

Redleaf Estate Yard, Camp Hill, Chiddingstone Causeway, Kent

Preliminary Ecological Appraisal

27th April 2018 / Ref No 2017/04/03

Client: Lambert and Foster



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1 Introduction

1.1 Background to the Scheme

KB Ecology Ltd has been commissioned to undertake a baseline ecological survey and a preliminary ecological appraisal with regards to a proposed development at Redleaf Estate Yard, Camp Hill, Chiddingstone Causeway, Kent, in support of a planning application for the conversion of a barn, demolition of some buildings and redevelopment of the site.

1.2 Survey Location/Area

The site is located at approximately TQ 518 468. 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.

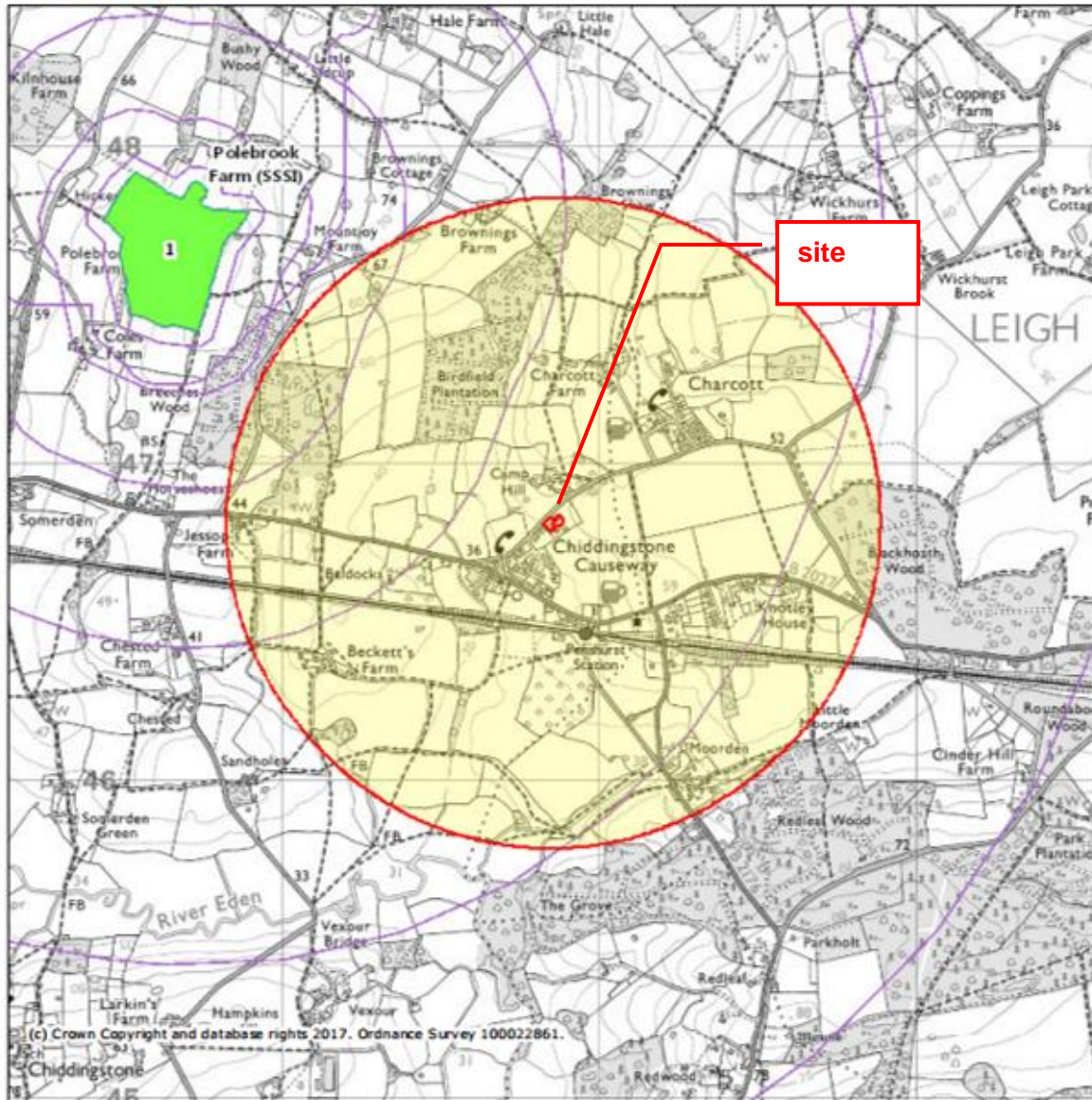
A summary of wildlife legislation and policy has been included in Appendix A.

