

# Preliminary Ecological Appraisal

**Harlands, Highcross Road,  
Southfleet, Kent DA13 9PH**

*Report to:*  
Mr. Lee Clarke

7<sup>th</sup> September 2023



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## 1. Summary

### *Background*

- 1.1 Land at Harlands has been proposed as the location of a new development project that includes demolition of existing structures and construction of a new residential dwelling.
- 1.2 Calumma Ecological Services was commissioned to undertake a preliminary ecological assessment of the site that advises on the need for additional survey work and mitigation.

### *Priority Habitats*

- 1.3 The proposed development site includes a modified grassland field that has not previously been designated as priority habitat.
- 1.4 A mature hedgerow and trees are located within along the northern and south eastern boundaries.
- 1.5 Several outbuildings, sheds and other structures are located within the application area.
- 1.6 The site is situated within the London Area Greenbelt.**
- 1.7 The site is located within ~ 70 m of a pond.**

### *Birds*

- 1.8 Structures and woody vegetation offer potential for nesting birds. There was no evidence of nesting barn owl.
- 1.9 Care must be taken to ensure that nesting birds are not disturbed during proposed works.**

### *Bats*

- 1.10 Structures proposed for demolition do not include features suitable for roosting bats.
- 1.11 Bats could forage and/or commute over the application area.
- 1.12 Any external lighting should follow appropriate guidelines to minimise disturbance to foraging bats.**

### *Reptiles*

- 1.13 Available ground vegetation is characterised by short sward grassland that is managed on a regular basis making the site suboptimal for reptiles.
- 1.14 Since reptiles likely occupy adjacent areas of suitable habitat, precautionary mitigation is recommended.**

*Amphibians*

- 1.15 No ponds are located within the application area.
- 1.16 Four ponds are located within 500 m of the site boundary, three of which are located within 250 m. One pond is located within 70 m of the site boundary.
- 1.17 Proposed development work will not negatively impact the local conservation status of widespread amphibian species.
- 1.18 Appropriate survey and/or mitigation for great crested newt is recommended.**

*Badgers*

- 1.19 No evidence of badger was observed within the application area.

*Dormouse*

- 1.20 Habitat suitable for dormouse will not be disturbed by the proposed development.

*Beaver, Otter and Water Vole*

- 1.21 Available habitat is considered unsuitable for beaver, otter or water vole.

*Hedgehog*

- 1.22 Hedgehog could shelter and/or forage within the local area.
- 1.23 Precautionary mitigation for hedgehog is recommended.**

*Invertebrates*

- 1.24 Available habitat within the proposed development area is considered to offer opportunities for widespread species of invertebrates.

*Other Considerations*

- 1.25 Appropriate biodiversity enhancement features should be included with the proposed development project.**

## 2. Site Location and Assessment

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<b>Site Name:</b>	Land at Harlands, Southfleet- <i>the site</i> ; Fig. 2.1
<b>Grid Reference:</b>	TQ 596 705
<b>County:</b>	Kent
<b>Planning Authority:</b>	Dartford Borough Council
<b>Planning Refs:</b>	Tbd
<b>National Character Area:</b>	North Kent Plain

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<b>Client:</b>	Mr. Lee Clarke
<b>Proposed Disturbance:</b>	Demolition of existing structures and construction of new residential dwelling.
<b>Survey Request:</b>	Preliminary Ecological Appraisal

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<b>Surveyor:</b>	Lee Brady PhD, BSc (Hons), MCIEEM
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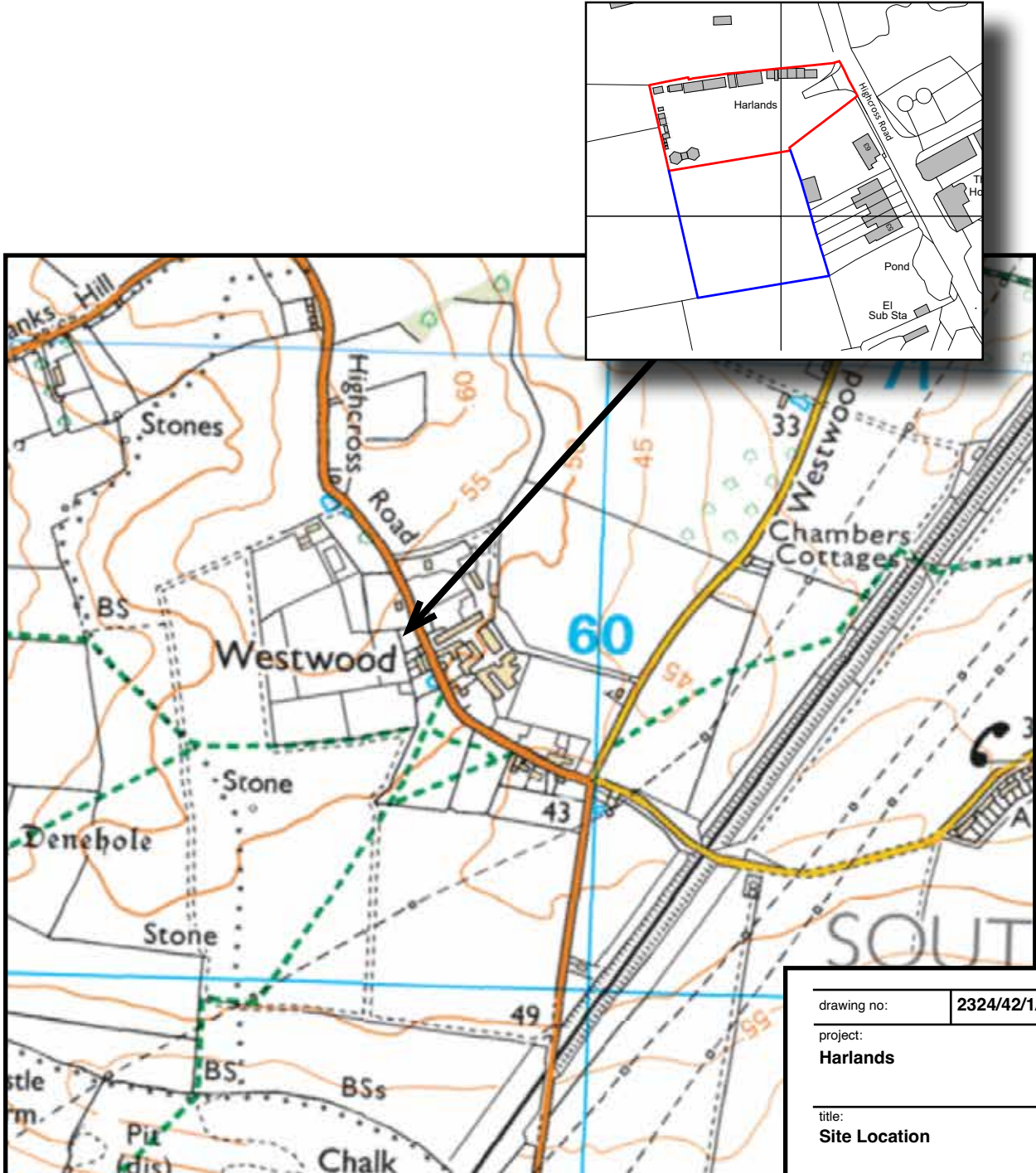
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<b>Assessment Period:</b>	6 <sup>th</sup> September 2023
<b>Limitations:</b>	This assessment did not include detailed surveys of protected species. Preliminary ecological appraisals assess likely presence of species on a site and recommend follow-up survey work, management and mitigation as appropriate. This report may need to be updated if new information becomes available (e.g. ponds not previously known to be present).
<b>Reliance:</b>	Information, including any survey data, contained within this report must only be relied upon for a maximum period of one year from the date of the report.

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# Fig. 2.1 Land at Harlands, Highcross Road, Southfleet, Kent (TQ 596 705)

Location of study site.



drawing no:	2324/42/1/2.1
project:	<b>Harlands</b>
title:	<b>Site Location</b>
scale: N.T.S.	date: <b>Sep 2023</b>



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### 3. Legal Protection and Planning

The protection of animals and plants in the United Kingdom is governed by several different regulations and conventions. Principally, these include:

- The Wildlife & Countryside Act 1981 (as amended);
- The Habitats and Species Directive (92/43/EC) enacted through the Conservation of Habitats and Species Regulations 2010 (updated in 2017);
- The Natural Environment and Rural Communities (NERC) Act 2006;
- The Hedgerow Regulations 1997;
- The National Planning Policy Framework (as amended);
- Biodiversity Net Gain.

#### 3.1 The Wildlife & Countryside Act

The Wildlife and Countryside Act was first introduced in 1981 and has since been amended and updated several times (e.g. Countryside and Rights of Way Act 2000).

The Wildlife and Countryside Act aims to balance conservation efforts with the needs of society and landowners, and provides a framework for the management and protection of wildlife and habitats in the UK.

The main provisions of the Wildlife and Countryside Act include:

- The protection of certain species of plants and animals, including birds, mammals, reptiles, and amphibians, from being killed, injured, or taken from the wild;
- The prohibition of certain methods of killing or taking animals, including the use of poisons, traps, and nets;
- The designation of Sites of Special Scientific Interest (SSSIs), which are areas of land that are of special scientific interest and are given legal protection to preserve their biodiversity and natural beauty;
- The regulation of hunting and killing of certain animals, such as deer, hares, and rabbits;
- The protection of hedgerows, trees, and other natural features in the countryside;
- The regulation of trade in endangered species and the control of invasive non-native species.

### 3.2 Conservation of Habitats and Species Regulations

The Conservation of Habitat and Species Regulations are designed to protect and conserve natural habitats and species of animals and plants that are of special importance. The regulations stem from the European Union's Habitats Directive, which was implemented in the UK through the Conservation of Habitats and Species Regulations 2010 (updated in 2017).

Under these regulations, certain habitats and species are afforded legal protection, including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). These areas are designated based on their importance for conservation and biodiversity, and activities that may damage them are regulated or prohibited.

The regulations also require public authorities to conduct an appropriate assessment of any plans or projects that may have an impact on these designated areas. If it is determined that the plans or projects may have a significant effect on the habitats or species, they must be subject to further scrutiny and potential mitigation measures.

The Habitat Regulations apply to species in a number of ways. Firstly, certain species are designated as 'European Protected Species' (EPS), meaning they are afforded legal protection under the regulations.

The regulations prohibit any deliberate capture, killing or disturbance of EPS species, as well as damage to or destruction of their breeding or resting sites. In addition, public authorities must take steps to ensure that these species are protected, and that their habitats are maintained or improved.

The regulations also require public authorities to assess the potential impact of plans or projects on species and their habitats. If a project is likely to have a significant effect on a protected species, it may require a specific 'derogation' to be granted before it can proceed. This means that the public authority must demonstrate that the project is necessary for certain reasons, such as for public health or safety, and that there are no alternative solutions. Mitigation works that involve EPS usually requires successful application for an appropriate licence.

#### 3.2.1 Habitats Regulations Assessment

Where a proposed development project is located within or close to an area designated or proposed for designation under the Birds and/or Habitats Directives (European sites) and/or the Ramsar Convention (Ramsar sites) an Appropriate Assessment under Regulation 61(1) of the Habitat Regulations may be required.

