

Preliminary Ecological Appraisal

**Land at Long Acre, Pear Tree Road,
Kent DA12 3JT**

Report to:
Mr. & Mrs. J. King

23rd February 2022



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1. Summary

Background

- 1.1 Land at Long Acre, Pear Tree Road has been proposed as the location of a new development project.
- 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 an existing residential property with areas of grassland and shrubs/trees. The site is located close to deciduous woodland.
- 1.4 No priority habitats are located within the boundary of the proposed development site and additional botanical surveys are not considered necessary.
- 1.5 The site is located close to Crabble Wood SSSI and other sites designated for their conservation interest.

Birds

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

Bats

- 1.8 Three buildings are located within the development site. These include the main dwelling (B1), a garden shed (B2) and an outbuilding (B3).
- 1.9 Buildings B1 and B3 include features that provide potential entry points for roosting bats.
- 1.10 **Additional survey work for bats is recommended.**

Reptiles

- 1.11 Ground vegetation within the proposed development site offers potential for a small population of reptiles (e.g. slow-worm).
- 1.12 **Additional survey work for reptiles is recommended.**

Amphibians

- 1.13 Great crested newt has previously been recorded within 0.95 km of the site boundary and a large population is known to breed at the nearby Shorne Woods Country Park.
- 1.14 One pond is known to be located within ~ 100 m of the boundary of the proposed development site.
- 1.15 **The applicant is advised to either undertake additional survey work for great crested newt or obtain a District Level Licence.**

Badgers

- 1.16 No evidence of badger was observed within the proposed development site.
- 1.17 Additional survey work for badgers is not considered necessary.

Dormouse

- 1.18 Nearby areas of woodland offer good potential for dormouse.
- 1.19 Habitat suitable for dormouse will not be disturbed by proposed development actions.
- 1.20 Additional survey work for dormouse is not considered necessary.

Water Vole

- 1.21 No waterbodies suitable for water vole are located within or adjacent to the proposed development site.
- 1.22 Additional survey work for water vole is not considered necessary.

Invertebrates

- 1.23 Available habitat within the proposed development area is considered to offer opportunities for common and widespread invertebrates.
- 1.24 The scale of proposed development means that additional survey work for invertebrates is not considered necessary.

Non-Native Species

- 1.25 A stand of Japanese Knotweed was found at the northern end of the garden.
- 1.26 **Additional investigation works are recommended with eradication undertaken as appropriate.**

Other Considerations

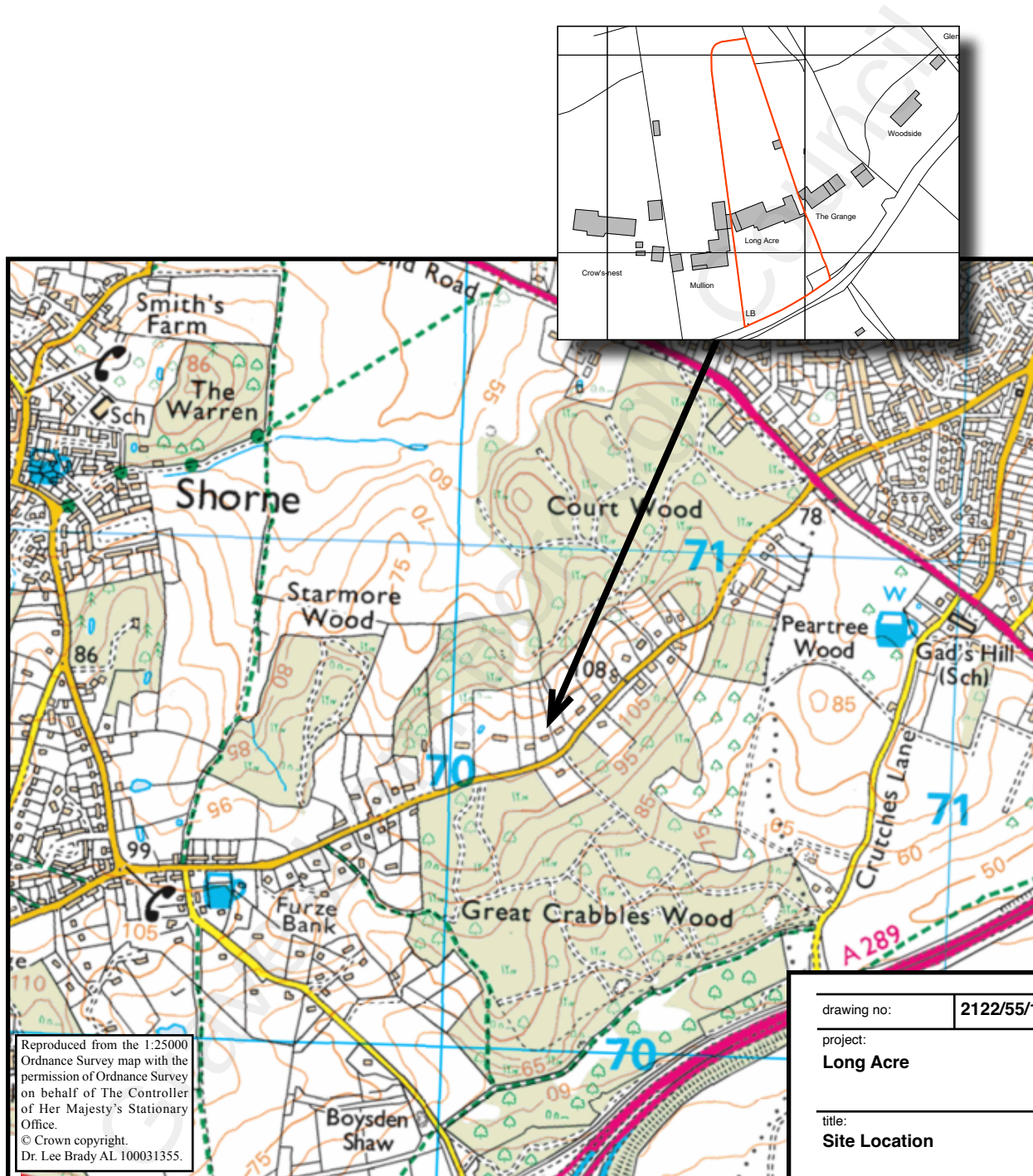
- 1.27 Hedgehog could shelter and/or forage within local gardens.
- 1.28 On the basis of the site assessment it is not expected that other protected species will be found to be present on the site.

2. Site Location and Assessment

Site Name:	Land at Long Acre, Pear Tree Road, Kent DA12 3JT - <i>the site</i> ; Fig. 2.1
Grid Reference:	TQ 701 706
County:	Kent
Planning Authority:	Gravesham Borough Council
Planning Ref:	tbd
Natural Area:	North Kent Plain
Client:	Mr. and Mrs. J. King
Proposed Disturbance:	Demolition of existing structures and construction of new dwelling.
Survey Request:	Preliminary Ecological Appraisal
Surveyor:	Lee Brady PhD, BSc (Hons), MCIEEM
Assessment Period:	10 th February 2022
Limitations:	This assessment did not include detailed surveys of protected species. Scoping surveys 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).
Reliance:	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.

Fig. 2.1 Land at Long Acre, Pear Tree Lane, Kent (TQ 701 706)

Location of study site.



