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Report prepared for: G C Planning Partnership Ltd

For the Site of: Land at Drivers End Lane, Codicote, Hitchin SG4 8TR

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Cherryfield Ecology has prepared this report for the named clients' use only.

Ecological reports are limited in shelf life, Natural England usually expect reports for licences to be from the most recent or current season, e.g. May 2024 to May 2025 for bats. Therefore, should the project not proceed within 12 months of this report an updated survey should be undertaken in order to check for changes that may have occurred on site. Information is believed to be accurate at the time of the survey; recommendations are made without bias based on good practice guidelines within the industry. However, species presence and ecological parameters can change over time.

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Ecological Appraisal (EA)

0.0 Non-Technical Summary

0.1 Background

This report follows national guidelines JNCC (2010) and UKHab's (2023) allowing for a daytime inspection and recommends for further surveys if considered necessary. If a deviation from the guidelines has been made, this will be detailed in the Method Section.

The following report details the findings and recommendations for the site of Land at Drivers End Lane, Codicote, Hitchin SG4 8TR.

The client commissioned Cherryfield Ecology to undertake an EA as the proposals include for the construction of a new residential dwelling and associated driveway. Plans have not been provided and only a verbal description has been given.

0.2 Results and Findings

The site consists of residential garden, with regularly mown garden lawn and small trees. No protected species or evidence of protected species were found on site at the time of the survey.

The site provides **low** potential for badger, Great Crested Newt (GCN) and reptiles due to the limited suitable habitat present on site, but suitable connectivity to other more suitable habitats.

There is **negligible** potential for roosting bats, however, the site provides **high** potential for foraging and commuting.

The tree and hedgerow habitats provide **moderate** potential for breeding birds.

The site provides **negligible** potential for other protected species due to the lack of suitable habitat onsite.

0.3 Impact Assessment and Recommendations

Badger - No further surveys are necessary; however, if any badger setts are found throughout works, all works must stop, and advice sought.

Bats - No further surveys are necessary; however, if bats are found throughout works, all works must stop, and advice sought.

Breeding Birds - No further surveys are recommended; however, the development should take place outside the nesting season (March to August). If this is not possible, it is recommended that a qualified ecologist is on-site to ensure the building/vegetation is not occupied by breeding birds, prior to demolition/clearance. Should an occupied nest be found, a buffer zone would need to be created until the nest is no longer in use.

Great Crested Newt (GCN) - Habitat that is being affected is not suitable for GCN, although habitat in the surrounding area is, therefore it is recommended that an Unlicensed Method Statement be followed.

Reptiles - No further survey is necessary; however, if reptiles are found on-site, all works must stop, and advice sought.

Other protected species - No further survey is necessary; however, if any other protected species are found on site, all works must stop, and advice sought.

Habitats - All habitats found are common and widespread, no impacts are foreseen.

The findings outlined in this report are valid for one year, after which updated surveys will be required.

Enhancements and mitigation are recommended (please see Section 4.4 for further details).

1.0 Introduction

1.1 Aim

The aim of this report is to inform of ecological constraints that may affect the development proposals and recommend to the client if further surveys are required for protected species. An impact assessment is undertaken at this stage; however, if further surveys are required, additional and unexpected impacts may result. The information within this report can be used as the baseline for any Biodiversity Net Gain (BNG) metric requirements, however, the calculations are not included within this report.

1.2 Background Information

The client, G C Planning Partnership Ltd, has commissioned Cherryfield Ecology to undertake an EA for the site of Land at Drivers End Lane, Codicote, Hitchin SG4 8TR. Planning permission is being sought for the construction of a new residential dwelling and associated driveway.

This survey has checked all habitats, buildings, trees (from ground level only) or structures due to be affected by the proposals on site; it includes checking for protected species, signs of protected species or habitat value e.g. crevices, badger setts, ponds etc. as well as mapping the habitats on site.

The inspection was conducted on 10/09/2024.

The survey can only ever provide a 'snapshot' of the site at the time of the survey and circumstances may change following this report. Health and Safety restrictions or obstructions may limit the ability to find evidence.

Biological records have been requested to give the report context and allow a study of the surrounding area. The information is often sensitive and therefore a synopsis is provided.

The survey can be conducted year-round with the optimal period between mid-March and mid-October (south)/1st April and 30th September (north). However, it can be limited due to bad weather and in the winter, when some species are not as active,

thus evidence and species are often not found. During these periods, habitat value (likely presence) becomes more important to the assessment of the site.

