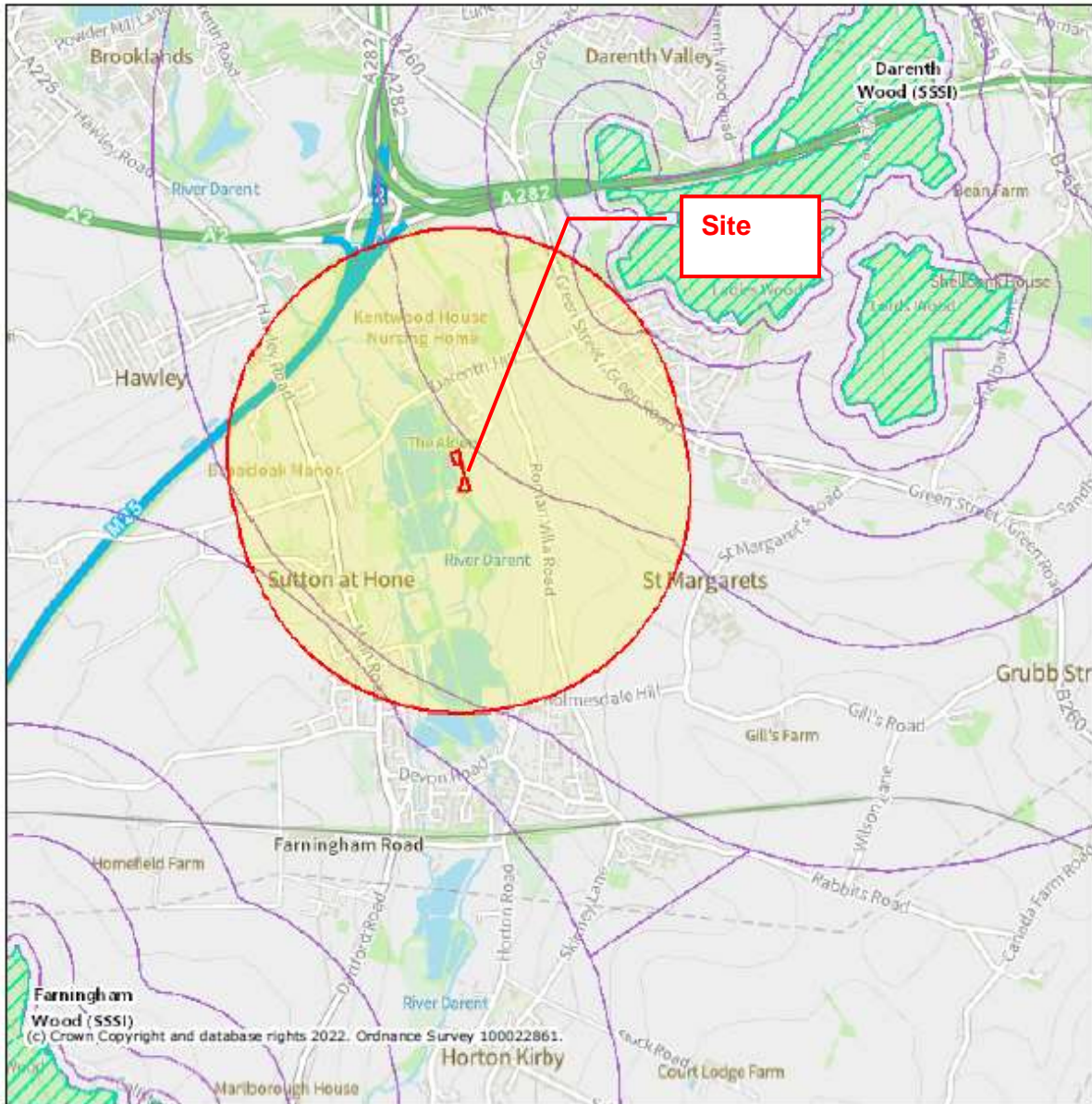
A summary of wildlife legislation and policy has been included in Appendix A.

