
Preliminary Ecological Assessment

Land to the left of St Johns church - Chapel Lane - Letty Green - Herts SG14 2PA

July 2021

Project: Land to the left of St Johns church - Chapel Lane - Letty Green - Herts SG14 2PA

Date: 12/07/2021

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Quality Control

- Version: Version 1

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Table of Contents

1. Non-technical summary

2. Introduction

Purpose of the report

Qualifications and competence of the author

3. Scope of works

Planning policy and legislation

4. Methodology

Desk study

Extended Phase I Habitat Survey

Protected species

5. Results

Site location and description

Desk study

Extended Phase I Habitat Survey

Protected species

6. Conclusion

Habitats

Protected species

7. Recommendations

8. References

9. Appendices

Appendix 1: Designated sites

Appendix 2: Impacts of sites

Appendix 3: Ancient Woodland

Appendix 4: BAP habitats

Appendix 5: Protected species licences

Appendix 6: Photographic records

Appendix 7: Legislation

1.0 Non-technical summary

1.1 To understand the ecology, an appraisal has been undertaken, which will outline any likely impacts and opportunities for mitigation, compensation and enhancement.

1.2 A desktop search for designated sites and habitats was undertaken using the Multi-agency Geographic Information for the Countryside (MAGIC) website and Promap. In addition, an extended Phase I Habitat Survey of the land and the likely presence of protected species was undertaken.

1.3 The site itself is not designated, and the habitats found on-site are common and widespread throughout the UK and are considered to be of site value only. The likelihood of occurrence of protected species is considered, and no further investigation is required.

2.0 Introduction

Purpose of the report

2.1 The survey's purpose was to assess the ecological features present or potential present, including the likely presence of rare or protected habitats and species within site and the zone of influence concerning the project. The key objectives are:

- Identify the likely ecological constraints associated with the project;
- Identify any mitigation measures likely to be required;
- Identify any additional surveys that may be required to inform an Ecological Impact Assessment (EclA); and,
- Identify the opportunities offered by the project to deliver ecological enhancement.

2.2 As advised by the British Standard BS 42020:2013,¹ an appraisal should be by a suitably qualified professional ecologist to ensure a rigorous and thorough independent review. The assessment and report have followed the Chartered Institute of Ecology and Environmental Management Guidelines,² which is proportionate to the scale of the project.

¹ Biodiversity – Code of practice for planning and development, BS 42020:2013.

² CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition, and CIEEM (2017) Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.

2.3 The preliminary ecological appraisal outlines likely impact and opportunities for mitigation, compensation and enhancement. The assessment also considers whether consultation with statutory bodies is necessary and whether consent or licences are required.

2.4 The preliminary ecological report also determines whether other information are required, such as an Ecological Impact Assessment (EclA). An EclA is a more detailed process of identifying, quantifying and evaluating the potential impact of a development on species, habitats and ecosystems for submission with a planning application. The impact considers impacts within the development site, the surrounding locality, and appropriate regional and national ecological resources. An EclA is usually submitted with a planning application unless the planning authority agrees that a preliminary ecological appraisal is sufficient.

Qualifications and Competence of the Author

2.5 The author has over 25 years of conservation experience. Founder of a new conservation charity and previously worked as Head of Conservation for a Wildlife Trust, Director of Studies for the Field Studies Council and Course Director and Lecturer for the University of Essex and Cambridge.

2.6 The author has been recognised by nationally respected organisations and has been awarded various fellowships for his '*outstanding or significant contribution*' towards these disciplines, including conservation and biodiversity for the delivery of landscape-scale conservation projects.

2.7 Currently on the external advisory board for the University of Essex and University of Southampton and representing CIEEM as an ecological expert for the Southwood Foundation.

3.0 Scope of works

3.1 The UK Government and devolved administrations have placed regulations on Local Planning Authorities to take the lead in responding to biodiversity losses by adopting clear environmental and planning policy requirements that encourage developers to take account of biodiversity impacts.

Planning policy and legislation

3.2 National policy guidance is by the National Planning Policy Framework, which sets out the Government's planning policies for England and how these should be applied.³ The guidance includes a requirement for local authorities to minimise impacts on biodiversity and

³ National Planning Policy Framework, February 2019.

provide a net gain in biodiversity when deciding planning applications. In addition, planning law requires that applications for planning permission be determined following the development plan unless material consideration indicates otherwise.

4.0 Methodology

Desk Study

4.1 A search for designated sites and habitats was undertaken using the Multi-agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) and Promap. The data collated will inform the impacts of the proposed works, ensuring that suitable mitigation and protection measures are considered.

4.2 A desktop study search was completed using an internet-based mapping service (www.magic.gov.uk) for statutory designated sites and internet-based aerial mapping services (www.maps.google.co.uk) to understand the habitats present in and around the survey area and habitat linkages and features into the broader landscape.

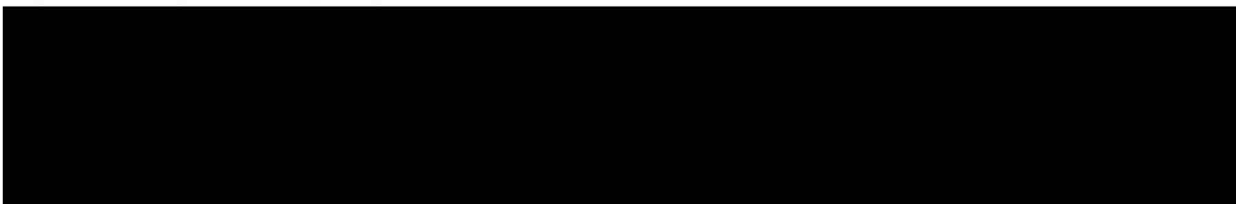
4.3 No biological records were requested at this stage. Instead, a search on Natural England's magic website for any European protected species licences that have been granted. These licences allow the licence holder to safeguard European Protected Species from adverse impacts associated with the development and other potentially damaging activity.

