# Land at Sunningdale, The Street, Sedlescombe

# Preliminary Ecological Appraisal

1st May 2019 / Ref No 2019/03/15

Client: Bloomfields

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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 Land at Sunningdale, The Street, Sedlescombe, Battle, TN33 0QB in support of a planning application for the erection of new dwellings.

## 1.2 Survey Location/Area

The site is located at approximately TQ781177. 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

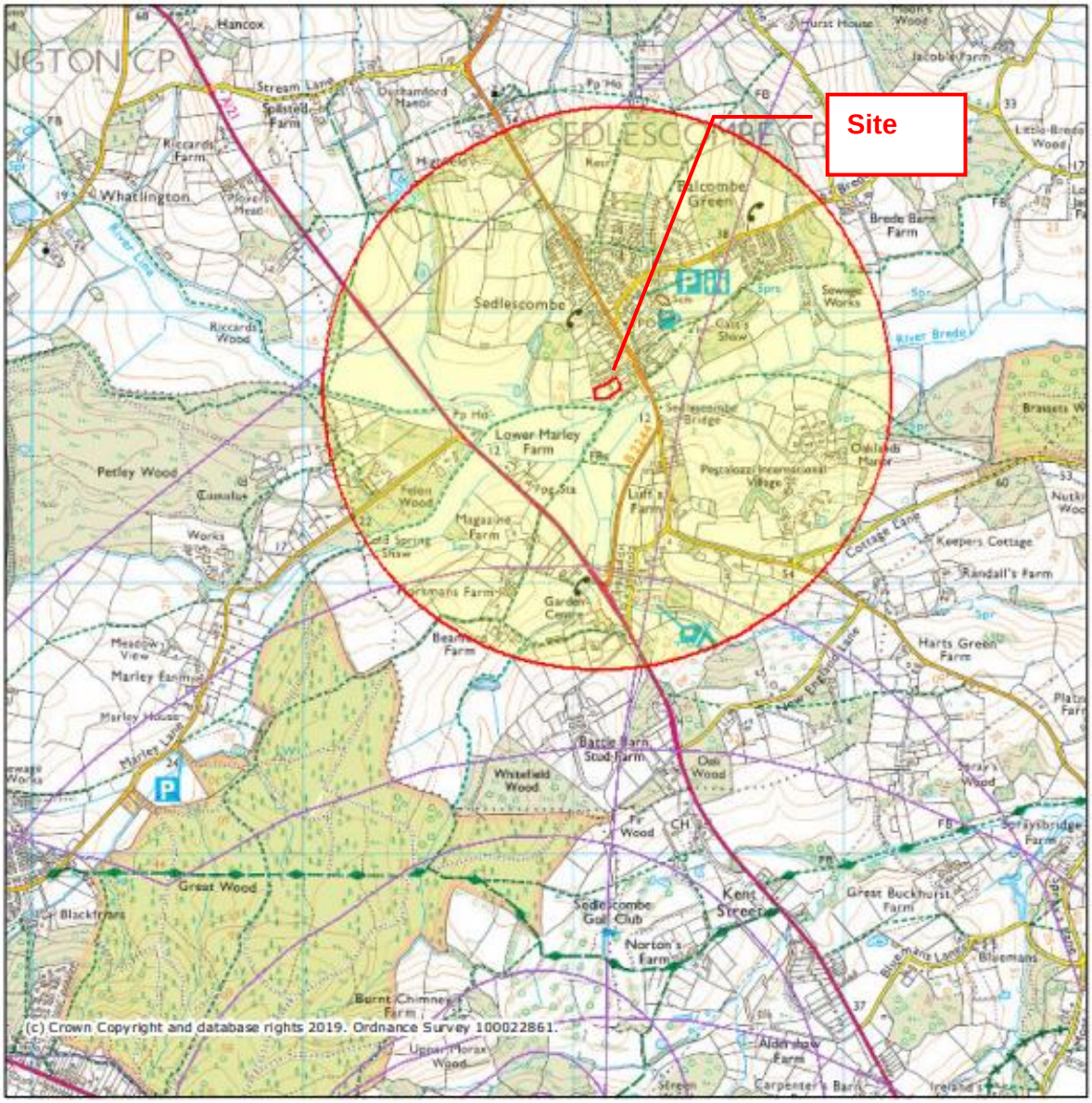
This report aims to provide general advice on ecological constraints associated with any development of the site and includes recommendations for further survey; it is not intended that this report should be submitted with a planning application for development of the site, unless supported by the results of further surveys and a detailed assessment of the effects of the proposed development.

