

Updated Ecological Appraisal with Method Statement

**The Old School House,
Ash, Kent CT3 2AA**

Report to:
Carter Consultancy

4th July 2023



COPYRIGHT and LEGAL GUIDANCE

Copyright of all information generated by Calumma Ecological Services remains with Dr. Lee Brady. The contents of this document must not be copied or reproduced in whole or in part for any purpose without the written consent of Calumma Ecological Services.

This report may contain sensitive information relating to the presence of protected species. Such information must not be disseminated without the prior consent of Calumma Ecological Services.

Information contained in this report does not represent legal opinion. If such advice is required, the opinion of a suitably qualified legal professional should be sought.

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.

Calumma Ecological Services

info@calumma.co.uk
www.calumma.co.uk

Contents

1. SUMMARY.....	4
2. SITE LOCATION, ASSESSMENT AND PLANNING.....	6
2.1. PLANNING PERMISSION	7
3. LEGAL PROTECTION AND PLANNING	10
3.1 THE WILDLIFE & COUNTRYSIDE ACT	10
3.2 CONSERVATION OF HABITATS AND SPECIES REGULATIONS	11
3.3 THE NATURAL ENVIRONMENT AND RURAL COMMUNITIES ACT	12
3.4 THE HEDGEROW REGULATIONS	13
3.5 THE NATIONAL PLANNING POLICY FRAMEWORK	13
3.6 BIODIVERSITY NET GAIN	13
3.7 SPECIES PROTECTIONS	14
4. DESKTOP STUDY	17
4.1 MAGIC GEOGRAPHIC INFORMATION SYSTEM.....	17
4.2 KENT INFORMATION LANDSCAPE SYSTEM (KLIS)	19
4.3 RECORDS SEARCHES	19
5. PROPOSED DEVELOPMENT AND SUMMARY SITE DESCRIPTION.....	21
5.1 SITE LOCATION	21
5.2 PROPOSED DEVELOPMENT	21
5.3 AQUATIC HABITAT.....	22
5.4 TERRESTRIAL HABITAT	22
5.5 BUILDINGS	22
6. HABITAT ASSESSMENT	27
6.1 HABITATS.....	27
6.2 DESIGNATED SITES	27
7. PROTECTED SPECIES ASSESSMENT	28
7.1 BIRDS	29
7.2 BATS	29
7.3 REPTILES.....	31
7.4 AMPHIBIANS.....	31
7.5 BADGERS	31
7.6 HAZEL DORMOUSE.....	31
7.7 BEAVER, OTTER AND WATER VOLE.....	31
7.8 HEDGEHOG.....	32
7.9 INVERTEBRATES	32
8. METHOD STATEMENT.....	33
8.1 BIRDS	33
8.2 BATS	34
8.3 REPTILES.....	35

8.4 HEDGEHOGS	35
8.8 ECOLOGICAL ENHANCEMENT AND BIODIVERSITY NET GAIN.....	35
9. REFERENCES AND FURTHER READING	37
APPENDIX I: HABITAT DESIGNATIONS	38
APPENDIX II: LAND DESIGNATIONS.....	40
APPENDIX III: RECORDS SEARCH	42
APPENDIX IV: BATS AND LIGHTING.....	45

1. Summary

Background

- 1.1 Former school buildings at the Old School House, Ash have been proposed for conversion into residential units.
- 1.2 Calumma Ecological Services was commissioned to provide an updated ecological appraisal and advise on the need for additional survey work and/or mitigation.

Habitats

- 1.3 The proposed development area includes buildings that are surrounded by hardstanding and improved grassland.
- 1.4 The development area has no specific botanical interest and additional survey work is not considered necessary.

Birds

- 1.5 The buildings could support nesting songbirds. In 2020, a disused nest was observed in an outbuilding.
- 1.6 No evidence of barn owl was observed.
- 1.7 Care must be taken to ensure that nesting birds are not disturbed during clearance/construction works.**

Bats

- 1.8 The local area could support roosting and foraging bats.
- 1.9 The two former school buildings were found to offer potential for roosting bats. In 2020, the two outbuildings were found to offer negligible potential for roosting bats.
- 1.10 Survey work undertaken in 2020 confirmed that bats were roosting in buildings B1 & B2.
- 1.11 Updated survey work for bats is required to inform an appropriate mitigation licence.**

Reptiles

- 1.12 Information supplied by Kent Reptile and Amphibian Group indicates that widespread reptile species have been recorded in the local area.
- 1.13 Land within the proposed development site includes vegetation that displays a sward with low structural complexity. Some of this vegetation had been removed prior to the 2023 site assessment. Remaining habitat is unlikely to be occupied by reptiles.
- 1.14 Precautionary mitigation is recommended. Such works would aim to continue site management to ensure habitat remains unfavourable for reptiles.

Amphibians

- 1.15 Information supplied by Kent Reptile and Amphibian Group indicates that the closest great crested newt record was obtained from a site located 2.45 km to the south.
- 1.16 Common frog, common toad and smooth newt have been recorded from the local area.
- 1.17 Ground truthing and literature review undertaken by Calumma Ecological Services found one pond within 250 m of the proposed development area.
- 1.18 The size of the proposed development area and distance from suitable aquatic habitat means that the development is not considered likely to significantly impact upon the conservation status of great crested newt or widespread amphibians.

Badgers

- 1.19 No badger setts or other signs of badger were observed within the proposed development area.

Dormouse

- 1.20 Proposed development work at the site will have no significant impact on populations of dormouse that may occur in the locality.

Beaver, otter and Water Vole

- 1.21 No waterbodies are located within the site boundary.
- 1.22 Proposed development work at the site will have no significant impact on populations of beaver, otter or water vole that may occur in the locality.

Hedgehogs

- 1.23 Occasional hedgehogs could forage and shelter around the boundary of the proposed development site.

Invertebrates

- 1.24 Available habitat within the proposed development site is considered to offer only limited opportunities for widespread invertebrate species.

2. Site Location, Assessment and Planning

Site Name:	The Old School House, Ash - <i>the site</i> ; Fig. 2.1
Grid Reference:	TR 289 584
County:	Kent
Planning Authority:	Dover District Council
Planning Refs:	22/00500
National Character Area:	North Kent Plain

Client:	Carter Consultancy
Proposed Disturbance:	Conversion of two former school buildings into residential units. Construction of one new residential unit.
Survey Request:	Preliminary Ecological Appraisal

Surveyor:	Lee Brady PhD, BSc (Hons), MCIEEM
------------------	-----------------------------------

Assessment Period:	20 th June 2023
Limitations:	This assessment did not include detailed surveys of protected species. 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).
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.