3. Legal Protection and Planning

The legal 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 by the Countryside and Rights of Way Act 2000 and
- The Habitats and Species Directive (92/43/EC) enacted through the Conservation of Habitats and Species Regulations 2017. Development works affecting listed species are subject to a licence granted by an appropriate authority. This authority is currently Natural England.
- The Natural Environment and Rural Communities (NERC) Act 2006
- The Hedgerow Regulations 1997

Species and habitats receive legal protection that may prohibit sale, disturbance and/or killing/injury.

3.1 Flora

A number of plant species are protected under Section 13 of the amended 1998 Wildlife and Countryside Act of 1981. 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.

3.2 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 1981. 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.

3.3 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 2010 and Section 9 of the Wildlife and Countryside Act 1981. 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.

3.4 Reptiles

All native reptiles are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (WCA 1981). It is an offence for anyone to intentionally kill or injure a '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 2010. 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.

3.5 Amphibians

All native amphibians are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (WCA 1981). 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 2010. 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.

3.6 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 Hazel Dormouse

Individual animals, their breeding sites or resting places (nests) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2010 and Section 9 of the Wildlife and Countryside Act 1981. 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, whether they are present or not.

3.8 Water Vole

Until the 6th April 2008 water voles received partial protection under the Wildlife & Countryside Act 1981 (as amended). This included protection from killing or taking by

certain prohibited methods. Breeding and resting places (burrows) were fully protected from destruction or obstruction; it was also an offence to disturb them in these places. From April 2008 water voles and their resting places are fully protected in England. It is an offence to deliberately, capture, injure or kill them or to damage, destroy or obstruct their breeding or resting places. It continues to be an offence to disturb them in their breeding or resting places.

3.9 Invertebrates

A small number of invertebrates including beetles, crickets, butterflies and moths are protected under Section 9, Schedule 5 of the amended 1998 WCA 1981 against deliberate killing, injuring and taking. Other species receive partial protection under the same act. For example, it is an offence for anyone to sell or offer for sale a stag beetle without a licence. The stag beetle is also listed as a Priority Species on the UK BAP.

3.10 The National Planning Policy Framework

The National Planning Policy Framework (2019) (NPPF) has reformed the planning system, to make it less complex and more accessible, to protect the environment and to promote sustainable growth. Regarding 'Conserving and enhancing the natural environment', when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying a number of principles.

3.11 Miscellaneous Planning Policy

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 Environmental and Rural Communities (NERC) Act 2006. 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.

3.12 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.

3.13 Biodiversity Net Gain

National policy sets out that planning should provide biodiversity net gains where possible. National Planning Policy Framework (NPPF) 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.

For more information see:

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

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 at the northern end of the garden has previously been identified as broadleaved woodland that is contiguous with Peartree Wood (Ancient and Semi-Natural Woodland).

Other priority habitats located within the local area include:

- Traditional Orchard (0.31 km east).

4.1.2 Statutory Designated Areas

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

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

Great Crabble Wood SSSI is located on the opposite side of Pear Tree Road.

Other statutory designated sites located nearby include:

- Shorne and Ashenbank Woods SSSI (1.1 km west);
- Cobham Woods, SSSI (1.8 km south);
- Rede Common, LNR (2.1 km south east);
- Thames Estuary & Marshes, Ramsar, SSSI (3 km north);
- Tower Hill to Cockam Wood, SSSI (4.5 km north east).

4.1.3 Non-statutory Designated Areas

The locations of nearby 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.

The applicant is advised that for new residential development in this area financial contributions are required to mitigate increased recreational disturbance on coastal SPAs and Ramsar Sites. Check with Local Planning Authority.

4.1.5 European Protected Species Licences

Information available via MAGIC reveals that EPS mitigation licences have been issued for works within 2 km of the proposed development site (brown long-eared bat and whiskered bat). EPS mitigation licences have also been issued for dormouse within 5 km of the site boundary.

4.1.6 Great Crested Newt Class Survey Licence Returns

Information available via MAGIC reveals that great crested newt has been recorded in 2015 from Shorne Wood Country Park 1.9 km to the west.

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 III.

The 2012 Kent Habitat Survey characterised the study area as improved grassland.

4.2.2 Local Wildlife Sites

Nearby designations are illustrated in Appendix IV.

Information available through KLIS indicates that land within the site has no nature conservation designations associated with it. However, woodland located immediately to the north is included within Court Wood, Shorne 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. Information supplied by KRAG indicates that common frog, smooth newt, palmate newt and great crested newt have been recorded from the local area (Ref. CES/22/034, Appendix V). The closest validated great crested newt record was reported from a private residence located 0.92 km to the west.

Viviparous lizard, slow-worm and grass snake have also been recorded from the local area. The closest reptile record is for grass snake, recorded 1.1 km to the east).

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 area.

Planning Category	Consult NE if Proposals Include
All Planning Applications	ALL PLANNING APPLICATIONS - EXCEPT HOUSEHOLDER APPLICATIONS.
Infrastructure	-
Wind & Solar Energy	-
Minerals, Oils & Gas	-
Rural Non Residential	-
Residential	-
Rural Residential	-
Air Pollution	-
Combustion	-
Waste	-
Composting	-
Discharges	-
Water Supply	-
Notes	For new residential development in this area financial contributions are required to mitigate increased recreational disturbance on coastal SPAs and Ramsar Sites. Check with Local Planning Authority.

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

Species	Likelihood of Presence
<i>Amphibians</i>	
Common Frog	HIGH
Common Toad	Possible
Natterjack	<i>n/a</i>
Smooth Newt	Possible
Palmate Newt	Possible
Great Crested Newt	Possible
<i>Reptiles</i>	
Viviparous Lizard	Possible
Slow-worm	Possible
Sand Lizard	<i>unlikely</i>
Grass Snake	Likely
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 area includes a residential property in the North Kent Plain Natural Area (English Nature, 1998). The site is accessed directly from Pear Tree Road.

5.2 Proposed Development

Demolition of existing building(s) and construction of new residential dwelling.

The site is approximately 0.46 Ha.

The proposed development area is 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

One pond is known to be located within 250 m of the proposed development site. A series of ornamental pools that no longer contain water are located within the proposed development site. Other small ornamental ponds could also occur in nearby residential gardens. The search area for waterbodies is illustrated in Fig. 5.2.

5.4 Terrestrial Habitat

Land within the proposed development area includes a residential garden with associated grassland, trees and shrubs. The grass had recently been cut and several trees had been felled prior to the site assessment being undertaken.