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

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

MAGIC

**Figure 1**




Legend

- 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)
- Proposed Ramsar Sites (England)
- Ramsar Sites (Scotland)
- Ramsar Sites (Wales)

0 0.6 1.2
km

Projection = OSGB36
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ymax = 119500

Map produced by MAGIC on 30 April, 2019.
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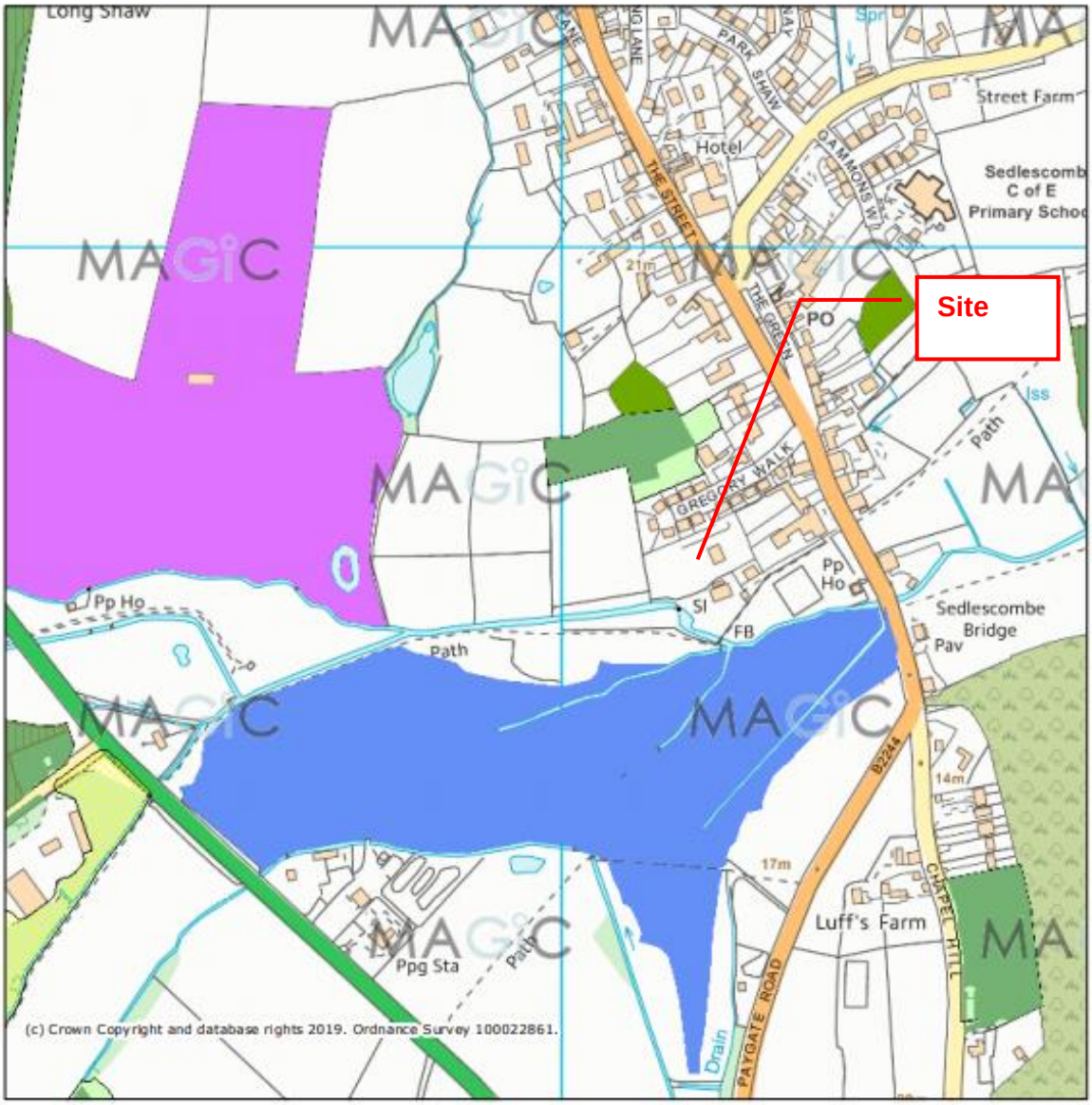
MAGiC