2.1. Planning Permission

Planning permission for the project was granted 14th October 2022. There are two precommencement planning conditions directly related to protected species and/or biodiversity. A single preoccupation condition is also stipulated.

Condition 9

No development shall take place (including any ground works, site or vegetation clearance), until a method statement for the protection of reptiles, nesting birds and hedgehogs during site clearance and construction works has been submitted to and approved in writing by the local planning authority. The content of the method statement will be informed by an updated ecological assessment of the site and will include:

- a) Purpose and objectives for the proposed methods.
- b) Working method, including timings, necessary to achieve stated objectives.
- c) Extent and location of all features with potential ecological interest shown on appropriate scale plans.
- d) Provision for species rescue.
- e) Persons responsible for implementing works, including times during site clearance / construction when specialist ecologists need to be present on site to undertake / oversee works.
- f) 'Toolboxtalk' information regarding protected species encounters that will be provided to contractors prior to works commencing.

The works will be carried out in accordance with the approved details.

Reason: To protect and enhance the ecology and biodiversity on the site in the future.

Condition 10

The development hereby approved shall not commence above slab level until details for a scheme for the enhancement of biodiversity on the site shall have been submitted to and approved in writing by the Local Planning Authority. The scheme shall consist of the enhancement of biodiversity through integrated methods into the design and appearance by means such as swift bricks. The development shall be implemented in accordance with the approved details and all features shall be maintained thereafter.

Reason: To protect and enhance the ecology and biodiversity on the site in the future.

Condition 11

Prior to occupation of any unit hereby permitted, a lighting design strategy for biodiversity for the site will be submitted to and approved in writing by the local planning authority. The lighting strategy will:

- a) Identify those areas/features on and around the site that, due to their potential for use by bats, are particularly sensitive to lighting impacts (including any biodiversity enhancement features)

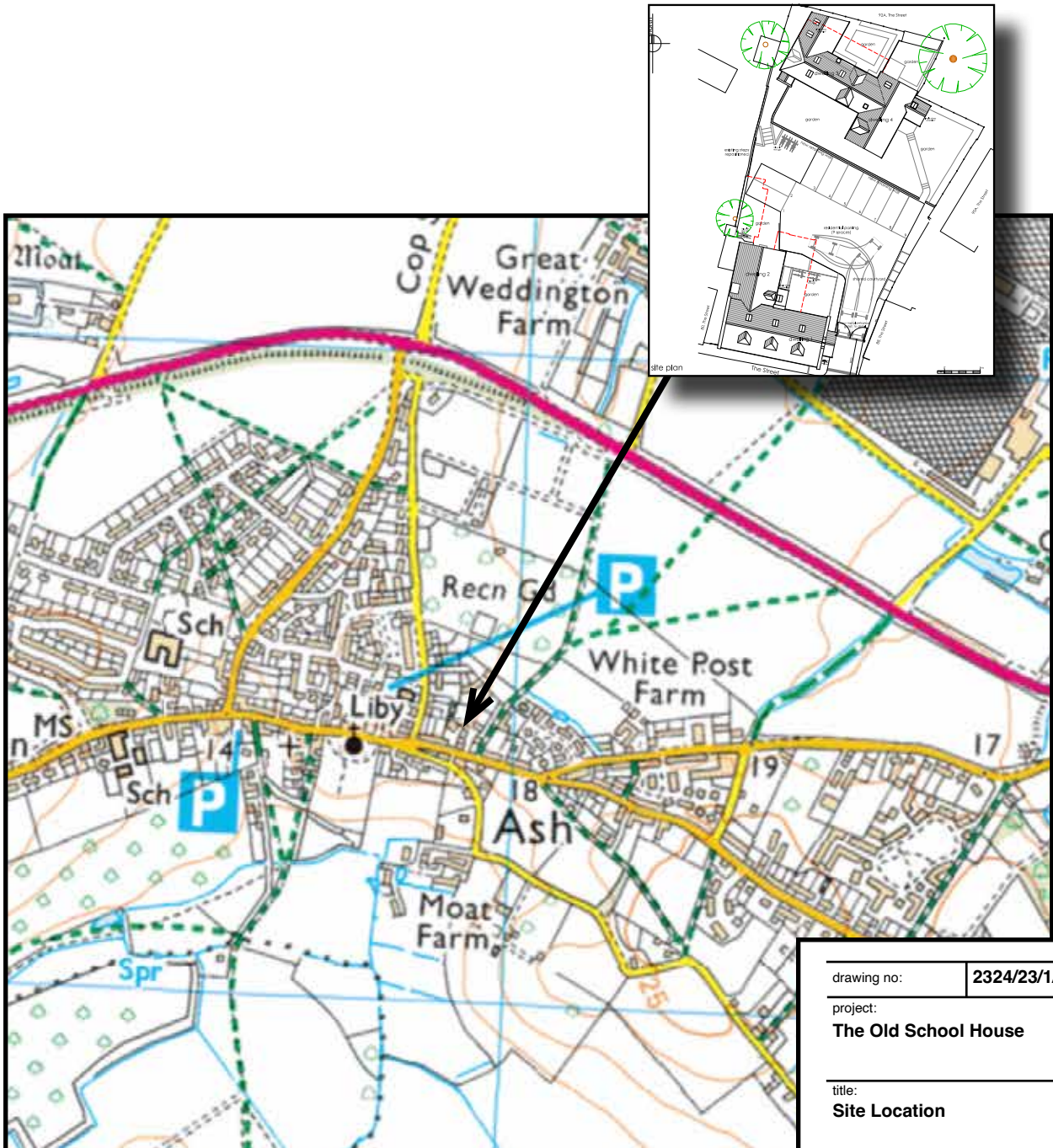
b) Show how and where external lighting will be installed in accordance with 'Guidance Note 8 Bats and Artificial Lighting' (Bat Conservation Trust and Institute of Lighting Professionals).

All external lighting will be installed in accordance with the specifications and locations set out in the strategy and will be maintained thereafter in accordance with the strategy.

Reason: To protect and enhance the ecology and biodiversity on the site in the future.

Fig. 2.1 The Old School House, Ash, Kent CT3 2AA (TR 289 584)

Location of study site.



drawing no: 2324/23/1/2.1

project:
The Old School House

title:
Site Location

scale: N.T.S. date: Jul 2023



13 Woodside Cottages,
Dunkirk,
Kent ME13 9NY
Tel/Fax: 01227 751408
info@calumma.co.uk
www.calumma.co.uk

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.