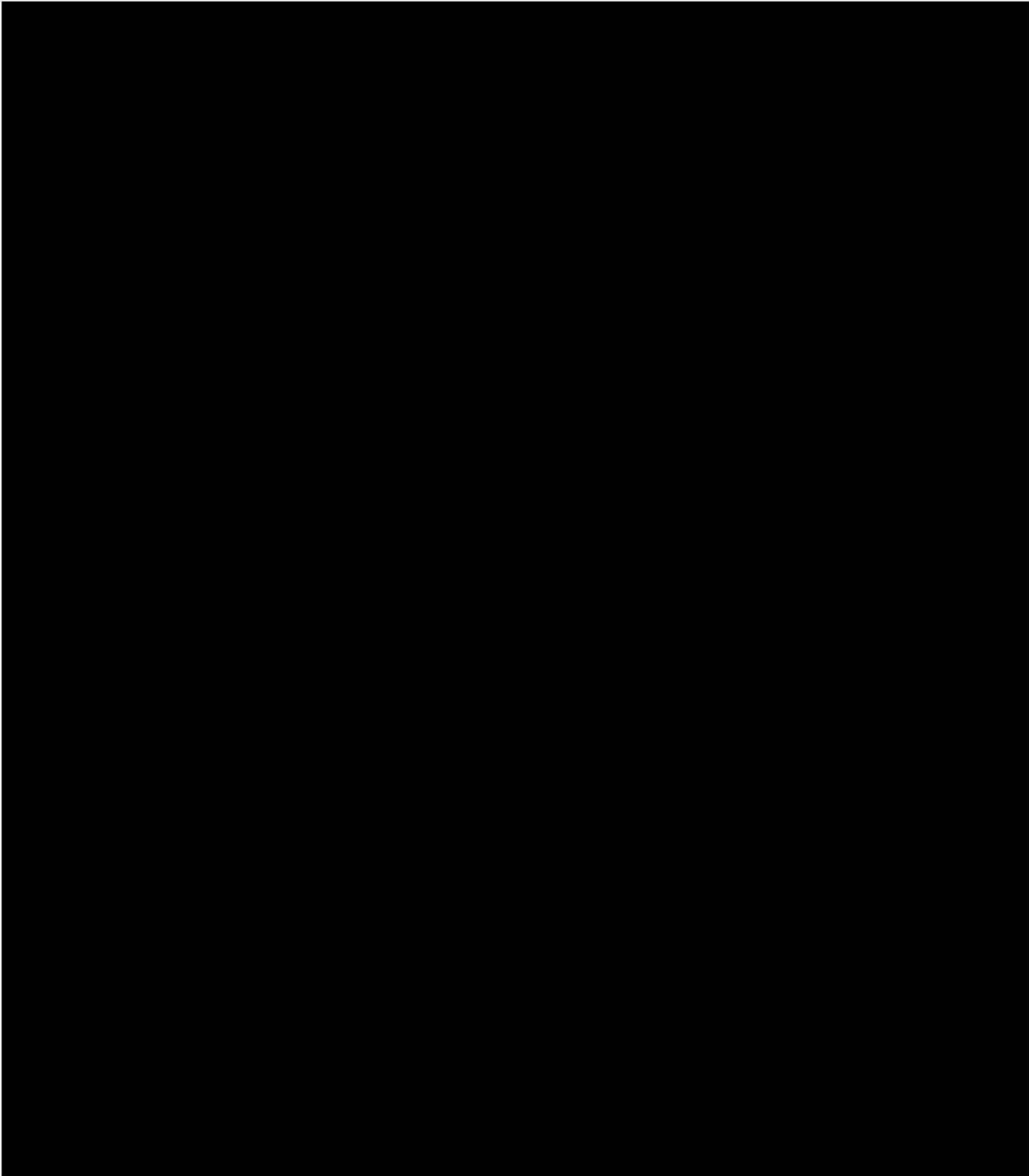
Extended Phase 1 Habitat Survey

4.4 An evaluation of the habitats within site and, where possible, of the immediate surrounding environs. The methodology followed the standard survey criteria as set out in the JNCC Survey Handbook (2010). The potential for the site to support protected species was also assessed, some of which may be protected by the UK or European legislation (Appendix 6).

Protected Species

4.5 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on-site, based on the habitat suitability and any direct evidence on site. It should not be taken as providing a complete and definitive survey of any protected species group. The assessment is only valid for the time when the survey. Additional surveys may be recommended if, based on this assessment, it is considered reasonably likely that protected species may be present.





Habitat Suitability for Hazel Dormouse (*Muscardinus avellanarius*)

4.8 The Hazel Dormouse is a specialist feeder needing a habitat that can provide high protein food ranging from pollen and nectar to insects and nuts. Such food is only seasonally available, leading to a Dormouse strategy of hibernation. The Dormouse favours deciduous woodland with secondary growth and scrub, especially where there is edible seed such as hazel

and beech⁴. Frequent in the coppice, sometimes in species-rich hedgerows spending most of its time above ground. In Essex, the Dormouse is considered to occur where oak and hazel abound and where there is sufficient woodland or overgrown hedgerow to protect it⁵. The main problem with Dormouse tends to be associated with a lack of woodland management leading to uniform structure with little re-growth and understorey.

4.9 A Dormouse assessment was conducted to evaluate the level of activity on-site. The hedgerows were assessed for their potential to support dormice. This involved evaluating potential food species, diversity, and the structure, form, and management of features for Dormice. Visual searches for nests and opened nuts were undertaken. Habitat connectivity was assessed from desk-based resources.

Habitat suitability for Water Vole (*Arvicola amphibious*)

4.10 Water Voles are usually found on the margins of slow-flowing rivers, stream, ditches and water bodies and spend most of their time foraging through vegetation. They leave a vole-sized length of cuttings piled up wherever they feed, and these can provide distinctive signs of their presence. They favour steep banks, into which they burrow with their teeth, but they can also live in open reedbeds by weaving football-sized nests into stems above the water-line. In addition, they burrow into tussocks of aquatic plants along particularly shallow margins and are surprisingly tolerant of polluted water.

Habitat suitability for Eurasian Otter (*Lutra lutra*)

4.11 Otters have been part of the British fossil record for half a million years. Of the thirteen species in the world, the Eurasian Otter is the only one native to Britain. Otters are generally nocturnal, and the majority of their prey being fish and shellfish. They hold large territories, typically covering many kilometres, with male territories overlapping two or three females.

4.12 Activity of Otters is searching the stream banks for evidence of spraints, tracks, feeding remains, holts and couches.

Habitat suitability for Barn Owl (*Tyto alba*)

4.13 Barn owls are mainly in rural parts of Britain where rough grassland in fields, field margins, ditches, dykes and riverbanks are available for foraging. They generally select nest and roost sites free from excessive human disturbance; most commonly those associated with

⁴ The Handbook of British Mammals.

⁵ Mammals of Essex.

agricultural buildings and mature trees which stand alone in fields or those in a hedgerow or along the woodland edge with trunks of a sufficient girth:

- Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*) and Crack Willow (*Salix fragilis*): 0.5 m diameter or more (>80 years old),
- Horse Chestnut (*Aesculus hippocastanum*) and beech (*Fagus sylvatica*): 0.75 m diameter or more (>150 years); and,
- Oak (*Quercus robur*): 1.5 m diameter or more (>250 years).

4.14 Barn Owls can utilise a variety of different habitat types. Fields of rough grassland provide the majority of prime foraging habitat in mainland Britain. In particular, rough grassland corridors along watercourses, roadsides, arable field margins, woodland edge and occasionally along with wide woodland rides. The type of grassland can influence the suitability as a feeding resource which the structural composition can define:

a) Optimal habitat:

These habitats tend to be associated with optimum habitat to Field Voles (*Microtus agrestis*) for breeding, foraging and shelter. In turn, they are of the highest value to Barn Owls. These habitats are usually permanent, unimproved or semi-improved grassland, rank and heterogeneous. The grasslands tend to be of a mixed height and with a high abundance of raised tussocks coupled with a small litter layer or 'thatch'. They tend to receive periodic management.

b) Sub-optimal habitat:

Habitats are sub-optimal to field voles and are of intermediate and often transient value to Barn Owls. This type of improved or semi-improved grassland is characterised by having a homogeneous, more even-height sward, sometimes displaying some lush and emerging tussock structure but little sign of a litter layer or 'thatch'. It can sometimes constitute a mature clover/grass ley and usually receives some level of farm management such as occasional fertilisation, annual topping or light grazing.

c) Poor habitat

These habitats offer very poor habitat for field voles and most other small mammals and are of low value to Barn Owls. These improved grasslands are characterised by a homogeneous sward, which is often kept short throughout much of the year, with no tussock structure and devoid of any litter layer at their

base. They are usually mown closely for hay or silage, heavily grazed by sheep, horses or cattle or used for public amenity. Grasslands overgrown with scrub can restrict Barn Owls from hunting, also fall into this habitat category.

d) Other Habitats

Non-grassland habitats, such as arable fields and mature woodland, generally have little or no value as a permanent foraging resource to Barn Owls. Arable fields containing cereals, rapeseed, or other food crops do not provide suitable habitat for field voles. However, at certain times of the year, such as during harvest, they can, for short periods, expose Wood Mice (*Apodemus sylvaticus*) and temporarily attract Barn Owls.

Habitat suitability for Breeding Birds

4.15 Birds breed in a wide range of habitats, e.g. woodlands, hedgerows, parks and buildings. Some birds will lay eggs directly on the ground without building a nest.

4.16 A visual survey was undertaken to evaluate the habitats associated with potential activity for breeding birds. This was based on assessing the quality of the habitat present within the proposed development footprint.

Habitat suitability for Bats

4.17 Bats use various landscapes or habitats throughout the year as they feed, roost and travel. They use hunting grounds or foraging habitats to find food and commuting habitats to travel between roosts and foraging habitats⁶. All UK bat species eat insects. Some bats prefer waterways; others prefer woods or grassland. Habitat choice can be species-specific, and some bats will journey further to seek the habitat they prefer.

4.18 Bats utilise woodland edges, rivers, hedgerows and other linear features as corridors to commute from one area to another. e.g. roosts to foraging areas. If these commuting routes are severed, it prevents movements and possible links to foraging habitats.