Regulation 63 states that:

*“A competent authority, before deciding to undertake, or give any consent, permission, or other authorisation for a plan or project which:*

*(a) is likely to have significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects); and*

*(b) is not directly connected with or necessary to the management of the site must make an appropriate assessment of the implications for the site in view of that site's conservation objectives”.*

The decision as to whether an Appropriate Assessment is required or not is based upon an assessment of 'Likely Significant Effect' (LSE), which is recognised as being a statement that the anticipated effects of the proposal will be more than trivial. That is, the anticipated changes resulting from the proposal have the potential to impact on a designated, or proposed to be designated, European/Ramsar site. It does not automatically follow that an impact will occur, or that the impact would be significant, with a decision of LSE being purely an indication of the need for an Appropriate Assessment.

For more information see:

<https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>

### **3.3 The Natural Environment and Rural Communities Act**

The Natural Environment and Rural Communities Act (NERC) seeks to promote and protect biodiversity in the UK. The act recognizes the importance of biodiversity for the health and wellbeing of humans, as well as for the functioning of ecosystems and the provision of ecosystem services.

The NERC establishes the duty for public authorities to have regard for the conservation and enhancement of biodiversity in the exercise of their functions. This means that public authorities must consider the impact of their actions on biodiversity and take steps to mitigate any negative impacts.

The NERC also establishes measures to protect important wildlife habitats, such as Sites of Special Scientific Interest (SSSIs), and to promote sustainable management of natural resources. The act includes provisions for the creation of biodiversity strategies and the establishment of biodiversity targets.

In addition, the NERC provides for the management of invasive non-native species, which can have a negative impact on biodiversity by outcompeting native species and disrupting ecosystems.

#### **3.3.1 Priority Habitats and Priority Species**

Previous planning policy refers to UK Biodiversity Action Plan (BAP) habitats and species as being a material consideration in the planning process. Although such habitats and species remain material considerations in the planning process, they are now described as *Species and Habitats of Principal Importance for Conservation* in England, or simply priority habitats and priority species. The list of habitats and species is still derived from Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. In 2007, a revised list was produced, following a 2-year review of UK BAP processes and priorities, which included a review of the priority species and habitats. Following the review, the list of UK BAP priority species increased from less than 600 to 1,150.

The UK BAP was succeeded by the 'UK Post-2010 Biodiversity Framework' in July 2012. The UK list of priority species, however, remains an important reference source and has been used to help draw up statutory lists of priority species in England, Scotland, Wales and Northern Ireland, as required under Section 41 of the Natural Environment and Rural Communities Act 2006 (England), Section 7 of the Environment (Wales) Act 2016, Section 2(4) of the Nature Conservation (Scotland) Act 2004, and Section 3(1) of the Wildlife and Natural Environment Act (Northern Ireland) 2011.

Note that as was previously the case when it was a BAP priority species, hen harrier continues to be regarded as a priority species although it does not appear on the Section 41 list.

### **3.4 The Hedgerow Regulations**

The Hedgerow Regulations aim to protect important hedgerows in the countryside, which are an important feature of the UK's rural landscape and provide habitat for a range of wildlife.

Under the regulations, it is illegal to remove or destroy most countryside hedgerows without permission from the local planning authority. Hedgerows that are protected under the regulations are those that meet certain criteria, including age, length, and species composition. The regulations also require that new hedgerows are planted to replace those that are removed, to ensure that there is no net loss of hedgerow habitat.

The Hedgerows Regulations seek to strike a balance between the protection of important hedgerows and the needs of farmers and landowners. The regulations recognize that hedgerows can provide important functions for agriculture, such as acting as windbreaks and providing shelter for livestock, and allow for certain exemptions for hedgerow removal in certain circumstances.

### **3.5 The National Planning Policy Framework**

The National Planning Policy Framework (NPPF) is a document in the UK that sets out the government's planning policies and guidance for local planning authorities. The NPPF was first introduced in 2012 and has since been updated several times.

The main provisions of the NPPF include:

- The promotion of sustainable development, which balances economic, social, and environmental considerations;
- The protection of the natural environment, including biodiversity, landscapes, and heritage assets;
- The promotion of sustainable transport and the reduction of greenhouse gas emissions;
- The promotion of high-quality design and the provision of affordable housing;
- The encouragement of healthy communities and the provision of infrastructure, such as schools and healthcare facilities;
- The promotion of economic growth and the provision of employment opportunities;
- The NPPF provides guidance to local planning authorities on how to make planning decisions that are consistent with the government's planning policies. The document aims to ensure that planning decisions are made in a transparent and consistent manner, and that they reflect the needs of local communities.

For more information see:

<https://www.gov.uk/government/publications/national-planning-policy-framework--2>

### **3.6 Biodiversity Net Gain**

National policy sets out that planning should provide biodiversity net gains where possible. National Planning Policy Framework Paragraphs 170(d), 174(b) and 175(d) refer to this policy requirement and the Natural Environment Planning Practice Guidance (PPG) provides

further explanation on how this should be done. Delivering net gain is also referred to in the National Infrastructure Commission's Design Principles, National Policy Statements and the National design guide.

Biodiversity net gain (BNG) is a strategy to develop land and contribute to the recovery of nature. It is a way of making sure the habitat for wildlife is in a better state than it was before development. The Environment Act sets out the following key components of mandatory biodiversity gain:

- Amends Town & Country Planning Act (TCPA);
- Minimum 10% gain required calculated using the Biodiversity Metric & approval of a biodiversity gain plan;
- Habitat secured for at least 30 years via planning obligations or conservation covenants;
- Delivered on-site, off-site or via a new statutory biodiversity credits scheme;
- National register for net gain delivery sites.

From November 2023, developers will be required to leave development sites 10% better off for biodiversity than when the development is completed. The UK government is proposing to sell biodiversity credits to developers if the required biodiversity net gains cannot be achieved on-site or through the off-site market. Private landowners can help deliver these gains for both biodiversity and sometimes other ecosystem services.

For more information see:

<https://www.local.gov.uk/pas/topics/environment/biodiversity-net-gain>

### **3.7 Species Protections**

Species receive legal protection under different legislation that may prohibit sale, disturbance and/or killing/injury. The following is a summary of some of the species/groups that are most frequently impacted by development related projects.

#### **3.7.1 Plants**

A number of plant species are protected under Section 13 of the amended Wildlife and Countryside Act. It is an offence to intentionally pick, uproot or destroy any wild plant listed in Schedule 8 of the Act. The list includes both higher plants including several of the rarer orchids and lower plants including several mosses and lichens.

#### **3.7.2 Birds**

All wild birds (birds in a wild state resident in or visiting Great Britain) and their nests and eggs are protected under the Wildlife & Countryside Act. Particular emphasis is given to the protection of breeding birds. With certain exceptions, it is an offence to intentionally kill, injure or take wild birds, take, damage or destroy the nest of wild birds while in use or being built, take or destroy the eggs of wild birds, disturb wild birds listed in Schedule 1 when nest building or at a nest containing eggs or young, or disturb dependent young of wild birds.

#### **3.7.3 Bats**

All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations and Schedule 5 of the

Wildlife and Countryside Act. It is an offence for anyone to intentionally kill, injure or handle a bat, to possess a bat (whether live or dead), deliberately disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter.

#### 3.7.4 Reptiles

All native reptiles are listed on Schedule 5 of the Wildlife and Countryside Act. It is an offence for anyone to intentionally kill or injure a so-called 'widespread' reptile species (viviparous lizard, slow-worm, grass snake or adder), or sell or offer for sale without a licence.

The sand lizard and smooth snake, their breeding sites or resting places (any structure that may offer refuge) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations. It is an offence for anyone intentionally to kill, injure or handle either of these two species, to possess an animal (whether live or dead), deliberately disturb a sheltering animal, or sell or offer an animal for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by sand lizards and smooth snakes for shelter.

#### 3.7.5 Amphibians

All native amphibians are listed on Schedule 5 of the Wildlife and Countryside Act. It is an offence for anyone to sell or offer for sale any native amphibian species without a licence.

The great crested newt and natterjack toad, their breeding sites (typically ponds) or resting places (typically a terrestrial habitat that offers refuge) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations. It is an offence for anyone to intentionally kill, injure or handle either of these two species, to possess an animal (whether live or dead), deliberately disturb a sheltering animal, or sell or offer an animal for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by natterjack toads or great crested newts for shelter.

#### 3.7.6 Badger

Badgers and their setts are protected under the Protection of Badgers Act 1992, which makes it illegal to kill, injure or take badgers or to interfere with a badger sett. The term 'badger sett' is normally understood to mean the system of tunnels and chambers, in which badgers live, and their entrances and immediate surrounds. The 1992 Act specifically defines a sett as "any structure or place which displays signs indicating current use by a badger".

#### 3.7.7 Hazel Dormouse

Individual animals, their breeding sites or resting places (nests) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations and Schedule 5 of the Wildlife and Countryside Act. It is an offence for anyone intentionally to kill, injure or handle a dormouse, to possess a dormouse (whether live or dead), deliberately disturb a dormouse, or sell or offer a dormouse for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by dormice for shelter.

#### 3.7.8 Beaver, Otter and Water Vole

Water voles receive full protection under Schedule 5 of the Wildlife & Countryside Act. It is an offence to deliberately, capture, injure or kill them or to damage, destroy or obstruct their breeding or resting places. It is also an offence to disturb them in their breeding or resting places. Otters and beavers are protected under the Conservation of Habitats and Species Regulations. It is an offence for anyone to intentionally kill, injure or handle these species, to possess an otter or beaver (whether live or dead), deliberately disturb an otter or beaver, or

sell or offer one for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by otter or beaver for shelter.

### 3.7.9 Hedgehogs

Hedgehogs are protected against being killed or taken by certain methods under Schedule 6 the Wildlife and Countryside Act 1981.

### 3.7.10 Invertebrates

Some invertebrates including several species of mollusc, crustacean, beetle, cricket, butterfly and moth are protected under Schedule 5 of the Wildlife and Countryside Act against deliberate killing, injuring and taking. Other species receive partial protection under the same act (e.g. against taking for sale).

## 4. Desktop Study

### 4.1 MAGIC Geographic Information System

<http://magic.defra.gov.uk>

#### 4.1.1 Habitat Designations

Nearby priority habitat designations are illustrated in Appendix I.

Information available through MAGIC indicates that habitat within the application area has no priority habitat designations associated with it.

Other priority habitats located within the local area include:

- Deciduous woodland (93 m north).

#### 4.1.2 Statutory Designated Areas

The locations of nearby statutory designated areas are illustrated in Appendix II.

Information available through MAGIC indicates that the proposed development site has no statutory designations associated with it.

Other statutory designated sites located nearby include:

- Darenth Wood SSSI (1.5 km north west);
- Swanscombe Peninsula SSSI (2.9 km north east).

#### 4.1.3 Non-statutory Designated Areas

The locations of nearby non-statutory designated areas are illustrated in Appendix II.

Information available through MAGIC indicates that land within the proposed development site is located within the London Area Greenbelt.

#### 4.1.4 Site of Special Scientific Interest Impact Risk Zone

Natural England has created a tool that is accessed via MAGIC to determine the risk of development impact on designated areas (including SSSIs, SACs, SPAs and Ramsar sites). Available information indicates that the proposed development **is located** within a SSSI risk zone.