Developers are 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.

No priority habitat areas occur within the proposed development site. Other priority habitats located in the nearby area include deciduous woodland.

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 designations associated with it.

Other statutory designated sites located nearby include:

- Thanet Coast & Sandwich Bay Ramsar (4.7 km east);
- Thanet Coast & Sandwich Bay SPA (4.7 km east);
- Sandwich Bay SAC (4.7 km east);
- Sandwich Bay to Hacklinge Marshes SSSI (4.7 km east);
- Sandwich & Pegwell Bay NNR (6.3 km east).

4.1.3 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. Available information indicates that the Local Planning Authority **will not** be required to consult Natural England over possible impacts to nearby designated areas.

Planning Category	Consult NE if Proposals Include
All Planning Applications	n/a
Infrastructure	Airports, helipads and other aviation proposals.
Wind & Solar Energy	n/a
Minerals, Oils & Gas	n/a
Rural Non Residential	n/a
Residential	Residential development of 500 units or more.
Rural Residential	Any residential development of 500 or more houses outside existing settlements/urban areas.
Air Pollution	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m ² , slurry lagoons > 750m ² & manure stores > 3500t).
Combustion	General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
Waste	n/a
Composting	n/a
Discharges	Any discharge of water or liquid waste of more than 20m ³ /day to ground (ie to seep away) or to surface water, such as a beck or stream (NB This does not include discharges to mains sewer which are unlikely to pose a risk at this location).
Water Supply	n/a
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.

4.1.4 European Protected Species Licences

Information available via MAGIC indicates that in 2013 a European Protected Species Licence (EPSL) was granted for a development project located within 2 km of the proposed development site. The EPSL covered mitigation works affecting common pipistrelle, soprano and brown long-eared bats.

4.2 Kent Information Landscape System (KLIS)

4.2.1 Kent Habitat Survey 2012

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

4.2.2 Non Statutory Designated Sites

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

Other non statutory designated sites located nearby include Ash Level and South Richborough Pasture Local Wildlife Site (1.7 km north east).

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 the primary data holder for reptiles and amphibians in Kent. Information supplied by KRAG indicates that common frog, common toad, marsh frog and smooth new have been recorded within 2 km (Appendix III). The closest great crested newt record was observed 2.45 km to the south.

Viviparous lizard and grass snake have all been recorded from the local area.

The closest reptile record is for grass snake (1.24 km to the north 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.

Species	Likelihood of Presence
<i>Amphibians</i>	
Common Frog	HIGH
Common Toad	Possible
Natterjack	<i>n/a</i>
Smooth Newt	HIGH
Palmate Newt	Unlikely
Great Crested Newt	Possible
<i>Reptiles</i>	
Viviparous Lizard	Possible
Slow-worm	Possible
Sand Lizard	Unlikely
Grass Snake	Possible
Adder	Unlikely
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 land that is located in a village setting within the North Kent Plain National Character Area. The site is accessed directly from The Street, Ash.

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

The proposed works include conversion of two former school buildings into residential units and construction of a new residential unit.

The development area is ~ 0.12 Ha.

The 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

No ponds are located within the proposed development site. Available information indicates that there are four ponds located within 500 m of the site boundary. One pond is located within 250 m (Table 5.1). Small ornamental ponds could 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 two former school buildings and two outbuildings that are surrounded by hardstanding and regularly managed improved grassland. No mature trees will be disturbed.

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

5.5 Buildings

Four structures are located within the proposed development site. These consist of (B1) a former school building constructed from bricks with a tiled roof, (B2) another former school building constructed from bricks with a tiled roof, (B3) a small brick outbuilding that is built into the western site boundary and (B4) a small brick outbuilding with dilapidated wooden roof that used to form a toilet block.

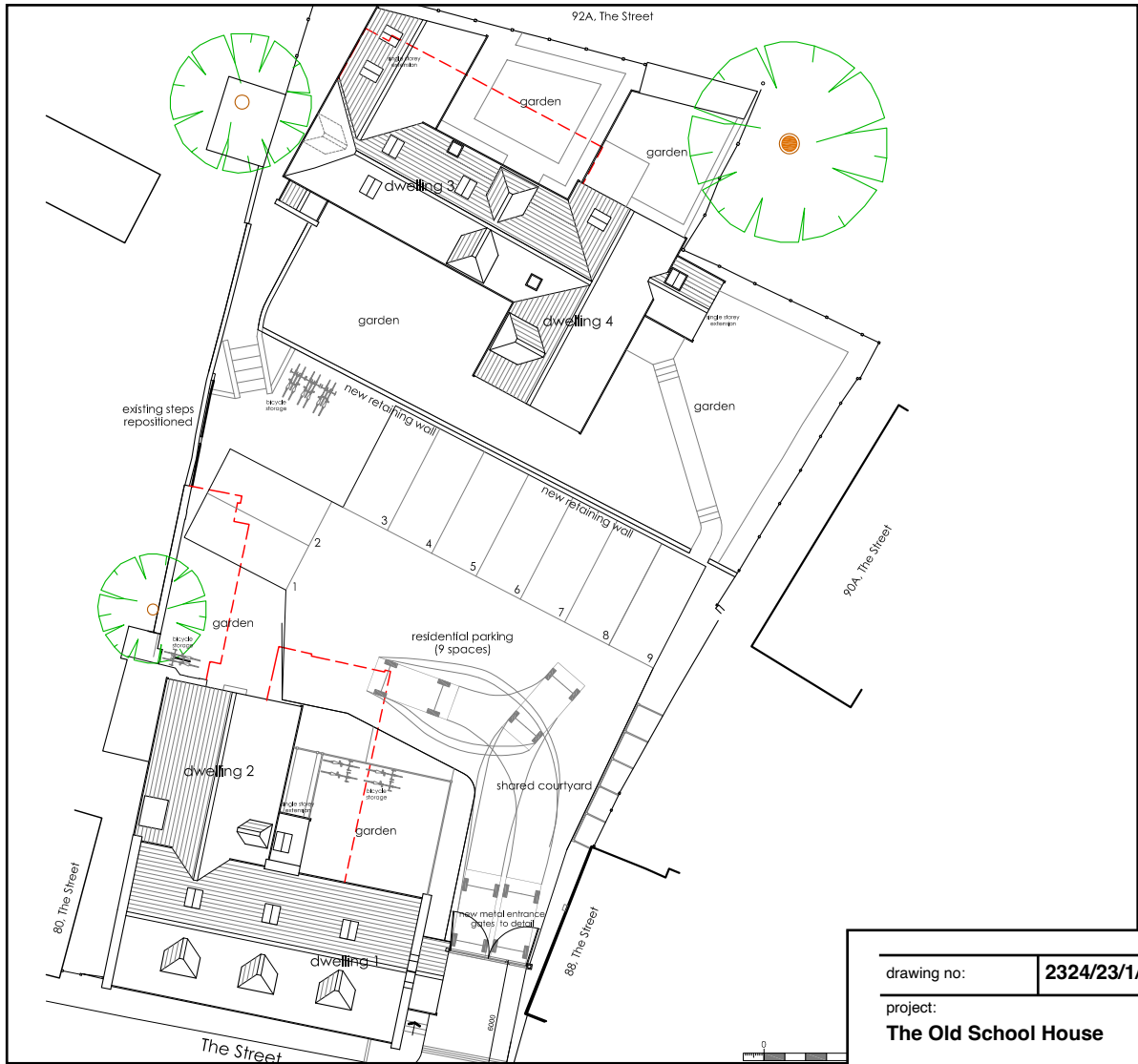
WB	Grid Reference	Distance (m)	Notes
1	TR 29075 58449	147	A field pond located amongst trees on the edge of an agricultural field. Approx. 160 m ² . No access permission.