#### **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.

Figure 1



**Legend**

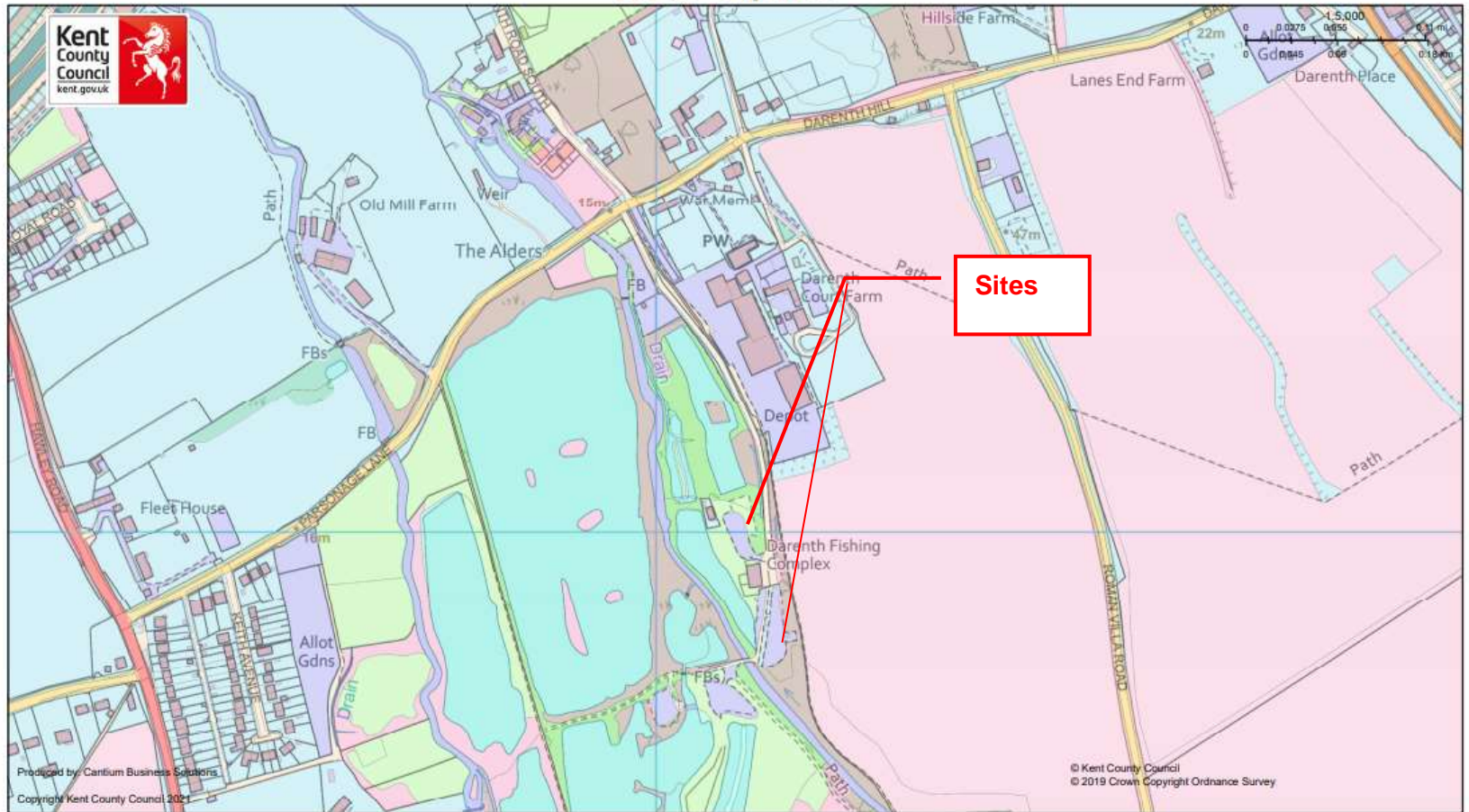
- Ramsar Sites (England)
- Sites of Special Scientific Interest (England)
- SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Special Areas of Conservation (England)
- Special Protection Areas (England)

0 0.75 1.5  
km

Projection = OSGB36  
 xmin = 550200  
 ymin = 167500  
 xmax = 562900  
 ymax = 173600

Map produced by MAGiC on 8 December, 2023.  
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K-LIS- Figure 2



Legend

Kent Habitat Survey 2012									
	Bracken		Coniferous woodland		Inland rock/Quarry		Neutral grassland		Supralittoral Sediment
	Acid grassland		Broadleaved, mixed, and yew woodland		European dry heaths		Littoral Rock		Rivers and streams
	Arable and horticulture		Built-up areas		Fen, marsh and swamp		Littoral Sediment		Standing open water and canals
	Boundary and linear features		Calcareous grassland		Improved grassland		Maritime grassland		Supralittoral Rock
									Traditional orchard
									Unknown terrestrial vegetation

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<sup>1,2</sup>.