The SSSI risk tool provides guidance on when the Local Planning Authority should consult Natural England (Table 4.1). Natural England will then provide advice on any potential impacts and how these might be avoided or mitigated.



<b>Planning Category</b>	<b>Consult NE if Proposals Include</b>
All Planning Applications	-
Infrastructure	Airports, helipads and other aviation proposals.
Wind & Solar Energy	Wind turbines.
Minerals, Oils & 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, livestock & poultry units with floorspace > 500m <sup>2</sup> , slurry lagoons & digestate stores > 200m <sup>2</sup> , manure stores > 250t).
Combustion	General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
Waste	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.
Composting	Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.
Discharges	Any discharge of water or liquid waste of more than 5m <sup>3</sup> /day to ground (ie to seep away) or to surface water, such as a beck or stream.
Water Supply	-
Notes	-

**Table 4.1.** SSSI Risk Assessment for proposed development site: When to consult Natural England.

#### 4.1.5 European Protected Species Licences

The locations of nearby EPS licences are illustrated in Appendix III.

Information available via MAGIC reveals that EPS mitigation licences have been issued for works affecting brown long-eared bats within 2.5 km of the proposed development site (2018-34833-EPS-MIT). Licence have also been issued for dormouse within 2.6 km (2020-49147-EPS-MIT).

#### 4.1.6 Great Crested Newt Class Survey Licence Returns

The locations of nearby great crested newt records are illustrated in Appendix IV.

Information available via MAGIC reveals that in 2015 great crested newt was recorded within 1.1 km of the proposed development site.

## **4.2 Kent Landscape Information System (KLIS)**

<https://webapps.kent.gov.uk/KCC.KLIS.Web.Sites.Public/Default.aspx>

### **4.2.1 Kent Habitat Survey 2012**

Habitat designations are illustrated in Appendix V.

The 2012 Kent Habitat Survey characterised the study area as (1) improved grassland and (2) built-up areas.

### **4.2.2 Local Wildlife Sites**

Nearby designations are illustrated in Appendix VI.

Information available through KLIS indicates that land within the site has no Local Wildlife Site designations associated with it. The proposed development area is situated within 1.13 km of Ash Level and South Richborough Pasture Local Wildlife Site.

## **4.3 Records Searches**

Available records for protected species have been obtained from Kent Reptile and Amphibian Group.

*Note that the availability of records is directly related to survey effort. A lack of records does not necessarily indicate the absence of protected species.*

### **4.3.1 Kent Reptile and Amphibian Group (KRAG)**

KRAG is one of the primary data holders for reptiles and amphibians in Kent (including areas of former West Kent now included in Greater London). Information supplied by KRAG indicates that common frog common toad, smooth newt and great crested newt have been recorded from the local area (Appendix VII). The closest validated great crested newt record was reported from Beacon Wood Country Park, 1.12 km to the north west.

Viviparous lizard, slow-worm and grass snake have also been recorded from the local area. The closest recorded observation was for viviparous lizard, reported from Darenth Wood, 1.12 km to the west.

KRAG has prepared a summary risk assessment that describes the likely presence of herpetofauna (Table 4.2). The risk assessment is based on statistical analysis of available distribution data but does not take into consideration the quality of habitat available within the proposed development site.

<b>Species</b>	<b>Likelihood of Presence</b>
<i>Amphibians</i>	
Common Frog	<b>HIGH</b>
Common Toad	<b>HIGH</b>
Natterjack	<i>n/a</i>
Smooth Newt	<b>HIGH</b>
Palmate Newt	Possible
Great Crested Newt	Possible
<i>Reptiles</i>	
Viviparous Lizard	Likely
Slow-worm	Possible
Sand Lizard	Unlikely
Grass Snake	Possible
Adder	Possible
Smooth Snake	<i>n/a</i>

**Table 4.2.** Herpetofauna risk assessment prepared by Kent Reptile and Amphibian Group.

## 5. Proposed Development and Summary Site Description

### 5.1 Site Location

The proposed development site includes a field that is located in a rural location outside Swanscombe, within the North Kent Plain National Character Area. The site is accessed from Highcross Road.

#### 5.1.1 North Kent Plain National Character Area

##### 5.1.1.1 Area Description

The North Kent Plain National Character Area is a fertile agricultural area between the Thames Estuary and the Kent Downs, known as the "Garden of England". It has a diverse coastline with chalk and soft cliffs, intertidal sand and mud, salt marshes, sand dunes, and shingle beaches. The area has significant urban development, including coastal towns and the influence of London and the Medway towns. Canterbury is a World Heritage Site with significant religious and architectural history.

##### 5.1.1.2 Characteristics

The North Kent Plain is characterised by an open, low and gently undulating landscape, with high- quality, fertile, loamy soils dominated by agricultural land uses. The area's geology is dominated by Palaeogene clays and sands, underlain by the chalk. The area includes a diverse coastline (both in nature and orientation), made up of cliffs, intertidal sand and mud, salt marshes, sand dunes and shingle beaches. Much of the coastal hinterland has been built on, and the coast itself has been modified through the construction of sea walls, harbours and piers.

Large arable/horticultural fields with regular patterns and rectangular shapes predominate with a sparse hedgerow pattern. Orchards and horticultural crops characterise central and eastern areas, and are often enclosed by poplar or alder shelterbelts and scattered small woodlands. Woodland occurs on the higher ground around Blean and in smaller blocks to the west, much of it ancient and of high nature conservation interest.

The Stour and its tributaries are important features of the eastern part of the NCA, draining eastwards into the North Sea, with associated wetland habitats including areas of grazing marsh, reedbeds, lagoons and gravel pits. The River Medway cuts through the NCA as it flows into the Thames Estuary.

Other semi-natural habitats include fragments of neutral, calcareous and acid grassland, and also heathland.

The area has rich evidence of human activity from the Palaeolithic period. Key heritage assets include Roman sites at Canterbury, Reculver and Richborough; the Historic Dockyard at Chatham; military remains along the coast; and historic parks and buildings. Large settlements and urban infrastructure (including lines of pylons) are often visually dominant in the landscape, with significant development around Greater London and the Medway Towns, as well as around towns further east and along the coast. Major rail and road links connect the towns with London.

## 5.2 Proposed Development

Demolition of existing buildings/structures and construction of new residential dwelling with associated parking and landscaping.

The proposed development site is approx. 0.21 Ha and illustrated in Fig. 5.1.

## 5.3 Aquatic Habitat

Ponds located within the local area have been identified using the following sources:

- Ordnance Survey (<https://www.bing.com/maps>)
- MAGIC (<http://magic.defra.gov.uk>)
- Google Earth

No ponds are located within the application area. Three ponds are known to be located within 500 m of the site boundary, two of which are located within 250 m. One pond is located within ~ 70 m.

The search area for waterbodies is illustrated in Fig. 5.2.

## 5.4 Terrestrial Habitat

Land within the proposed application area includes a modified grassland field bordered to the north and south east by hedgerow and mature trees.

Habitat available within the proposed development area is illustrated in Figs. 5.3 - 5.4.

## 5.5 Buildings

The development area includes several outbuildings, barns, sheds and animal enclosures.

B1 – Collection of outbuildings/sheds (to be demolished);

B2 – Barn (retained);

B3 – Garage (retained);

B4 – Stables (retained);

B5 – Stables (retained);

B6 – Chicken coop (retained);

B7 – Shed (to be demolished);

B8 – Shed (to be demolished);

B9 – Chicken coop (to be demolished);

B10 – Chicken coop (to be demolished);

B11 – Shed (to be demolished);

B12 – Large chicken coop (to be demolished).

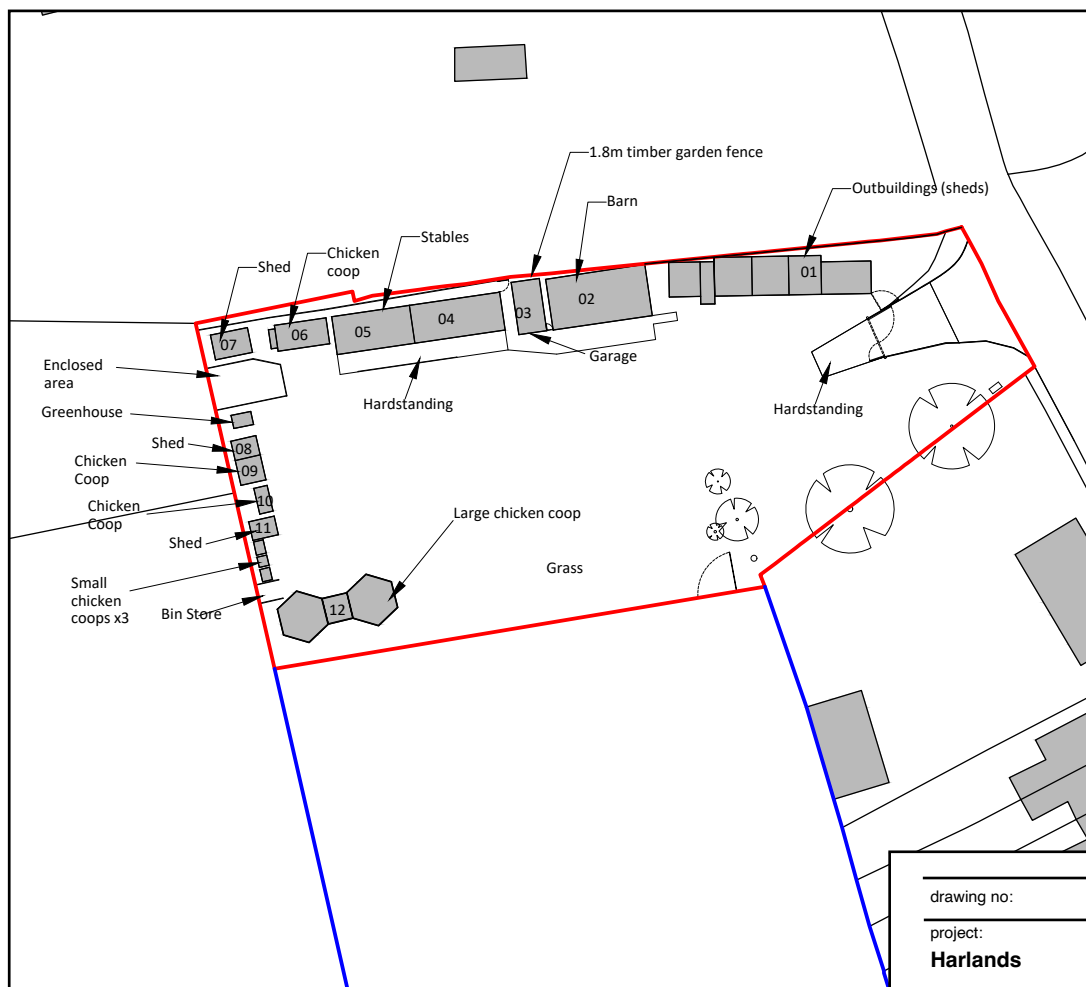
<b>WB</b>	<b>Grid Reference</b>	<b>Distance (m)</b>	<b>Notes</b>
1	TQ 59758 70479	70	Shaded roadside pond with brick lined perimeter.
2	TQ 59610 70743	201	Roadside pond. Somewhat shaded and appears shallow. No access permission.
3	TQ 59575 70751	211	Modest sized pond close to roadside and arable. Previously surveyed by Kent Reptile and Amphibian Group. No access permission.
4	TQ 59977 70367	368	Appears to be located in residential garden. No access permission.