Summary of legislation and National Planning Policy that protects wildlife in England:

- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
- Wildlife and Countryside Act 1981 as amended.
- Countrywide and Rights of Way Act 2000.
- Natural Environment and Rural Communities Act 2006.
- National Planning Policy Framework (“NPPF”).
- Circular 06/05.

This legislation makes it illegal to:

- Intentionally or deliberately kill, injure or capture a protected species.
- Deliberately disturb a protected species, whether at rest or not.
- Damage, destroy or obstruct access to a resting place.
- Possess or transport a protected species or any part of that species, unless acquired legally.
- Sell, barter or exchange a protected species, or any part of a species.

1.3 Species Specific Information

All UK-protected species have the same protection and the detail under Bats also applies to GCN, Dormouse, Otters and the two UK-protected reptiles.

1.3.1 Breeding Birds

All nesting birds are protected under the Wildlife and Countryside Act (as amended) 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. Furthermore, a number of birds enjoy further protection under that Act and are listed on Schedule 1 of the Act. These further protected birds are also protected from disturbance and it may be necessary to operate a “no-go” buffer zone around such nests - typically out to 5m.

1.3.2 Bats

All 18 species of bat common in the UK (17 known to be breeding) are fully protected under the Wildlife and Countryside Act (as amended) 1981 through inclusion in Schedule V of the Act. All bat species in the UK are also included in Schedule II of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which transpose Annex II of the Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (“Habitats Directive”) which defines United Kingdom protected species of animals.

Bats species are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

This combined legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport bats, unless acquired legally.
- Sell, barter or exchange bats.

1.3.3 Reptiles

There are six species of reptiles in Great Britain (Edgar *et al.*, 2010) and four of these are commonly found; the Barred Grass Snake *Natrix helvetica*, Adder *Vipera berus*, Common Lizard *Zootoca vivipara* and Slow Worm *Anguis fragilis*.

All native British species of reptiles are legally protected through their inclusion in Schedule V of the Wildlife and Countryside Act 1981. As such, all species are protected from deliberate killing or injury. Therefore, where development is permitted, and there will be a significant change in land use, a reasonable effort must be undertaken to avoid committing an offence. The same act makes the trading of native reptile species a criminal offence without appropriate licensing.

Two species of reptile; the Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis* are further protected under The Conservation of Habitats and Species

(Amendment) (EU Exit) Regulations 2019, which defines UK protected species of animals (“rare reptiles”).

1.3.4 Badgers

Badger *Meles meles* and its habitat are protected under The Protection of Badgers Act 1992, Schedule V of the Wildlife and Countryside Act 1981, and Appendix III of the Bern Convention 1979.

This legislation makes it an offence to:

- Kill, injure, take or possess a badger.
- Interfere with, damage or destroy a badger sett including e.g. obstructing access to a badger sett.
- Cruelly treat or harm a badger.
- Disturb a badger in a sett.

1.3.5 Great Crested Newts

Great Crested Newts (GCN) *Triturus cristatus* are listed in both The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and in Schedule V of the Wildlife and Countryside Act 1981.

GCN are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

1.3.6 Otter

The Eurasian Otter *Lutra lutra* is the only Otter species native to the UK. The Eurasian Otter is fully protected under Schedule V of the Wildlife and Countryside Act (as amended) 1981 and in Schedule II of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which transpose Annex II of the Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (“Habitats Directive”) which defines United Kingdom protected species of animals. This legislation makes it illegal to:

- capture, kill, disturb or injure otters (on purpose or by not taking enough care).
- damage or destroy a breeding or resting place (deliberately or by not taking enough care).
- obstruct access to their resting or sheltering places (deliberately or by not taking enough care).
- possess, sell, control or transport live or dead otters, or parts of otters.

1.3.7 Water Vole

The Water Vole *Arvicola amphibius* is protected under Schedule V of the Wildlife and Countryside Act 1981 and is a priority conservation species. This legislation makes it illegal to:

- intentionally capture, kill or injure water voles.
- damage, destroy or block access to their places of shelter or protection (on purpose or by not taking enough care).
- disturb them in a place of shelter or protection (on purpose or by not taking enough care).
- possess, sell, control or transport live or dead water voles or parts of them (not water voles bred in captivity).