### 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 5<sup>th</sup> December 2023 by Katia Bresso CEnv MCIEEM, a qualified professional consultant ecologist with over 20 years of experience<sup>3</sup>, licensed bat surveyor (Class Licence CL19, Level 3, Registration Number: 2016-27133-CLS-CLS<sup>4</sup>) 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)'.

All trees were also checked for suitability for roosting bats.

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<sup>1</sup> Please note that absence of records should not be taken as confirmation that a species is absent from the search area.

<sup>2</sup> 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.

<sup>3</sup> Katia Bresso is a Suitably Qualified Ecologist with regards to Code for Sustainable Homes assessment and BREEAM

<sup>4</sup> This licence allows the holder to disturb or capture bats using: torches, endoscopes, hand nets, static hand-held nets, mist nets for development surveys (can be used for a maximum of 3 days at any one site), acoustic lures and to disturb but not handle hibernating bats.

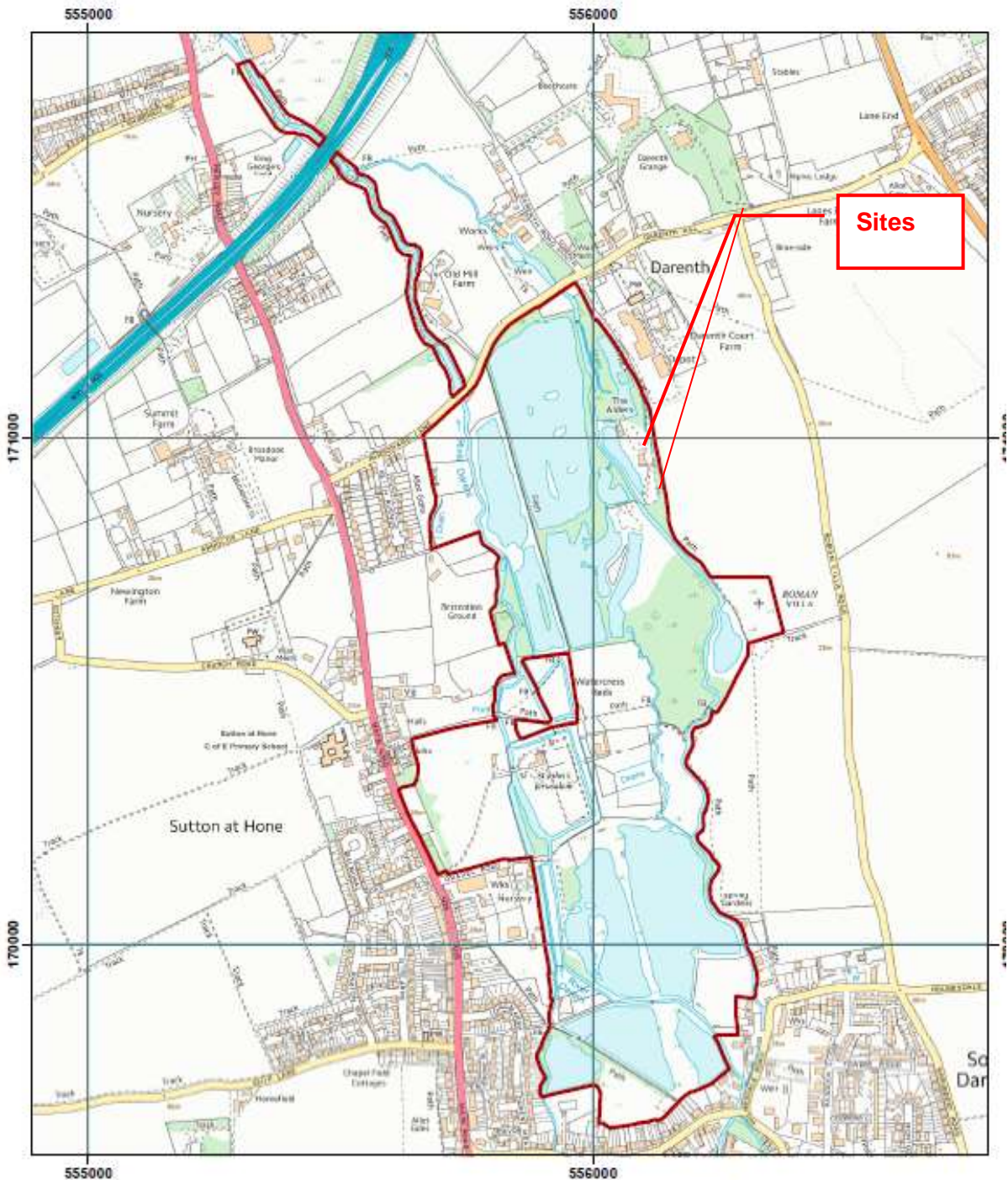


# KENT LOCAL WILDLIFE SITE

Site: Sutton at Hone Lakes

Site Ref: DA03

Grid Ref: TQ559705



## Kent Wildlife Trust 2019

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0 237.5 475 Meters



Approved: 2019 May

## 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.

But the two sites are present within a 68.78 ha local wildlife site LWS called 'Sutton at Hone Lakes'. The reason for designation is that this section of the River Darent and adjacent lakes are recognised for the matrix of habitats formed, including a moat, and areas of neutral grassland and scrub which add to the site's diversity. The site is used by a variety of dragonfly, bird and bat species.