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

5.5 Buildings

Three structures are located within the proposed development site:

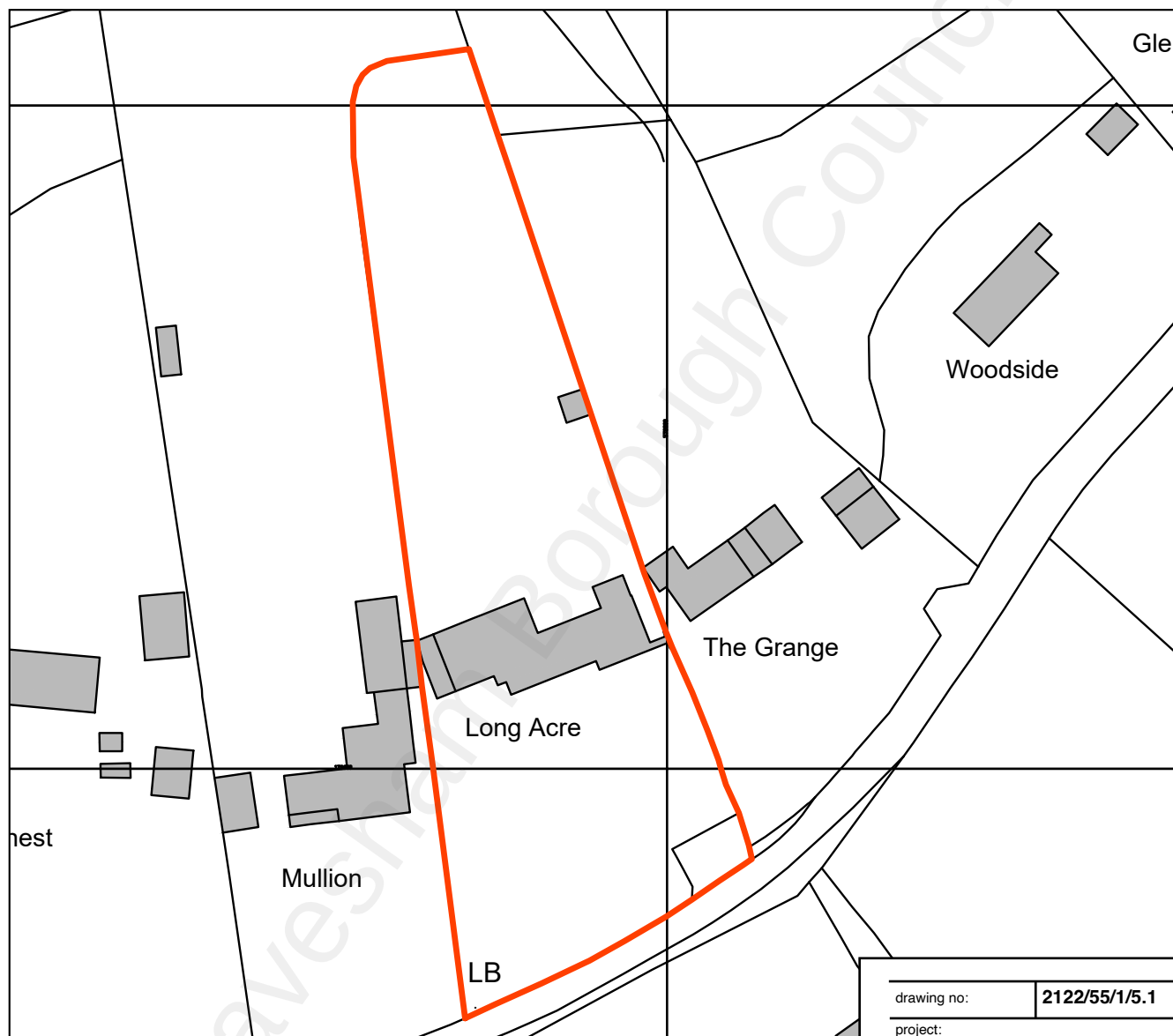
B1 – Two-storey residential dwelling.

B2 – Garden shed.

B3 – Outbuilding, possibly used as pump house for now defunct pools.

Fig. 5.1 Proposed Development Area

application area = ~ 0.46 Ha



drawing no: 2122/55/1/5.1

project:
Long Acre

title:
Development Area

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

date: **Feb 2022**



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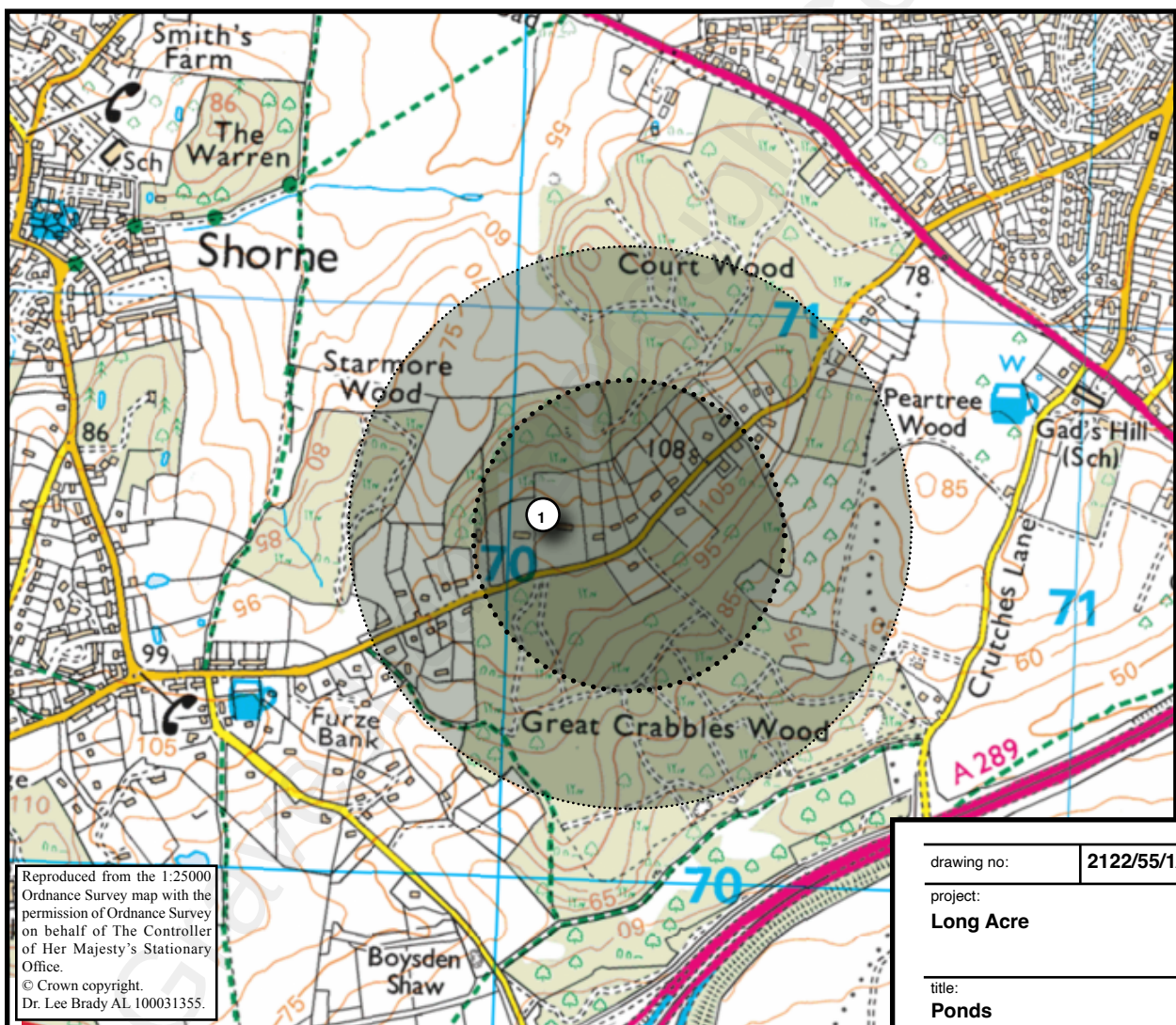
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Fig. 5.2 Ponds

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

One pond is known to be located within 250 m of the site boundary. A defunct series of pools is located within the proposed development area. Other small ornamental ponds may also be present in nearby residential gardens.