**Table 5.1.** Summary information for ponds (WB) located within 500 m of the proposed development site. The locations of ponds are illustrated in Fig. 5.2.

## Fig. 5.1 Proposed Development

Proposals include demolition of outbuildings, sheds and chicken coops and construction of new single storey residential unit.

Application area approx: 0.21 Ha.



drawing no: 2324/42/1/5.1

project:  
**Harlands**

title:  
**Development Area**

scale: **N.T.S.**

date: **Sep 2023**



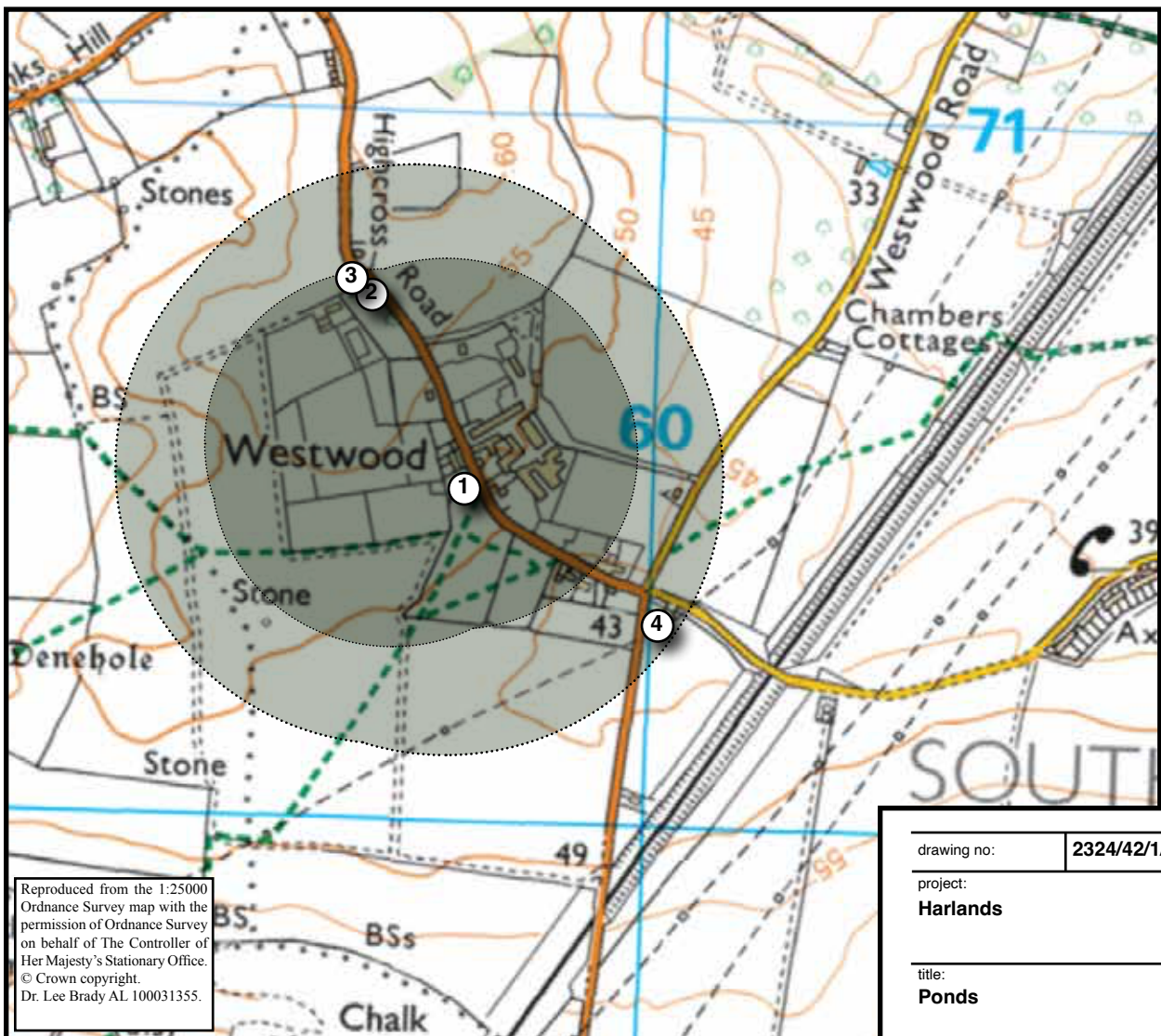
13 Woodside Cottages,  
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## Fig. 5.2 Ponds

Figure illustrates ponds known to occur within recommended area of search for great crested newt.

No ponds are located within the application area. Four ponds are known to be located within 500 m of the site boundary, three of which are located within 250 m. WB1 is located within 70 m of the site boundary.

For ponds located more than 250 m from a proposed development, Natural England recommend that survey work is most appropriate when (a) the pond has the potential to support a large population, (b) the development includes particularly favourable habitat, (c) the development will have a significant impact on available habitat, (d) there is an absence of dispersal barriers.



### Key to Symbols

● HSI surveyed pond    
  unsurveyed pond    
 ● filled/dry pond    
  250/500 m radius



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## Fig. 5.3 Aerial Photographs

Indicative location of proposed application area, illustrating existing habitat (main plate 2022).

The application area includes a modified grassland field with several buildings/structures. Hedges and mature trees are present along the northern and south eastern boundaries.



drawing no: 2324/42/1/5.3

project:  
**Harlands**

title:  
**Aerial Photographs**

scale: **N.T.S.** date: **Sep 2023**



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The proposed development site includes a modified grassland field with several outbuildings. Proposals include demolition of several outbuildings and construction of a new single storey dwelling. Most grassland is maintained as a short sward.



Structures that will be demolished include various outbuildings. There are no features suitable for roosting bats. Some outbuildings could support nesting birds. A mature hedge that is dominated by hawthorn with some ash, elder and fruit trees is present along the northern boundary.

### Fig. 5.4 Site Photographs

Figure illustrates habitat features located within the study area.



Structures that will be demolished include sheds and chicken coops. There are no features suitable for roosting bats.



One area of land in the north western corner displays ruderal vegetation.

drawing no:	<b>2324/42/1/5.4</b>
project:	<b>Harlands</b>
title: <b>Site Photographs</b>	
scale: <b>N.T.S.</b>	date: <b>Sep 2023</b>



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## 6. Preliminary Habitat Assessment

### 6.1 Habitats

Available habitat within the proposed application area includes a modified grassland field that has not been designated as Priority Habitat by Natural England. Grassland within the application area is subject to regular management works and characterised by a short sward. A hedge dominated by hawthorn, with elder, ash, fruit trees and ivy border the northern site boundary. Several mature trees are located along the south eastern boundary (mostly just outside the site boundary). It is understood that the site is subject to a separate arboricultural report.

Areas of available habitat are detailed in Table 6.1.

Habitat	Area (Ha)	Length (m)
<i>Area Habitat</i>		
Modified grassland	0.16	-
Ruderals	0.01	-
Developed Land	0.04	-
<i>Hedgerows</i>		
Hedgerows	-	73
Line of Trees	-	32
<i>Rivers/Streams</i>		
Riparian Zone (ditch)	-	-

**Table 6.1.** Preliminary habitat assessment (all measurements are approximate). Note that a more detailed habitat condition assessment may be required if biodiversity net gain calculations are subsequently required.

### 6.2 Designated Sites

Information available through MAGIC indicates that land within the proposed development site is located within the London Area Greenbelt.

#### 6.2.1 London Area Greenbelt

The London area green belt refers to a policy and designated land area surrounding Greater London. It aims to prevent urban sprawl and maintain open spaces by placing restrictions on development. The green belt serves as a buffer zone between the city and the countryside, preserving natural habitats, agricultural land, and recreational areas. It helps to protect the environment, promote sustainable development, and maintain the distinct identity of London while providing residents with access to green spaces.

## 7. Protected Species Assessment

Species/Species Group	Likely Presence	Evidence	Further Work Required?
Birds	Breeding: Likely	The site includes buildings and woody vegetation suitable for nesting birds.	Nesting birds must not be disturbed.
Bats	Roosting: Negligible Foraging: Possible	Structures offer negligible potential for roosting bats. Foraging/commuting bats are likely to use available habitat within the application area.	External lighting should follow appropriate guidelines.
Reptiles	Low	Available habitat within development site suboptimal for reptiles. Adjacent areas are likely to be occupied.	Precautionary mitigation recommended.
Amphibians	Breeding: Negligible Sheltering: Possible	No ponds within site. Three ponds located within 250 m, including one within ~ 70 m. Available terrestrial habitat provides limited potential for sheltering amphibians that could breed in nearby ponds.	Survey and or mitigation work will be required.
Badgers	Negligible	No evidence of badgers observed.	No.
Dormouse	Negligible	Habitat suitable for dormouse will not be disturbed.	No.
Beaver, otter and water Vole	Negligible	Available habitat unsuitable for otter, beaver and water vole.	No.
Hedgehog	Possible	Hedgehog could occupy nearby locations.	Precautionary mitigation recommended.
Invertebrates	Widespread species: Likely	Potential for widespread invertebrates in vegetated areas.	No survey required, but appropriate habitat enhancement recommended.

**Table 7.1.** Summary of protected species likely presence within application area and recommendations for further survey and/or mitigation work. Species for which additional survey/mitigation is recommended are highlighted. Refer to text for further details.

### 7.1 Birds

Within the local area there are areas of woodland, hedgerows, gardens and agricultural fields that are expected to support a varied bird population. Buildings, trees and hedges within and close to the proposed application area are likely to support nesting birds.

No evidence of barn owl was observed within the site and it is considered unlikely that any species afforded protection by inclusion on Schedule 1 of the Wildlife & Countryside Act 1981 will nest in the proposed development area.

## **7.2 Bats**

Local habitat features include woodland, hedgerows and buildings that provide potential roosting, foraging and commuting opportunities for bats.

### **7.2.1 Building Inspection**

A buildings inspection was undertaken that followed the survey guidelines recommended in The Bat Workers' Manual (Mitchell-Jones, 2004) and the Bat Conservation Trust's Good Practice Guidelines (BCT, 2016).

Features and evidence of bat use and potential considered when assessing the buildings included:

- Roof and wall construction;
- Any bat droppings and/or staining on external walls;
- Scattered or accumulated bat droppings (identified by their dry, powdery texture when compressed) within the interior of the buildings or around entrances to potential roosts;
- Oily staining, scratch marks and/or urine staining around entrances to potential roosts;
- Places where cobwebs have been swept away;
- The presence of live or dead bats; and
- Features that have the potential to be bat roosts or to provide access to roosting opportunities within the buildings. These include missing tiles, cavities in woodwork or masonry and any crevices within the buildings.

Buildings and structures within the application area that are proposed for demolition were not found to offer features suitable for roosting bats.

