

Northfield House, Wrotham Road, Meopham, Kent

Preliminary Ecological Appraisal

24th May 2022 / Ref No 2022/03/14

Client: Bloomfields



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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 Northfield House, Wrotham Road, Meopham, DA13 OAQ Kent, in support of a planning application for new dwellings.

1.2 Survey Location/Area

The site is located at approximately TQ 643 657. 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.

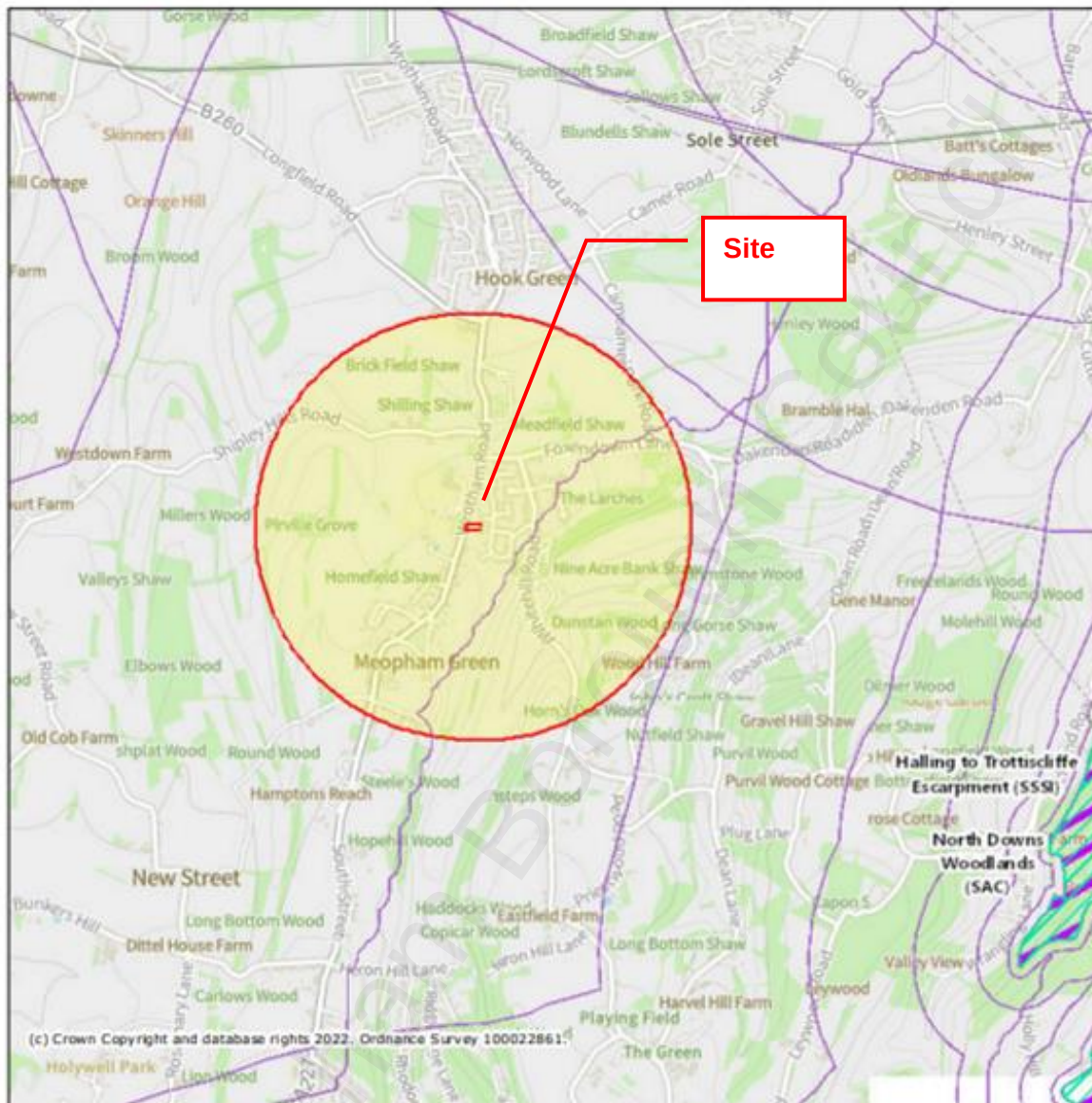
A summary of wildlife legislation and policy has been included in Appendix A.