### 3.2 Habitats

The site is part of Darent Fishing Complex, which encompasses ten artificial fishing lakes.

At the time of site visit, both sites consisted mainly of large areas of Type 1 sub-base / concrete apron with low vegetation growing over the sub-base in places and areas of longer vegetation along the boundaries.

Four containers were present on the northern site and two alder trees are present at the access point and one hazel is present along the east boundary, where a small shallow ditch starts northwards from the hazel tree.

Both sites showed signs of recent ground disturbance. Historical aerial photos show that both sites have been used for car parking since at least 2007, as shown below, but some tree cover seems to have been present to the west of both sites.



The ground flora was dominated by a daisy species (too far gone for identification, expected to be *Senecio* family), weld, hemlock, but also great mullein, marsh thistle, creeping



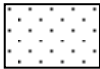



cinquefoil, creeping buttercup, lesser burdock, teasel, common mallow, ragwort, creeping thistle<sup>5</sup>.

The northern site had a shallow grassy earth bund to the west, with short grass next to the lake.

Two alder trees line the river along the west boundary of the southern site. The ground had lots of rubble sticking out throughout, even in the more densely vegetated areas. Rabbit burrows are present in the earth bund along the east boundary (cultivated arable land is present to the east).

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

Legend of Phase 1 habitat survey map hereafter:

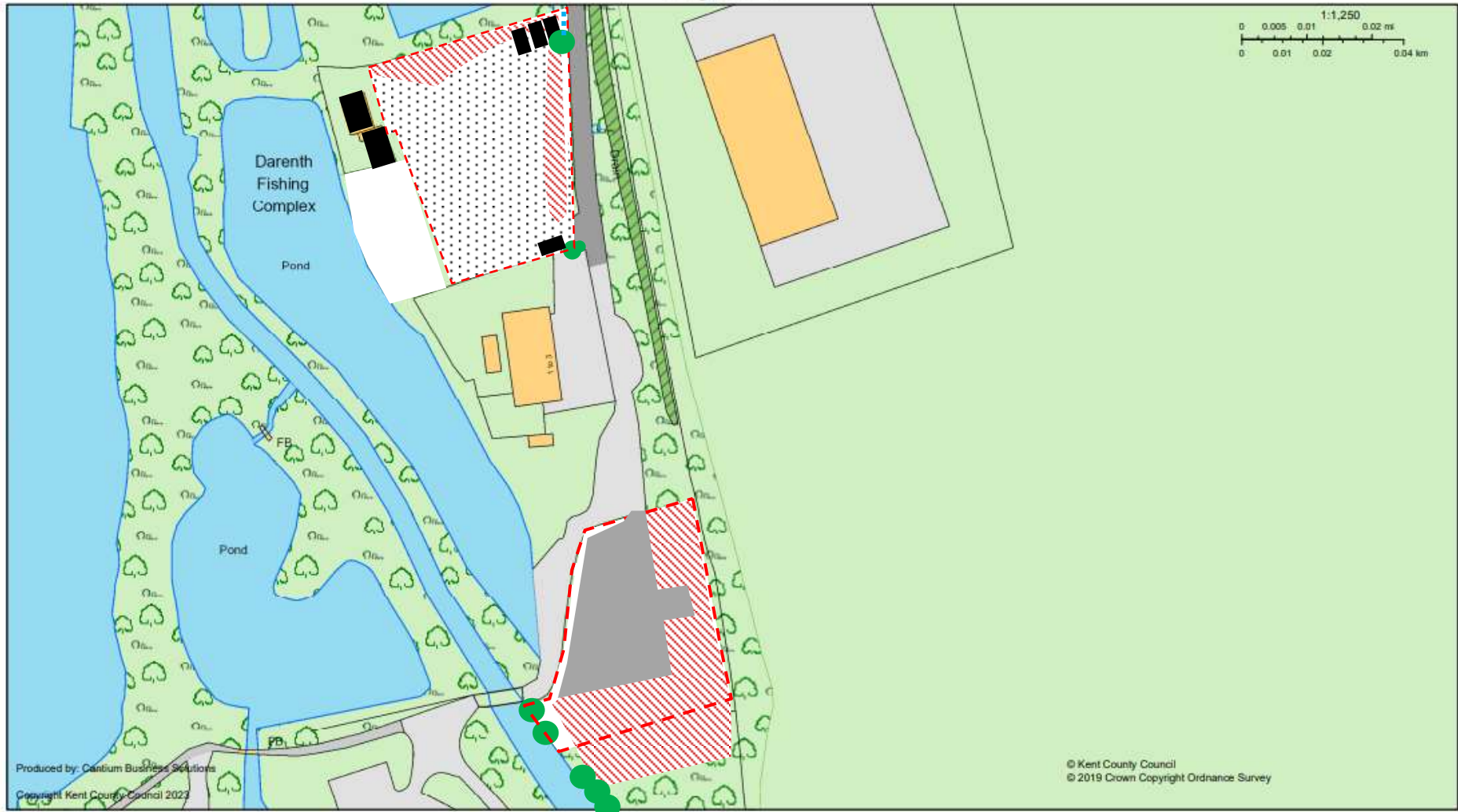
-  Site boundary
-  Hard standing
-  Bare ground with some low vegetation in places
-  Building/containers
-  Ephemeral
-  Individual tree (number and location approximate)

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<sup>5</sup> Please note that the site visit was undertaken at a time of year when most ground flora is not visible.

Figure 4

December 8, 2023





### 3.3 Amphibians

The data search carried out with Krag (Enquiry No: CES/21/007) revealed that the closest recorded Great Crested Newt *Triturus cristatus* site is a historical record located at Beacon Wood Country Park, 2.86 km to the E (record id: 5557).

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'<sup>6</sup>, with only nine 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:

*'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.'*

The fishing lakes present near-by are large (over 1,000sqm), heavily stocked with fish, with some wildfowl present and thus the likelihood of great crested newts breeding in any of these

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<sup>6</sup> Likelihood of Presence Scores are described using the following categories: Unlikely<Possible<Likely<High  
Preliminary Ecological Appraisal  
Darent Fishing Complex, Darent Hill, Darent  
KB Ecology Ltd- December 2023

fishing lakes is considered negligible. Thus, it is judged unlikely that great crested newts would be present on site.

### 3.4 Reptiles

The KRAG datasearch revealed that the closest recorded reptile is Viviparous Lizard, located at Old Mabledon Hospital, approximately 0.64 km to the NE (record id: 12843). The likelihood of reptiles to be present *in the overall area* is judged as per table below:

	Likelihood of Presence	
	Score	Dist.(km)
Viviparous Lizard:	Likely	0.64
Slow-worm:	Possible	1.04
Sand Lizard:	unlikely	29.63
Grass Snake:	Possible	1.31
Adder:	HIGH	1.08
Smooth Snake:	n/a	n/a

Reptile survey effort in local area is considered to be relatively high.