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



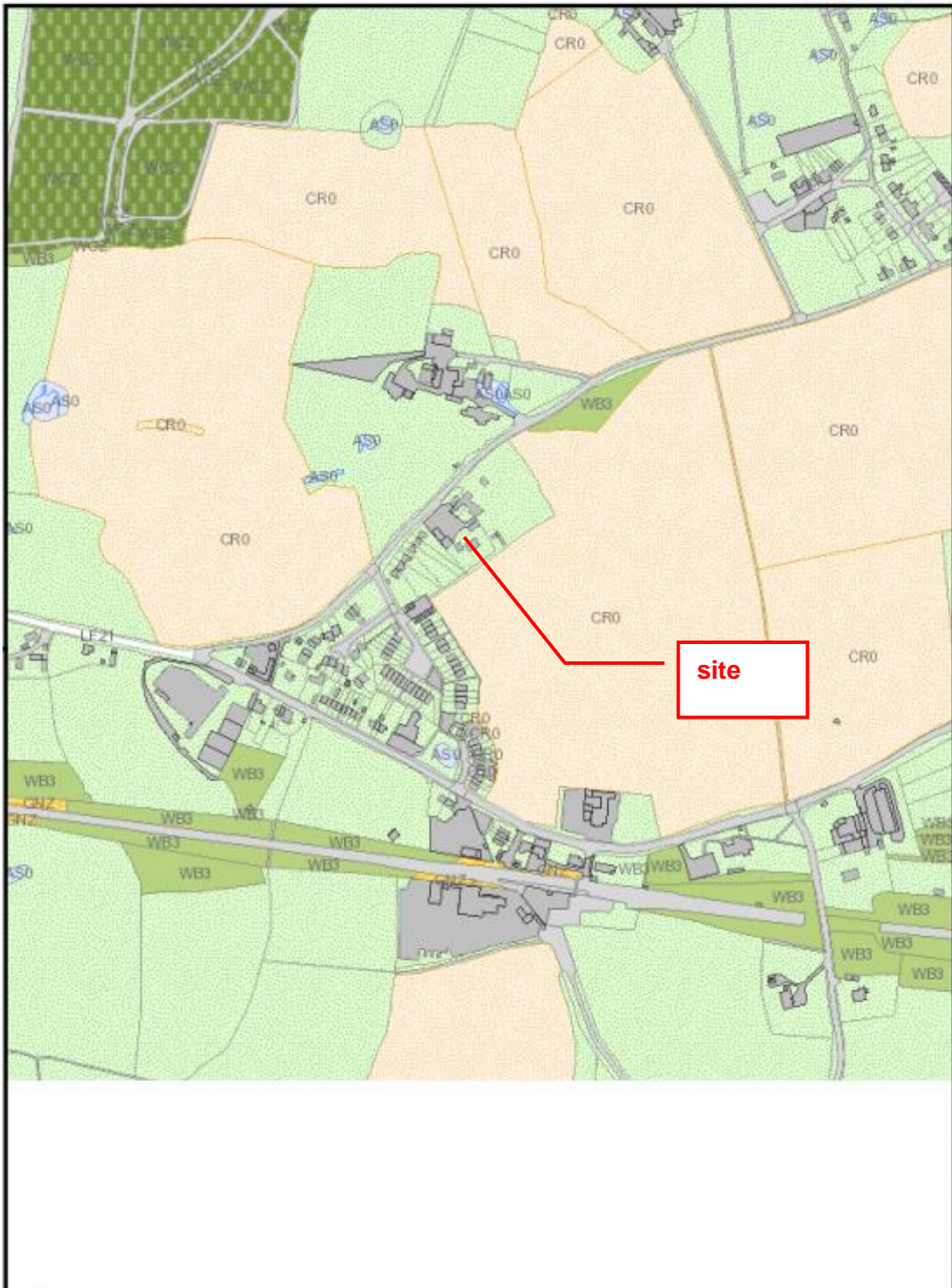
Legend

- Limestone Pavement Orders (England)
- Local Nature Reserves (England)
- Moorland Line (England)
- National Nature Reserves (England)
- National Nature Reserves (Scotland)
- National Nature Reserves (Wales)
- National Parks (England)
- Ramsar Sites (England)
- Ramsar Sites (Scotland)