Table 5.1. Summary information for ponds (WB) located within 250 m of the proposed development site. The locations of ponds are illustrated in Fig. 5.2.

Fig. 5.1 Proposed Development

Proposals include redevelopment of existing structures.

Application area approx: 0.12 Ha.



drawing no: **2324/23/1/5.1**

project:
The Old School House

title:
Development Area

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



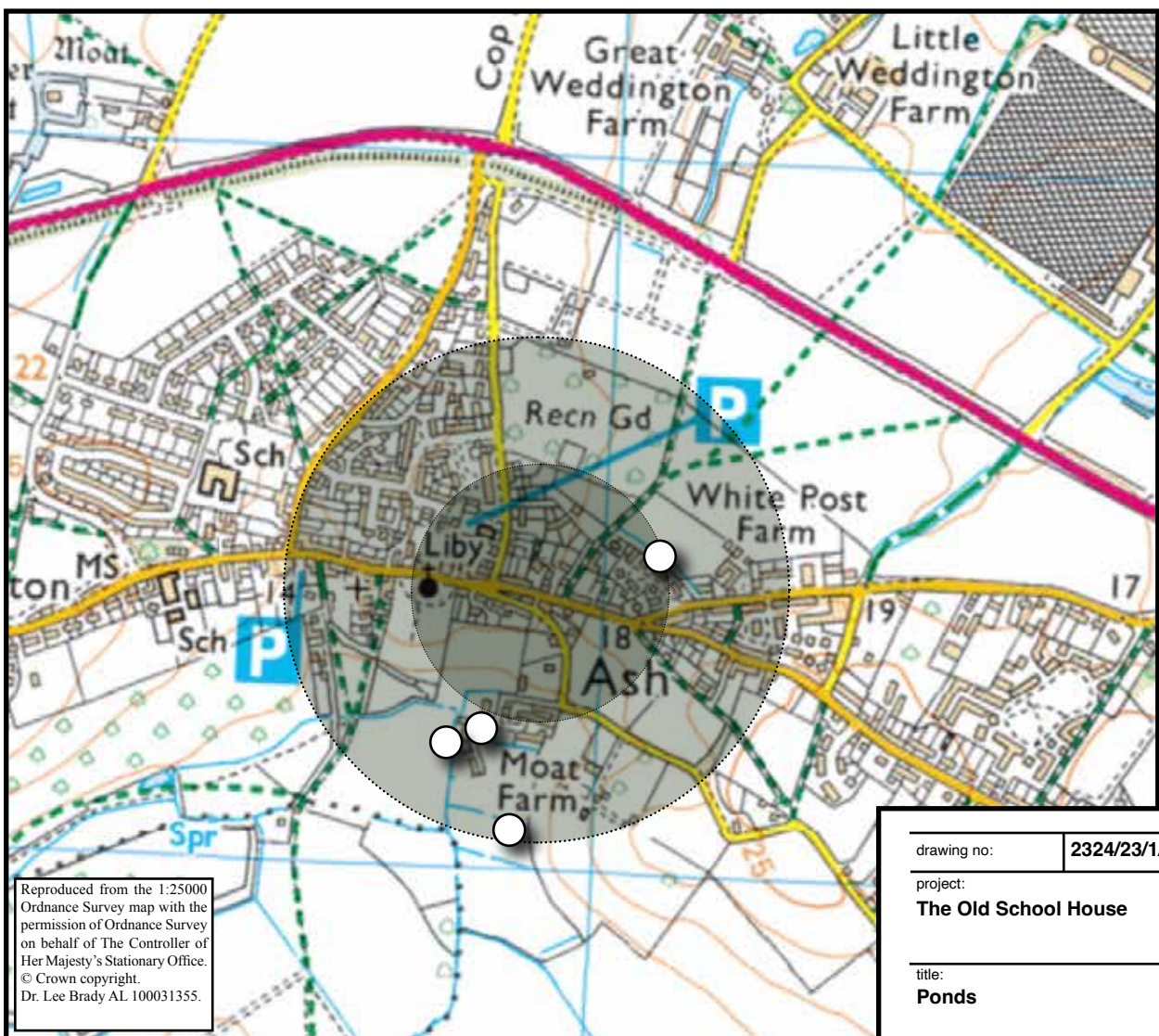
13 Woodside Cottages,
Dunkirk,
Kent ME13 9NY
Tel/Fax: 01227 751408
info@calumma.co.uk
www.calumma.co.uk

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 proposed development site. Four ponds are known to be located within 500 m of the site boundary, one of which is located within 250 m.

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



13 Woodside Cottages,
Dunkirk,
Kent ME13 9NY
Tel/Fax: 01227 751408
info@calumma.co.uk
www.calumma.co.uk

Fig. 5.3 Aerial Photographs

Indicative location of proposed application area, illustrating existing habitat (main plate 2021).

The application area includes a former school house with associated access and parking. Available habitat includes modified grassland that has been regularly managed.



drawing no: 2324/23/15.3

project:
The Old School House

title:
Aerial Photographs

scale: N.T.S. date: Jul 2023



13 Woodside Cottages,
Dunkirk,
Kent ME13 9NY

Tel/Fax: 01227 751408
info@calumma.co.uk

www.calumma.co.uk



The proposed development site includes two school buildings that are set within an area of hardstanding and short sward improved grassland that is regularly managed.