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 0.8 1.6
km

Projection = OSGB36

xmin = 558100

ymin = 162300

xmax = 571400

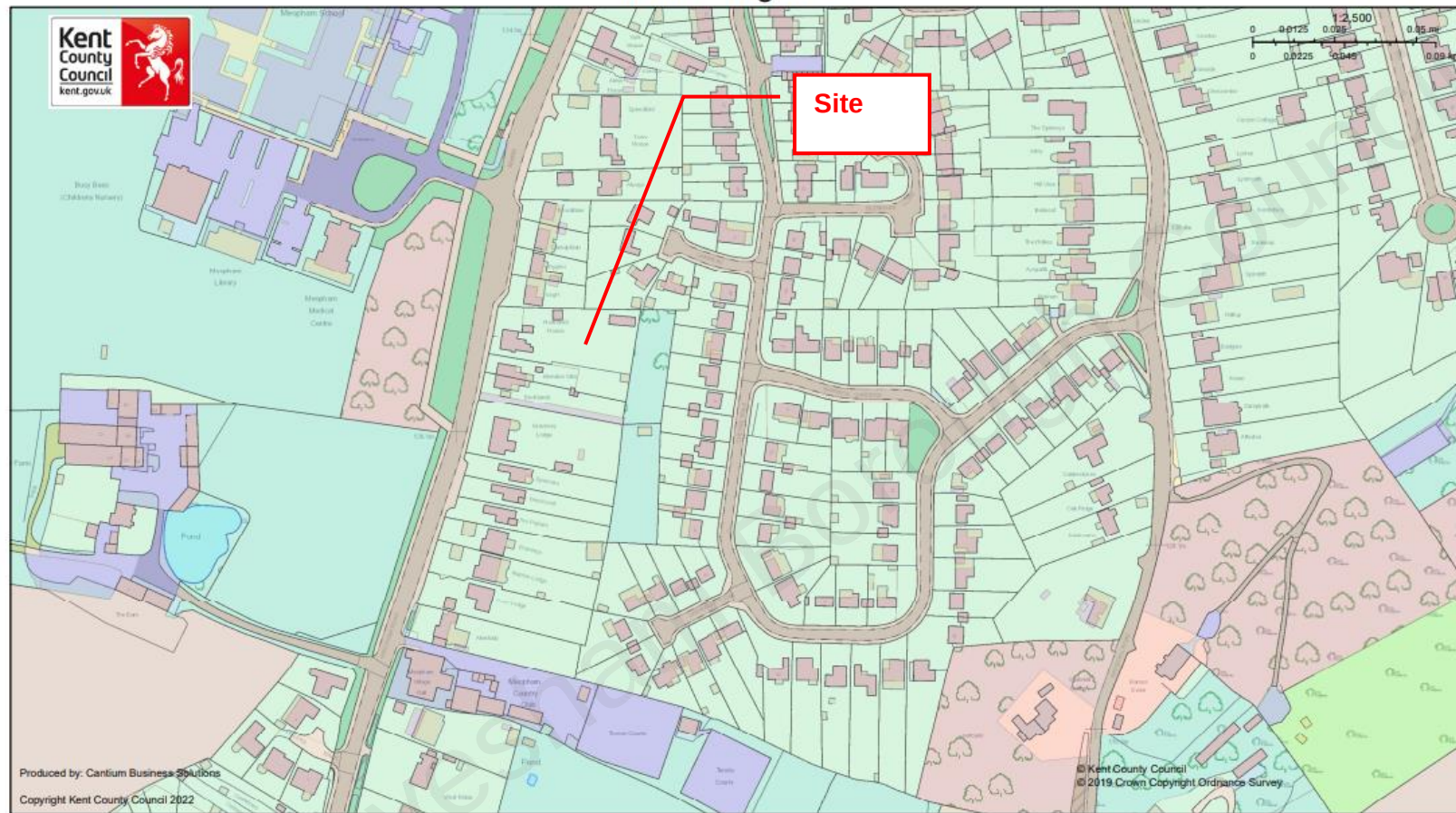
ymax = 168800

Map produced by MAGiC on 24 May, 2022.

Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

K-LIS - Figure 2

May 24, 2022



Legend

Kent Habitat Survey 2012

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

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 26th April 2022 by Katia Bresso CEnv MCIEEM, a qualified professional consultant ecologist with over 20 years of experience³, licensed bat surveyor (Class Licence CL19, Level 3, Registration Number: 2016-27133-CLS-CLS) and Registered Consultant of the Bat Mitigation Class Licence (BMCL) (formerly Bat Low Impact Class Licence) 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 endoscope⁴, 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.

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

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 Katia Bresso is a Suitably Qualified Ecologist with regards to Code for Sustainable Homes assessment and BREEAM

⁴ RIDGID CA-350x Inspection Camera System 63888

Practice Guidelines (2016).

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.

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.

One local wildlife site⁵, 'Happy Valley, Meopham', is present 180m to the south of the site.

3.2 Habitats

The site is surrounded by dwellings with arable land and pasture further away.

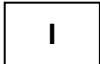
The Integrated Habitat System (IHS) classification of the Kent Habitat Survey 2012 describes the site as:

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

Indeed the site consists of a house with a concrete side access drive leading to the back garden where two timber outbuildings are present, as well as a large oak tree and short mowed grass. A hedge with hawthorn, hazel and privet lines the north and east boundaries.

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
	Building
	Improved grassland
	Individual tree (number and location approximate)

⁵ In Kent, there are over 460 Local Wildlife Sites, covering a total area of over 27,500 hectares, (roughly 7% of the county). They range from a 0.13 hectares churchyard important for its orchids, to grazing marsh sites of over 1,000 hectares.

Figure 4

May 24, 2022





3.3 Amphibians

The data search carried out with Krag (Enquiry No: CES/22/089) revealed that the closest recorded Great Crested Newt *Triturus cristatus* site is located 2.69 km to the SW (record id: 90993).

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

⁶ Likelihood of Presence Scores are described using the following categories:
 Unlikely<Possible<Likely<High
 Preliminary Ecological Appraisal
 Northfield House, Wrotham Road, Meopham
 KB Ecology Ltd- May 2022

No ponds are present within 100m and only one pond is present within 250m, on the other side of the road.

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, due to the paucity of ponds in the general area, the distance to the nearest pond and the poor quality of the habitat on site, 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 Grass Snake, located 0.22 km to the SE (record id: 16197). 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:	Likely	1.03
Slow-worm:	Possible	2.93
Sand Lizard:	unlikely	70.90
Grass Snake:	HIGH	0.22
Adder:	Possible	2.70
Smooth Snake:	n/a	n/a

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

The proposed development area 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.

3.5 Birds

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

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

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

3.6 Hazel Dormouse

It is considered that the site has no potential to support the hazel dormouse due to lack of connection to suitable woodlands. No nests or signs of dormice were found during the site visit.

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 buildings⁷.

The two outbuildings present in the garden are timber structures with tin roof and were judged as offering negligible suitability for roosting bats, being of single skin construction with no suitable cavities.

The house is a brick building with concrete interlocking tiles, providing no access points for roosting bats, but small areas of mortar were missing along a few ridge and hip tiles, providing low suitability for roosting bats as crevice-dwelling bats (such as pipistrelle bats) could be roosting under the ridge/hip tiles⁸.

The maple tree in the middle of the garden had a covering of ivy which provides low suitability for roosting bats. There is also an oak tree present outside the site with a large split branch overhanging one of the outbuildings in the north east corner, which provide moderate suitability for roosting 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>

⁷ Internal inspection of the house was not possible at the time of site visit

⁸ and there wouldn't be any external signs of such roosting usage

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 Strategy⁹.

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

⁹ <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 not known at the time of writing this report.