Projection = OSGB36
 xmin = 548600
 ymin = 144400
 xmax = 555100
 ymax = 149000

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FIGURE 2

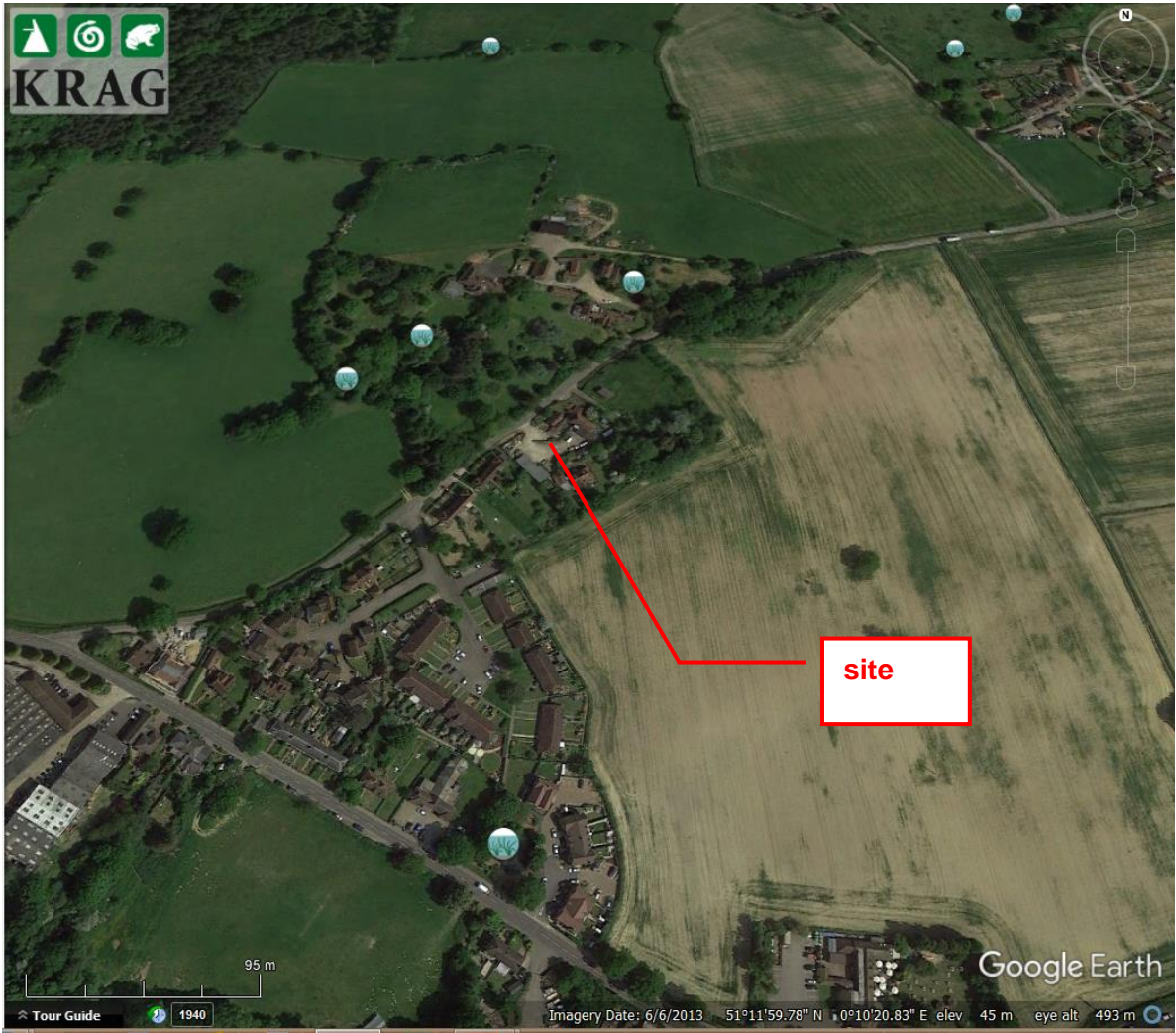


Scale 1:5,000

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Map Dated: 27 Apr 2017

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 20th April 2017 by Katia Bresso CEnv MCIEEM, a qualified professional consultant ecologist with over 15 years of experience³, licensed bat surveyor (Class Survey Licence Registration Number 2015-11917-CLS-CLS (CL15 Bat Roost Visitor Level 1), 2015-11918-CLS-CLS (CL18 Bat Survey Level 2) and 2016-27133-CLS-CLS (WML-A34 - Level 3 Class Licence) and Registered Consultant of the Bat Low Impact Class Licence WML-CL21 with Natural England (since May 2015), licensed dormouse surveyor (Class Survey Licences Registration Number 2016-22060-CLS-CLS) and licensed great crested newt surveyor (Class Survey Licences Registration Number Level 1 2015-16268-CLS-CLS and Class Survey Licences Registration Number Level 2 2016-23313-SCI-SCI). 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 potential for roosting bats (from the ground only, using binoculars).

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 Kent and Medway Biological Record Centre KMBRC 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 Teslong 5.5mm Inspection NTS200 Digital Endoscope with 3.5 Inch full color LCD Screen

2.3 Bat Night-time Surveys

Bat Box Duet heterodyne and frequency division and Pettersson D240x time expansion detectors were used for two emergence bat surveys and one dawn re-entry bat survey of the barn as it was assessed as being suitable for roosting bats. Two surveyors were present. Bat echolocation calls were recorded onto digital recorders for subsequent up-loading onto the computer software 'BatSound' for analysis; this allows sonograms of the bats echolocation and allows limited spectral analysis of the sonograms to be carried out, in particular the frequency components which can be examined and compared with known data. Nightscopes with infra-red light were also used.

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, 'SE22 Chiddingstone Old Clay Pits etc., Chiddingstone Causeway', is present 700m to the West of the site.

3.2 Habitats







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

- *UR0.UAZ - Built-up areas and gardens; other extended built environment*
- *G10.UA32- Improved grassland; gardens*

Indeed, the site is used as a builders yard and joinery shop and has limited vegetation, consisting of low bramble scrub (*Rubus fruticosus agg*) to the back of the buildings where equipment and materials are stored. Self-seeded saplings of butterfly bush *Buddleja davidii*, hazel *Corylus avellana*, *rosa sp*, hawthorn *Crataegus monogyna*, ash *Fraxinus excelsior* are also present. A number of outbuildings are present and the rest of the site consists of hardstanding and a small area of common nettles *Urtica dioica* and grass along the buildings.

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
	Bramble scrub and piles of tiles, equipment etc
	Individual tree (number and location approximate)
	Tall ruderal

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





3.3 Amphibians

The data search carried out with Krag (Enquiry No: CES/17/035) revealed that the closest recorded Great Crested Newt *Triturus cristatus* site is located at Chiddingstone Nature Reserve, 0.71 km to the W (record id: 79008).

Krag's database risk assessment indicates that the likelihood of presence of great crested newts *in the overall area* is 'High'⁶.

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

Redleaf Estate Yard, Camp Hill, Chiddingstone Causeway

KB Ecology Ltd- April 2018

Figure 5



Projection = OSGB36
xmin = 551500
ymin = 146500
xmax = 552300
ymax = 147100

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No ponds are on site but three ponds are 90m-130m from the site, on the other side of the road. The area of bramble at the back of the site offers potential terrestrial habitat for amphibians but this area is in constant use and disturbance occurs on a daily basis. Also, as there is plenty of suitable high quality terrestrial habitat nearer the ponds, it is judged unlikely that great crested newts would be present on site.

Common amphibian species are afforded limited legal protection under the Wildlife & Countryside Act 1981 (as amended). The great crested newt is afforded full legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). It is also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2010 and are therefore a European Protected Species (EPS). Great crested newts and common toads are also listed as species of principal conservation importance (See Appendix A).

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

3.4 Reptiles

The KRAG datasearch revealed that the closest recorded reptile is Grass Snake, located at Chiddingstone Nature Reserve, 0.71 km to the W (record id: 79041). The likelihood of reptiles to be present *in the overall area* is judged as per table below:

Reptiles		
	Likelihood of Presence	
	Score	Dist (km)
Viviparous Lizard:	Possible	2.73
Slow-worm:	Likely	0.71
Sand Lizard:	<i>unlikely</i>	84.62
Grass Snake:	HIGH	0.71
Adder:	<i>unlikely</i>	6.21
Smooth Snake:	n/a	n/a

Reptile survey effort in local area is considered to be average.

The area of bramble at the back of the site offers some potential habitat for reptiles but this area is in constant use and disturbance occurs on a daily basis. Therefore, it is judged unlikely that reptiles would be present on site.

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).

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

3.5 Birds

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

No signs of barn owl *Tyto alba* were found during the survey. No white droppings, black/grey pellets or white/buff feathers (specific signs of barn owls) were found.

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 *Muscardinus avellanarius* due to lack of connection to suitable woodlands.

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 barn but the roof space of the barn could not be accessed in its entirety however (due to health and safety restrictions) and thus signs could have been missed. The barn has Kent peg tiles over felt on part of the roof, thus offering roosting opportunities for crevice dwelling bats.

Up to two brown long-eared bats and up to two soprano pipistrelle bats were seen emerging from the barn during the night-time surveys. Full details are present in Appendix B.

None of the trees present on site offered potential for roosting bats. But the surroundings are likely to be used by a small number of 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 2010 and are therefore a “European Protected Species” (EPS). Some species of bats (noctule, soprano pipistrelle, brown long-eared bat, barbastelle) are also listed as species of principal conservation importance.

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

The legislation makes it a criminal offence to:

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

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

3.9 Other Species

It is considered that the surroundings have moderate potential to support hedgehogs (*Erinaceus europaeus*), which are a Species of Principal Importance under Section 41 of the NERC Act (2008 updated list).

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

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.