## Figure 2- Habitats




Legend

- Priority Habitat Inventory - Calaminarian Grassland (England)
- Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh (England)
- Priority Habitat Inventory - Good quality semi-improved grassland (Non Priority) (England)
- Priority Habitat Inventory - Lowland Calcareous Grassland (England)
- Priority Habitat Inventory - Lowland Dry Acid Grassland (England)
- Priority Habitat Inventory - Lowland Meadows (England)
- Priority Habitat Inventory - Purple Moor Grass and Rush Pasture (England)
- Priority Habitat Inventory - Upland Calcareous Grassland (England)

0 0.15 0.3
km

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**Figure 3**

# 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)[1].

## 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 30th April 2019 by Katia Bresso CEnv MCIEEM, a qualified professional consultant ecologist with over 15 years of experience[2], licensed bat surveyor (Class Licence CL19, Level 3, Registration Number: 2016-27133-CLS-CLS[3]) and Registered Consultant of the Bat Mitigation Class Licence (BMCL) (formerly Bat Low Impact Class Licence) WML-CL21 with Natural England (Registered Consultant Reference NumberRC056, since May 2015), licensed dormouse surveyor (Class Survey Licences Registration Number 2016-22060-CLS-CLS) and licensed great crested newt surveyor (Class Licence CL08, Level 1, Registration Number: 2015-16268-CLS-CLS and licence 2017-30955-SCI-SCI for box traps). Evidence of the use of the site by species was recorded (i.e. field signs).

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

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

All trees were also checked for potential for roosting bats[4].

[1] 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.

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

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

[4] No internal surveys of buildings were undertaken.

# 3 Baseline Ecological Conditions

## 3.1 Designated Nature Conservation Sites

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

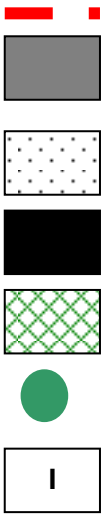
## 3.2 Habitats

The site is surrounded by dwellings to the north and east, the river Brede to the south and pasture with tree lines and hedges to the west.

The site consists of a bungalow and garage with garden. A hard standing access leads to the garage. Trees line most of the boundaries, with coppiced hazel *Corylus avellana*, hornbeam *Carpinus betulus,* cherry laurel *Prunus laurocerasus,* privet *Ligustrum ovalifloim,* rhododendron, pedunculate oak *Quercus robur*, hawthorn *Crataegus monogyna*. A large copper beech *Fagus sylvatica f. purpurea* is present at the back of the garden. Areas of bramble *Rubus fruticosus agg* present along the boundaries had been recently cut prior to the site visit. The north-west corner seemed to have had some earth works/ground levelling shortly before the site visit, the ground being vegetation free and tyre marks clearly visible. Ground flora present in the lawn areas and along the boundaries included daisy *Bellis perennis*, dandelion *Taraxacum officinale agg*., wild angelica *Angelica sylvestris,* lords-and-ladies *Arum maculatum*, nettles *Urtica dioica*, dock *Rumex sp*. Dog's Mercury *Mercurialis perennis* was present along the hazel coppice stools lining the west boundary. On the other side of the trees in the south-west corner of the site, along the river Brede, there is a different ground flora including yellow archangel *Lamiastrum galeobdolon*, ramsons *Allium ursinum*, wood avens *Geum urbanum*.