The sites consist of Type 1 sub-base with some low vegetation growing in places and suffer from frequent disturbance. Thus they don't offer suitable habitat for burrowing species such as slow worms but highly mobile species such as viviparous lizards could be present occasionally during the active season (the site is likely too wet to be used during hibernation). Grass snakes could also be present at times.

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<sup>7</sup>.

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 potential to support breeding birds within the trees.

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>

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

### 3.6 Hazel Dormouse

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

### 3.7 Badger

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

### 3.8 Water voles

No burrows or signs of water voles were found along the river or within the sites. The species is not mentioned in the LWS citation so it is likely absent.

Water voles are afforded legal protection under section 9 of the Wildlife & Countryside Act 1981 (as amended) (See Appendix A). Otters are 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 water vole is also a Priority Species under the Kent Biodiversity Strategy<sup>8</sup>.

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

### 3.9 Bats

None of the trees present on site offered potential 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.

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>

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<sup>8</sup> <http://kentnature.org.uk/uploads/files/Nat-Env/Kent%20Biodiversity%20Strategy%202020.pdf>

### 3.10 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<sup>9</sup>.

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

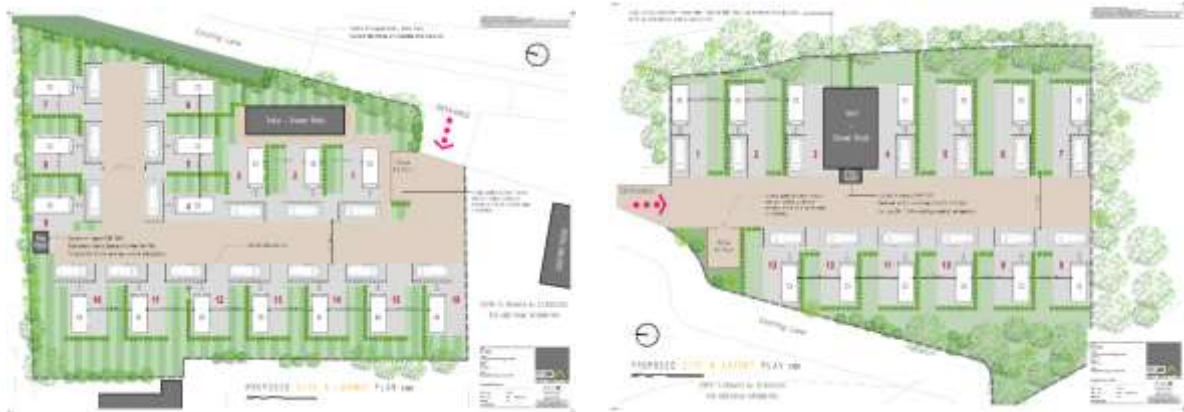
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<sup>9</sup> <http://kentnature.org.uk/uploads/files/Nat-Env/Kent%20Biodiversity%20Strategy%202020.pdf>



## 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.



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<sup>10</sup>:

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<sup>10</sup> 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>

Site Check Report generated on Fri Dec 08 2023  
You selected the location: Centroid Grid Ref. TQ56107097  
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 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

Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m<sup>2</sup>, slurry lagoons & digester stores > 200m<sup>2</sup>, manure stores > 250t).

Combustion

General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

Waste

Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.

Composting

Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.

Discharges

Any discharge of water or liquid waste of more than 20m<sup>3</sup>/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.

Although not protected by law, Local Wildlife Sites are recognised across the UK in national planning policies, which set out requirements for protection through local policy and plans. They are defined in local and structure plans under the Town and Country Planning system and are a material consideration when planning applications are being determined.

Indeed, they fill an important gap not covered by other designations and are vital in building a Living Landscape. The importance of international, national and locally designated sites is recognised in government policy. The 2012 National Planning Policy Framework says protection should be “commensurate with their status and give[s] appropriate weight to their importance and the contribution that they make to wider ecological networks.”

The “Making Space for Nature” report to Defra (Lawton et al September 2010) stated that: ‘Local Wildlife Sites are important to future ecological networks, because they not only provide wildlife refuges in their own right but can act as stepping stones and corridors to link and protect nationally and internationally designated sites’.