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 website⁷:

27/04/2017

Site Check Report Report generated on Thu Apr 27 2017
You selected the location: Centroid Grid Ref: TQ518468
The following features have been found in your search area:

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

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?	2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:
All Planning Applications	
Infrastructure	Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helpads and other aviation proposals.
Wind & Solar Energy	
Minerals, Oil & Gas	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
Rural Non Residential	
Residential	
Rural Residential	
Air Pollution	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, pig & poultry units, slurry lagoons > 200m ³ & 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	
Water Supply	Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m ² or more.
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.

⁷ The Impact Risk Zones (IRZs) dataset is a GIS tool which maps zones around each SSSI according to the particular sensitivities of the features for which it is notified and specifies the types of development that have the potential to have adverse impacts.

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

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

4.2 Habitats

Habitats present outside the works footprint should be suitably protected against any damages during works.

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

4.3 Amphibians

Pond loss is often seen as the most damaging impact on great crested newt populations, but the loss of terrestrial habitat can also have serious consequences. Great crested newts live on land for the majority of their lives, and so loss of terrestrial areas, particularly those close to the breeding pond, can be very damaging. The main effect of habitat loss is reduction in 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
<p>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. <u>It is not a substitute for a site-specific risk assessment informed by survey.</u> 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.</p>
<p>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.</p>

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 project involves loss of only hard standing and a bit of scrub, thus less 0.01ha of potential terrestrial habitat. Below is the risk assessment, should great crested newts be present in ponds within 100m:

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 score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.05
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
	Maximum:	0.05
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

Therefore no further work is recommended with regards to great crested newts.

4.4 Reptiles

No further work is recommended with regards to reptiles.

4.5 Birds

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

The effect on birds can be avoided by removing any trees/scrub outside of the nesting season (which extends from March – August inclusive⁸) or only after a survey has confirmed the absence of nesting birds⁹. 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 further work is recommended with regards to dormice.

4.7 Badger

No further work is recommended with regards to badgers.

4.8 Bats

The survey data suggests that the barn is not used as a maternity roost but is used as a day roost by very low numbers of brown long-eared bats and soprano pipistrelle bats, both common species. Therefore:

1. the roosts can be regarded as being of low conservation significance as referred in the 'Bat Mitigation Guidelines' (English Nature, 2004).
2. the following mitigation strategy should be followed to ensure the local bat population stays at a favourable conservation status and include the mitigation/compensation requirements suggested in the 'Bat Mitigation Guidelines' (English Nature, 2004):

*'Flexibility over provision of bat boxes,
access to new buildings etc.
No conditions about timing or monitoring'*

As brown long-eared bats need a flight area inside their roost, it is recommended to:

- Keep part of the roof of the barn for the use of bats¹⁰,
- or, if the above is not possible, providing a bat loft in one of the new buildings.

The Bat mitigation guidelines (BCT, 2004) states:

For species that fly within roof voids, notably both species of horseshoe bats and long-eared bats, it is essential that a sufficiently large space, unobstructed by constructional timbers, is

⁸ It should be noted however that certain species are known to breed throughout the year (e.g. collard dove) and remain protected.

⁹ 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.

¹⁰ please note that Breathable Roofing Membranes BRMs should not be installed into a roof used by bats, due to risks of entanglement of bats

http://www.bats.org.uk/pages/breathable_roof_membranes.html

available for the bats to fly in. Based on a sample of known roosts, it is unlikely that a void height (floor to ridge board) of less than 2 m will provide sufficient volume or that an apex length or width of less than 4 m will provide sufficient area. An ideal roof void would have an apex height in excess of 2.8 m and a length and width of 5 m or more. These species are generally found in older roofs of traditional construction giving a large uncluttered void, so typical trussed rafter construction must not be used. Suitable construction methods are purlin and rafter ('cut and pitch') with ceiling ties or possibly attic trusses, which are designed to give a roof void large enough to be used as a room.

Also, to mitigate the loss of pipistrelle roost, it is recommended to install two woodcrete bat boxes on trees or buildings.

Even though there are no conditions about timing, the optimum time for the works to the roof of the barn to be carried out is September/October and, if at all possible, such works should avoid the winter months (November to March).

The dismantling works shall be done as such:

1. Briefing to contractors – A toolbox talk will be delivered to contractors in advance of works commencing on site. This will include information on relevant legislation relating to bats, and contractor's responsibilities. It will also include confirmed bat roosts proposed for retention during works and the protection measures to be enforced.
2. Pre- works Survey – if the works take place more than two years after the initial bat surveys, a re-survey will be undertaken in advance of works commencing on site. This will assess the status of the roosts and record any evidence of roosting bats. If evidence of roosting bats is significantly different to previously recorded on site, then Natural England will be informed and the method statements amended prior to works commencing.
3. Supervision by a licensed bat handler – Any works affecting suitable roosting opportunities, such as roof tiles, loft spaces, internal rooms where roosting bats were confirmed and soffits, will be undertaken under the supervision of a licensed bat handler.
4. Due to the number of suitable access opportunities present on site, exclusion techniques are considered inappropriate for the site. Soft techniques will be employed to remove the roof from buildings supporting bat roosts as described in the following text. The clay roof tiles, slates and roofing felt will be dismantled by hand in a vertical rather than horizontal sliding motion checking for roosting bats, under the supervision of a licensed bat handler. The soffit boards, where present, will be taken apart by hand in sections.
5. If any bats are found during the dismantling works, they will be captured by hand, by the licenced bat worker, checked for injury and released at the site in the evening on the same day (depending on weather conditions, should weather conditions be bad, the bat would be kept in captivity by the licence holder for as little time as possible, until suitable weather conditions) or transferred to a suitable bat box which will be plugged for a short period of time to allow the bat to become acclimatised to the box.
6. The licenced bat worker will decide how long to supervise the works or whether to stay 'on-call' once the works have started. If a bat is discovered at other unsupervised times, work will cease immediately and the licensed ecologist will be called for advice. This advice will include leaving the bat to disperse of its own accord, or wait for the licensed ecologist to appear and move the bat. Builders and contractors are explicitly forbidden from handling bats.