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

Legend of Phase 1 habitat survey map hereafter:




Site boundary

Hard standing

Bare ground

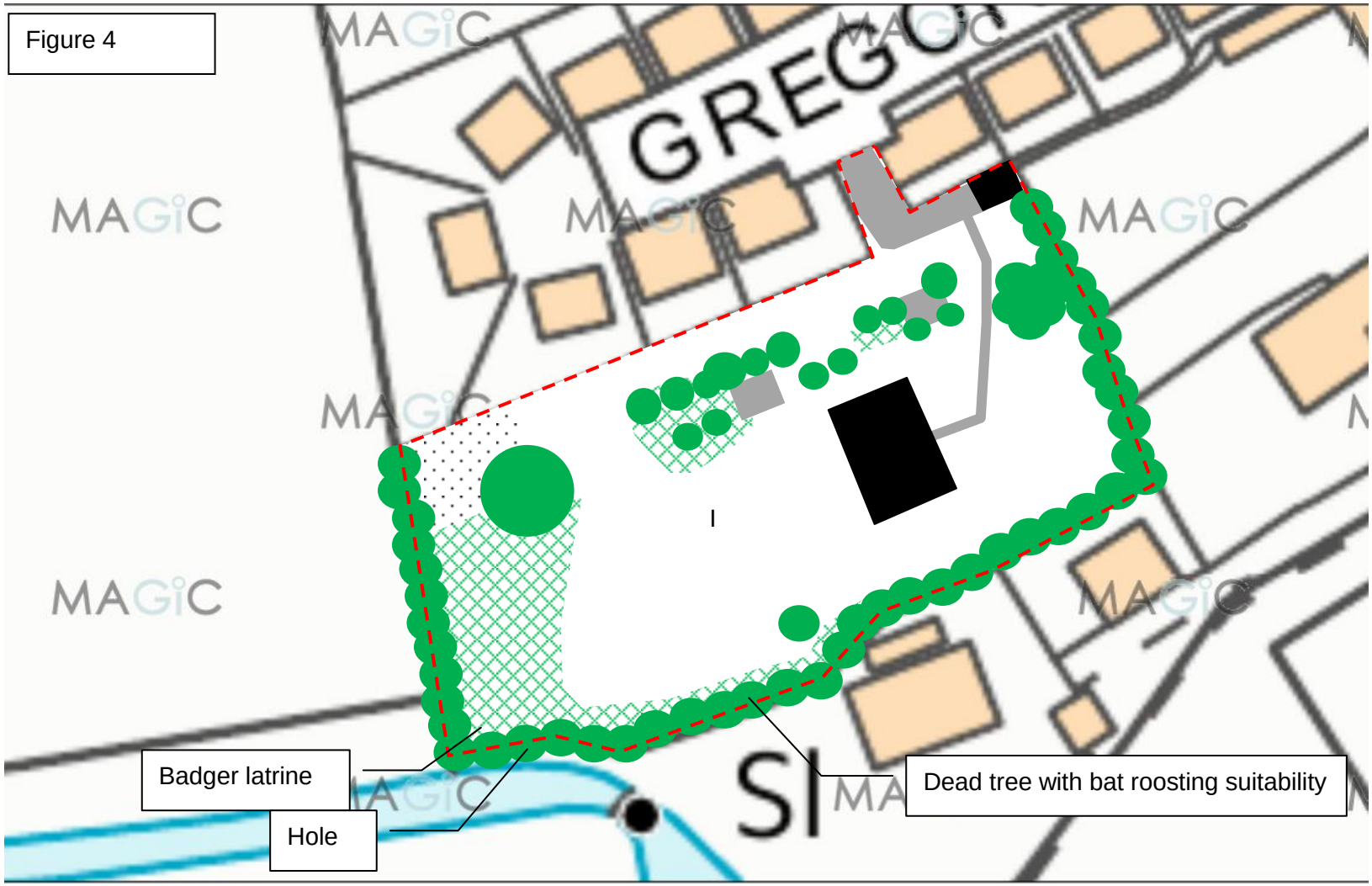
Building

Areas of bramble scrub recently cleared thus bare but regenerating

Individual tree (number and location approximate)