Building B1 (illustrated) is the former boys' school building. An internal examination of the building did not reveal evidence of bats. The external roof tiles and gaps in brickwork were considered to offer potential for crevice roosting bats. Bat roosts were confirmed in 2020 and 2023.



Building B2 is the former girls' school building. An internal examination of the building did not reveal evidence of bats. The external roof tiles and gaps in brickwork were considered to offer potential for crevice roosting bats. Bat roosts were confirmed in 2020.

Available grassland is generally short sward and suboptimal for reptiles. Since reptiles could occupy nearby gardens, precautionary mitigation is recommended.



Hedgehogs could occupy adjacent gardens. Any close board fencing should be provisioned with hedgehog gates.



Any open excavations should be covered at night or provisioned with a ramp to permit exit by any hedgehogs that may enter to site.

Fig. 5.4 Site Photographs

Figure illustrates habitat features located within the study area.

drawing no: **2324/23/1/5.4**

project:
The Old School House

title:
Site Photographs

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

date: **Jul 2023**



13 Woodside Cottages,
Dunkirk,
Kent ME13 9NY
Tel/Fax: 01227 751408
info@calumma.co.uk
www.calumma.co.uk

6. Habitat Assessment

6.1 Habitats

Available vegetation within the proposed development site is dominated by regularly managed improved grassland. At the time of the 2023 site assessment, development work has commenced and only a small area of grassland remained present (~ 70 m²).

6.2 Designated Sites

The extent of proposed development will not impact on nearby priority habitats and additional survey work is not considered necessary. 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.

7. Protected Species Assessment

Species/Species Group	Likely Presence	Evidence	Further Work Required?
Birds	Breeding: Likely	The site includes buildings suitable for nesting birds.	Nesting birds must not be disturbed.
Bats	Confirmed	Survey work undertaken in 2020 confirmed the presence of bat roosts in both buildings.	Updated emergence surveys required. External lighting should follow appropriate guidelines.
Reptiles	Low	Available habitat within development site suboptimal for reptiles. Adjacent areas could be occupied.	No surveys required. Precautionary mitigation recommended.
Amphibians	Breeding: Negligible Sheltering: Low	No ponds within site. Available terrestrial habitat provides potential sheltering places for amphibians that could breed in nearby ponds.	No.
Badgers	Negligible	No evidence of badger observed within site.	No.
Dormouse	Negligible	Available habitat unsuitable for dormouse.	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	Limited potential for widespread invertebrate species.	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, trees and grassland. This variety of potentially suitable habitat is expected to support a varied bird population within the locality. Buildings located within the proposed development site could 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 area proposed for construction and additional bird survey work is not considered necessary.

7.2 Bats

Local habitat features include areas of buildings, woodland and grassland that provide roosting, foraging and commuting opportunities for bats. Bats are considered likely to commute/forage over the proposed development site.

7.2.1 Building Inspection

A 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).

Features and evidence of bat use and potential habitat that were considered when assessing the building 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.

Buildings B1 & B2 include a number of features that are considered to offer potential for roosting bats. Bat emergence surveys were undertaken in May, June and July 2020. Four day roosts of individual bats were recorded at each building (a total of 8 day roosts). Foraging bats recorded were dominated by common pipistrelle, with frequent soprano pipistrelle activity, and occasional brown long eared bat, serotine, Daubenton's bat and noctule passes.

A European Protected Species Mitigation Licence (EPSML) will be required for the conversion of buildings B1 & B2 as it will have the potential to result in the damage/destruction/obstruction of up to 8 occasionally used day roosts of low conservation significance, and has the potential to kill/injure/disturb bats, all of which are offences under UK and European legislation. The EPSML will require an updated emergence survey.

An updated emergence survey has been commissioned. To date, this survey has reconfirmed the presence of at least one roosting common pipistrelle bat in building B2.

Building Number	Description	Bat Potential	Further Survey Required?
1	<p>Brick constructed former school building with a tiled roof. No evidence of roosting bats was observed in the building.</p> <p>Gaps beneath the roof tiles and within brickwork offer roost potential to crevice roosting species.</p> <p>Works to this building had already started prior to the 2023 assessment.</p> <p>Updated survey work has commenced in 2023 and pipistrelle roost confirmed present.</p>	Confirmed in 2020 & 2023	Emergence survey with minimum three visits.
2	<p>Brick constructed former school building with a tiled roof. No evidence of roosting bats was observed in the building.</p> <p>Gaps beneath the roof tiles and within brickwork offer roost potential to crevice roosting species.</p> <p>Works to this building had already started prior to the 2023 assessment.</p> <p>Updated survey work has commenced in 2023.</p>	Confirmed in 2020	Emergence survey with minimum three visits.
3	<p>Small brick outbuilding (storage shed). No features considered suitable for roosting bats observed. Demolished prior to 2023 assessment.</p>	Negligible	No.
4	<p>Small brick outbuilding (toilet block). No features considered suitable for roosting bats observed. Demolished prior to 2023 assessment.</p>	Negligible	No.

Table 6.1. Building assessment for bats.

7.2.2 Trees

Trees and shrubs located around the boundary of the proposed development site were inspected for their potential to support roosting bats.

No trees suitable for roosting bats will be disturbed by the proposed works.

7.3 Reptiles

Available habitat around the buildings includes short sward improved grassland that displays low structural complexity. Only a small area of grassland was found to remain during the 2023 assessment and this is considered unlikely to be occupied by reptiles.

Available habitat is considered to offer negligible to low potential for reptiles. However, if management of the site changes and vegetation is allowed to grow species such as slow-worm could colonise from nearby gardens. Precautionary mitigation is recommended.

7.4 Amphibians

One pond is known to be located within 250 m of the proposed development site.

7.4.1 Great Crested Newt Risk Assessment

WB1 is a medium sized pond that is located within 147 m of the proposed development area. Access permission was not available to survey the pond.

The size of the application area and distance from nearby ponds means that proposed works are unlikely to have a significant negative impact on the Favourable Conservation Status of great crested newt.

7.4.2 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

No evidence of badger was observed within the area proposed for development (latrines etc) and works are considered unlikely to impact on badgers or their setts.

Additional survey work for badgers is not considered necessary.