The development needs to satisfy the requirements of the 'mitigation hierarchy' to maintain the continued ecological functionality of the site for protected species¹⁰, through appropriate mitigation if needed; this hierarchy means:

1. Avoidance of any impacts should be the first consideration¹¹,
2. The next step is mitigation of any impacts that cannot be avoided; where significant harm cannot be wholly or partially avoided, it should be minimised by design or by the use of effective mitigation measures;
3. And lastly compensation should be used to off-set unavoidable remaining impacts.

Therefore, should there be potentially for protected species to be present, further surveys will be necessary and, if present, suitable mitigation strategies will need to be devised.

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 website¹²:

¹⁰ <https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications#agree-avoidance-mitigation-or-compensation-measures>

¹¹ 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.

¹² 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>

24/05/2022, 16:56

Site Check Report generated on Tue May 24 2022
You selected the location: Centroid Grid Ref: TQ64406583
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? 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 > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t).

Combustion

General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

Waste

Composting

Discharges

Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.

Water Supply

Notes 1

Notes 2

GUIDANCE - How to use the Impact Risk Zones

[/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf](#)

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

4.2 Habitats

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

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

There are a number of development activities which can affect great crested newts, which should be fully considered at the application stage. Great crested newts can migrate more than 500 metres from their breeding ponds in areas of suitable terrestrial habitat. However, generally the scale of potential impacts will decrease as the distance from the breeding pond increases.

Natural England provides a rapid risk assessment tool to work out whether a licence will be needed.

Application tools: (1) "Do I need a licence?" - rapid risk assessment

Caveats and limitations

This risk assessment tool has been developed as a **general guide only**, and it is inevitably rather simplistic. It has been generated by examining where impacts occurred in past mitigation projects, alongside recent research on newt ecology. It is not a substitute for a site-specific risk assessment informed by survey. In particular, the following factors are not included for sake of simplicity, though they will often have an important role in determining whether an offence would occur: population size, terrestrial habitat quality, presence of dispersal barriers, timing and duration of works, detailed layout of development in relation to newt resting and dispersal. The following factors could increase the risk of committing an offence: large population size, high pond density, good terrestrial habitat, low pre-existing habitat fragmentation, large development footprint, long construction period. The following factors could decrease the risk: small population size, low pond density, poor terrestrial habitat, substantial pre-existing dispersal barriers, small development footprint, short construction period. You should bear these mitigating and aggravating factors in mind when considering risk.

It is critical that, even if you decide not to apply for a licence, you ensure that any development takes account of potential newt dispersal. Where great crested newts are present, landuse in that area must ensure there is adequate connectivity. Retaining and improving connectivity will often involve no licensable activities.

Guidance on risk assessment result categories

"Green: offence highly unlikely" indicates that the development activities are of such a type, scale and location that it is highly unlikely any offence would be committed should the development proceed. Therefore, no licence would be required. However, bearing in mind that this is a generic assessment, you should carefully examine your specific plans to ensure this is a sound conclusion, and take precautions (see **Non-licensed avoidance measures tool**) to avoid offences if appropriate. It is likely that any residual offences would have negligible impact on conservation status, and enforcement of such breaches is unlikely to be in the public interest.

"Amber: offence likely" indicates that the development activities are of such a type, scale and location that an offence is likely. In this case, the best option is to redesign the development (location, layout, methods, duration or timing; see **Non-licensed avoidance measures tool**) so that the effects are minimised. You can do this and then re-run the risk assessment to test whether the result changes, or preferably run your own detailed site-specific assessment. Bear in mind that this generic risk assessment will over- or under-estimate some risks because it cannot take into account site-specific details, as mentioned in caveats above. In particular, the exact location of the development in relation to resting places, dispersal areas and barriers should be critically examined. Once you have amended the scheme you will need to decide if a licence is required; this should be done if on balance you believe an offence is reasonably likely.