1.4 Protected Sites and Priority Habitats

Some areas with distinctive plants, animals, habitats, geology or landforms are protected at the international, European, national and local-level under statutory and non-statutory sites. Some habitats have been identified as needing priority conservation action; UK BAP Priority Habitats are a range of semi-natural habitat types that are identified as being the most threatened and requiring conservation action.

2.0 Methods

The survey follows the national guidelines JNCC (2010) and UKHabs (2023), and the following equipment is available for the inspection:

- Torches (e.g. LED Lensar type).
- Ladders (Standard 4m telescopic surveying ladder).
- Endoscope where holes, cracks and crevices are accessible.
- Mirrors (extendable and movable mirror face).
- Binoculars (Pentax close focus).
- Thermometer/hygrometer.
- Camera.
- Sample bags for collecting dropping and feeding evidence.
- Quadrat for vegetation sampling.

The survey can be conducted year-round with the optimal period between mid-March and mid-October (south)/1st April and 30th September (north). However, it can be limited due to bad weather and in the winter, when some species are not as active, thus evidence and species are often not found. During these periods, habitat value (likely presence) becomes more important to the assessment of the site.

Trees and building exteriors are checked from ground level only. Buildings are checked internally where access is available.

Ponds are checked in person where access is available. If access is not available, for example the pond is situated on private land, ponds are assessed as far as is possible from satellite imagery.

Target notes are made when appropriate to highlight, for example, protected species evidence or other feature(s) of ecological note.

A summary of the condition assessments for BNG are included (where required) within Table 7 of Section 3.2.1. The excel sheets for these are released separately.

If a deviation from the guidelines has been made the reason and justification will be explained below:

No deviation from the standard guidelines has been made for this survey.

Great Crested Newt District Level License Zones explained, these criteria are from the two schemes -

Natural England Scheme -

- Red zones contain key populations of GCN, which are important on a regional, national or international scale and include designated Sites of Special Scientific Interest for GCN. *If in a red zone traditional surveys methods will have to be used going forward.*
- Amber zones contain main population centres for GCN and comprise important connecting habitat that aids natural dispersal.
- Green zones contain sparsely distributed GCN and are less likely to contain important pathways of connecting habitat for this species.
- White zones contain no GCN. However, as most of England forms the natural range of GCN, white zones are rare and will only be used when it is certain that there are no GCN.

NatureSpace Scheme -

- Black - nationally or regionally important site for great crested newt - excluded from development impacts under the District Licence Scheme.
- Red - highly suitable habitat - the most important areas for great crested newts.
- Amber - suitable habitat - great crested newts are likely to be present.
- Green - moderate habitat suitability - great crested newts may be present.

- White - low habitat suitability - low probability of great crested newt presence.

Table 1: Habitat value (likelihood) of protected species presence assessed against Collins (2023), Edgar *et al.* (2010) and Natural England (2007) etc.

Likelihood of species presence (Habitat Value)	Features that species can use, regardless of evidence being present.
Confirmed Presence	Species are found to be present during the survey. Evidence of species is found to be present during the survey.
Higher likelihood of presence	Buildings, trees or other structures or habitat features of particular significance for use by protected species e.g. nesting habitat, roosting opportunities, and ponds. Habitat of high quality for foraging e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting species e.g. river and or stream valleys and hedgerows. Site is close to known locations of records for protected species.
Moderate and Lower likelihood of species presence	Several potential habitat opportunities in buildings, trees or other habitats. Habitat could be used for foraging e.g. trees, shrub, grassland or water. Site is connected with the wider landscape by linear features that could be used by commuting species e.g. lines of trees and scrub or linked back gardens. A small number of less significant habitat opportunities. Isolated habitat for foraging e.g. a lone tree or patch of scrub. An isolated site not connected by prominent linear landscape features.
Negligible likelihood of species presence	No features suitable for roosting, minor foraging or commuting.

2.1 Limitations

This survey provides a snapshot of the site at the time of the survey only. Species are highly mobile and can turn up from time to time unexpectedly. All care has been taken to ensure the results and recommendations are suitable to the context of the development and the information gathered on surveys.

3.0 Results

The following section details the results of the desk study, inspection and survey; it includes MAGIC information, biological records data and map/aerial photo information. The results detail the building, structure or tree (numbered for reference) description of any evidence found and habitat value if no evidence has been located.

3.1 Desk Study

The desk study is centred on Grid Reference - TL 22053 19862 and Postcode - SG4 8TR.

3.1.1 MAGIC

The following statutory sites and Natural England Protected Species (NEPS) have been located within the 2km search area (Figure 1).