4.19 Besides roosting in buildings, bats can use trees to rest, give birth, raise young and/or hibernate. Roosts may be found in the following features:

- Woodpecker holes, natural cracks and rot holes in trunks and branches;
- Frost cracks;

⁶ Bat Conservation Trust

- Trunk and branch splits;
- Hollow sections of trunk and branches;
- Loose bark;
- Cavities beneath old root buttresses and coppice stools;
- Dense epicormic growth; and,
- Dense ivy cover.

4.20 Roosts of bats in trees may be identified from the following field signs:

- Black stains beneath cracks, splits and other features where bat droppings have fallen;
- Dark marks at entrance points where bats have rubbed against the wood and left natural body oils;
- Feeding remains beneath roosts, such as insect wings;
- Chattering of bats;
- Bat droppings under access points;
- Scratch marks around a feature (cavity or split) caused by bat claws;
- Urine stains below the entrance or end of split;
- Large roosts or regularly used sites may produce an odour; and,
- Flies around the entrance, attracted by the smell of guano.

4.21 Veteran trees typically exhibit many of these features. They should usually be regarded as sites with clear potential, but any tree is possessing one or more such features may host bats. Any tree species can be suitable, but oak and beech often seem to be the preferred option. However, bats rarely restrict themselves to one tree. They change their roost sites frequently, sometimes every two to three days, looking for minor differences in temperature and humidity.

Habitat Suitability for Reptiles

4.22 Habitat surveys were to assess the potential of the site to hold populations of reptile species. This involved looking for the presence of factors that would increase the suitability of the site for reptiles such as:

- Habitat heterogeneity ~ reptiles occupy a dynamic, successional habitat and their requirements met only in certain stages, e.g. a grass/scrub mosaic provides an ideal combination of micro-habitats for thermoregulation. Major features include uniformity of habitat structure and increase shading;

- Topography ~ the shape and structure of the ground and its features are vital components of any reptile habitat, e.g. providing south-facing basking opportunities.
- Vegetation structure ~ the structural complexity of vegetation will impact upon prey availability, basking opportunities as well as sheltering, e.g. a good grassland structure will show a variation from short sward to scrub;
- Hibernation sites ~ a lack of hibernation sites means that reptile occupancy of a site may be seasonal. Hibernation sites are a crucial part of a reptiles life cycle;
- Prey availability ~ an essential aspect of whether reptiles will be present at a site will be prey availability;
- Predators ~ areas with high numbers of predators can have an impact on the likely presence of reptile species even if the habitat affords good cover;
- Public pressure ~ site with public pressure may be prone to influence the management.
- Management ~ grazing/mowing intensity can have a significant positive or negative impact on the suitability of the habitat for reptiles; and,
- Connectivity ~ colonisation of remote sites may occur very slowly or not depending on the dispersal abilities of different species.

Habitat Suitability for Great Crested Newts (*Triturus cristatus*)

4.23 Habitat surveys were to assess the potential of the site to hold Great Crested Newts. Before visiting the site, searches on Google Maps and Magic Maps were to evaluate the habitat types on the broader landscape. In addition, the presence of factors suitable for Great Crested Newts that would increase the suitability of the site for Great Crested Newts was assessed, such as:

- The presence of suitable breeding place (water bodies) on-site and within 500m of the site in the broader landscape;
- Habitat connectivity between ponds (if present) on the wider landscape and on-site;
- The condition of the ponds whether there were factors that would render them unsuitable for Great Crested Newts such as fish;
- Land uses surrounding the site that may affect the potential of the site to hold Great Crested Newts such as agriculture;

- Type of suitable habitat on-site such as scrub/grassland mosaic;
- Patches of woodland in the broader landscape that can provide terrestrial habitat;
- Any barriers between known populations of Great Crested Newts such as roads; and,
- Hibernation features on-site for Great Crested Newts such as log and rubble piles.

White-clawed Crayfish (*Austropotamobius pallipes*)

4.24 The White-clawed Crayfish is the only native species of freshwater Crayfish in Britain and the largest freshwater crustacean. Although locally abundant in some areas of England and Wales, the White-clawed Crayfish has declined dramatically in recent years. It is under threat throughout its range in Britain and other regions of Europe. The principal causes of decline are competition from non-native Crayfish and a lethal disease (Crayfish plague) carried by introduced species.

4.25 Habitat deterioration and loss can also have significant impacts on remaining populations. Maintenance and enhancement of habitat form an essential part of the conservation strategy for White-clawed Crayfish. Habitat can be a factor in isolating populations. A feature of the watercourse may form a partial, or even a complete barrier to the movement of White-clawed Crayfish, for example:

- a major weir, dam or waterfall;
- a length of highly modified channel lacking in suitable habitat;
- a fast-flowing flume or culvert;
- a dried-up section of a channel; or,
- poor water quality in a reach.

4.26 A refuge is only suitable while it stays free of material, or the Crayfish can push out the material. Accumulation of soft, loose silt makes refuges unfavourable for Crayfish. The fine sediments clog and irritate the gills of Crayfish (and other gill breathing invertebrates). Bacterial decomposition of organic fines can lead to localised de-oxygenation.

4.27 White-clawed crayfish of all ages need refuges. Juvenile Crayfish are especially vulnerable to predation by fish, ducks and other water birds, otter and mink, carnivorous dragonfly larvae and other predatory invertebrates, including adult crayfish.

4.28 Acceptable methods for surveying Crayfish include manual searching and hand netting when the water is clear and the flow is low.

Buildings and other structures

4.29 Any buildings or other structures on site were surveyed. This comprised an external visual inspection and an internal search (where safety allowed) to look for signs of, or potential for, protected species (most likely to include bird and bat species). Indicators of use could consist of live animals, carcasses, droppings, feeding remains and nesting material. A ladder, high-powered torch, angled mirror was available for use as required.

5.0 Results

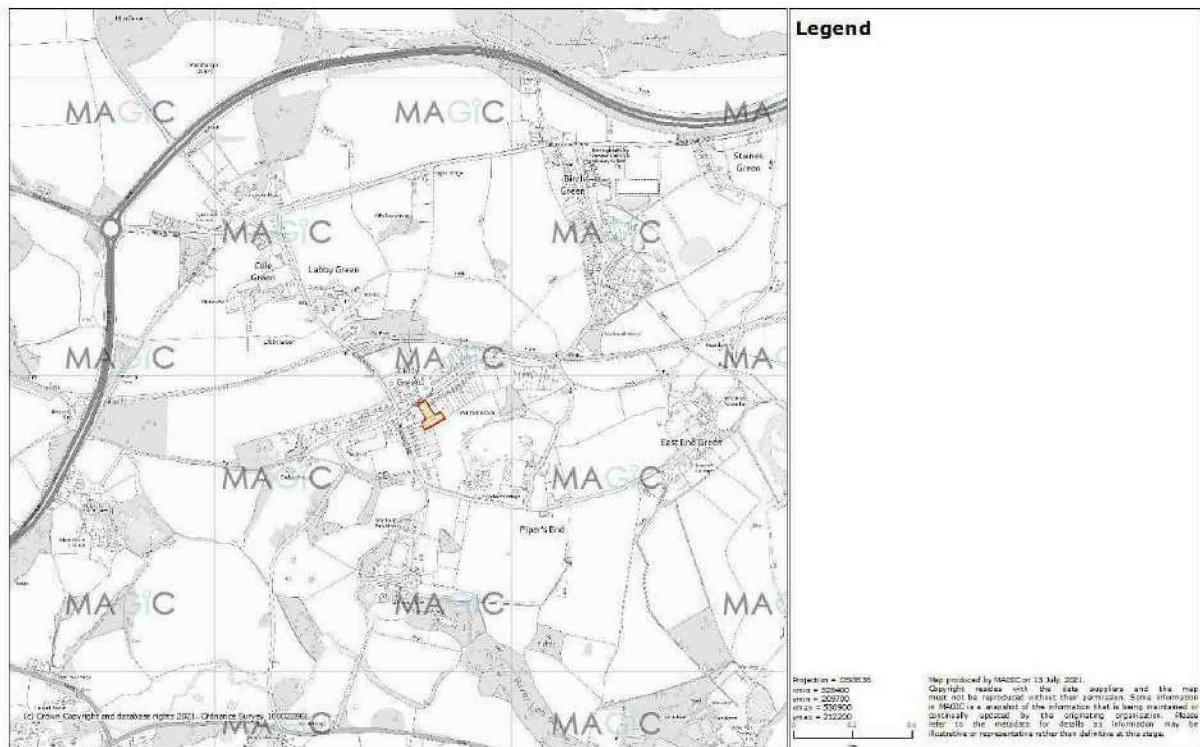
Site location and description

6.0 The site is off land to the left of St Johns church, Chapel Lane, Letty Green, Herts SG14 2PA (Map 1). The site previous included a chicken run and has been unmanaged for the last 10+ years. The vegetation has naturally developed from what would have been regularly managed and manicured habitats. A small area of grassland is still regularly mown.