The citation for the LWS states that the rationale for site boundary is as below:

*The site boundary surrounds the habitats of interest, incorporating adjoining areas of grassland and a section of the River Darent. The boundaries for the river include the bank as far up as the first major break in the slopes, or, where there is semi-natural vegetation at the top of the bank, a strip of this vegetation at least 5m wide.*

It also says it was first notified in 1985 and revised in February 1999 and July/Aug 2018.

Historical aerial photos clearly show that a large part of the sites has been built-up for some time. It seems some tree cover has recently been lost. The proposal entails the planting of hedgerows between caravan bays, as well as areas of lawn. It is suggested that the new

hedges are planted with native-species only and that the lawns are seeded with Flowering Lawn Mixture EL1<sup>11</sup> (or similar).

It is also recommended that a Construction Management Plan be implemented to minimise any dust, noise and light during construction.

## **4.2 Habitats**

It is recommended that a 10 metre wide buffer zone alongside the river remains free from built development including lighting, domestic gardens and formal landscaping. This would mean a change to the southern site.

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**

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

## **4.4 Reptiles**

Due to the low likelihood of reptile presence on site, 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:

- The works area should be mowed using hand held machinery only<sup>12</sup> (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 outside of the nesting season (which extends from March – August inclusive<sup>13</sup>) or only after a survey has

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<sup>11</sup> <https://wildseed.co.uk/product/mixtures/complete-mixtures/special-habitat-mixtures/flowering-lawn-mixture/>

<sup>12</sup> strimmer, brush-cutter

<sup>13</sup> It should be noted however that certain species are known to breed throughout the year (e.g. collard dove) and remain protected.

confirmed the absence of nesting birds<sup>14</sup>. 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.

#### **4.8 Water voles**

Although it is judged unlikely that water voles be present, it is recommended to avoid any works within 5m from the banks of the stream<sup>15</sup>. If this is not possible, a water vole survey should be carried out (between mid-April to mid-September) to ensure they are indeed not present.

It is actually recommended to restore a 10m wide buffer of semi-natural habitat along the river (with seeding of a meadow mix suitable for wet areas<sup>16</sup> and/or plant native trees).

#### **4.9 Bats**

No impact is expected onto roosting bats.

However, as lighting can be detrimental to roosting, foraging and commuting bats<sup>17</sup>, the recommendations from the Bat Conservation Trust and the Institution of Lighting Professionals, titled 'Guidance Note 8 Bats and Artificial Lighting'<sup>18</sup>, should be considered, when designing any lighting scheme for the proposed development.

#### **4.10 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 not be left open for animals to fall into, or planks of wood should be placed to enable any animals which may fall into such a hole to escape.

#### **4.11 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

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<sup>14</sup> 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.

<sup>15</sup> Because water voles burrows can occur up to 3m from the water's edge.

<sup>16</sup> such as 'BFS 3 – Floodplain Meadow Grassland Seed Mix' for instance <https://grassandflower.co.uk/british-flora/store/products/bfs-3-floodplain-meadow-grassland-seed-mix/>

<sup>17</sup> <https://www.bats.org.uk/about-bats/threats-to-bats/lighting>

<sup>18</sup> <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

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<sup>19</sup>.

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.

Suggested biodiversity enhancements are listed below for the developer to choose from:

- Provision of hedgehog nesting boxes<sup>20</sup>.
- 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)<sup>21</sup>.
- Provision of ready-made bird boxes<sup>22</sup> on retained trees;
- Provision of integrated bird and bat boxes on new buildings<sup>23</sup> or bat boxes on retained mature trees<sup>24</sup>.
- Tree / shrub/ hedgerow planting (native species to be used only).
- Establish climbing plants on walls and other vertical structures<sup>25</sup>.
- Establish wildflower plug/bulb planting in private gardens<sup>26</sup>.

Priority should be given to habitats and species present on the Kent Biodiversity Strategy<sup>27</sup>.

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<sup>19</sup> <https://deframedia.blog.gov.uk/2019/03/13/government-to-mandate-biodiversity-net-gain/>

<sup>20</sup> <http://www.hedgehogstreet.org/pages/hedgehog-homes.html>

<sup>21</sup> <https://www.hedgehogstreet.org/wp-content/uploads/2019/03/Hedgehogs-and-developers-ZR.pdf>

<sup>22</sup> Integrated nest boxes in new buildings are preferred as they provide longer term nesting opportunities.