Table 2: Magic search results

Receptor	Distance and Direction to Nearest (m/km)	Description
Statutory sites	~1.1km	Knebworth Woods SSSI
Granted protected species licenses	~1.2km south	Brown Long-Eared - 14/12/2017 - 07/12/2022 - License No. 2017-32287
	~1.4km north-east	Brown Long-Eared, Common Pipistrelle - 10/04/2020 - 30/09/2023 - License No. 2020-45457
Priority habitat	~1km north & ~1.1km north-west	Good quality semi-improved grassland
	~1.8km north-west	Lowland Dry Acid Grassland
	~1.7km north	Lowland Meadows
	Several areas found within the search area. The closest point is located ~1.1km east	Ancient and Semi-Natural Woodland
	Several areas found within the search area. The closest point is located ~786m west	Ancient Replanted Woodland

	~918m north-west	Graffridge/Winter Woods - Ancient Replanted Woodland & Ancient and Semi-Natural Woodland
	Small areas found throughout the search area. The closest point is located ~378m west.	Deciduous Woodland
	There are 5 small areas found within the search area. The closest is located ~350m south	Traditional Orchards
	~600m north-east	Woodpasture and Parkland

MAGiC

SG4 8TR

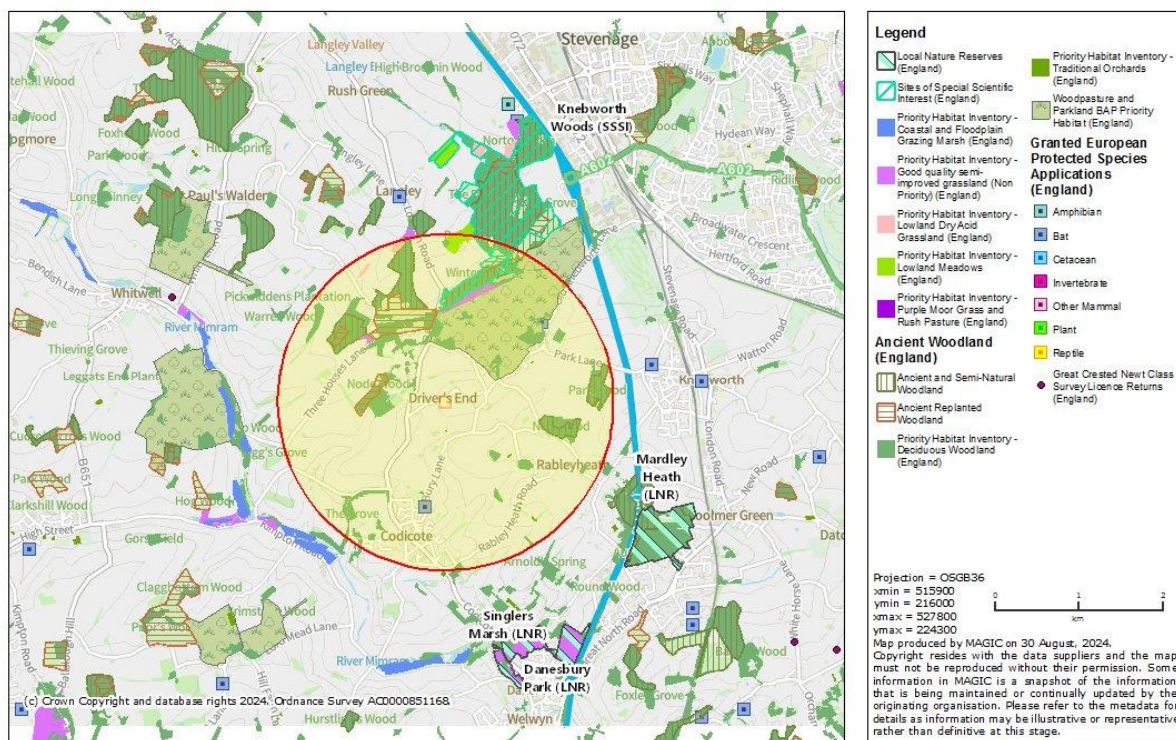


Figure 1: Magic Map Search

3.1.2 GCN DLL Zone

The site falls within an ‘amber’ zone on the GCN Impact Risk Zones map for Hertfordshire (Natural England). This indicates that the site is within an area that contains main population centres for GCN and comprises of important connecting habitat that aids natural dispersal.