### **7.2.2 Trees**

Mature trees located within the application area were considered to offer negligible to low potential for roosting bats. The applicant has confirmed that no mature trees will be disturbed.

## **7.3 Reptiles**

Available ground vegetation is generally short and managed on a regular basis offering suboptimal habitat for sheltering reptiles. However, the applicant is advised that adjacent areas of habitat include features suitable for sheltering reptiles. Precautionary mitigation is recommended.

## 7.4 Amphibians

No ponds are located within the application area. Four ponds are known to be located within 500 m of the site boundary, three of which are located within 250 m (Table 7.2). One pond is located within ~ 70 m. Whilst all reasonable effort is made to identify ponds located around the site, small garden ponds and recently constructed ponds may not be included in available information sources. If additional ponds are subsequently identified close to the site, the amphibian risk assessment may need to be updated.

WB	Distance (m)	HSI Score	GCN Suitability	NE Risk Zone	Survey Required for Non DLL Licence
1	70	0.58	Below Average	Green	Yes
2	201	0.68	Average	Green	Yes
3	211	0.76	Good	Green	Yes
4	368	-	-	Green	No

**Table 7.2.** Habitat suitability for accessible waterbodies (WB) located in survey area. All specified distances measured from pond to edge of proposed development. The listed NE risk zones are for individual ponds rather than the proposed development site. Access permission was not available so all assessments were undertaken from the roadside. HSI values are therefore provisional.

### 7.4.1 Great Crested Newt Risk Assessment

Natural England has recently published a risk map for Kent that predicts the likelihood of newts being present within a proposed development site. The proposed works area is located in a *Green* risk zone.

*"Red zones contain key populations of GCN, which are important on a regional, national or international scale and include designated Sites of Special Scientific Interest for GCN. Amber zones contain main population centres for GCN and comprise important connecting habitat that aids natural dispersal. Green zones contain sparsely distributed GCN and are less likely to contain important pathways of connecting habitat for this species. White zones contain no GCN."*

Natural England has also published a risk assessment tool for determining whether development activities are likely to result in significant disturbance to great crested newt (Natural England, 2008). Natural England advise:

*"This risk assessment tool has been developed as a general guide only, and it is inevitably rather simplistic. It has been generated by examining where impacts occurred in past mitigation projects,*

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

The following calculations indicate the risk of disturbance based on whether the closest offsite ponds are either occupied or not occupied by breeding newts. The calculations take into consideration any actions that may be undertaken to avoid disturbing or harming individual newts.

**Ponds within 100 m Occupied**

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)	0.1 - 0.5 ha lost or damaged	0.5
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)	0.1 - 0.5 ha lost or damaged	0.005
Individual great crested newts	No effect	0
	Maximum:	0.5
Rapid risk assessment result:	<b>AMBER: OFFENCE LIKELY</b>	

**"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.

**Ponds within 100 m NOT Occupied**

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)	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)	0.1 - 0.5 ha lost or damaged	0.005
Individual great crested newts	No effect	0
	Maximum:	0.1
Rapid risk assessment result:	<b>GREEN: OFFENCE HIGHLY UNLIKELY</b>	

"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.

**7.4.2 Great Crested Newt Mitigation Licence**

Land within the site includes habitat that offers great crested newt limited opportunities for sheltering and protection.

Five levels of licence are available for development projects (Table 7.3).

The proposed works are not considered likely to significantly impact on the local conservation status of great crested newt for the following reasons:

- No impact on breeding ponds.
- Apparently small area of available habitat within the development site.
- Available grassland habitat does not appear to be offer significant opportunities for sheltering and protection.

However, the proposed works may still require application for an appropriate mitigation licence for the following reasons:

- Proposed works are located within 100 m of a pond and would damage habitat that could provide some terrestrial sheltering places.
- Whilst small, the area of the proposed works is above the threshold at which a licence is required if newts are confirmed present in WB1.



The size of the application area and distance from the closest pond therefore means that proposed works could have a low impact on the Favourable Conservation Status of great crested newt. Sufficient information is not yet available to determine whether the project qualifies for a low impact class licence.

Licence Level	Licence Type	Notes
1	No Licence	No or negligible impacts on gcn.
2	Non-Licensed Method Statement	Negligible or low impacts on gcn that can be prevented using avoidance measures.
3	Low Impact Class Licence	Low impacts on gcn in relatively small areas over short periods of time. No impacts on ponds.
4	<b>Full EPS Licence</b>	<b>Impacts on gcn in larger areas or over longer periods of time.</b>
5	<b>District Level License</b>	<b>Permits development without the need for survey and/or mitigation works.</b>

**Table 7.3.** Available licence categories for development projects affecting great crested newt (gcn). Note that DLL is not currently available for all counties. Available options for the proposed scheme are highlighted.

#### 7.4.3 Great Crested Newt Survey

Although survey work of ponds located within 500 m can sometimes be necessary, Natural England now recommends a proportionate approach to survey work:

*"In keeping with a proportionate and risk-based approach, surveys need reasonable boundaries. The Great crested newt mitigation guidelines explain that surveys of ponds up to around 500m from the development might need to be surveyed. The decision on whether to survey depends primarily on how likely it is that the development would affect newts using those ponds. For developments resulting in permanent or temporary habitat loss at distances over 250m from the nearest pond, carefully consider whether a survey is appropriate. Surveys of land at this distance from ponds are normally appropriate when all of the following conditions are met: (a) maps, aerial photos, walk-over surveys or other data indicate that the pond(s) has potential to support a large great crested newt population, (b) the footprint contains particularly favourable habitat, especially if it constitutes the majority available locally, (c) the development would have a substantial negative effect on that habitat, and (d) there is an absence of dispersal barriers."*

To determine whether ponds are occupied by great crested newts, appropriate survey work would be required (Table 7.4).

Licence Level	Mitigation Licence	Disturbance Threshold (relative to gcn occupied pond)	Recommended Pond Survey
1	No licence	No disturbance to pond. No disturbance within 100 m and < 0.5 Ha within 250 m of pond	None required, but presence/likely absence survey of all ponds within 100 m beneficial.
2	Non-Licensed Method Statement	No disturbance to pond. No disturbance within 50 m and < 0.01 Ha within 100 m and < 0.5 Ha within 250 m of pond	Presence/likely absence survey all ponds within 100 m. Presence/likely absence survey of all ponds within 250 m beneficial.
3	Low Impact Class Licence	No disturbance to pond. < 0.01 Ha within 50 m and < 0.2 Ha within 100 m and < 0.5 Ha within 250 m of pond	Presence/likely absence survey all ponds within 250 m.
4	Full EPS Licence	Any	Relative population survey all accessible ponds within 500 m.
5	District Level Licence	Any	None required.

**Table 7.4.** Recommended survey work required for great crested newt mitigation. Area values for disturbance thresholds refer to area of land within application site regardless of apparent suitability for newts.

#### 7.4.4 Other Widespread Amphibian Species

Common frog, common toad, smooth newt and palmate newt are likely to breed in nearby ponds, including those in residential gardens and ponds supporting fish.

The proposed development is not considered likely to have a significant negative impact on the local conservation status of widespread amphibian species.

### 7.5 Badgers

No evidence of badger was observed within the application area.

### 7.6 Hazel Dormouse

Habitats typically suitable for dormouse include:

- Deciduous woodland, with a dense understory, species-rich shrub layer and thick ground cover.
- Hazel or sweet chestnut coppice.

- Continuous, thick, wide hedgerows over 4m high with connections to nearby suitable woodland.
- Thick continuous areas of scrub, particularly bramble, close to hedgerows or woodlands.

Although available information indicates that the proposed development site is within the known range of dormouse, there will be no direct impacts on features suitable for dormouse (e.g. woodland, scrub or native hedgerows).

### **7.7 Beaver, Otter and Water Vole**

Available habitat is unsuitable for beaver, otter and water vole.

### **7.8 Hedgehog**

Hedgehog could be present in the local area. Available habitat offers potential foraging and sheltering habitat for hedgehog.

Precautionary mitigation for hedgehog is recommended.

### **7.9 Invertebrates**

Available habitat within the application area is considered to offer opportunities for common and widespread invertebrates. Although additional survey work for invertebrates is not considered necessary, appropriate habitat enhancement is recommended to promote biodiversity interest within the site.

## 8. Recommendations

Appropriate actions should be undertaken to ensure that there is minimal disturbance to protected species and any retained habitat. Retained habitat should be managed to promote biodiversity interest.

If any areas with potential for protected species are proposed for management, all works should first be discussed and agreed with a suitably experienced ecologist.

### 8.1 Habitats

#### 8.1.1 Trees

Where proposals are likely to be in close proximity to mature trees to be retained it is recommended that any works within the tree protection zones are carefully monitored to protect trees in the long-term. All tree protection, work to trees and any work in the vicinity of trees is to accord with the relevant sections of the following standards:

BS 3998 - Recommendations for Tree Work.

BS 4428 - Code of practice for general landscape operations.

BS 5837 - Guide for Trees in Relation to Construction.

BS 1722 - Fences.

### 8.2 Birds

#### 8.2.1 Timing of Works

To avoid any potential offence under the Wildlife & Countryside Act, no clearance of features that could support nesting birds should be undertaken during the bird-nesting season (1st March to 31st August inclusive).

If this is not practicable, any potential nesting habitat to be removed must first be checked by a suitably experienced ecologist in order to determine the location of any active nests. Any active nests identified will then need to be cordoned off (within a minimum 5 m buffer) and protected until the end of the nesting season or until the birds have fledged. These checking surveys would need to be carried out no more than three days in advance of vegetation clearance. If vegetation clearance works have not been completed within this timeframe, an update check should be undertaken.

#### 8.2.2 Bird Nesting Boxes

The applicant should consider installing one or more bird nesting boxes in suitable locations. Suitable exterior boxes should be installed at a height of ~3 m above ground with a minimum distance of 3 m between boxes. Boxes should face north to east. Suitable exterior boxes include those for house sparrow and/or robin that can be attached to the new house or existing structures. Details of the boxes that will be installed together with their locations should be included with the application.

Details of the boxes that will be installed together with their locations should be included with the application.

## 8.3 Bats

### 8.3.1 Bat Boxes

The applicant should consider installing additional bat boxes in suitable locations. It is recommended that at least one Kent Bat Box/Schwegler 1FF Bat Box or similar (dependent upon availability) should be installed on either the new building or one of the retained trees located in an area that will not be disturbed by proposed development activities. The box(es) must be sited at least 3.5 meters above ground and should face south west to south east.

Details of the box(es) that will be installed together with their locations should be included with the application.

For more information on Kent Bat Boxes see:

<http://www.kentbatgroup.org.uk/kent-bat-box.pdf>

### 8.3.2 Lighting

Some artificial lighting can be detrimental to roosting, foraging and commuting bats especially Daubenton's, Whiskered, Natter's and Long-eared. Impacts on bats are higher in the April/May and September/October time periods, when bats emerge earlier and when most lighting will be on. The impact on bats is increased after mid-October when British Summer Time ends (by subtracting an hour).

If lighting is required, this should be low or zero UV, which is preferred to reduce attraction of insects to lighting and therefore to reduce the attraction of foraging bats to these areas. The Bat Conservation Trust's *Bats and Lighting in the UK guidance* must be adhered to in the lighting design (Appendix VIII).