Should landscaping be proposed, it should include species known to benefit bats (as per the document 'Encouraging Bats' by the Bat Conservation Trust¹¹), such as:

- Planting of hawthorn, hazel, honeysuckle, hornbeam, jasmine, rowan, silver birch, buddleia, common alder, dog rose, elder, English oak, gorse, guelder rose.
- Seeding of Aubretia, Candytuft, Cherry pie, Corncockle, Cornflower, Corn marigold, Corn poppy, Echinacea, English Bluebell, Evening primrose, Field poppies, Honesty, Ice plant, 'Pink lady', Knapweed, Mallow, Mexican aster, Michaelmas daisy, Night-scented stock, Ox-eye daisy, Phacelia, Poached egg plant, Primrose, Red campion, Red valerian, Scabious, St John's wort, Sweet William plant, Verbena, Wallflowers, Wood forget-me-not, Yarrow.

Also, as lighting can be detrimental to roosting, foraging and commuting bats¹², the recommendations from the Bat Conservation Trust, titled Bats and Lighting in the UK, should be considered, when designing any lighting scheme for the proposed development (see Appendix D).

As the proposed works would result in the loss of a bat roost, the works will only be undertaken once a licence is in place for the project, which can be done in two ways:

- A. A European Protected Species Mitigation licence (or EPSM licence) could be sought from Natural England to permit the proposed works. An application would need to be prepared and submitted to Natural England for determination, once full planning permission has been granted. A decision on the application would be made by Natural England within 30 days of receipt (although it has taken Natural England considerably more time in the last two years). The licence application would need to include full details of the proposed ecological mitigation / compensation and a program for these works.
- B. Alternatively, a Registered Consultant of the Bat Low Impact Class Licence could register the site under their licence to undertake the works, as the works can be covered under its remit; i.e.:
 - The disturbance and/or capture of bats and/or damage or destruction of bat roost/s of low conservation significance (i.e. feeding perches/roosts, day and night roosts), affecting no more than three (3) of the more common species of bats present in small numbers.
 - The 7 species that are covered within the remit of the licence are common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*), whiskered (*Myotis mystacinus*), Brandt's (*Myotis brandtii*), Daubenton's (*Myotis daubentonii*) and Natterer's (*Myotis nattereri*).

In both cases, the species protection provisions of the Habitats Directive, as implemented by the Conservation of Habitats and Species Regulations 2010, contain three "derogation tests" which must be applied by Natural England when deciding whether to grant a licence to a person carrying out an activity which would harm a European Protected Species.

For development activities, this licence is obtained after planning permission has been obtained. The three tests are that:

¹¹ http://www.bats.org.uk/publications_detail.php/231/encouraging_bats

¹² http://www.bats.org.uk/pages/bats_and_lighting.html

and

<http://www.batsandlighting.co.uk/index.html> for more information

- the activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
- there must be no satisfactory alternative; and
- favourable conservation status of the species must be maintained.

More information is present in:

<https://www.gov.uk/government/collections/bat-licences>

<http://publications.naturalengland.org.uk/publication/113030?category=8004>

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 below:

On 27 March 2012, the UK Government published the National Planning Policy Framework (NPPF) which states that “opportunities to incorporate biodiversity in and around developments should be encouraged”(Para 118).

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.

Biodiversity enhancements for the site could include the following:

- Provision of ready-made bird boxes (sparrow terrace timber boxes or house martin nests for instance¹³ or mix of open-fronted and hole-nesting boxes and constructed from woodcrete)¹⁴.
- Provision of bat roosting spaces within the new buildings (examples can be found in: Williams, C (2010). *Biodiversity for Low and Zero Carbon Buildings: A Technical Guide for New Build*. RIBA) or installation of ready-made bat boxes (such as Kent Bat Box¹⁵, Habitat¹⁶, EcoSurv Bat Box or Schwegler Bat tube¹⁷)¹⁸.

¹³ to benefit these declining urban bird species

¹⁴ In order not to damage trees, free-hanging nesting boxes can be hung from a loop or hook over a branch. This method avoids the use of nails. It is also helpful to avoid predation.

¹⁵ http://www.teach-organic.org.uk/uploadedfiles/CMS/pdf/bat_box.pdf

¹⁶ Habitat is a large, solid bat box made of concrete with an internal roost space, which can be incorporated into the fabric of a building <http://www.habibat.co.uk/>

¹⁷ http://www.bats.org.uk/publications_download.php/1109/BCT_BatBoxProductList_v4a.pdf
http://www.bats.org.uk/pages/accommodating_bats_in_buildings.html <http://www.habibat.co.uk/about-habibat>

¹⁸ It is highly recommended to install bird boxes near bat boxes to avoid birds from using the bat boxes to the detriment to bats.

- Establish climbing plants on walls and other vertical structures¹⁹.
- For areas of new planting where there was hardstanding or damaged soil, it is recommended to add mycorrhizal fungi (mycorrhizas are fungal associations between plant roots and beneficial fungi. The fungi effectively extend the root area of plants and are extremely important to most wild plants).
- Establish Fruit Espaliers²⁰.

Priority should be given to species present on the Kent BAP species list, which include great crested newt, common toad, viviparous lizard, slow-worm, grass snake, adder, house sparrow, tree sparrow, hedgehog, noctule, soprano pipistrelle, brown long-eared bat, brown hare, water vole, harvest mouse, dormouse, otter as well as many more species (see <http://www.kentbap.org.uk/habitats-and-species/priority-species/>).

¹⁹ 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>

²⁰ <http://apps.rhs.org.uk/advicesearch/profile.aspx?PID=319> for more information

5 References and Bibliography

- Joint Nature Conservation Committee (2003). *Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit*. JNCC, Peterborough.²¹

Websites Visited:

- <http://www.archnature.eu/mapping-tools.html>
- <http://bbowt-extra.org.uk/KWTWebMap/>
- <http://magic.defra.gov.uk/MagicMap.aspx>

With kind permission from Google Earth Brand

²¹ 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>

and

<https://www.gov.uk/government/policies/protecting-biodiversity-and-ecosystems-at-home-and-abroad/supporting-pages/species-protection>

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	Legislation
Bats (all species) Dormice Great crested newts Otters Sand lizards and smooth snakes	<p>The Wildlife and Countryside Act 1981 (as amended) & The Conservation of Habitats and Species Regulations 2010. These make it an offence to:</p> <ul style="list-style-type: none"> • Deliberately or recklessly capture, injure or kill any wild animal of a European protected species • Deliberately or recklessly disturb wild animals of any such species • Damage or destroy their breeding site or resting place • Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead animal, or any part of, or anything derived from these species. <p>Disturbance of animals includes in particular any disturbance which is likely</p> <ul style="list-style-type: none"> • to impair their ability: <ul style="list-style-type: none"> - to survive, to breed or reproduce, or to rear or nurture their young, or - in the case of animals of a hibernating or migratory species, to hibernate or migrate; • to affect significantly the local distribution or abundance of the species to which they belong.
Breeding birds	The Wildlife and Countryside Act 1981 (as amended). This makes it