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

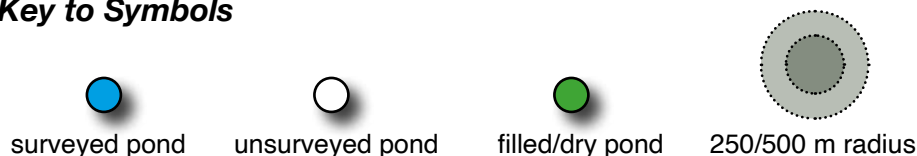


Fig. 5.3 Habitats

Indicative location of proposed development site, illustrating existing habitat (main plate 2020).

The proposed development site is dominated by modified (improved) grassland that is managed as part of a residential property consisting of a main dwelling (B1) and two outbuildings (B2 & B3). Aerial imagery indicates that land to the north of the property includes an area of deciduous woodland, some of which appears to have been cleared between 2013 and 2017. A series of dry pools are located within the site boundary. Japanese Knotweed is present (TN1).



drawing no: 2122/55/1/5.3

project:
Long Acre

title:
Habitats

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

date: **Feb 2022**



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Fig. 5.4 Site Photographs

Figure illustrates habitat features located within the study area.

The proposed development site includes a residential property with two storey dwelling (B1; illustrated), shed (B2) and outbuilding (B3). Rotten wood creates gaps that provide potential entry points for bats in B1 (e.g. inset). Some mature trees had been felled prior to the site visit.

Building B3 is an outbuilding with gaps in soffits offering potential entry points for roosting bats.



A series of defunct pools are located in the rear garden. Available vegetation was found to have been recently managed but still considered suitable for a small population of reptiles. A pond is located in a neighbouring garden ~ 100 m to the west.

A stand of Japanese knotweed was found at the northern end of the garden (for location see Fig. 5.3, TN1).

drawing no:	2122/55/1/5.4
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project:	Long Acre
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title:	Available Habitat
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scale: N.T.S.	date: Feb 2022
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6. Habitat Assessment

6.1 Habitats

Vegetation within the proposed development site is characterised by a residential garden that is dominated by modified (improved) grassland with mature trees and shrubs.

The scale and nature of the proposed development within an existing residential property means that further botanical surveys are not considered necessary. Areas of available habitat are detailed in Table 6.1.

Habitat	Area (m ²)	Length (m)
Urban – Buildings and Sealed Surface	100	-
Grassland - Modified Grassland	1833	-
Trees/Shrubs	1769	-

Table 6.1. Available Habitat (all measurements are approximate).

6.1.1 Designated Sites

The proposed development area is located within the London Area Greenbelt and is close to several designated sites including Great Crabbles Wood SSSI that is situated on the opposite side of Pear Tree Road. Great Crabbles Wood includes mixed coppice under oak standards, with sweet chestnut as the dominant species. A number of scarce plants occur, including lady orchid *Orchis purpurea* and man orchid *Aceras anthropophorum*.

The proposed development represents replacement of an existing dwelling and is therefore not considered likely to result in significant additional impacts on nearby designated sites.

However, the applicant is advised that for new residential development in this area financial contributions are required to mitigate increased recreational disturbance on coastal SPAs and Ramsar Sites. All new developments at this location will be reviewed by Natural England and additional survey/mitigation work may be requested over and above recommendations made within this report.

7. Protected Species Assessment

Species/Species Group	Likely Presence	Evidence	Further Survey Required?
Birds	Likely	Buildings and remaining woody vegetation are suitable for nesting birds. No evidence of barn owl was observed.	No.
Bats	Possible	The main building (B1) includes some features that are considered suitable for roosting bats. Adjacent woodland offers roost potential and the site is likely to support foraging and commuting bats.	Yes.
Reptiles	Possible	Habitat within the site offers some potential for a small population of reptiles (e.g. slow-worm).	Yes.
Amphibians	Possible	Great crested newt previously recorded within 0.95 km. One pond known to be present within 100 m. Available habitat within application area offers potential for foraging and sheltering.	Yes (if application area not reduced and mitigation licence required). Survey work can be avoided with DLL.
Badgers	Possible	No evidence of snuffle holes, latrines or setts was observed. Badgers may occasionally forage within garden.	No.
Dormouse	Negligible	Adjacent deciduous woodland offers good habitat potential for dormouse. Dormouse is unlikely to be present in areas proposed for disturbance within the application area.	No.
Water Vole	Negligible	No suitable waterbodies present.	No.
Rare/Protected Invertebrates	Negligible	Adjacent deciduous woodland offers good habitat potential. Only common widespread species likely to be present within the application area.	No.
Non-native Species	Observed (requires confirmation)	Stand of Japanese Knotweed at northern end of garden.	Yes.
Other	Possible	Available habitat could support foraging and sheltering hedgehog.	No.

Table 7.1. Summary of protected species likely presence and recommendations for further survey work. Species for which additional surveys are recommended are highlighted. Refer to text for further details.

7.1 Birds

Within the local area there are areas of woodland, gardens, and orchards that are expected to support a varied bird population. Structures and remaining woody vegetation located in and around the proposed development site are likely to support nesting songbirds.

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.

The scale of proposed development means that further survey work is not considered necessary.

7.2 Bats

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

7.2.1 Building Inspection

A preliminary buildings inspection was undertaken which followed the survey guidelines recommended in The Bat Workers' Manual (Mitchell-Jones, 2004) and the Bat Conservation Trust's Good Practice Guidelines (BCT, 2016). Results are summarized in Table 7.2.

Features and evidence of bat use and potential habitat that were 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) 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 building. These include missing tiles, cavities in woodwork or masonry and any crevices within the building.

Building Number	Description	Bat Potential	Further Survey Required?
1	Residential dwelling with flat roof and external weatherboarding. Generally good external condition, but some wood found to be rotten and/or have gaps. Holes within soffits and weather boarding offer potential entry points to voids within the roof and/or walls.	Low to Medium	Emergence survey with minimum two visits. If bats confirmed an additional visit will be required.
2	Wooden shed with corrugated plastic roof.	Negligible	No.
3	Brick outbuilding with flat roof. Rotten wood on soffits has resulted in gaps that provide potential entry points for bats.	Low	Emergence survey with minimum one visit. If bats confirmed an additional two visits will be required.

Table 7.2. Building assessment for bats.

7.2.2 Trees

Several trees were found to have been felled before the site assessment was undertaken. If any of the remaining mature trees are proposed for removal, they should first be assessed for their suitability to support roosting bats.

7.3 Reptiles

Available vegetation includes an area of grassland. The grassland appears to have been cut prior to the site assessment. The grassland has previously been managed as part of a residential garden but aerial photos suggest that management may have been intermittent in recent years. Garden management, combined with the site's northerly aspect means that the site is unlikely to support a large population of reptiles. However, available habitat could support species such as slow-worm. Since the extent of proposed works has not yet been confirmed, a reptile survey is recommended to inform appropriate mitigation actions.

7.4 Amphibians

One extant pond is known to be located within ~ 100 m of the proposed development site.