Improved grassland

Figure 4




## 3.3 **Amphibians**

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

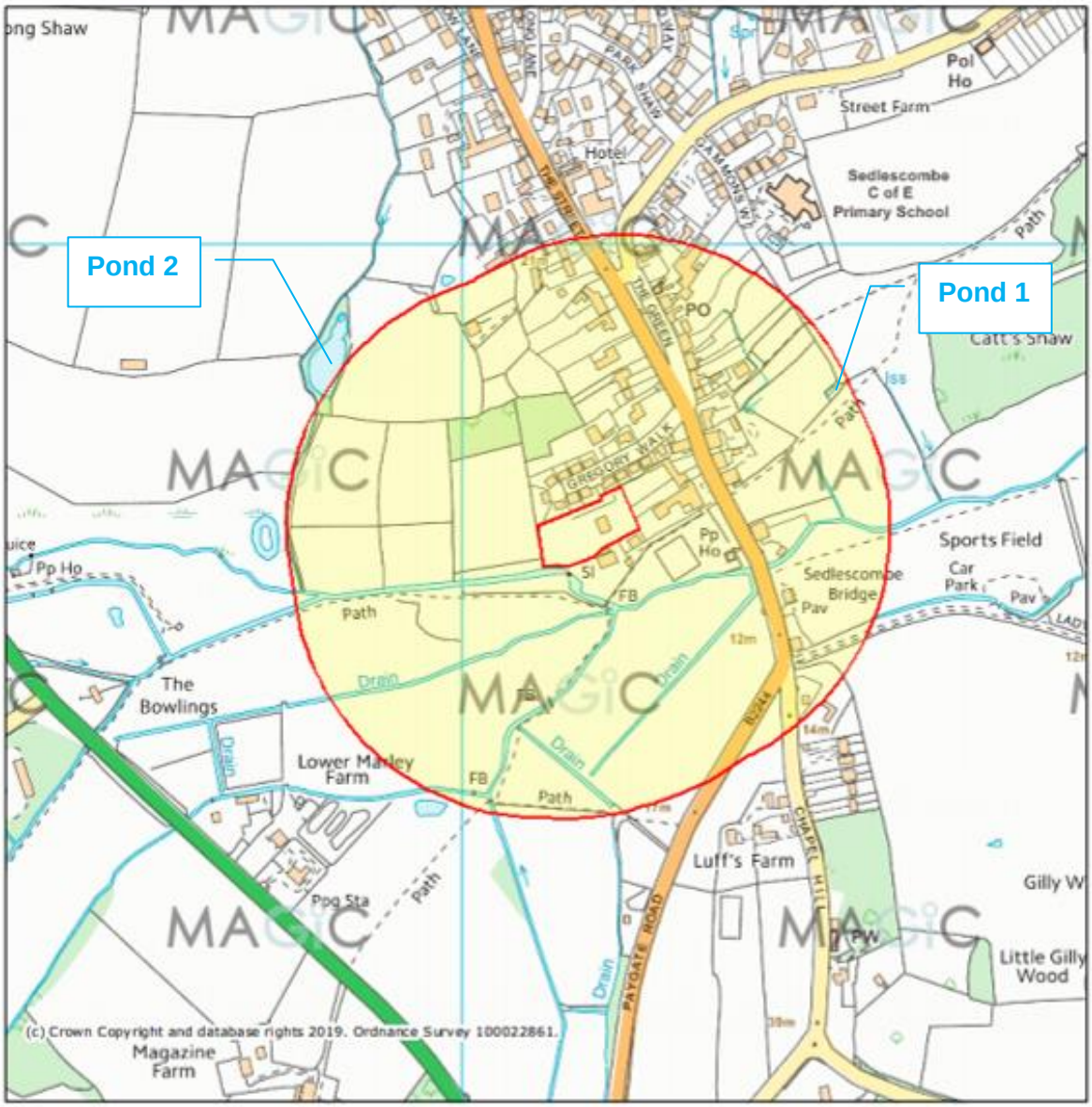
The 'Great Crested Newt Mitigation Guidelines' (English Nature 2001) state the following:
*'Great crested newts have been found to move over considerable distances (up to 1.3km from breeding sites). However, the vast majority of newts will inhabit an area much closer to the pond, and the exact distribution 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.'*