6.1 The scrub includes several trees are present, which would be subject to an Arboricultural Impact Assessment. The grassland is typically an amenity grassland, and urban development surrounds the area with the road to the front.

6.2 The site was surveyed on the 12th of July 2021. The weather was cloudy and rainy with sunny patches and a temperature around 21° C. A risk assessment was completed, and all appropriate PPE was worn. The client granted access to the site.

Map 1: Location of the proposed development site



Desk Study

Designated sites and habitats of principal importance

5.4 The following habitats recorded:

- Special Protection Area or Special Area of Conservation within 3km: No
- Site of Special Scientific Interest (SSSI) within 2km: No
- Ancient Semi-Natural Woodland within 1km: No
- Priority habitat within 50 metres: Yes – Deciduous woodland
- Ponds within 500 metres: No
- River, streams or water-filled ditches within 100 metres: No

5.5 Natural England has developed an Impact Risk Zone to assess the potential risks to SSSI and European sites rapidly. The following habitats within the Impact Risk Zone of the proposed development include:

- None

Extended Phase 1 Habitat Survey

5.6 The majority of the vegetation growing on the site resembles an overgrown scrub with a small section of amenity grassland. The grassland includes Rye-grass (*Lolium perenne*), Meadow Grasses (*Poa* spp.), Cocksfoot (*Dactylis glomerata*), Red Fescue (*Festuca rubra* agg.), Yorkshire

fog (*Holcus lanatus*), Creeping Bent (*Agrostis stolonifera*) and False Oat grass (*Arrhenatherum elatius*).

5.7 Herbs were restricted to Daisy (*Bellis perennis*), Broad-leaved plantain (*Plantago major*), Creeping Buttercup (*Ranunculus repens*), White clover (*Trifolium repens*) and Dandelion (*Taraxacum* agg.). Other herbs recorded within site included Sowthistle (*Sonchus arvensis*), Bramble (*Rubus fruticosus* agg.), Broad-leaved dock (*Rumex obtusifolius*), Nettle (*Urtica dioica*) and Forget me knot (*Myosotis scorpioides*).

5.8 The scrub included Ash (*Fraxinus excelsior*), Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), Oak (*Quercus robur*), Elder (*Sambucus nigra*) and Poplar (*Populus* spp.). In areas where the canopy was open, species included Spear thistle (*Cirsium vulgare*), Rose (*Rosa canina*), Cleavers (*Galium aparine*), Bramble and Broad-leaved dock. Grasses were typically Cocksfoot and Yorkshire Fog.

Protected Species

5.9 No protected species were granted a European licence with 1 km.

Habitat Suitability for Hazel Dormouse (*Muscardinus avellanarius*)

5.11 There is no suitable habitat to support Dormice within the site boundary. This species will not require further consideration or survey.

Habitat suitability for Water Vole (*Arvicola amphibious*)

5.12 There is no suitable habitat to support Water Vole. This species requires no further consideration or survey.

Habitat suitability for Eurasian Otter (*Lutra lutra*)

5.13 No evidence of Eurasian Otter was recorded on-site and therefore required no further consideration or survey.

Habitat suitability for Barn Owl (*Tyto alba*)

5.14 There were no roosting, feeding or breeding opportunities for Barn Owls within the site. This species needs no further consideration or survey.

Habitat suitability for Breeding Birds

5.15 Birds were observed on-site. As such, it is considered likely that breeding birds may be using the trees. This group requires no further consideration or survey. However, any works must be undertaken outside the breeding season.

Habitat suitability for Bats

5.16 The potential for indirect impacts on potential bat roost habitat within buildings were assessed as having low bat roost potential. This group of species needs no further consideration.

Habitat Suitability for Reptiles

5.17 The site contains limited features for reptiles to be present. This group of species needs no further consideration.

Habitat Suitability for Great Crested Newts (*Triturus cristatus*)

5.18 The site contains limited features for amphibians to be present. This group of species needs no further consideration.

White Clawed Crayfish (*Austropotamobius pallipes*)

5.19 There was no suitable habitat for White Clawed Crayfish on-site. This species needs no further consideration or survey.

Survey Constraints

5.20 The survey was undertaken during the optimal survey season. Given the nature of the site, it is felt that an accurate record of the habitats and species present was still recorded. It may be that additional plant species were present, which were not visible at the time of the survey. It is important to note that species diversity and dominant plant assemblages may increase or change throughout the season.

5.21 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment. Species that potentially occur within the area have been recorded. Therefore, the survey provides a general assessment of the potential nature conservation value of the site and does not include a definitive plant species list.

5.22 Not all areas could be accessed surrounding the site as the land was in private ownership.

6.0 Conclusion

Habitats

6.1 The site is not designated or located on or adjacent to a Local Wildlife Site or potentially would be considered as a Local Wildlife Site. The site itself and the habitats found on-site are common and widespread throughout the UK. The habitats are of limited ecological value and are considered to be of site value only.

Protected species

6.2 The site is isolated and situated within a semi-urban surrounding. Any ecological linkage to the site is limited due to the low permeability of these physical structures. The habitats on-site were evaluated for their likelihood to provide shelter, roosting, foraging, basking and nesting habitat. The likelihood of occurrence of protected species is considered negligible, and no further investigation is required.

6.3 No nests were identified at the time of the survey. However, nests may be present but not visible.

7.0 Recommendations

7.1 The removal of suitable habitat must be undertaken outside the bird breeding season. If work during the breeding season is unavoidable, an inspection will need to be carried out by a suitably experienced ecologist immediately before the start of site clearance to identify whether nests are present.

7.2 Biodiversity net gain should be proportionate to the scale of development.⁷ Any biodiversity improvements will be at a local level. Any planting should include native species mixed to improve the diversity and adaptive to climate change. Hedgehog nest domes and gaps under any perimeter fencing installed.

8.0 References

Cresswell, P., Harris, S., & Jeffries, D.J., (1990). The history, distribution, status and habitat requirements of the Badger in Britain. Nature Conservancy Council.

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155

Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework.