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.

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. Despite this low risk zone assessment, great crested newt has been recorded within 0.95 km of the proposed development site and a large population is known to breed in the nearby Shorne Woods Country Park. Note that the boundaries of different risk zones are periodically reassessed by Natural England.

"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 completed risk assessment represents the lowest impact if great crested newts are subsequently found to breed in the closest pond. The impact will be higher if individual newts are found sheltering within the proposed development site.

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)	0.01 - 0.1 ha lost or damaged	0.3
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:	0.3
Rapid risk assessment result:	AMBER: OFFENCE LIKELY	

"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.

Based on available information, the development size, quality of available terrestrial habitat and distance from the closest pond means that there could be a negative impact on newts that may breed in ponds in the local area.

7.4.2 Great Crested Newt Mitigation Licence

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

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

The scale of impact of the proposed works within 100 m of a pond means that the proposed development may qualify for a *Low Impact Class Licence*.

7.4.3 Great Crested Newt Survey

If either a Low Impact Class Licence or Full Mitigation Licence are determined to be most appropriate for the proposed scheme, additional survey work will be required.

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."

A Great crested newt survey of all ponds within 250 m is recommended for a Low Impact Class Licence (Table 7.4). Survey work can be avoided either by reducing the development area or using a *District Level Licence*. Further details are provided in Section 8.4.

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	Full EPS Licence	Impacts on gcn in larger areas or over longer periods of time.
5	District Level License	New licence proposed by NE that permits development without the need for survey and/or mitigation works.

Table 7.3. Available licence categories for development projects affecting great crested newt (gcn). Avoidance of licensing will require additional survey work or reduction in disturbance area. Further details are provided in Table 7.3 and Section 8.4.

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 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 development land 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 negatively impact on the local conservation status of widespread amphibian species. Additional survey work for widespread amphibian species is not considered necessary.

7.5 Badgers

Mammal burrows were found towards the northern end of the garden, but no evidence of badger was observed within the proposed development site. Additional survey for badger is not considered necessary.

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 additional survey work for dormouse is not considered necessary, the applicant is advised that nearby areas of woodland are likely to support this species.

7.7 Water Vole

No waterbodies suitable for water vole are located within or close to the site boundary and additional survey work for water vole is not considered necessary.

7.8 Invertebrates

Available habitat within the site is considered to offer opportunities for a range of widespread species of invertebrates. Additional survey work for invertebrates is not considered necessary.

7.9 Non-Native Species

A stand of Japanese knotweed was found growing at the northern end of the garden. If left untreated, this invasive plant may significantly impact on the conservation status of nearby designated sites. It is recommended that further investigation works are undertaken.

7.10 Other Considerations

Hedgehog is likely to be present in the local area.

On the basis of the site assessment, it is not expected that other protected species are present within the proposed site.

Gravesham Borough Council

8. Recommendations

8.1 Birds

8.1.1 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 competent 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 5m 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.

8.1.2 Bird Nesting Boxes

The applicant should consider installing bird nesting boxes in suitable locations. Suitable exterior boxes include those for blue tit and/or house sparrow and 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.

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

8.2 Bats

8.2.1 Bat Survey

The main dwelling (B1) and outbuilding (B3) were considered to offer potential for roosting bats. Low to medium potential was noted in B1 and low potential in B3. To determine whether or not bats are using features within the buildings to roost, further survey work is recommended. All buildings should be subject to emergence survey(s) in accordance with BCT Guidelines (2016). The surveys should be carried out during the optimum season from May to August. If bats are found to be using a building, further surveys may be required, as per current guidelines (BCT, 2016), to provide sufficient information to inform a European Protected Species Mitigation Licence from Natural England. At least 2 weeks gap should be left between each survey.

If any trees suitable for roosting bats are to be removed, these may also be subject to appropriate survey work.

Confirmation that remaining trees will not be disturbed should be included with the application.

For more information see:

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

8.2.2 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 for the proposed scheme, the Bat Conservation Trust's *Bats and Lighting in the UK guidance* must be adhered to in the lighting design.

8.3 Reptiles

Available habitat could support a small population of reptiles and presence/likely absence survey work is recommended in order to inform appropriate mitigation.

- Survey all suitable terrestrial habitat within the proposed development site.
- Survey work should be undertaken by a suitably experienced ecologist using appropriate methods (preferably artificial cover object survey).
- A minimum of 7 survey visits are required to reliably confirm presence/likely absence.
- Survey visits should be undertaken during suitable weather conditions from April to September.

If reptiles are subsequently confirmed present a suitable mitigation strategy should be prepared.

For more information see:

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

8.4 Great Crested Newt

Based on available information, the development size, quality of available terrestrial habitat 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>

One of the following options is recommended: (1) reduce the proposed development area, (2) survey ponds located within 250 m to determine likely presence of newts or (3) apply for DLL that does not require survey work.

Option (1): Reduce Development Area

- Reduce overall development area to ensure land proposed for disturbance within 100m of WB1 is below 0.01 Ha. Note that this includes all land that will be disturbed as part of the development (i.e. all land within the red line application area).
- If the disturbance area can be reduced below 0.01 Ha, appropriate mitigation can be achieved through a non-licensed method statement.
- Great crested newts are more likely to shelter in habitat located within a development site when the site is located close to a pond supporting a medium or large population.
- Survey work of ponds located within 100 m is therefore still beneficial.
- If survey work is not undertaken and a non licensed method statement strategy is adopted, the applicant is advised that all works must stop and further ecological advice sought if great crested newts are subsequently encountered within the development site.
- If great crested newts are encountered within the development site, an appropriate mitigation licence will be required.

Option (2): Pond Survey

- All ponds located within 250 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.
- Access permission to survey ponds on land owned by third parties will be required.
- If great crested newts are not confirmed present, no further mitigation actions are required.
- 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 (3) District Level Licence (DLL)

- A new *District Level Licence* (DLL) that aims to fundamentally change the approach to great crested newt mitigation licensing has recently been launched by Natural England in Kent.
- Under the DLL, development over a whole district is covered by a single licence. In Kent this licence is issued by Natural England. In other counties the licence may be issued by local authorities or even private companies.
- 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.
- Calumma Ecological Services considers that the DLL could provide 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 the Risk Zone and whether great crested newt has recently been confirmed present. Natural England identify ponds based on OS mapping data and these can sometimes include garden ponds and ponds that are no longer extant.

For more information see:

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

8.5 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).

The results of all recommended follow-up surveys should be summarised in an appropriate report. In addition to specific mitigation works for protected species, the report should include details of habitat management and enhancement works that the applicant has confirmed will be undertaken. As well as protected species, such work should target more widespread species that are of biodiversity interest.

Features that should be considered for inclusion include:

- Bird nesting boxes.
- Bat roosting boxes.

- Ecologically sympathetic soft landscaping that provides shelter and nectar for invertebrates such as bees.
- Creation of log/habitat piles that provide shelter for amphibians and reptiles.
- Eradication of non-native species such as Japanese Knotweed.