7.6 Hazel Dormouse

Although available information indicates that the proposed development site is within the known range of dormouse in Kent, there will be no direct impacts on features suitable for dormouse (e.g. 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. Individuals could occasionally forage and disperse around the boundary of the site.

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. Method Statement

Appropriate actions will 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 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 or disturbed 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 proposed works. If works have not been completed within this timeframe, an update check will be undertaken.

8.1.2 Bird Nesting Boxes

The applicant should consider installing two 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 that can be attached to the new house. Details of the boxes that will be installed together with their locations should be included with the application.

In addition, two to four swift nest bricks should be installed at least 5 m above ground with a distance of 0.5 - 1 m between boxes. Boxes should receive some shade. Swift bricks typically encroach into the wall cavity, or even span the cavity. If they are placed under the eaves, or under fascia boards, this is generally not a problem, however lower locations may need to incorporate a cavity tray to prevent water penetration. Swift bricks should not overheat on south-facing walls, but if they have a thin front wall, they should not be placed in the sun, but should be sheltered under the eaves. If the design of the proposed new building is unsuitable for bricks swift nesting boxes should be installed instead.

For more information see:

https://www.designingbuildings.co.uk/wiki/Swift_brick

<https://www.swift-conservation.org/Leaflet%20-%20Swift%20Nest%20Bricks%20-%20installation%20&%20suppliers-small.pdf>

<https://www.rspb.org.uk/get-involved/activities/nature-on-your-doorstep/garden-activities/create-a-high-home-for-swifts/>

8.2 Bats

8.2.1 Bat Survey and EPS Licence

Confirmed bat roosts were found in buildings B1 & B2 during 2020. An updated bat emergence survey is being undertaken to determine whether or not bats are still using features within the buildings to roost. Buildings B1 & B2 will be subject to 3 dusk emergence surveys in accordance with BCT Guidelines (2016). The surveys will be carried out during the optimum season from May to August. A minimum 2 weeks gap will be left between each survey. A European Protected Species Mitigation Licence from Natural England will be required.

For more information see:

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

8.2.2 Bat Boxes

Provision of bat boxes on buildings or nearby trees will provide sheltering opportunities. Most modern designed bat boxes are now produced from woodcrete, which is a formulation of wood sawdust, concrete and clay. This material allows natural respiration, a stable temperature, and is extremely long lasting being both rot and predator proof. Woodcrete also has the highest rates of occupation of all box types. There are a wide range of box designs available for trees and buildings, all of which have specific installation requirements.

The number of required boxes and their locations will depend on the results of the 2023 bat survey and will be detailed in the bat survey report.

For more information on Kent Bat Boxes see:

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

8.2.3 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 will 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* will be adhered to in the lighting design (Appendix IV).

Lighting will 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.

8.3 Reptiles

8.3.1 Precautionary Mitigation

Available habitat within the proposed development site currently offers relatively low potential for reptiles. However, reptiles could be present in nearby gardens and a small number of individuals could shelter beneath refuges in the development site.

- Any ground objects suitable for sheltering animals will be removed by hand and checked for sheltering reptiles.
- Areas proposed for disturbance will be strimmed to ground level and vegetation maintained at this height until completion of all works.
- Reptile exclusion fencing is not considered necessary.
- In the unlikely event that reptiles are found within the working area, they will 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>

8.4 Hedgehogs

8.4.1 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* will 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.

8.4.2 Open Excavations

During months when hedgehogs are most likely to be active (March to October), excavations will 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.

8.8 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 will 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;
- 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 renovated buildings;