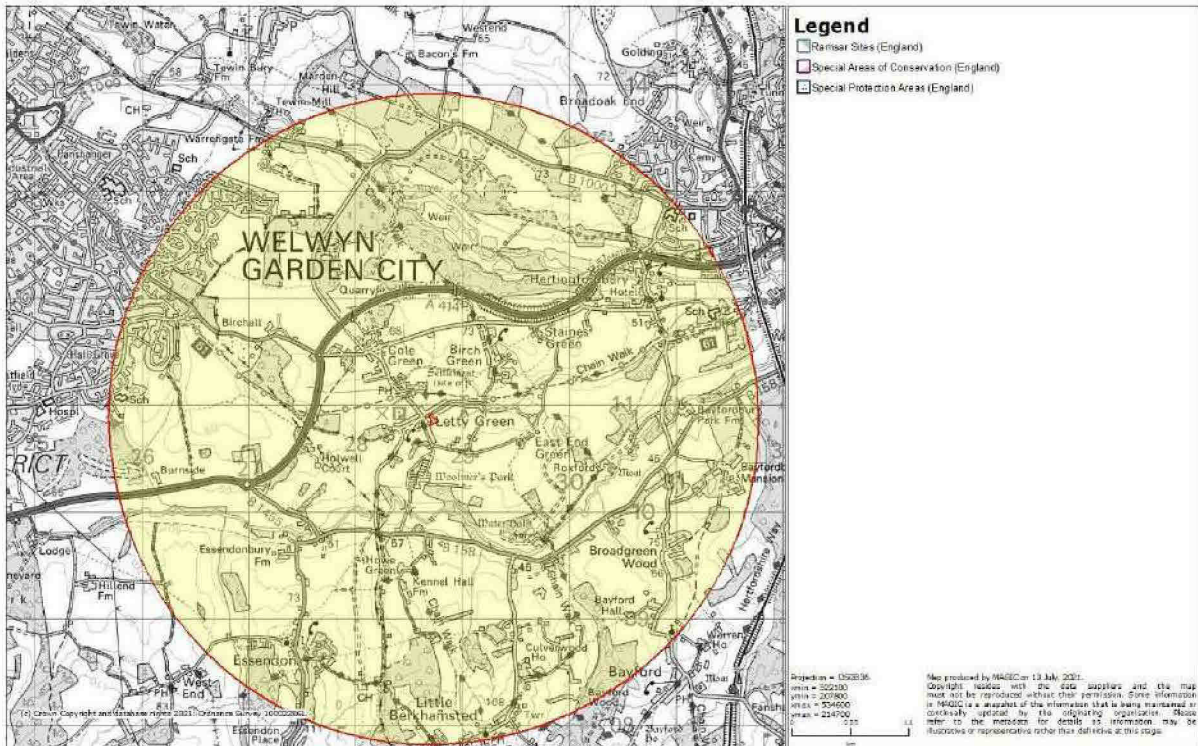
Joint Nature Conservation Committee (2010) Handbook for Phase 1 habitat survey: a technique for environmental audit.

⁷ Biodiversity net gain: Good practice principles for development (2019)