No ponds are present on site or within 100m. There are only two ponds within 250m, being 230m to the east (on the other side of dwellings and a road) and 242m to the north-west. Suitable high quality terrestrial habitat is present near these ponds.

Therefore it is judged unlikely that great crested newts would be present on site.

MAGiC **Figure 5 - 250m radius**




0 0.15 0.3
km

Projection = OSGB36
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ymin = 117100
xmax = 579000
ymax = 118300

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Common amphibian species are afforded limited legal protection under the Wildlife & Countryside Act 1981 (as amended). The great crested newt is afforded full legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). It is also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 and are therefore a European Protected Species (EPS). Great crested newts and common toads are also listed as species of principal conservation importance (See Appendix A).

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

### 3.4 Reptiles

Reptiles, namely slow worms *Anguis fragilis* and common lizards *Zootoca* could be present along the boundaries and grass snakes *Natrix natrix* could be present near the river; although none were seen during the site visit.

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. Kingfisher nests could be present along the banks of the river Brede (nest tunnels are usually 60-90cm long).

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

A badger latrine was found in the south-west corner of the site and a hole was present under the stump of a fallen tree in the corner. This hole could be used by badgers although it seemed disused at the time of site visit and no badger hair or footprint was found there.

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 inter alia 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.

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

## 3.8 Water voles and Otters

The River Brede may be used by water voles *Arvicola terrestris* (although it seems fast flowing thus less suitable for this species) and otters *Lutra lutra*. The hole found under the tree stump could be used by otters as a holt although no footprints or spraints were found near-by.

Water voles are afforded legal protection under section 9 of the Wildlife & Countryside Act 1981 (as amended) (See Appendix A). Otters are afforded full legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). It is also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 and are therefore a European Protected Species (EPS).

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

## 3.9 Bats

The bungalow is judged as offering moderate suitability for roosting bats due to lifted and missing tiles and gaps under lead flashing, which provide suitable gaps for crevice-dwelling bats such as pipistrelle bats.

The garage is judged as offering negligible suitability for roosting bats, having an asbestos corrugated roof with no suitable gaps.

A dead tree present along the south boundary offered moderate suitability for roosting bats.

Bats are expected to commute and forage along the river Brede and throughout the site.

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

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

The legislation makes it a criminal offence to:

- Deliberately capture, injure or kill a bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;

- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat;
- Intentionally or recklessly obstruct access to a bat roost.

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

## 3.10 Other Species

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

Common mammal species such as rabbit (*Oryctolagus cuniculus*), mole (*Talpa europea*), field vole (*Microtus agrestis*) and fox (*Vulpes vulpes*) are likely to be present on site.

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 website[5]:

30/04/2019

Site Check Report Report generated on Tue Apr 30 2019
**You selected the location:** Centroid Grid Ref: TQ78121771
The following features have been found in your search area:

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

| 1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW? | 2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING: |
|---|---|
| **All Planning Applications** | |
| **Infrastructure** | Airports, helipads and other aviation proposals. |
| **Wind & Solar Energy** | |
| **Minerals, Oil & Gas** | |
| **Rural Non Residential** | |
| **Residential** | |
| **Rural Residential** | |
| **Air Pollution** | Livestock & poultry units with floorspace > 500m², slurry lagoons > 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** | |
| **Water Supply** | |
| **Notes** | |
| **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

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

[5] 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

It is recommended that a 5 metre wide buffer zone alongside the river remains free from built development including lighting, domestic gardens and formal landscaping; and could form a vital part of green infrastructure provision.