Species	Legislation
(in particular barn owls)	illegal to intentionally kill, injure or take any wild bird and to take, damage or destroy the nest (whilst being built or in use) or eggs.
Adders, grass snakes, common lizards and slow worms	The Wildlife and Countryside Act 1981 (as amended) (intentional killing and injuring only). This makes it illegal to kill or injure these animals.
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.
White clawed crayfish	<p>The Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:</p> <ul style="list-style-type: none"> • intentionally, or recklessly, kill or injure any of the above species, and/or; • sell, or attempt to sell, any part of the species, alive or dead. Advertises that he buys or sells, or intends to buy or sell.
Badgers	<p>The Protection of Badgers Act 1992. This makes it an offence to:</p> <ul style="list-style-type: none"> • Willfully killing, injures or takes, or attempts to kill, injure or take, a badger. • Cruelly ill-treating a badger, digging for badgers, using badger tongs, using a firearm other than the type specified under the exceptions within the Act. • Interfering with a badger sett by damaging, destroying, obstructing, causing dog a dog to enter a sett, disturbing an occupied sett - either by intent or by negligence. • Selling or offering for sale a live badger, having possession or control of a live badger. • Marking a badger or attaching any ring, tag, or other marking device to a badger.

The Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) implements the Birds Directive (1979) and the Berne Convention (1979) into national legislation. The Wildlife and Countryside Act 1981 (as amended) includes a number of Schedules which are reviewed (usually every five years) on which details of the protected species, and their level of protection, are detailed. A detailed summary of the sections of the Wildlife and Countryside Act, along with the

protection afforded under them can be found within Paragraphs 118-122 of ODPM Circular 06/2005 (Circular06/2005)

Full details of the legislation can be found at www.jncc.gov.uk/page-3614 and details of the species listed on the Schedules can be found at:

- Birds www.jncc.gov.uk/PDF/waca1981_schedule1.pdf
- Animals www.jncc.gov.uk/page-1815
- Plants www.jncc.gov.uk/page-1816

There are no licensing functions within the Wildlife and Countryside Act for development activities which may affect a species protected under The Wildlife and Countryside Act 1981 (as amended) and works need to proceed following good practice and if appropriate rely on the 'incidental result of an otherwise lawful operation defence'. However, with regards to the water vole, where translocation of animals is proposed, Natural England does not feel this could be considered the incidental result of other activities and so would not be covered by the defence in the legislation. If there is no alternative to translocation, Natural England may be able to issue a licence to trap and translocate the water voles for the purpose of conservation.

The Countryside and Rights of Way Act 2000

The Wildlife and Countryside Act 1981 was amended by the Countryside and Rights of Way Act (CRoW Act) in 2000. The CRoW Act strengthened the protection afforded to species listed within the Schedules of the Wildlife and Countryside Act by adding 'reckless' to several of the offences and increased the penalties for wildlife offences.

In addition, Section 74 of the CRoW Act introduced a new duty on Government Ministers and Department to further the conservation of biodiversity for habitats and species of principal importance. This was superseded by Sections 40 and 41 of the Natural Environment and Rural Communities (NERC) Act of 2006. Section 40 provides that every public authority must, in exercising its functions, have regard to the purpose of conserving biodiversity. Details of the lists of habitats and species provided for at Section 41 of the NERC act can be found at www.ukbap-reporting.org.uk/news/details.asp?X=45. The ODPM Circular 06/2005 ([Circular06/2005](http://www.jncc.gov.uk/page-3614)) place a clear responsibility on Local Planning Authorities to further the conservation of habitats and species of principal importance where a planning proposal may adversely affect them.

Full details of the legislation contained within the Countryside and Rights of Way Act can be found at www.opsi.gov.uk/acts/acts2000/ukpga_20000037_en_1.

The Protection of Badgers Act 1992

The legislation affording protection to badgers is primarily concerned with animal welfare and the need to protect badgers from activities such as baiting and deliberate harm. The Protection of Badgers Act 1992 makes it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so;
- To intentionally or recklessly interfere with a sett (this includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it).

As with The Wildlife and Countryside Act 1981 (as amended), there are several defences to prosecution in the legislation and the text should be consulted for details of these. Penalties

for offences include fines up to £5,000, plus up to six months imprisonment for each illegal sett interference, or badger death or injury.

Full Details of the legislation can be found at www.opsi.gov.uk/ACTS/acts1992/ukpga_19920051_en_1.

Conservation of Habitats and Species Regulations 2010 (SI 2010/490) came into force (the "2010 Regulations").

From 1st April 2010, these are now the principal means by which the Habitats Directive is transposed in England and Wales. This updates and consolidates all the amendments to the Regulations since they were first made in 1994.

The 2010 Regulations implement the European Habitats Directive into national legislation. Details of those species (often referred to as European protected species or EPS) which receive protection under these regulations can be found in Schedule 2 of the 2010 Regulations.

Full details of the legislation can be found at http://www.opsi.gov.uk/si/si2010/uksi_20100490_en_1

The Regulations state that:

Part 3 - 41.—

(1) A person who:

- (a) deliberately captures, injures or kills any wild animal of a European protected species,
- (b) deliberately disturbs wild animals of any such species,
- (c) deliberately takes or destroys the eggs of such an animal, or
- (d) damages or destroys a breeding site or resting place of such an animal,

is guilty of an offence.

(2) For the purposes of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely:

(a) to impair their ability:

- (i) to survive, to breed or reproduce, or to rear or nurture their young, or
- (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate;

Or

(b) to affect significantly the local distribution or abundance of the species to which they belong.

(3) It is an offence for any person:

- (a) to be in possession of, or to control,
- (b) to transport,
- (c) to sell or exchange, or
- (d) to offer for sale or exchange, anything to which this paragraph applies.

(4) Paragraph (3) applies to—

- (a) any live or dead animal or part of an animal—
 - (i) which has been taken from the wild, and

- (ii) which is of a species or subspecies listed in Annex IV(a) to the Habitats Directive; and
- (b) anything derived from such an animal or any part of such an animal.