Appendix 1: Designated sites

MAGIC

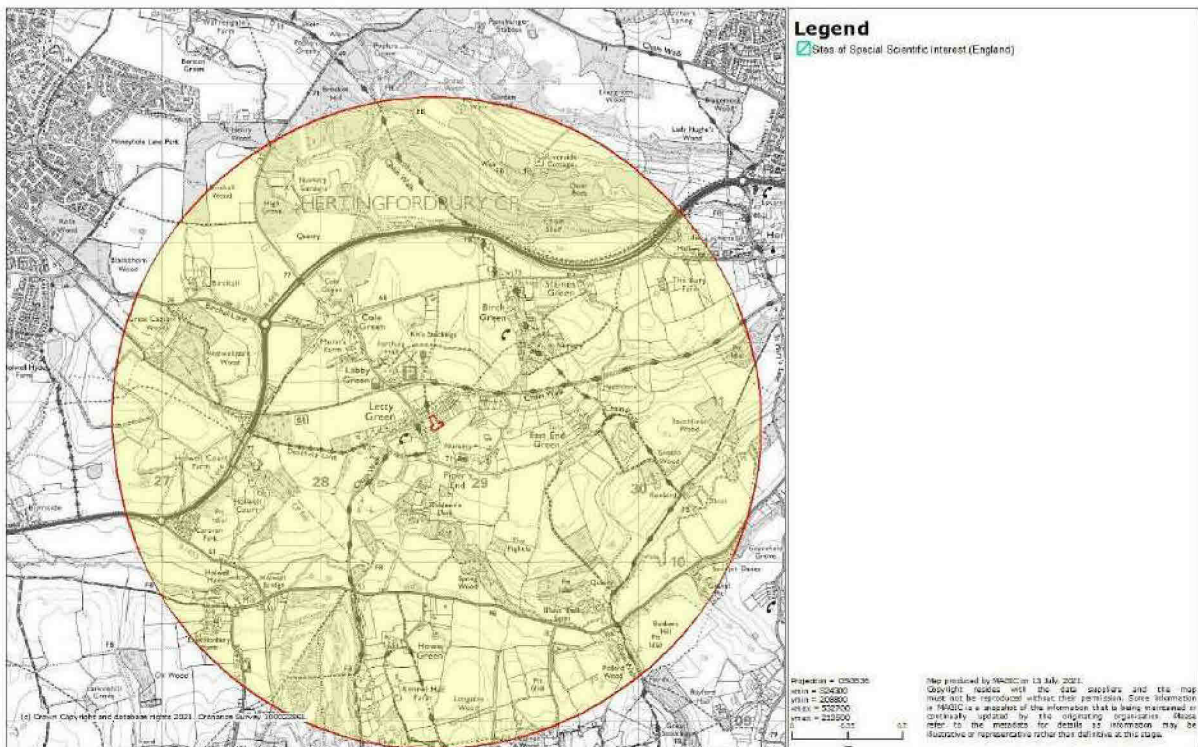
Designated sites



Appendix 2: SSSI

MAGIC

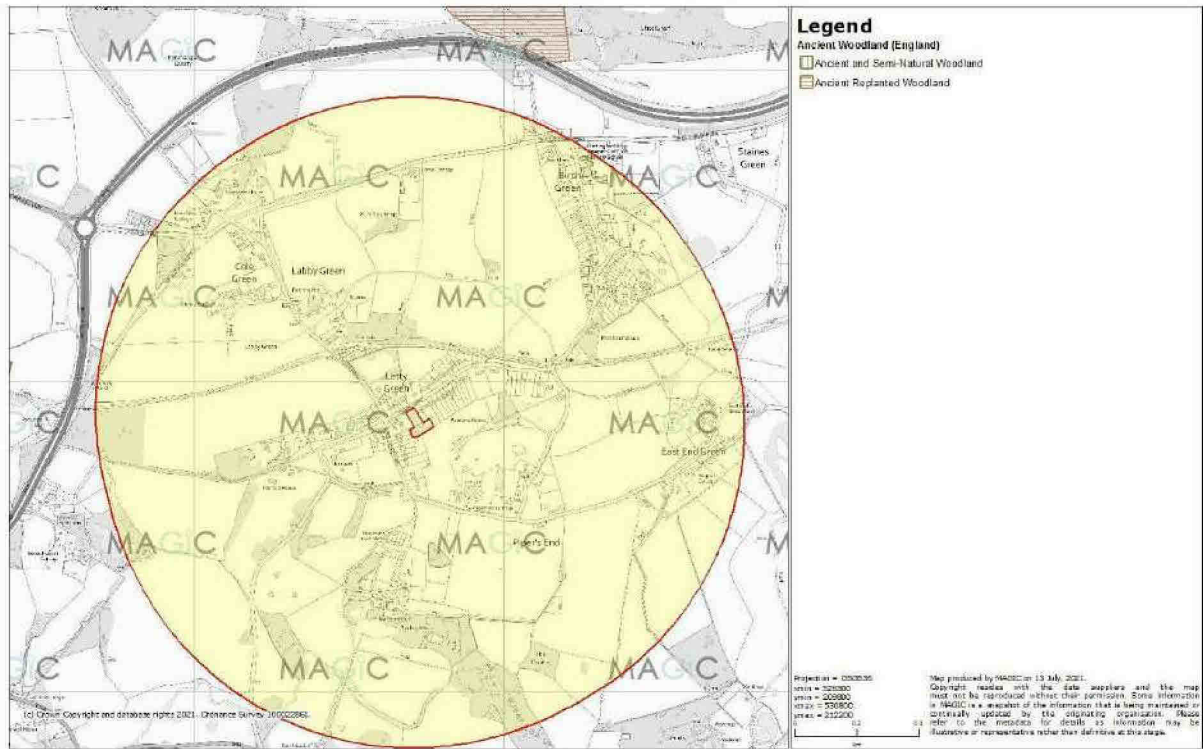
SSSI



Appendix 3: Ancient Woodland

MAGIC

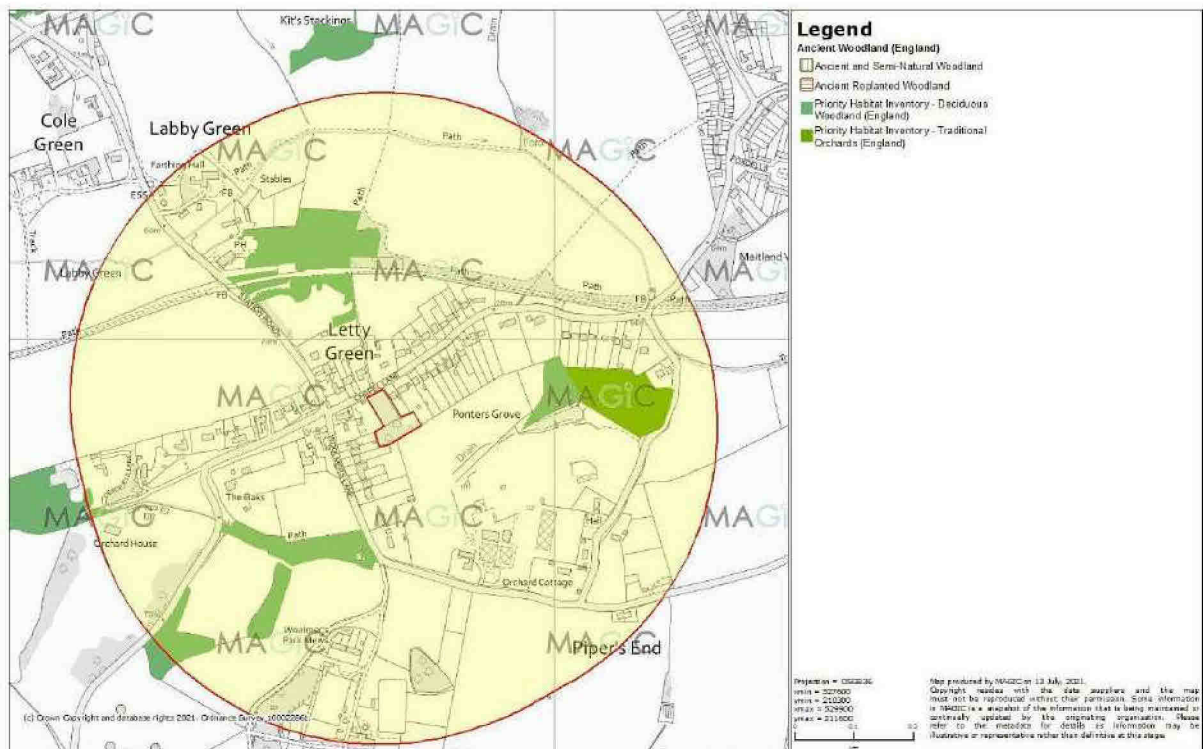
Ancient woodland



Appendix 4: BAP habitat

MAGIC

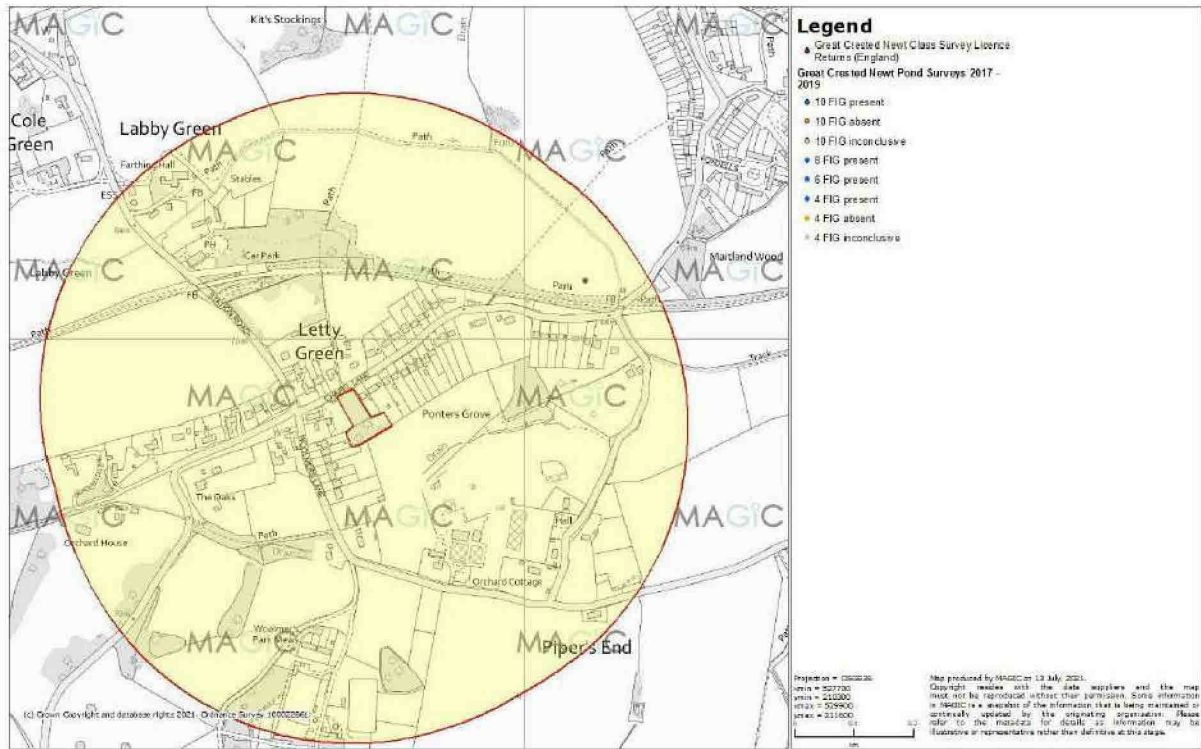
BAP habitats



Appendix 5: European protected species

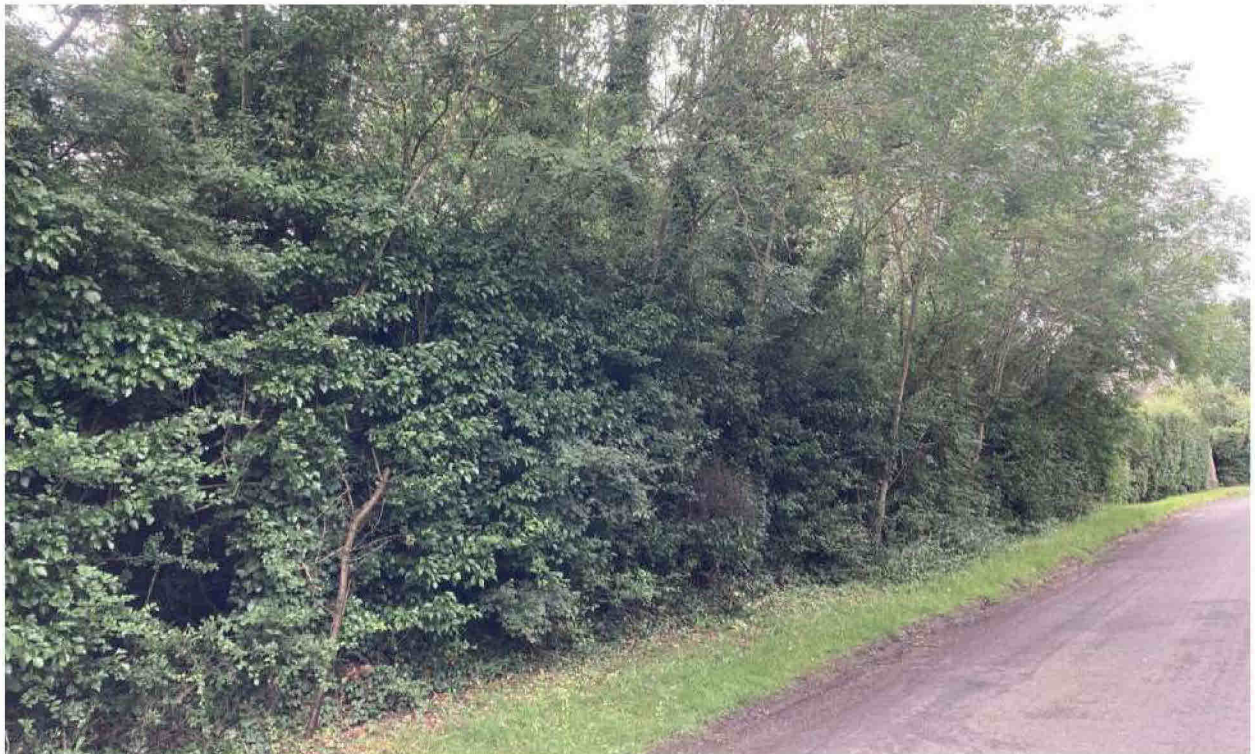
MAGIC

Great Crested Newt



Appendix 6: Photographic evidence

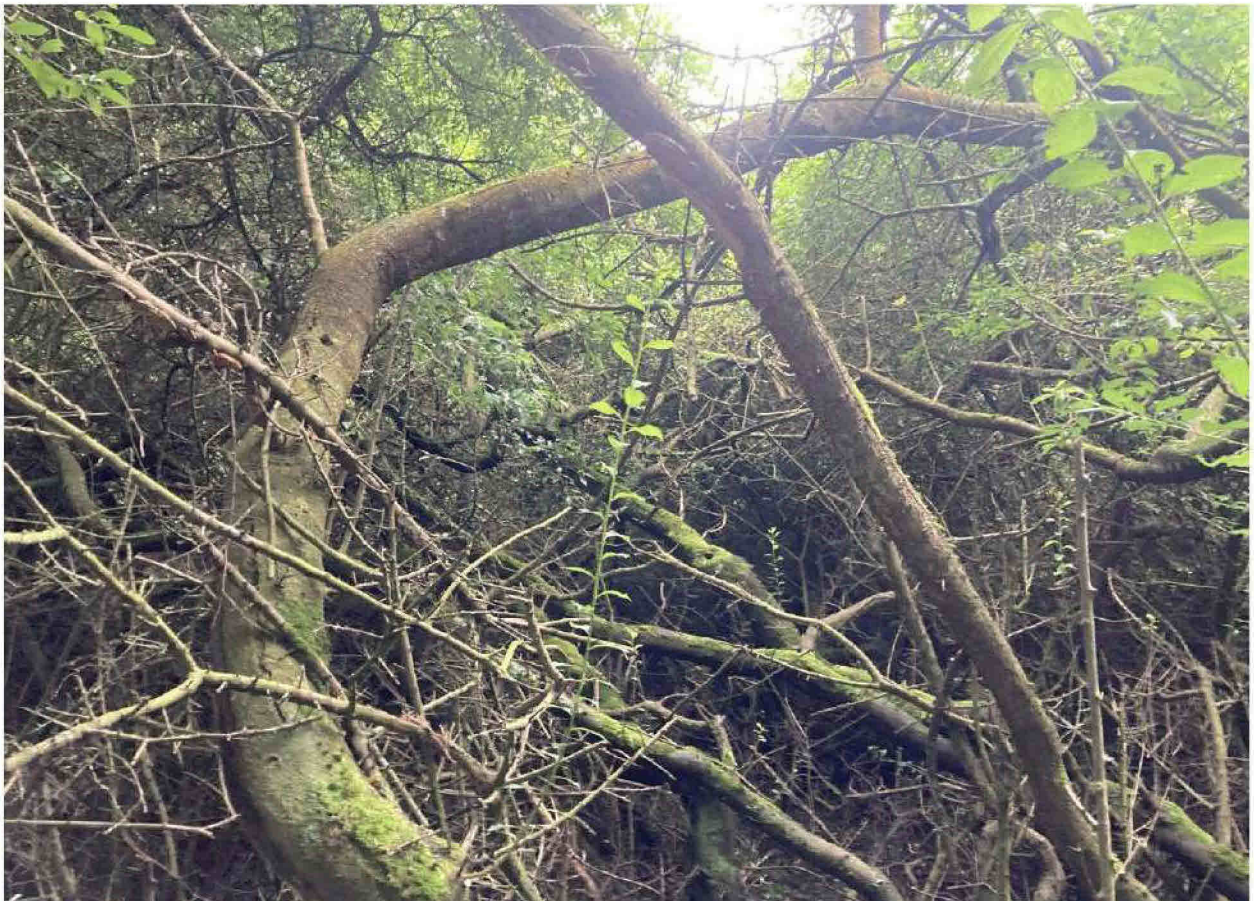
Photograph 1: Front view from the road



Photograph 2: Grass cuttings left to rot in the middle of the scrub



Photograph 3: Thick scrub



Photograph 4: Small areas of open canopy



Photograph 5: Area near the open ground



Appendix 7: Legislation

This document contains a summary of key legislation relating to the protection of wildlife and habitats. Andrew Day Arboricultural Consultancy Limited does not offer legal opinions or provide legal advice. The client is responsible for reviewing the full legislative documents from up-to-date sources and should seek independent legal advice where appropriate.

European Protected Species

The Bern Convention (The Convention on the Conservation of European Wildlife and Natural Habitats) was adopted in 1979 and came into force in 1982. To implement this agreement, the European Community adopted the EC Habitats Directive in 1992. This directive has been transposed into UK legislation by the Wildlife and Countryside Act 1981 (as amended); and the Conservation of Habitats and Species Regulations 2010. The Countryside and Rights of way (CRoW) Act 2000 strengthened the existing wildlife legislation in the UK. The UK has also signed the Bonn Convention (The Convention of Migratory Species of Wild Animals) and is, therefore, a party to various agreements.

Bats

All species of British bats are fully protected under Schedules 5 and 6 of the Wildlife and Countryside Act 1981 (as amended) and are also protected under Schedule 2 of the Conservation of Habitats and Species Regulation 2010. They are listed under Appendix III of the Bern Convention and Annex IV of the EC Habitats Directive. Bats and their habitats are also listed under Appendix II of the Bonn Convention and therefore, the UK should protect their habitats, including links to important feeding areas. Taken together, these pieces of legislation make it an offence to:

- Deliberately or recklessly disturb bats (whether in the roost or not)