Lighting should be directed away or shielded from any green areas/ponds/hedgerows, and bat boxes to allow bats safe foraging routes where they will not be visible to predators.

## 8.4 Great Crested Newt

Based on available information, the development size and distance from the closest pond means that works may have to be undertaken under an appropriate mitigation licence. For more information see:

<https://www.gov.uk/guidance/great-crested-newts-surveys-and-mitigation-for-development-projects>

The following options are proposed: (1) survey ponds to determine likely presence of newts or (2) apply for DLL that does not require survey work.

### Option (1): Pond Survey

- Ideally, all accessible ponds located within 500 m of areas proposed for disturbance should be surveyed by experienced and licensed personnel. This should also include any garden ponds that are subsequently found to be present.

- Survey priority is as follows: (1) all ponds within 100 m of the application area; (2) all ponds within 250 m of application area; (3) all ponds within 500 m of application area.
- Access permission to survey ponds on land owned by third parties will be required.
- If great crested newts are not confirmed present in ponds located within 100 m of the site boundary, the scale of proposed development means that a non-licensed method statement may be considered sufficient for mitigation purposes.
- If a Low Impact Class Licence is required only presence information is required.
- Four survey visits to each pond are required to confirm presence using traditional survey methods. If eDNA sampling is undertaken only one visit to each pond is required.
- If newts are confirmed present and a full mitigation licence is required a total of six survey visits will be required to each occupied pond to determine relative population size(s).
- Mitigation actions and licence requirements will depend upon survey results.

### **Option (2) District Level Licence (DLL)**

- A new *District Level Licence* (DLL) that aims to fundamentally change the approach to great crested newt mitigation licensing has been launched by Natural England.
- Under the DLL, development over a whole district is covered by a single licence. In some counties this licence is issued by Natural England. In other counties the licence may be issued by local authorities or even private companies (e.g. NatureSpace).
- Compensatory habitat is created off site by a third party prior to development and developers pay a fee based on an estimated impact on great crested newts for each development.
- No amphibian survey work, mitigation or other compensatory habitat works are required on the development site in order to apply for a DLL. However, the applicant is advised that such works may still be required to satisfy local planning obligations or licences issued by private companies such as NatureSpace.
- Calumma Ecological Services considers that the DLL offers a useful tool to help provide suitable compensation for development projects that will have only a low impact on great crested newt.
- The applicant is advised that the cost of a District Level Licence is determined by the total area of the proposed development located within 250 m of a pond and subject to modifiers that are based on risk zones and whether great crested newt has recently been confirmed present. Natural England identifies ponds based on OS mapping data and these can sometimes include garden ponds and ponds that are no longer extant. Other companies may require the applicant to identify ponds on a site plan.

For more information see:

<https://www.gov.uk/government/publications/great-crested-newts-district-level-licensing-schemes>

## 8.5 Reptiles

### 8.5.1 Precautionary Mitigation

Available habitat within the proposed development site currently offers relatively low potential for reptiles. However, reptiles are known to be present in nearby areas and could shelter beneath hedges and other adjacent habitat areas.

- Any ground objects suitable for sheltering animals should be removed and checked for sheltering reptiles.
- Areas proposed for disturbance should be strimmed to ground level and vegetation maintained at this height until completion of all works.
- Reptile exclusion fencing is not considered necessary.
- If any reptiles are found within the working area, they should be removed to a suitable location that will not be disturbed by proposed works. Further advice can be sought from Calumma Ecological Services if required.

For more information see:

<https://www.gov.uk/guidance/reptiles-protection-surveys-and-licences>

## 8.6 Hedgehogs

### 8.6.1 Hedgehog Gates

If any installed fencing will be of a design similar to that of close board fencing which are typically solid from ground level, *hedgehog gates* should be installed in the fencing within the proposed site. The gates consist of semi-circular holes (measuring 0.13 m x 0.13 m) cut into the bottom of the fence to allow the movement of hedgehogs into adjacent areas of land.

### 8.6.2 Open Excavations

During months when hedgehogs are most likely to be active (March to October), excavations should not be left open for animals to fall into. If this is not possible, suitable planks of wood should be placed to allow trapped animals to escape. Any open excavation should be inspected before works commence in the morning and trapped animals relocated to a suitable place of safety along the site boundary.

## 8.7 Ecological Enhancement and Biodiversity Net Gain

The National Planning Policy Framework (NPPF) encourages new developments to maximise the opportunities for biodiversity through incorporation of enhancement measures. The proposals present the opportunity to deliver ecological enhancements at the site for the benefit of local biodiversity, thereby making a positive contribution towards the broad objectives of national conservation priorities and the local Biodiversity Action Plan (BAP).

Details of habitat management and enhancement works that the applicant has confirmed will be undertaken to achieve net gain should be included with the application and form part of the landscaping proposals. As well as protected species, such work should target more widespread species that are of biodiversity interest.

Features that can be considered for inclusion in the landscaping proposals include:

- Bird nesting boxes;
- Bat roosting boxes;
- Landscaping proposals should include appropriate management of retained trees and hedges to protect and enhance biodiversity value;
- Non-native species such as laurel could be replaced by native trees/shrubs;
- Where appropriate, ecologically sympathetic soft landscaping that provides shelter and nectar for invertebrates such as bees;
- If appropriate bee bricks can be included within the construction of the new house;
- Native hedgerow planting along appropriate site boundaries (e.g. along the western and southern boundaries);
- Green roofs and walls where appropriate.



## 9. References and Further Reading

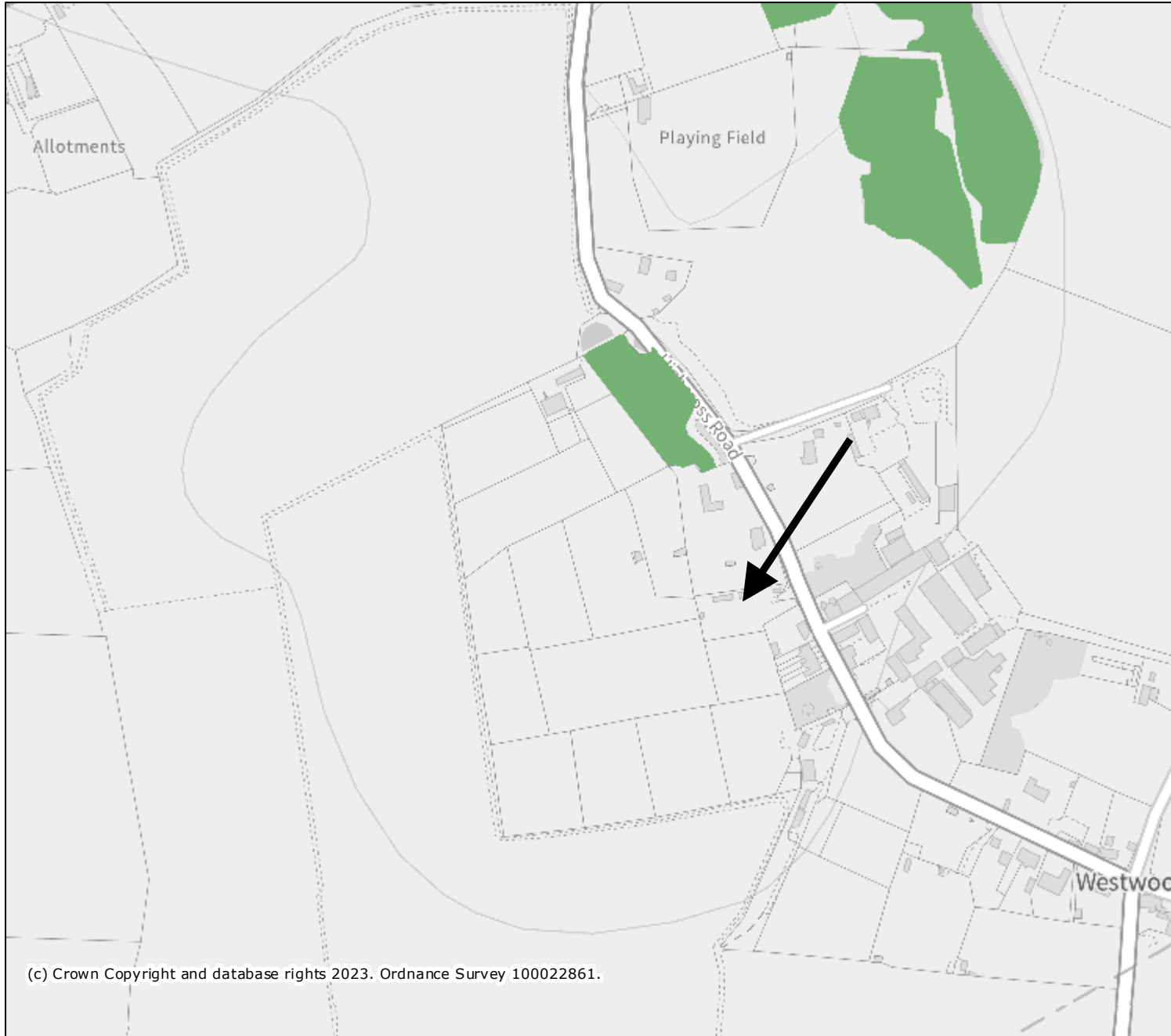
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# Appendix I: Habitat Designations

**Source:**

MAGIC (<http://www.magic.gov.uk>)

## 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 - Lowland Heathland (England)
  - Priority Habitat Inventory - Lowland Fens (England)
  - Priority Habitat Inventory - Reedbeds (England)
- ### Ancient Woodland (England)
- Ancient and Semi-Natural Woodland
  - Ancient Replanted Woodland
  - Priority Habitat Inventory - Deciduous Woodland (England)
  - Priority Habitat Inventory - Traditional Orchards (England)
  - Woodpasture and Parkland BAP Priority Habitat (England)