(5) Paragraphs (1) and (3) apply regardless of the stage of the life of the animal in question.

(6) Unless the contrary is shown, in any proceedings for an offence under paragraph (1) the animal in question is presumed to have been a wild animal.

(7) In any proceedings for an offence under paragraph (3), where it is alleged that an animal or a part of an animal was taken from the wild, it is presumed, unless the contrary is shown, that that animal or part of an animal was taken from the wild.

(8) A person guilty of an offence under this regulation is liable on summary conviction to imprisonment for a term not exceeding six months or to a fine not exceeding level 5 on the standard scale, or to both.

(9) Guidance as to the application of the offences in paragraph (1)(b) or (d) in relation to particular species of animals or particular activities may be published by—

- (a) the appropriate authority; or
- (b) the appropriate nature conservation body, with the approval of the appropriate authority.

(10) In proceedings for an offence under paragraph (1)(b) or (d), a court must take into account any relevant guidance published under paragraph (9).

(11) In deciding upon the sentence for a person convicted of an offence under paragraph (1)(d), the court must in particular have regard to whether that person could reasonably have avoided the damage to or destruction of the breeding site or resting place concerned.

Licences may be obtained to permit activities that would otherwise be unlawful, but they can only be granted for certain purposes. Those purposes include that of preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment (Regulation 42(10)). It is the imperative reasons of overriding public interest element of this that is relied upon by those seeking to carry out development where those activities affect a European protected species or their places used for shelter or protection. Even where that purpose is met, however a licence may only be granted where:

- There is “no satisfactory alternative”; and
- The action authorised “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”

Natural England issues licences for these purposes under Regulation 44(2)(e).

It is not the responsibility of Natural England staff to decide when a licence is required/recommended. This decision is down to the proposer of the operation who should consider whether, on balance and usually with the assistance of an ecological consultant, the operation would be reasonably likely to result in the commission of an offence under these Regulations. This view should be formed in the light of survey information and specialist knowledge. A licence simply permits an action that is otherwise unlawful. A licence should be applied for if, on the basis of survey information and specialist knowledge, it is considered that the proposed activity is reasonably likely to result in an offence (killing, breeding site destruction, etc – see above).

It should be noted that the protection afforded to species under the UK and EU legislation referred to here is in addition to that provided by the planning system and the applicant must ensure that any activity they undertake on the application site (regardless of whether or not planning permission has been obtained) complies with the appropriate wildlife legislation. Failure to do so may result in fines and, potentially, a custodial sentence.

Biodiversity Action Plans

Biodiversity Action Plans (BAPS) set out actions for the conservation and enhancement of biological diversity at various spatial scales. They consist of both Habitat Action Plans (HAPs) and Species Action Plans (SAPs).

The UK BAP was the UK's response to the 1992 Convention on Biological Diversity in Rio de Janeiro. Following a review in 2007 a list of 1149 priority species and 65 priority habitats has been adopted, which are given a statutory basis for planning consideration under Section 40 of the NERC Act 2006.

The UK Post-2010 Biodiversity Framework was published on 17 July 2012. It covers the period from 2011 to 2020, and was developed in response to two main drivers: the Convention on Biological Diversity's (CBD's) Strategic Plan for Biodiversity 2011-2020 and its 5 strategic goals and 20 'Aichi Biodiversity Targets', published in October 2010; and the EU Biodiversity Strategy (EUBS), released in May 2011. <http://jncc.defra.gov.uk/page-6189>

Further information about Kent BAP can be found here: <http://www.kentbap.org.uk/habitats-and-species/priority-species/>

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_8490



IMG_8491



IMG_8492



IMG_8493



IMG_8494



IMG_8495



IMG_8496



IMG_8497



IMG_8498



IMG_8499



IMG_8500



IMG_8501



IMG_8502



IMG_8503



IMG_8504



IMG_8505



IMG_8506



IMG_8507



IMG_8508



IMG_8509



IMG_8510



IMG_8511



IMG_8512



IMG_8513



IMG_8514



IMG_8515



IMG_8516



IMG_8517



IMG_8518



IMG_8519

Appendix C – Night-time Bat Survey Results

Emergence survey - 13/06/2017

Sunset: 21.15

17C, 5%cloud, no wind

21:43	55pip	C	East to west along back of barn
21:49	45pip	C	not seen
21:56	45pip	C	commuting through yard
21:57	45pip	C	not seen
21:59	45pip	C	North to south between buildings and hedge
22:03	ble	E	emerging from west side of barn
22:05	45pip	F	in trees to NE
22:07	45pip	C	not seen
22:11	45pip	F	in trees to NE
22:12	45pip	F	in trees to NE
22:17	ble	E	emerging from west side of barn
22:22	45pip	F	in trees to NE
22:23	55pip	C	not seen
22:24	55pip	C	not seen