- Damage, destroy or obstruct access to bat roosts. A roost is defined as “any structure which a bat uses for shelter or protection.” As bats tend to re-use the same roots, a legal opinion is that a roost is protected whether or not bats are present at the time of the survey.

Dormice

Dormice are classified as Lower Risk-Near Threatened by the International Union for the Conservation of Nature (IUCN) Red List and as Vulnerable in the UK. They are listed under Appendix III of the Bern Convention and Annex IV of the EC Habitats Directive. In the UK they are protected under Schedule 5, and 6 of the Wildlife and Countryside Act 1981 (as amended) and are also protected under Schedule 2 of the Conservation and Species Regulations 2010.

Great Crested Newts

Great crested newts are protected under Schedule 5 of the Wildlife and Countryside Act 1981(as amended) and Schedule 2 of the Conservation of Habitat and Species Regulations 2010. At the European level, they are protected under Annex IV of the EC Habitats Directive. All life stages of great crested newts are protected, including eggs, larvae, juveniles and adults.

Otters

They are classified as Vulnerable under the IUCN Red List and are also listed under Appendix II of the EC Habitats Directive. They are also protected in the UK by Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). To minimise disturbance, it is usually recommended that a barrier should be erected to prevent works within 20 metres of an otter resting place. If the holt is known to be used for breeding, the radius should be extended to 30 metres.

Legislation relating to European Protected Species

Concerning development, a person commits an offence if they:

- Deliberately capture, injure or kill a European Protected Species
- Deliberately or recklessly disturb and European Protected Species in such a way as to be likely to significantly affect:
 - The ability of any significant group of animals to survive, breed, rear or nurture their young
 - The local distribution or abundance of that species
- Damage or destroy a breeding site or resting place (even if unintentionally or when the animal is not present)
- Intentionally or recklessly obstruct access to a structure or place used for shelter or protection

All aspects of this legislation apply regardless of the life stage.

A European Protected Licence is required to carry out any activity that would otherwise involve committing an offence.

The species above are the most frequently encountered. For a full list of current European protected Species in the UK please refer to the Conservation of Habitats and Species Regulation 2010, available at www.legislation.gov.uk. List of animals and plants can be found in Schedule 2 and 5, respectively.