Projection = OSGB36

xmin = 558800

ymin = 170100

xmax = 560400

ymax = 171100

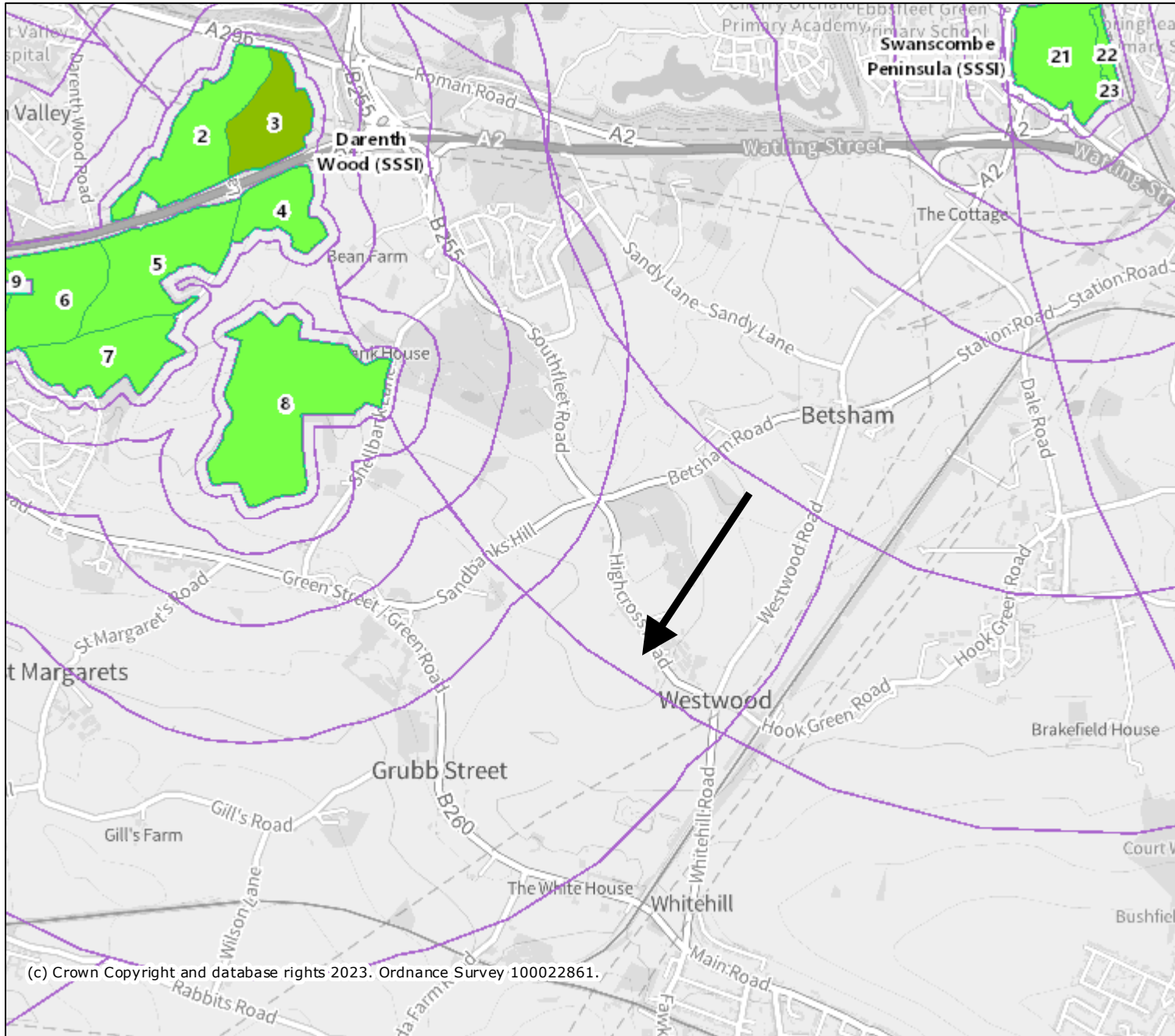


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# Appendix II: Land Designations

**Source:**

MAGIC (<http://www.magic.gov.uk>)



### Legend

- Areas of Outstanding Natural Beauty (England)
- Local Nature Reserves (England)
- National Nature Reserves (England)
- Ramsar Sites (England)
- Destroyed
- Not Assessed
- Sites of Special Scientific Interest (England)
- SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Favourable Condition
- Unfavourable Recovering
- Unfavourable no change
- Unfavourable Declining
- Part Destroyed
- Special Areas of Conservation (England)
- Special Protection Areas (England)
- Biosphere Reserves (England)

Projection = OSGB36

xmin = 554900

ymin = 168300

xmax = 564000

ymax = 173900



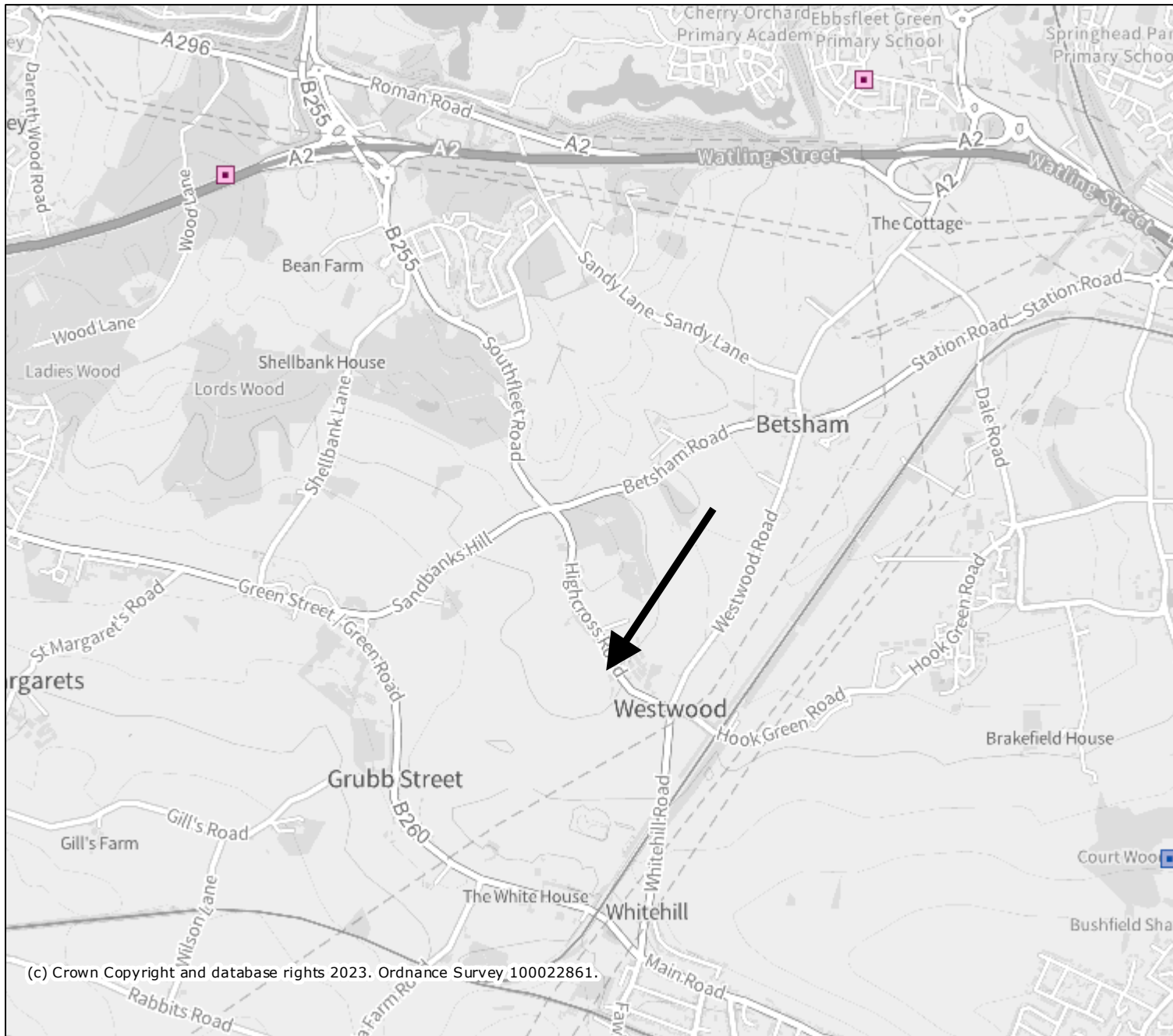
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# Appendix III: European Protected Species Mitigation Licences

**Source:**

MAGIC (<http://www.magic.gov.uk>)



### Legend

#### Granted European Protected Species Applications (England)

- Amphibian
- Bat
- Cetacean
- Invertebrate
- Other Mammal
- Plant
- Reptile

Projection = OSGB36  
 xmin = 555100  
 ymin = 168400  
 xmax = 564200  
 ymax = 173900



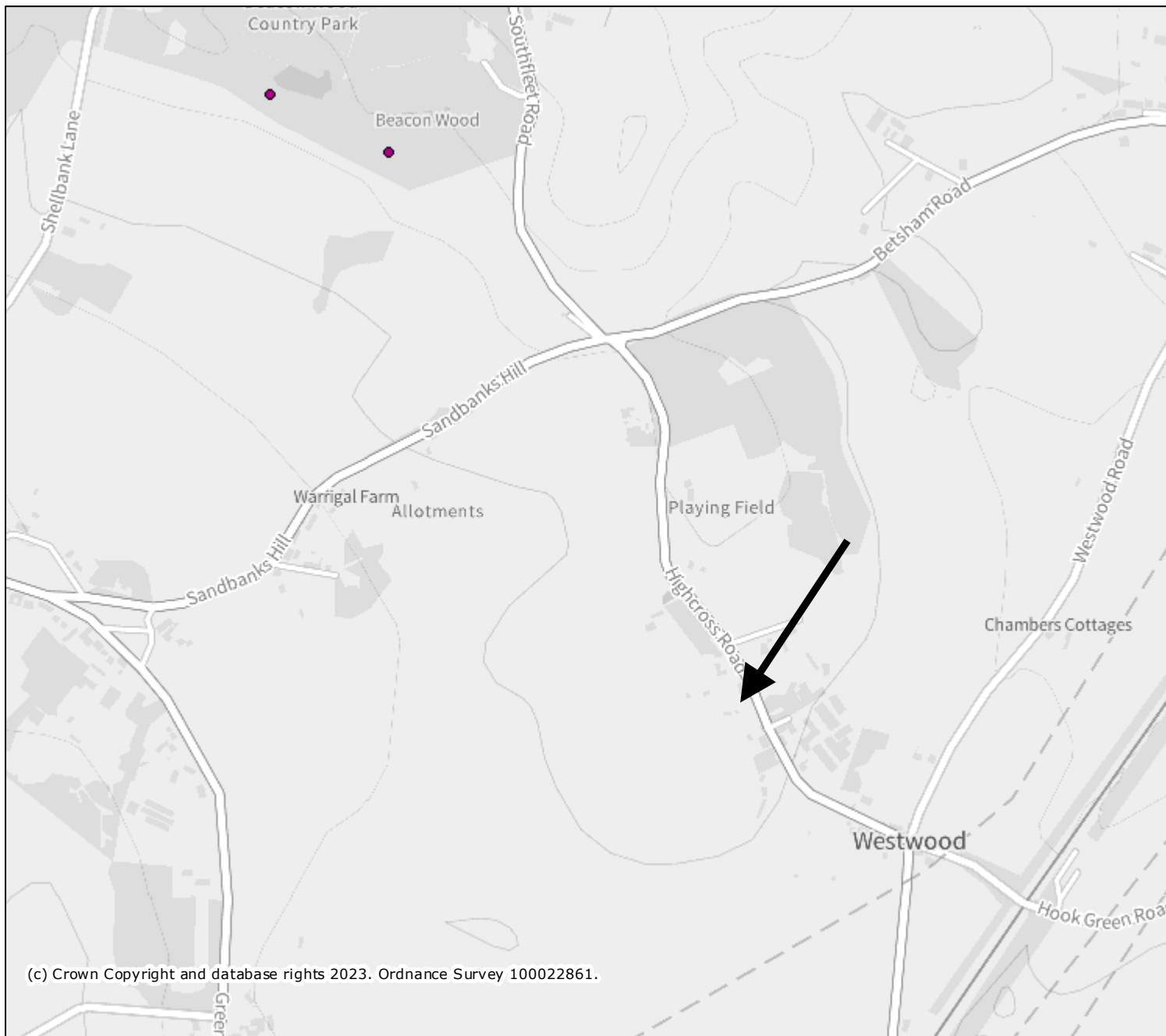
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# Appendix IV: Great Crested Newt Records