"Red: offence highly likely" indicates that the development activities are of such a type, scale and location that an offence is highly likely. In this case, you should attempt to re-design the development location, layout, timing, methods or duration in order to avoid impacts (see **Non-licensed avoidance measures tool**), and re-run the risk assessment. You may also wish to run a site-specific risk assessment to check that this is a valid conclusion. If you cannot avoid the offences, then a licence should be applied for.

The site is under 0.5ha. Below is the risk assessment, should GCNs breed in a pond within 250m:

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
	Maximum:	0.1
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

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

4.4 Reptiles

No impact is expected onto reptiles and thus no further work is recommended for these species.

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 inclusive¹³) or only after a survey has confirmed the absence of nesting birds¹⁴. 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 and thus no further work is recommended for this species.

4.7 Badger

No impact is expected onto badgers and thus no further work is recommended for this species.

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.

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

¹⁴ 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.

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.

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

Thus, should the house and/or trees with suitability for roosting bats be impacted, further surveys would be recommended as per table above.

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 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.

4.10 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 elsewhere¹⁵.

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 boxes¹⁶.
- If any close board fencing are 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)¹⁷.
- Provision of ready-made bird boxes¹⁸ on retained trees;
- Provision of integrated 'swift bricks' in new buildings (as these are often occupied by other small cavity-nesting birds^{19, 20})²¹. A ratio of at least two per residential dwelling, or one per 50sqm of commercial floor space is generally accepted now as good practice (see BS 42021:2022). It is suggested better to install them in small groups of 2/6 approx. one metre+ apart in suitable locations at a minimum height of 4 metres (5 metres is better).²²
- Provision of integrated bat boxes on new buildings²³ or bat boxes on retained mature trees²⁴.
- Establish climbing plants on walls and other vertical structures²⁵.
- Establish wildflower plug/bulb planting²⁶.

¹⁵ <https://deframedia.blog.gov.uk/2019/03/13/government-to-mandate-biodiversity-net-gain/>

¹⁶ <http://www.hedgehogstreet.org/pages/hedgehog-homes.html>

¹⁷ <https://www.hedgehogstreet.org/wp-content/uploads/2019/03/Hedgehogs-and-developers-ZR.pdf>

¹⁸ Integrated nest boxes in new buildings are preferred as they provide longer term nesting opportunities.

¹⁹ <https://drive.google.com/file/d/1ljCJ7rIkNMrr4lxd41XcBU3YC6IFKM6z/view>

²⁰ <https://actionforswifts.blogspot.com/p/swift-bricks.html>

²¹ Boxes integrated into buildings offer much greater longevity but need to be considered in the design process. One study found that incorporating bird/bat boxes into walls could cause cold spots on the interior, leading to condensation and possibly mould. They recommend additional insulation to prevent this; advice from an architect is advisable.

²² 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.

²³ 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.

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

²⁵ 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>

- Establish Fruit Espaliers²⁷.

Priority should be given to habitats and species present on the Kent Biodiversity Strategy²⁸.

²⁶ 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*

²⁷ <http://apps.rhs.org.uk/advicesearch/profile.aspx?PID=319> for more information

²⁸ <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.²⁹
- Bat Conservation Trust (2012). *Bat Surveys - Good Practice Guidelines – 2nd Edition*. Bat Conservation Trust, London.
- English Nature (2004). *Research Reports Number 576: An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt Triturus cristatus*. English Nature, Peterborough

Websites Visited:

- <http://webapps.kent.gov.uk/KCC.KLIS.Web.Sites.Public/ViewMap.aspx>
- <http://www.magic.gov.uk/magicmap.aspx>
- <http://www.kentbap.org.uk/species/>

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²⁹ 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



✓ IMG_5090



✓ IMG_5091



✓ IMG_5092



✓ IMG_5094



✓ IMG_5095



✓ IMG_5096



✓ IMG_5097



✓ IMG_5098



✓ IMG_5100



✓ IMG_5101



✓ IMG_5103



✓ IMG_5104



✓ IMG_5105



✓ IMG_5106



✓ IMG_5109



✓ IMG_5110



✓ IMG_5111



✓ IMG_5112



✓ IMG_5113



✓ IMG_5114



✓ IMG_5115



✓ IMG_5116



✓ IMG_5117