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.

In order to reduce any risk of pollution incidents such as spillage of oil, diesel, detergents, cement, etc., or an increase in sedimentation from disturbance to the river bed or banks, all work in the vicinity of the watercourse on the site should follow recommendations given in the Environment Agency Pollution Prevention Guidance[6].

## 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** |
| T**his 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. |

[6] Can be found here: https://www.gov.uk/government/collections/pollution-prevention-guidance-ppg

| 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 0.45ha. Below is the risk assessment, should GCNs breed in the ponds present within 100m-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** | |

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

## 4.4 Reptiles

Should reptiles be present, the proposal would result in killing and injuring of reptiles and loss of habitat. It is thus necessary to undertake further surveys to fully understand the impact.

The survey would consist of placing artificial refuges (i.e. 0.5 $m^2$ tins or roofing felt) in areas of suitable reptile habitat and leaving them in place for at least 1 week prior to the survey commencing. The refuges would be checked on seven separate occasions, over four weeks at least, to establish presence / likely absence during suitable weather conditions (i.e. cool weather with no heavy rain but sunny intervals between showers, and ambient air temperatures between 10-20$^{o}$C).

Reptile surveys can be undertaken between March and October, the optimal months being April, May, June and September. Mid-summer temperatures and general activity levels are usually too high for refuges to be successfully used (surveys are highly weather dependent).

## 4.5 Birds

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

The effect on birds can be avoided by undertaking any vegetation clearance outside of the nesting season (which extends from March – August inclusive[7]) or only after a survey has confirmed the absence of nesting birds[8].

## 4.6 Hazel Dormouse

No further work is recommended with regards to dormice.

## 4.7 Badger

The proposed development will impact on badgers by reducing their foraging area and potentially directly impacting their setts.

Badger tunnels can extend to 20m from the entrance holes and are located between 0.2 and several metres deep, depending on the soil and topography. Excavation work and heavy machinery should be kept well away from where it could result in damage to the sett or disturbance to any badger occupying the sett.

It is thus recommended that further surveys be undertaken to find out if indeed the hole is currently used by badgers; the monitoring needs to be done over an extended period of time, eg up to 4 weeks, to see if they're active, using a camera trap.

## 4.8 Water voles and Otters

It is recommended that a 5 metre wide buffer zone alongside the river remains free from built development including lighting, domestic gardens and formal landscaping. If this is the case, any water voles present would remain unimpacted.

The monitoring of the hole present in the south west corner with a camera trap will also allow to assess whether it is used by otters and thus help assess any impact of the proposal onto the species.

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

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

## 4.9 Bats

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

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

**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).<br><br>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)<br><br>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] |

If the buildings are to be demolished and the dead tree to be removed, further surveys should be carried out as per above table.

Besides, as lighting can be detrimental to roosting, foraging and commuting bats[9], the recommendations from the Bat Conservation Trust and the Institution of Lighting Professionals, titled 'Guidance Note 8 Bats and Artificial Lighting'[10], should be considered, when designing any lighting scheme for the proposed development. In particular, it is important to ensure that a dark corridor is established along the river Brede and 5m wide buffer zone.

## 4.10 Other Species

There is some potential for hedgehogs to be present on site. Therefore any areas where mammals could be sheltering should be hand searched prior to disturbance. Excavations should not be left open for animals to fall into, or planks of wood should be placed to enable any animals which may fall into such a hole to escape.