Gravesham Borough Council

9. References and Further Reading

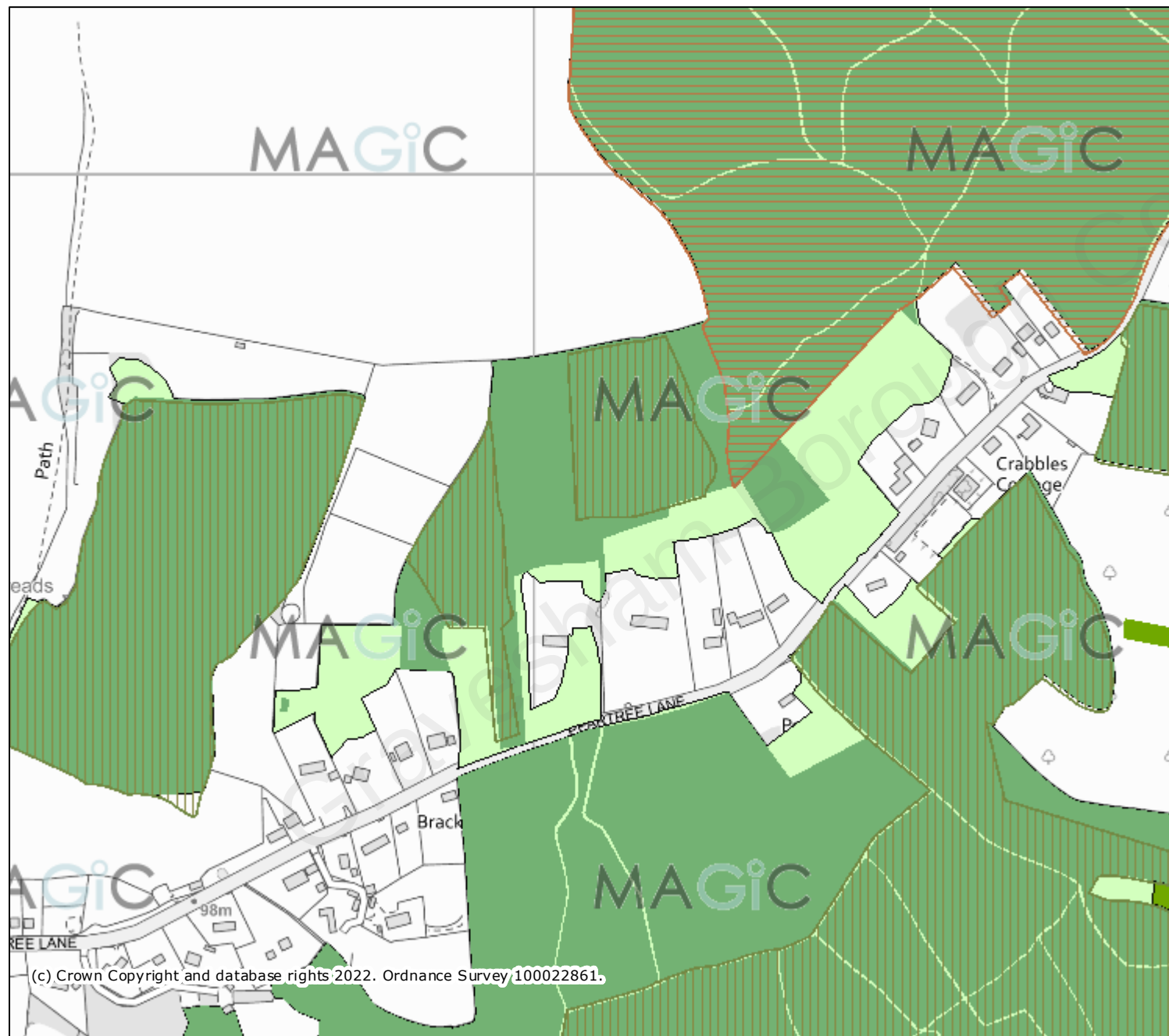
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Appendix I: Habitat Designations

Source:

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

Gravesham Borough Council



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Legend

- | | |
|--|---|
| Priority Habitat Inventory - Coastal Saltmarsh (England) | Priority Habitat Inventory - Lowland Meadows (England) |
| Priority Habitat Inventory - Coastal Sand Dunes (England) | Priority Habitat Inventory - Purple Moor Grass and Rush Pasture (England) |
| Priority Habitat Inventory - Coastal Vegetated Shingle (England) | Priority Habitat Inventory - Upland Calcareous Grassland (England) |
| Priority Habitat Inventory - Maritime Cliffs and Slopes (England) | Priority Habitat Inventory - Upland Hay Meadows (England) |
| Priority Habitat Inventory - Mudflats (England) | Priority Habitat Inventory - Lowland Heathland (England) |
| Priority Habitat Inventory - Saline Lagoons (England) | Priority Habitat Inventory - Mountain Heaths and Willow Scrub (England) |
| Saline Lagoons (Wales) | Priority Habitat Inventory - Upland Heathland (England) |
| Saltmarsh (Wales) | |
| Sand Dunes (Wales) | |
| Priority Habitat Inventory - Calaminarian Grassland (England) | Moorland Change Map 2019-20 (England) |
| Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh (England) | Cloud |
| Priority Habitat Inventory - Good quality semi-improved grassland (Non Priority) (England) | No recent Burn or Cut in vegetation |
| Priority Habitat Inventory - Lowland Calcareous Grassland (England) | Recent Burn or Cut in vegetation |
| Priority Habitat Inventory - Lowland Dry Acid Grassland (England) | Moorland Change Map 2018-19 (England) |
| | Cloud |
| | No recent Burn or Cut in vegetation |
| | Recent Burn or Cut in vegetation |

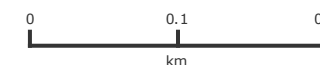
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Map produced by MAGiC on 18 February, 2022.