<sup>23</sup> 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.

<sup>24</sup> <https://www.bats.org.uk/our-work/buildings-planning-and-development/bat-boxes>

<sup>25</sup> 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>

<sup>26</sup> 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*

<sup>27</sup> <http://kentnature.org.uk/uploads/files/Nat-Env/Kent%20Biodiversity%20Strategy%202020.pdf>

## 5 References and Bibliography

- Joint Nature Conservation Committee (2003). *Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit*. JNCC, Peterborough.<sup>28</sup>
- 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>
- <http://www.kentbap.org.uk/species/>

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<sup>28</sup> [http://www.jncc.gov.uk/pdf/pub90\\_HandbookforPhase1HabitatSurveyA5.pdf](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	<p>The great crested newt is afforded full legal protection under Schedule 5 of the Wildlife &amp; 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:</p> <ul style="list-style-type: none"> <li>• Deliberately capture (or take), injure or kill GCN</li> <li>• 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.</li> <li>• Damage or destroy a breeding site or resting place - even if GCN are not occupying the place at the time;</li> <li>• Intentionally or recklessly obstruct access to a sheltering or resting place.</li> </ul> <p>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).</p> <p>Great crested newts and common toads are also listed as Species of Principal Importance under Section 41 of the NERC Act 2006.</p>
Hazel dormice	<p>The hazel dormouse is afforded full legal protection under Schedule 5 of the Wildlife &amp; 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:</p> <ul style="list-style-type: none"> <li>• Deliberately capture (or take), injure or kill hazel dormouse</li> <li>• Deliberately or recklessly disturb hazel dormouse, in particular (i) any</li> </ul>

	<p>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.</p> <ul style="list-style-type: none"> <li>• Damage or destroy a breeding site or resting place - even if dormice are not occupying the place at the time;</li> <li>• Intentionally or recklessly obstruct access to a sheltering or resting place.</li> </ul> <p>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).</p> <p>Hazel dormouse is also listed as a Species of Principal Importance under Section 41 of the NERC Act 2006.</p>
Bats	<p>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:</p> <ul style="list-style-type: none"> <li>• Deliberately capture (or take), injure or kill a bat.</li> <li>• 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.</li> <li>• Damage or destroy a breeding site or resting place (roost) of a bat- even if bats are not occupying the roost at the time;</li> <li>• Intentionally or recklessly obstruct access to a roost;</li> <li>• Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat.</li> </ul> <p>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.</p>
Reptiles	<p>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 &amp; Countryside Act 1981 (as amended).</p> <p>All six UK reptile species are listed as Species of Principal Importance under Section 41 of the NERC Act 2006.</p>
Badgers	<p>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:</p> <ul style="list-style-type: none"> <li>• Wilfully kill, injure or take a badger, or to attempt to do so;</li> <li>• Cruelly ill-treat a badger; or</li> <li>• 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</li> </ul>



	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	<p>The Wildlife &amp; 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).</p> <p>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.</p> <p>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.</p>
Hedgehogs	<p>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</p> <p>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.</p>
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  
Northern site**



IMG\_2829



IMG\_2830



IMG\_2831



IMG\_2832



IMG\_2833



IMG\_2834



IMG\_2835



IMG\_2842



IMG\_2843



IMG\_2847



IMG\_2849



IMG\_2850



IMG\_2851



IMG\_2852



IMG\_2853



IMG\_2854



IMG\_2855



IMG\_2856 - outside site

## Southern site



✔ IMG\_2867



✔ IMG\_2868



✔ IMG\_2869



✔ IMG\_2870



✔ IMG\_2871



✔ IMG\_2879



✔ IMG\_2880



✔ IMG\_2881



✔ IMG\_2882



✔ IMG\_2883



✔ IMG\_2884



✔ IMG\_2885 River



✔ IMG\_2886 River



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✔ IMG\_2891



✔ IMG\_2892



✔ IMG\_2893



✔ IMG\_2894



✔ IMG\_2895



✔ IMG\_2896



✔ IMG\_2897