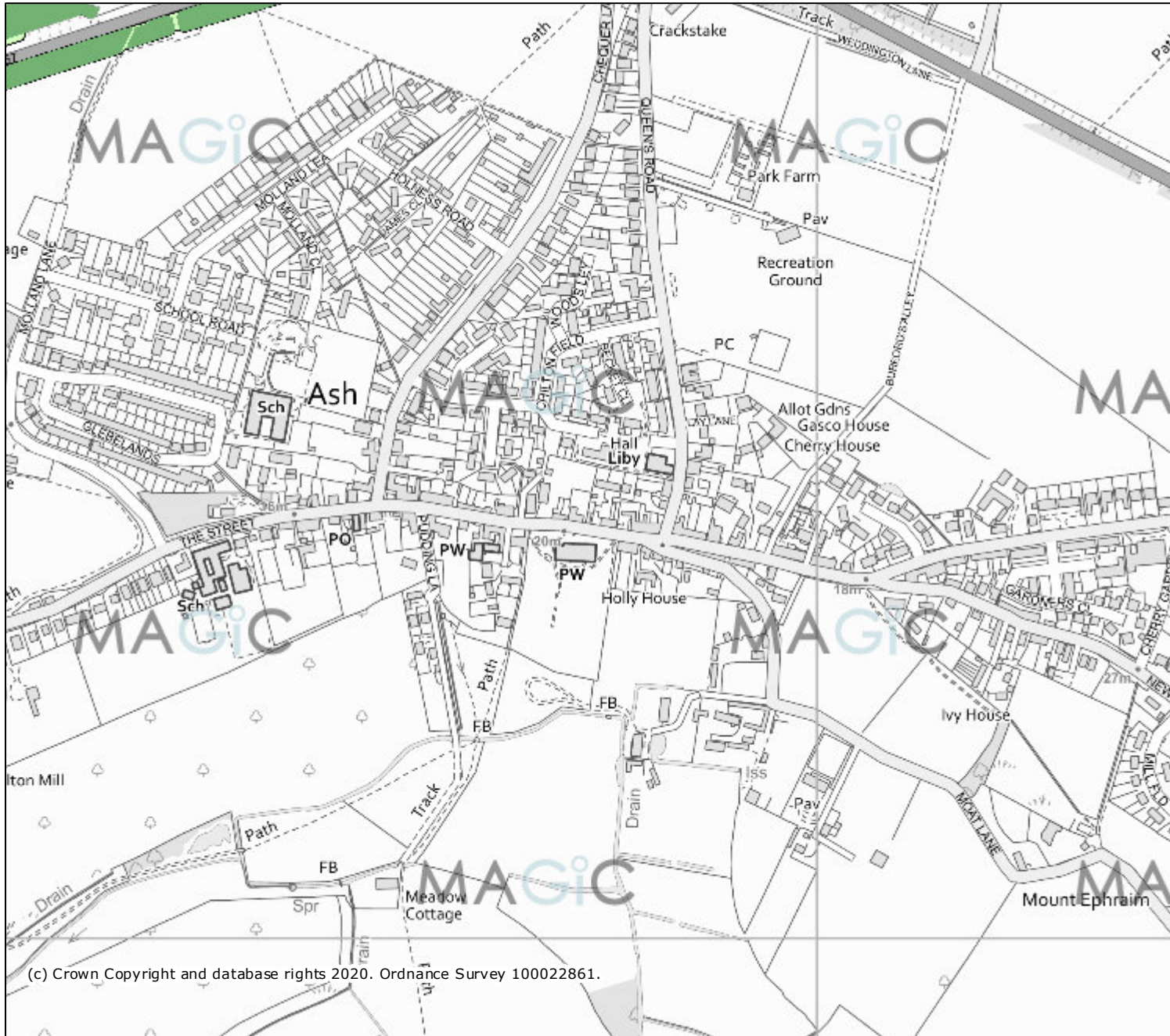
9. References and Further Reading

- Bat Conservation Trust (2016). Bat Surveys – Good Practice Guidelines. 3rd Edition. Bat Conservation Trust, London, UK.
- Beebee, T. and Grayson, R. (1998) Site Assessment and Protection. In: *Herpetofauna Workers' Manual*. Gent, A. H. & Gibson, S. D. (eds.), Joint Nature Conservation Committee, Peterborough, p. 97.
- Bright, P., Morris, P. and Mitchell-Jones, T. (2006) The Dormouse Conservation Handbook. English Nature.
- Calumma Ecological Services (2020) Preliminary Ecological Appraisal. The Old School House, Ash, Kent.
- Calumma Ecological Services (2020) Bat Survey Report. The Old School House, Ash, Kent.
- English Nature (1998) Natural Areas. Nature Conservation in Context. English Nature, Peterborough.
- English Nature (2001) Great crested newt mitigation guidelines. English Nature, Peterborough.
- English Nature (2002). Bats in roofs: a guide for surveyors. English Nature, Peterborough, UK.
- English Nature (2005) Reptiles: guidelines for developers. English Nature, Peterborough.
- Froglife (1999) Reptile survey. An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.
- Gent, T. and Howarth, W. (1998) Amphibians and reptiles and the law. In: *Herpetofauna Workers' Manual*. Gent, A. H. & Gibson, S. D. (eds.), Joint Nature Conservation Committee, Peterborough, pp. 75 - 93.
- Griffiths, R. A. and Inns, H. (1998) Surveying. In: *Herpetofauna Workers' Manual*. Gent, A. H. & Gibson, S. D. (eds.), Joint Nature Conservation Committee, Peterborough, pp. 1 - 6.
- Gunnel, K., Murphy, B. & Williams, C. (2013). *Designing for Biodiversity: A technical guide for new and existing buildings*. RIBA, UK.
- Herpetofauna Groups of Britain and Ireland (1998) Evaluating local mitigation/translocation programmes: Maintaining Best Practice and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs). HGBI, c/o Froglife, Halesworth.
- Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough, UK.
- Oldham, R. S., Keeble, J., Swan, M. J. S. and Jeffcote, M. (2000) Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*). *Herpetological Journal*, **10**, 143-155.
- Phillips, M. and Huggett, D. (2001) From Passive to Positive – the Countryside Act 2000 and British Wildlife. *British Wildlife*, **12**, 237 – 243.
- Young, J. S., Ryan, H., Thompson, S., Newcombe, M. and Puckett, J. (2015) *Mammals of Kent*. Kent Mammal Group, Kent Bat Group, East Kent Badger Group and Kent Field Club.

Appendix I: Habitat Designations

Source:

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



(c) Crown Copyright and database rights 2020. Ordnance Survey 100022861.

Legend

- | | |
|---|---|
|  Priority Habitat Inventory - Coastal Saltmarsh (England) |  Priority Habitat Inventory - Lowland Calcareous Grassland (England) |
|  Priority Habitat Inventory - Coastal Sand Dunes (England) |  Priority Habitat Inventory - Lowland Dry Acid Grassland (England) |
|  Priority Habitat Inventory - Coastal Vegetated Shingle (England) |  Priority Habitat Inventory - Lowland Meadows (England) |
|  Priority Habitat Inventory - Maritime Cliffs and Slopes (England) |  Priority Habitat Inventory - Purple Moor Grass and Rush Pasture (England) |
|  Priority Habitat Inventory - Mudflats (England) |  Priority Habitat Inventory - Upland Calcareous Grassland (England) |
|  Priority Habitat Inventory - Saline Lagoons (England) |  Priority Habitat Inventory - Upland Hay Meadows (England) |
|  Saline Lagoons (Wales) |  Priority Habitat Inventory - Lowland Heathland (England) |
|  Saltmarsh (Wales) |  Priority Habitat Inventory - Mountain Heaths and Willow Scrub (England) |
|  Sand Dunes (Wales) |  Priority Habitat Inventory - Upland Heathland (England) |
|  Priority Habitat Inventory - Calaminarian Grassland (England) |  Priority Habitat Inventory - Mountain Heaths and Willow Scrub (England) |
|  Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh (England) |  Priority Habitat Inventory - Upland Heathland (England) |
|  Priority Habitat Inventory - Good quality semi-improved grassland (Non Priority) (England) |  Priority Habitat Inventory - Limestone Pavements (England) |