F Foraging / C Commuting / E Emerging
--

Dawn re-entry survey - 07/07/2017

Sunrise: 03:30

18C, 10% cloud, no wind

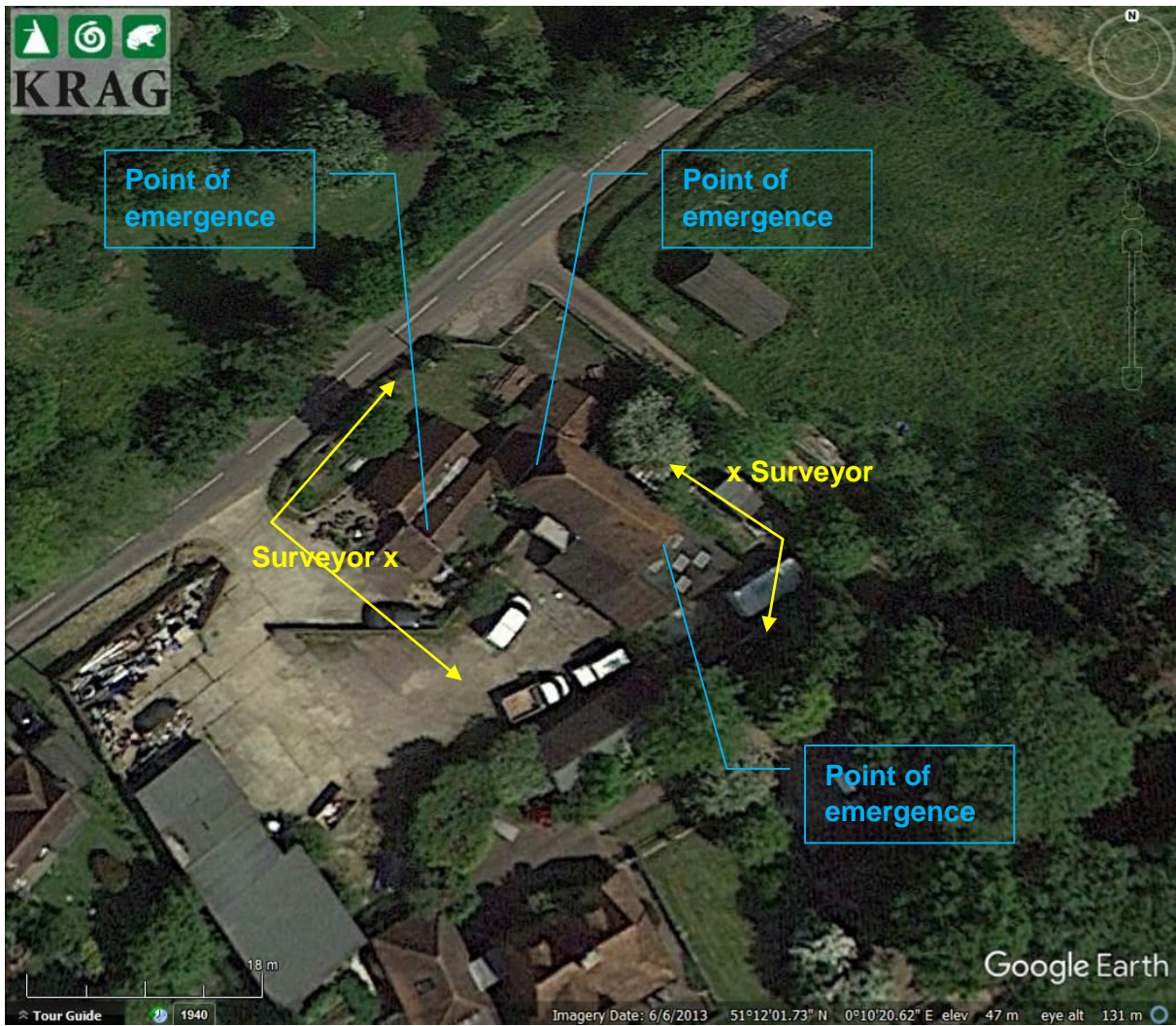
03:52	45pip	F	East to West, 1 pass along front of barn
03:58	55 pip	C	audio only
03:59	55pip	F	Along road
04:04	45pip	C	Flying around NW hip then disappeared from view

Emergence survey - 04/08/2017

Sunset:20.41

19C, 60%cloud, Light beeeze

20:45	45pip	F	audio only
20:50	55 pip	E	emerging from weatherboards in adjacent cottage
20:51	55 pip	E	emerging from weatherboards in adjacent cottage
20:53	55 pip	E	emerging from weatherboards from west side of barn
21:00	45pip	F	audio only
21:07	45 pip	C	from yard towards road
21:12	45pip	F	audio only
21:14	BLE	E	emerging from weatherboards from east side of barn
21:16	45pip	F	audio only
21:17	45pip	F	foraging along at front of yard
21:19	BLE	E	emerging from weatherboards from east side of barn
21:32	55pip	F	audio only
21:45	45pip	F	audio only
21:49	45pip	F	brief audio only



Appendix D - Bats and Lighting in the UK

Bat Conservation Trust and Institution of Lighting Engineers Summary of requirements

The two most important features of street and security lighting with respect to bats are:

1. **The UV component.** Low or zero UV installations are preferred to reduce attraction of insects to lighting and therefore to reduce the attraction of foraging bats to these areas.
2. **Restriction of the area illuminated.** Lighting must be shielded to maintain dark areas, particularly above lighting installations, and in many cases, land adjacent to the areas illuminated. The aim is to maintain dark commuting corridors for foraging and commuting bats. Bats avoid well lit areas, and these create barriers for flying bats between roosting and feeding areas.

UV characteristics:

Low

- Low pressure Sodium Lamps (SOX) emit a minimal UV component.
- High pressure Sodium Lamps (SON) emit a small UV component.
- White SON, though low in UV, emit more than regular SON.

High

- Metal Halide lamps emit more UV than SON lamps, but less than Mercury lamps
- Mercury lamps (MBF) emit a high UV component.
- Tungsten Halogen, if unfiltered, emit a high UV component
- Compact Fluorescent (CFL), if unfiltered, emit a high UV component.

Variable

- Light Emitting Diodes (LEDs) have a range of UV outputs. Variants are available with low or minimal UV output.

Glass glazing and UV filtering lenses are recommended to reduce UV output.

Street lighting

Low-pressure sodium or high-pressure sodium must be used instead of mercury or metal halide lamps. LEDs must be specified as low UV. Tungsten halogen and CFL sources must have appropriate UV filtering to reduce UV to low levels.

Lighting must be directed to where it is needed and light spillage avoided. Hoods must be used on each lamp to direct light and contain spillage. Light leakage into hedgerows and trees must be avoided.

If possible, the times during which the lighting is on overnight must be limited to provide some dark periods. If the light is fitted with a timer this must be adjusted to reduce the amount of 'lit time' and provide dark periods.

Security and domestic external lighting

The above recommendations concerning UV output and direction apply. In addition:

Lighting should illuminate only ground floor areas. Light should not leak upwards to illuminate first floor and higher levels.

Lamps of greater than 2000 lumens (150 W) must not be used.

Movement or similar sensors must be used. They must be carefully installed and aimed, to reduce the amount of time a light is on each night.

Light must illuminate only the immediate area required, by using as sharp a downward angle as possible. Light must not be directed at or close to bat roost access points or flight paths from the roost. A shield or hood can be used to control or restrict the area to be lit.

Wide angle illumination must be avoided as this will be more disturbing to foraging and commuting bats as well as people and other wildlife.
Lighting must not illuminate any bat bricks and boxes placed on buildings, trees or other nearby locations.