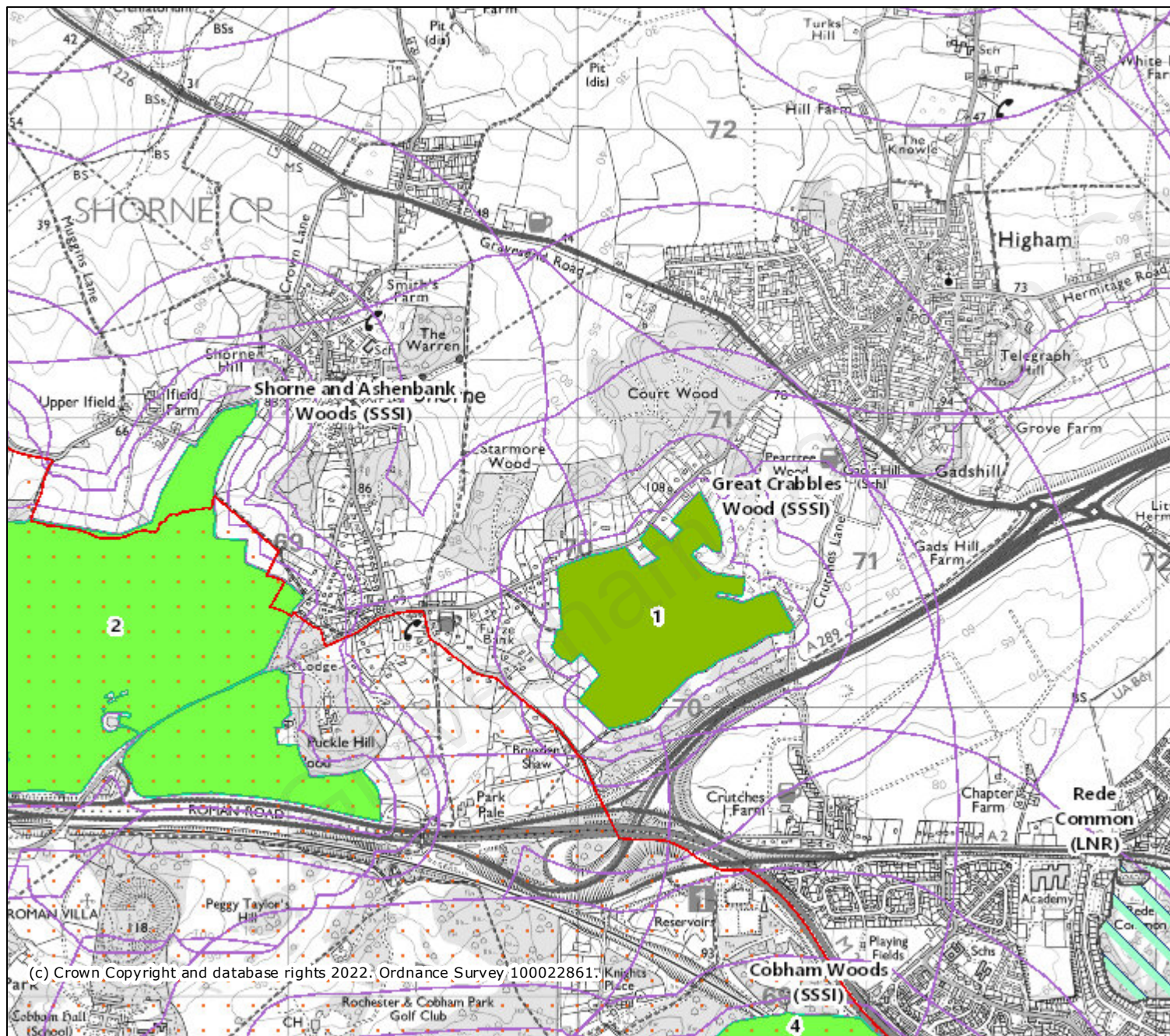
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Appendix II: Land Designations

Source:

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

Gravesham Borough Council



Legend

- | | |
|---|---|
| Areas of Outstanding Natural Beauty (England) | Not Assessed |
| Limestone Pavement Orders (England) | Sites of Special Scientific Interest (England) |
| Local Nature Reserves (England) | SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England) |
| Moorland Line (England) | Special Areas of Conservation (England) |
| National Nature Reserves (England) | Possible Special Areas of Conservation (England) |
| National Nature Reserves (Scotland) | Special Protection Areas (England) |
| National Parks (England) | Biosphere Reserves (England) |
| Ramsar Sites (England) | Community Forests (England) |
| Proposed Ramsar Sites (England) | Heritage Coasts (England) |
| Ramsar Sites (Scotland) | Land Management Initiatives (England) |
| Sites of Special Scientific Interest Units (England) | |
| Favourable Condition | National Forest (England) |
| Unfavourable Recovering | RSPB Reserves (GB) |
| Unfavourable no change | Upland Experiment Areas (England) |
| Unfavourable Declining | |
| Part Destroyed | |
| Destroyed | |

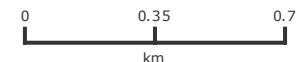
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Map produced by MAGIC on 18 February, 2022.

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Appendix III: Kent Habitat Survey 2012

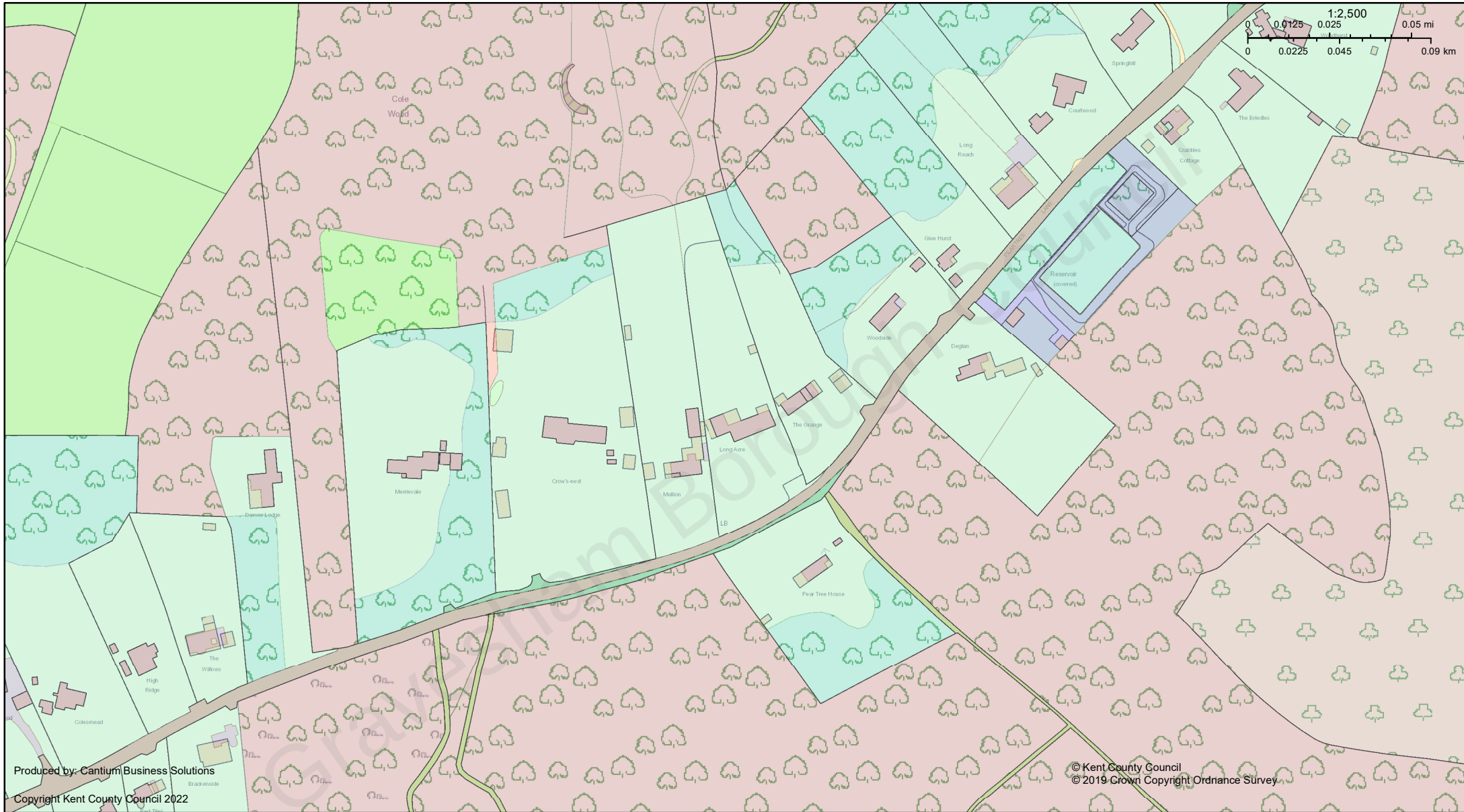
Source:

Kent Landscape Information Land System

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

Kent Habitat Survey

February 18, 2022



Legend

Kent Habitat Survey 2012

- Acid grassland
- Arable and horticulture
- Boundary and linear features

- Bracken
- Broadleaved, mixed, and yew woodland
- Built-up areas
- Calcareous grassland

- Coniferous woodland
- European dry heaths
- Fen, marsh and swamp
- Improved grassland

- Inland rock/Quarry
- Littoral Rock
- Littoral Sediment
- Maritime grassland

- Neutral grassland
- Rivers and streams
- Standing open water and canals
- Supralittoral Rock

- Supralittoral Sediment
- Traditional orchard
- Unknown terrestrial vegetation

Appendix IV: Local Wildlife Sites

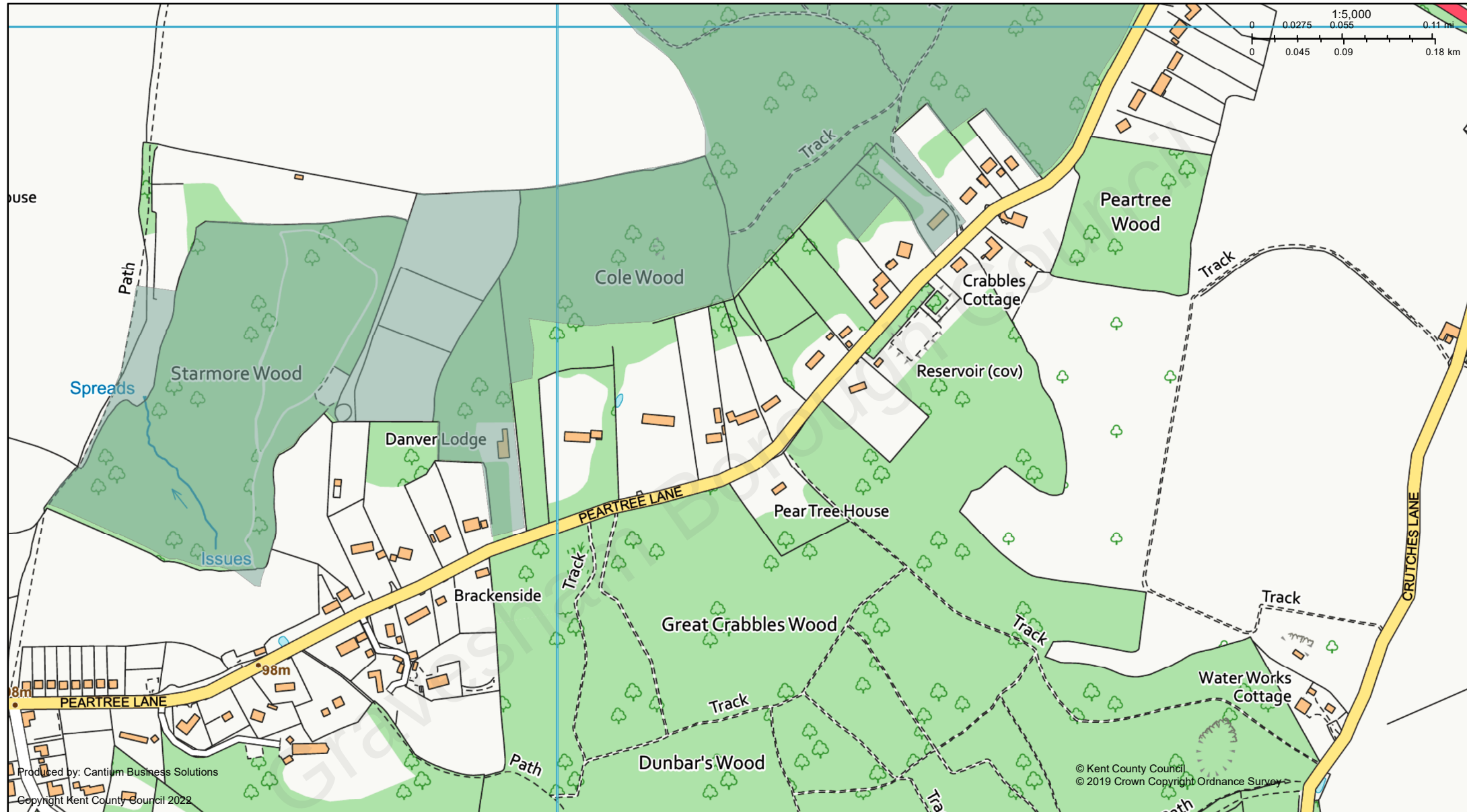
Source:

Kent Landscape Information Land System

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

Local Wildlife Sites

February 18, 2022



Legend



Local Wildlife Sites

Appendix V: Records Search

Source:

Kent Reptile and Amphibian Group (Ref: CES/22/034)

Gravesham Borough Council

Herpetofauna Database Search Summary

Enquiry No: CES/22/034
On Behalf of: Calumma Ecological Services
Search Area: Shorne
Grid Reference: TQ 701 706
Search Radius (km): 2

Amphibians Recorded in Search Area:

Common Frog
Smooth Newt
Palmate Newt
Great Crested Newt

list excludes historical and confidential observations

The closest recorded Great Crested Newt observation is located at [Private Residence], 0.95 km to the W (record id: 116585).

Reptiles Recorded in Search Area:

Viviparous Lizard
Slow-worm
Grass Snake

list excludes historical and confidential observations

The closest recorded reptile observation is for Grass Snake, located at Rochester, 1.1 km to the E (record id: 67573).

The Kent Reptile and Amphibian Group is a non-profit making organisation that promotes the conservation of reptiles and amphibians. Although the KRAG recording database contains several thousands of records, the availability of information detailed within this search is directly related to survey effort. A lack of records does not necessarily indicate the absence of a species. KRAG recommends that a thorough herpetofauna survey is undertaken following the most recently published best practice guidelines.

KRAG welcomes the submission of additional records from those undertaking survey work in Kent.

Kent Reptile and Amphibian Group

Search Date: 8/2/2022

info@kentarg.org
www.kentarg.org

Species Risk Assessment

Enquiry No: CES/22/034
On Behalf of: Calumma Ecological Services
Search Area: Shorne
Grid Reference: TQ 701 706

Amphibians

	<u>Likelihood of Presence</u>	
	<u>Score</u>	<u>Dist (km)</u>
Common Frog:	HIGH	0.99
Common Toad:	Possible	2.02
Natterjack:	n/a	64.19
Smooth Newt:	Possible	1.77
Palmate Newt:	Possible	1.77
Great Crested Newt:	Possible	0.95
Marsh Frog:	Possible	2.71
Alpine Newt:	n/a	17.50

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

Reptiles

	<u>Likelihood of Presence</u>	
	<u>Score</u>	<u>Dist (km)</u>
Viviparous Lizard:	Possible	1.60
Slow-worm:	Possible	1.84
Sand Lizard:	<i>unlikely</i>	65.58
Grass Snake:	Likely	1.10
Adder:	Possible	4.70
Smooth Snake:	n/a	n/a

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

ponds within 1 km: 11
distance to nearest pond (km): 0.1

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: 8/2/2022

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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 works towards the policy of 'best practice' advocated by ARG UK (formally known as Herpetofauna Groups of Britain and Ireland).

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