Other Protected Species

Nesting Birds

All wild birds are protected under Part 1 of the Wildlife and Countryside Act 1981 (as amended). Therefore, in the UK it is an offence to:

- Take, damage or destroy the nest of any wild bird whilst it is being built or in use
- Kill, injure or take any wildlife bird
- Take or destroy the eggs of any wild bird
- Take or destroy the eggs of any wild bird

To avoid committing an offence, no works should be conducted on a habitat that is being used by nesting birds. Nesting is deemed to be over when the young have fully-fledged. Certain species which are listed on Schedule 1 of the Wildlife and Countryside Act receive

special protection. Any form of intentional or reckless disturbance when they are nesting or rearing dependant young constitutes an offence.

Reptiles

Common lizard, slow-worm, adder and grass snake are all protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and updated by the Countryside and Rights of Way (CROW) Act 2000. They are covered against intentional injuring, killing or selling. To avoid prosecution, wherever works will impact these species there must be evidence to show that every reasonable effort was made to avoid breaking the law – including proof of adequate surveys and mitigation plans. Mitigation measures should ideally be agreed with Natural England.

Only the sand lizard and smooth snake are fully protected under the Wildlife and Countryside Act (Section 9) and the Conservation of Habitats and Species Regulations (Regulation 9). These protect them against:

- Killing, injuring or capturing
- Keeping, transporting or selling
- Damaging or destroying a breeding or resting place
- Intentionally obstructing access to a place used for shelter.

This means that both the animal and their habitats are protected. These species mainly occur in specific nature reserves, mostly in the south and south-west of England.

Badgers

Badgers are fully protected in the UK by the Protection of Badgers Act 1992 and by Schedule 6 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- Wilfully kill, injure, take possess or cruelly treat a badger
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett
- Disturb a badger while it is occupying a sett

Water voles

Water voles and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended). Water voles are protected against intentional killing, capture or injury and intentional or reckless disturbance, obstruction, damage or destruction of their burrows. Displacement works can now only occur under an ecologist's direction (Class licence holder) or a specific Natural England licence.

White-clawed Crayfish

The white-clawed Crayfish is protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Also, Schedule 9 makes it an offence to release, or to allow to escape into

the wild, all non-native Crayfish. It is listed under Appendix III of the Bern Convention, under Annexes II and V of the EC Habitats Directive, and is classed as Globally Threatened by the IUCN. It is also a Priority Species under the UK Biodiversity Action Plan (BAP).

Invertebrates

Many invertebrates are listed as UK Biodiversity Action Plan (BAP) Priority Species and as Species of Principal Importance (Section 41) of the Natural Environment and Rural Communities Act 2006 (NERC-S41). Although such species do not receive protection under criminal law. Their presence is a material consideration and consequently:

- Regional Planning Bodies and Local Planning Authorities will use the Section 41 list to identify the species and habitats that should be afforded priority when applying the requirements of the National Planning Policy Framework (NPPF) to promote the “protection and recovery of priority species populations.”
- Local Planning Authorities will use the list to identify the species and habitats that require specific consideration in dealing with the planning and development control, recognising that under the NPPF the aim of planning decisions should be to avoid or minimise impacts to biodiversity.

Invasive Species

The Wildlife and Countryside Act 1981 (as amended) is the principal legislation dealing with non-native species. The Wildlife and Countryside Act has been amended concerning England and Wales by various pieces of legislation, including Wildlife and Countryside Act Variation of Schedule 9 Order 2010; the Natural Environment and Rural Communities Act 2006; and the Countryside and Rights of Ways Act 2000. Section 14(1) of the Wildlife and Countryside Act make it illegal to release or allow to escape into the wild any animal which is not ordinarily resident in Great Britain, is not a regular visitor to Great Britain in a wild state, or is listed in Schedule 9 of the Act. It is also illegal to plant or otherwise cause to grow in the wild any plant listed in Schedule 9 of the Act.

Wild Mammals (rabbits, foxes, deer etc.)

Mammal species that are not of primary conservation importance do receive a degree of protection within the Wild Mammals (Protection) Act 1996. This includes offences which have implications for site clearance (particularly in the case of burrowing species like rabbits and foxes), such as crushing or asphyxiation of any wild mammal with intent to cause unnecessary suffering. To avoid offences under this legislation, it is recommended that where these species are present a method statement is produced, aimed at the careful excavation of (or exclusion from) burrows.

The Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) is an Act of Parliament in the United Kingdom implemented to comply with European Council Directive 2009/147/EC on the conservation of wild birds. The Act provides the main legal framework for nature conservation

and species protection in the UK. Protected birds, animals and plants are listed in Schedule 1, 5, 6 and 8 of the Wildlife and Countryside Act.

Schedule 1

The Act makes it an offence to intentionally kill, injure or take any wild bird, their eggs or their nests. Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to expectations) to provide further protection to birds. The Act also prohibits certain methods of killing, injuring or taking birds; and sets standards for keeping birds in captivity.

Schedule 5

The Act makes it an offence to intentionally kill, injure, take or possess, or trade-in any wild animal listed in Schedule 5. It also prohibits interference with places used for shelter or protection or the intentional disturbance of animals occupying such places. The Act also prohibits certain methods of killing, injuring or taking wild animals.

Schedule 6

The Act makes it an offence to kill or take animals by certain methods. Such methods include self-locking snares, bows, crossbows, explosives (other than firearm ammunition) or live decoys. Species listed are also protected from the use of traps, snares or nets; electrical devices for killing or stunning; poisonous, poisoned or stupefying substance, or any other gas or smoke; automatic or semi-automatic weapons; devices for illuminating a target or sighting devices for night shooting; artificial lights, mirrors or other dazzling devices; sound recording; and mechanically propelled vehicles in immediate pursuit.

Schedule 8

The Act makes it an offence to pick, uproot, trade-in or possess (for trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.

The Conservation of Habitats and Species Regulations 2010

The Conservation of Habitats and Species Regulations 2010 (abbreviated to the habitats Regulations) consolidate all of the various amendments made to the Conservation (Natural Habitats, &c.) Regulations of 1994. The 1994 Regulations transposed the EC Habitats Directive into national law in England and Wales. The Regulations provide for the protection of European Protected Species; and the designation, protection and adaptation of planning and other controls for the protection of European sites. Under the Regulations, competent authorities, e.g. government departments, public bodies or persons holding public office, have a general duty, in the exercise of any of their functions, to regard the EC Habitats Directive.

Schedule 2: European Protected Species of animals; Schedule 3: animals which may not be taken or killed in certain ways; Schedule 4: European protected species of plants.

The Countryside and Rights of Way Act 2000 and The Natural Environment and Rural Communities (NERC) Act 2006

The Countryside and Rights of Way Act 2000 and The Natural Environment and Rural Communities (NERC) Act 2006, provide supplementary protected species legislation. Section 41 (S41) of the NERC Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act.

The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Fifty-six habitats of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework.

There are 943 species of principal importance included on the S41 list. These are the species found in England which were identified as requiring action under the UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. Following Section 41(4), the Secretary of State will, in consultation with Natural England, keep this list under review and will publish a revised list if necessary.

Specific protection for badgers is provided under the Protection of Badgers Act 1992.

The Hedgerow Regulations 1997

The Hedgerow Regulations were made under Section 97 of the Environment Act 1995 and came into effect in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside. Under the Regulations, it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. The Regulations specify the criteria to be used by the local planning authority in determining which hedgerows are important. The criteria relate to the value of the hedgerows from an archaeological, historical, landscape, wildlife or amenity perspective. Local planning permission is normally required before removing hedges that are at least 20 metres in length, more than 30 years old or contain certain plant species. If a hedgerow is at least 30 years old and qualifies under one of the criteria listed in part II of Schedule 1 of the Regulation, then it is important.

The National Planning Policy Framework

The revised National Planning Policy Framework was published in February 2019 and sets out the Government's planning policies for England and how these are expected to be applied. This revised Framework replaces the previous National Planning Policy Framework published in March 2012.