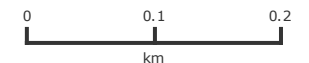
Projection = OSGB36

xmin = 627800

ymin = 157700

xmax = 629800

ymax = 159100



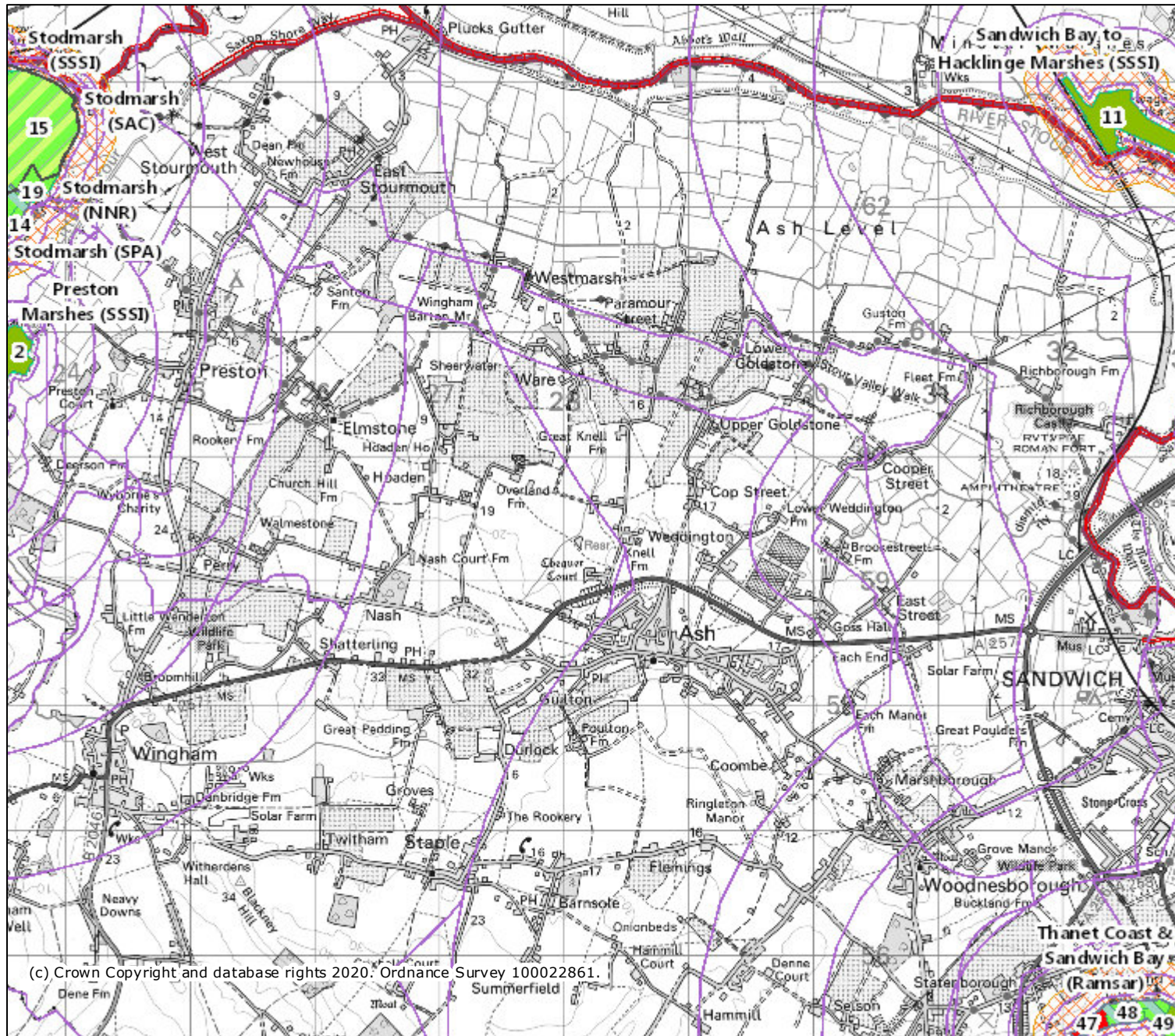
Map produced by MAGiC on 19 February, 2020.

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

Appendix II: Land Designations

Source:

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



(c) Crown Copyright and database rights 2020. Ordnance Survey 100022861.

Legend

- Limestone Pavement Orders (England)
- Local Nature Reserves (England)
- Moorland Line (England)
- National Nature Reserves (England)
- National Nature Reserves (Scotland)
- National Nature Reserves (Wales)
- National Parks (England)
- Ramsar Sites (England)
- Proposed Ramsar Sites (England)
- Ramsar Sites (Scotland)
- Ramsar Sites (Wales)
- Sites of Special Scientific Interest (England)
- Favourable Condition
- Unfavourable Recovering
- Unfavourable no change
- Unfavourable Declining
- Part Destroyed
- 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)
- Sites of Special Scientific Interest (Scotland)
- Sites of Special Scientific Interest (Wales)
- Special Areas of Conservation (England)
- Possible Special Areas of Conservation (England)
- Special Areas of Conservation (Scotland)
- Special Areas of Conservation (Wales)
- Special Protection Areas (England)
- Potential Special Protection Areas (England)
- Special Protection Areas (Scotland)
- Special Protection Areas (Wales)

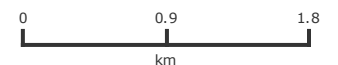
Projection = OSGB36

xmin = 620300

ymin = 154000

xmax = 636200

ymax = 164900



Map produced by MAGiC on 20 February, 2020.

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

Appendix III: Records Search

Source:

Kent Reptile and Amphibian Group



Herpetofauna Database Search Summary

Enquiry No: CES/23/172
On Behalf of: Calumma Ecological Services
Search Area: Ash
Grid Reference: TR 289 584
Search Radius (km): 2

Amphibians Recorded in Search Area:

Common Frog
Common Toad
Smooth Newt
Marsh Frog

list excludes historical and confidential observations

The closest recorded Great Crested Newt observation is located at [Private Residence], 2.45 km to the S (record id: 49953).

Reptiles Recorded in Search Area:

Viviparous Lizard
Grass Snake

list excludes historical and confidential observations

The closest recorded reptile observation is for Grass Snake, located at Goss Hall, 1.24 km to the E (record id: 114258).

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: 4/7/2023

info@kentarg.org
www.kentarg.org

Species Risk Assessment

Enquiry No: CES/23/172
On Behalf of: Calumma Ecological Services
Search Area: Ash
Grid Reference: TR 289 584

Amphibians

	<u>Likelihood of Presence</u>	
	<u>Score</u>	<u>Dist (km)</u>
Common Frog:	HIGH	0.14
Common Toad:	Possible	1.71
Natterjack:	n/a	6.52
Smooth Newt:	HIGH	0.20
Palmate Newt:	<i>unlikely</i>	7.88
Great Crested Newt:	Possible	2.45
Marsh Frog:	Possible	1.98
Alpine Newt:	n/a	15.11

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

Reptiles

	<u>Likelihood of Presence</u>	
	<u>Score</u>	<u>Dist (km)</u>
Viviparous Lizard:	Possible	1.98
Slow-worm:	Possible	3.51
Sand Lizard:	<i>unlikely</i>	7.02
Grass Snake:	Possible	1.24
Adder:	<i>unlikely</i>	5.58
Smooth Snake:	n/a	n/a

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

ponds within 1 km: 11
distance to nearest pond (km): 0.12

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: 4/7/2023

info@kentarg.org
 www.kentarg.org

Appendix IV: 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

For more details please contact:

Dr. Lee Brady, *Calumma Ecological Services*,
13 Woodside Cottages, Dunkirk, Faversham, Kent ME13 9NY

Tel/Fax: 01227 751408
info@calumma.co.uk

www.calumma.co.uk