[9] http://www.bats.org.uk/pages/bats_and_lighting.html and http://www.batsandlighting.co.uk/index.html for more information

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

### 4.11 Additional Recommendations: Enhancements

Ecological enhancements should where possible be incorporated into the proposed development to contribute towards the objectives of planning legislation below:
In July 2018, the UK Government published the revised National Planning Policy Framework (NPPF) which states that "opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity" (Para 175).

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 an artificial otter hold near the River Brede and developing thick scrub around it to ensure no access by dogs and public.
- Provision of hedgehog nesting boxes[11].
- Provision of 12cm square gaps under any new fencing to allow hedgehogs access onto all garden areas.
- Provision of ready-made bird boxes (sparrow terrace timber boxes or house martin nests for instance[12] or mix of open-fronted and hole-nesting boxes and constructed from woodcrete)[13].
- 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 Box[14], Habibat[15], EcoSurv Bat Box or Schwegler Bat tube[16])[17].
- Provision of bat friendly planting within the gardens[18]
- Provision of barn owl boxes[19] as the surrounding landscape is judged suitable[20]
- Provision of owl boxes in trees[21]
- Establish climbing plants on walls and other vertical structures[22].
- Establish wildflower plug/bulb planting in amenity grassland and private gardens [23].

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

[12] to benefit these declining urban bird species

[13] 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.

[14] http://www.teach-organic.org.uk/uploadedfiles/CMS/pdf/bat_box.pdf

[15] Habibat 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/

[16] 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

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

[18] More information can be found here http://www.bats.org.uk/publications_download.php/231/Encouraging_bats_English_2010.pdf

[19] More information can be found here: http://www.barnowltrust.org.uk/infopage.html?Id=42

[20] http://www.barnowltrust.org.uk/content_images/gallery/ENGLAND_Southern1159973743.jpg

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

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

- Integration of Sustainable Urban Drainage Systems (SUDS)[24].
- Integration of green or grey roofs[25],[26],[27].
- Consider using grid mesh system (or Ground Reinforcement Grids) with topsoil and seeding with a wildflower species mix, to car parking areas and new access drives to retain some vegetation as well as drainage, or Gravel turf[28].
- Establish Fruit Espaliers[29].

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

[24] http://www.ciria.org.uk/suds/index.html for more information

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

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

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

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

[29] 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. [30]
- 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://www.magic.gov.uk/magicmap.aspx


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[30] 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)<br>Dormice<br>Great crested newts<br>Otters<br>Sand lizards and smooth snakes | The Wildlife and Countryside Act 1981 (as amended) & The Conservation of Habitats and Species Regulations 2017. These make it an offence to:<br>• Deliberately or recklessly capture, injure or kill any wild animal of a European protected species<br>• Deliberately or recklessly disturb wild animals of any such species<br>• Damage or destroy their breeding site or resting place<br>• 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.<br>Disturbance of animals includes in particular any disturbance which is likely<br>• to impair their ability:<br>- to survive, to breed or reproduce, or to rear or nurture their young, or<br>- in the case of animals of a hibernating or migratory species, to hibernate or migrate;<br>• 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 | The Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:<br>• intentionally, or recklessly, kill or injure any of the above species, and/or;<br>• 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 | The Protection of Badgers Act 1992. This makes it an offence to:<br>• Willfully killing, injures or takes, or attempts to kill, injure or take, a badger.<br>• 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.<br>• 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.<br>• Selling or offering for sale a live badger, having possession or control of a live badger.<br>• 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) 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 2017 (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.

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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 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 this 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

**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_7714

IMG_7715

IMG_7716

IMG_7717

IMG_7718

IMG_7719

IMG_7720

IMG_7721

IMG_7722

IMG_7723

IMG_7724

IMG_7725

IMG_7726

IMG_7727

IMG_7728

IMG_7729 River Brede

IMG_7730

IMG_7732

IMG_7733

IMG_7738 Hole

IMG_7739 Badger latrine

IMG_7740

IMG_7741

IMG_7742

IMG_7743

IMG_7744

IMG_7745

IMG_7746

IMG_7747

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