**Source:**

MAGIC (<http://www.magic.gov.uk>)





### Legend

- Great Crested Newt Class
- Survey Licence Returns (England)

Projection = OSGB36

xmin = 557600

ymin = 169800

xmax = 561300

ymax = 172000



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# Appendix V: Kent Habitat Survey 2012

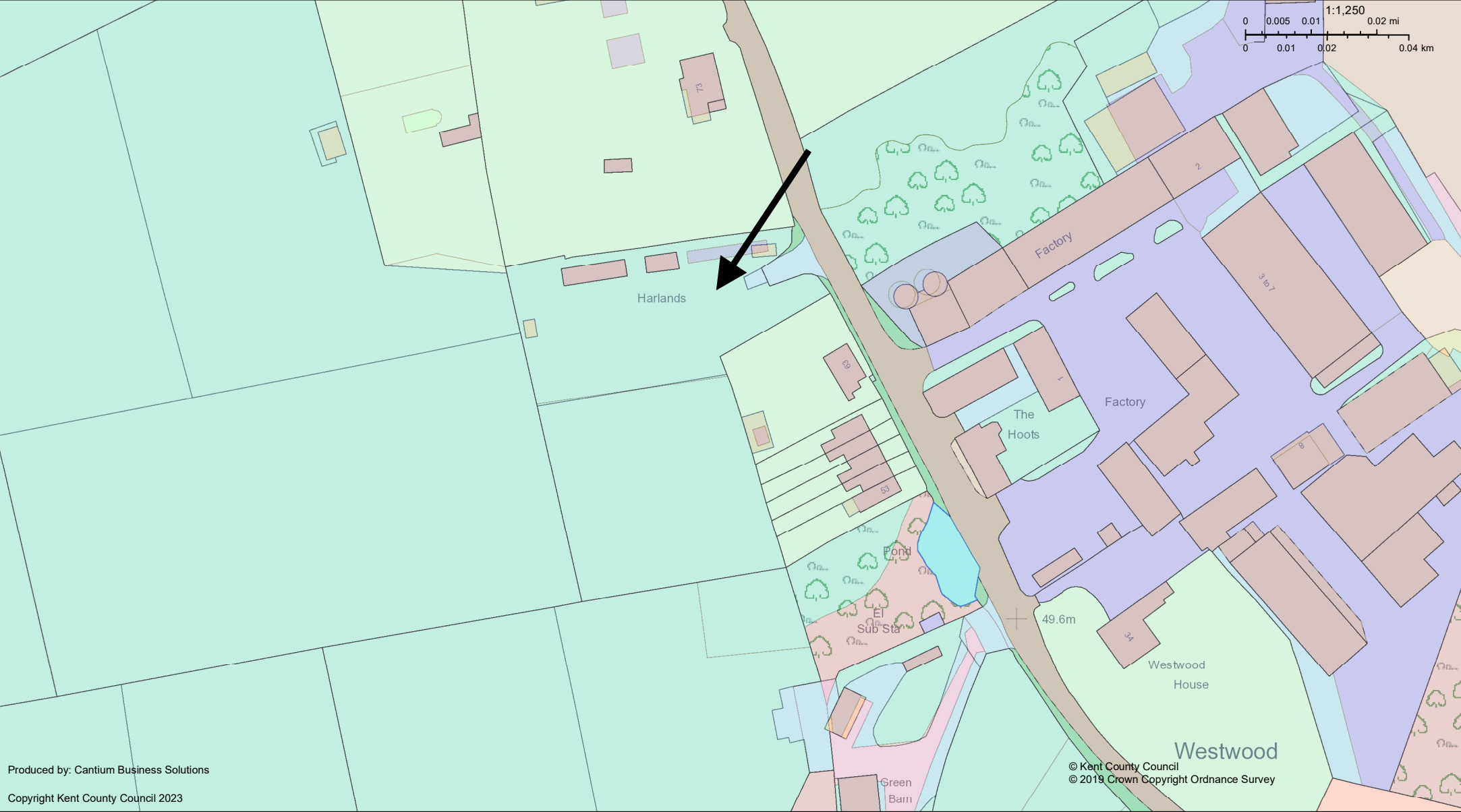
**Source:**

Kent Landscape Information Land System

(<https://webapps.kent.gov.uk/KCC.KLIS.Web.Sites.Public/ViewMap.aspx>)

# Kent Habitat Survey 2012

September 6, 2023



Produced by: Cantium Business Solutions

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Legend

**Kent Habitat Survey 2012**

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

## Appendix VI: Local Wildlife Sites

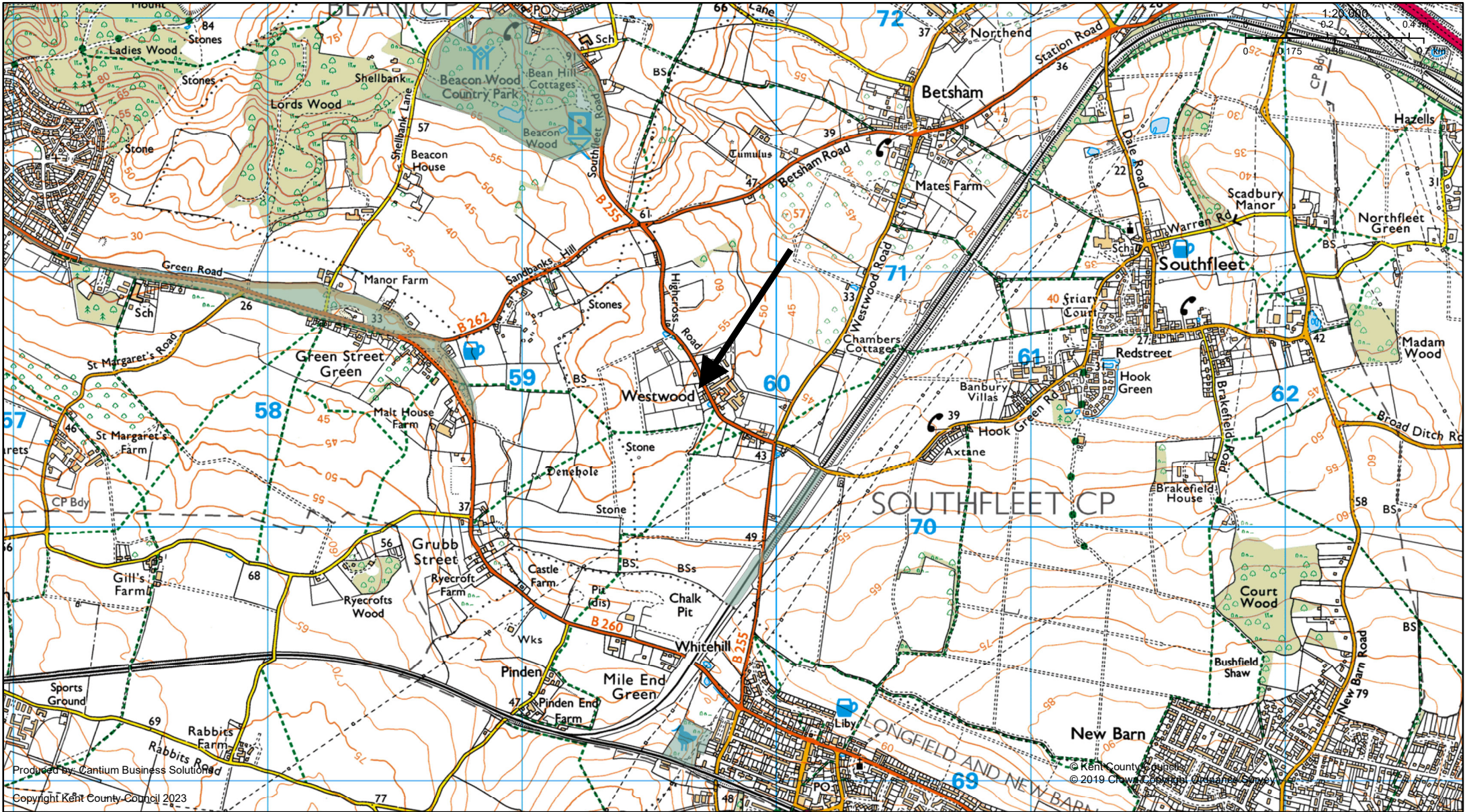
**Source:**

Kent Landscape Information Land System

(<https://webapps.kent.gov.uk/KCC.KLIS.Web.Sites.Public/ViewMap.aspx>)

# Local Wildlife Sites

September 7, 2023



Legend  
Local Wildlife Sites

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# Appendix VII: Record Search Results

**Source:**

Kent Reptile and Amphibian Group

## Species Risk Assessment

**Enquiry No:** CES/23/204  
**On Behalf of:** Calumma Ecological Services  
**Search Area:** Southfleet  
**Grid Reference:** TQ 596 705

<u>Amphibians</u>		
	<u>Likelihood of Presence</u>	
	<u>Score</u>	<u>Dist (km)</u>
<b>Common Frog:</b>	<b>HIGH</b>	<b>1.12</b>
<b>Common Toad:</b>	<b>HIGH</b>	<b>0.22</b>
<b>Natterjack:</b>	n/a	74.61
<b>Smooth Newt:</b>	<b>HIGH</b>	<b>0.22</b>
<b>Palmate Newt:</b>	Possible	2.44
<b>Great Crested Newt:</b>	Possible	1.12
<b>Marsh Frog:</b>	Possible	4.20
<b>Alpine Newt:</b>	n/a	7.47

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

<u>Reptiles</u>		
	<u>Likelihood of Presence</u>	
	<u>Score</u>	<u>Dist (km)</u>
<b>Viviparous Lizard:</b>	Likely	1.12
<b>Slow-worm:</b>	Possible	1.30
<b>Sand Lizard:</b>	<i>unlikely</i>	75.99
<b>Grass Snake:</b>	Possible	1.40
<b>Adder:</b>	Possible	2.75
<b>Smooth Snake:</b>	n/a	n/a

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

**# ponds within 1 km:** 6  
**distance to nearest pond (km):** 0.13

This risk assessment is based on a nearest neighbour analysis of records available at the time of this search request. The assessment considers habitat characteristics for each species at the landscape level, but does not control for the suitability of available habitat at the specified grid reference. The risk assessment does not include historical records and may underestimate likely presence of a species in areas with limited survey effort. The risk assessment is provided for guidance only and should not be used in place of a full herpetofauna survey.

For sites with no waterbodies where the analysis suggests that amphibians are likely to be present, individual animals may use suitable terrestrial habitat for sheltering, foraging and/or dispersal.

Kent Reptile and Amphibian Group

**Search Date:** 4/8/2023

info@kentarg.org  
 www.kentarg.org

# Appendix VIII: Bats and Lighting

**Source:**

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.



*Calumma Ecological Services* is an independent wildlife consultancy specialising in the applied conservation of amphibians and reptiles. *Calumma Ecological Services* offers a full range of specialist services to private companies, local authorities, government agencies, wildlife organisations and members of the public.

*Calumma Ecological Services* always works to industry good practice

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