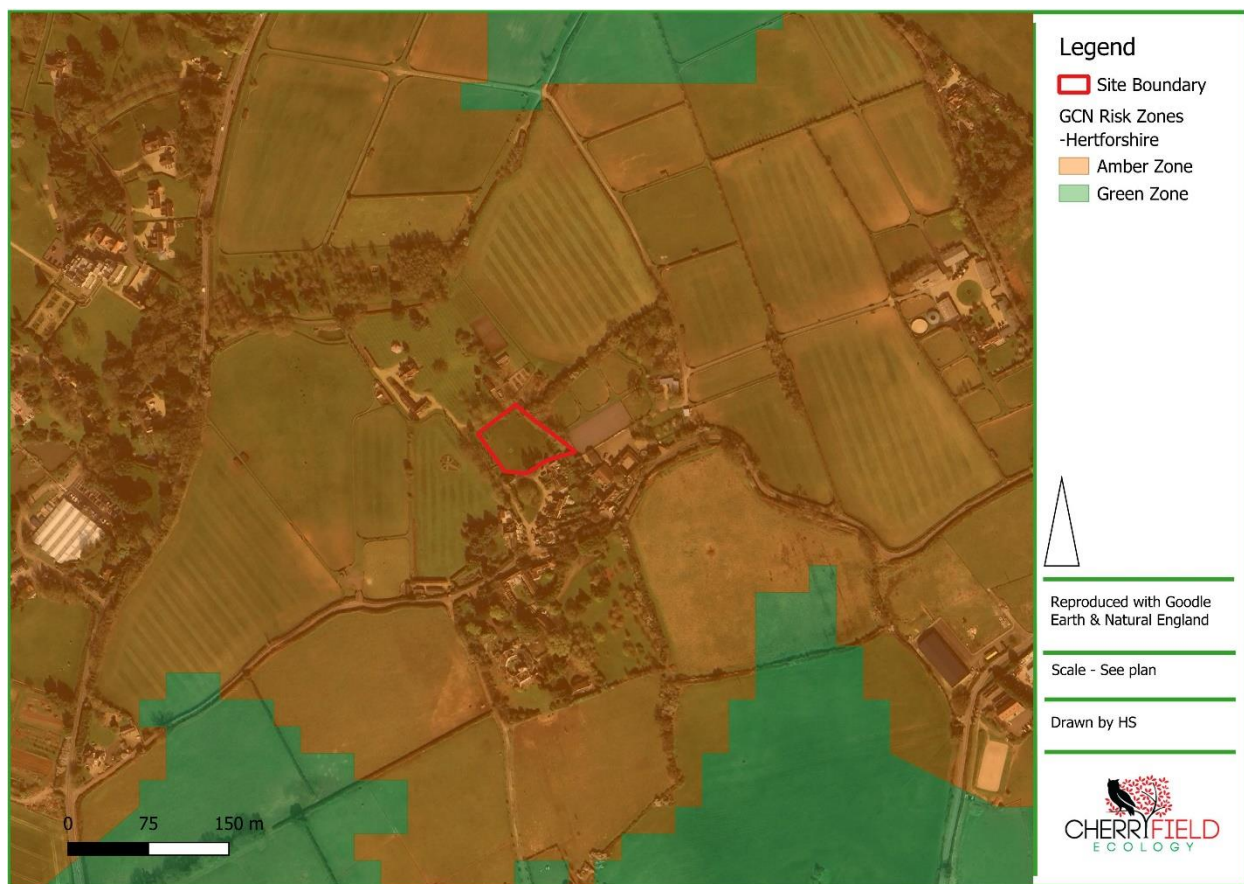


Figure 2: GCN Risk Zone

3.1.3 Biological Records Data

A standard data search of existing records for protected species and nature reserves has been commissioned, below details the results and site context. *Data older than 10 years old will not be included.*

Biological records were obtained from Herts Environmental Records Centre (2024).

Table 3: Biological Records

Species	Number of Records	Closest Record (accuracy)	Most Recent Record (year)
Amphibians			
Common Frog <i>Rana temporaria</i>	-	-	-
Common Toad <i>Bufo bufo</i>	7	~50m (2km)	2018
Great Crested Newt <i>Triturus cristatus</i>	3	~150m (1km)	1998
Palmate newt <i>Lissotriton helveticus</i>	-	-	-
Smooth newt <i>Lissotriton vulgaris</i>	-	-	-
Bats			
Barbastelle <i>Barbastella barbastellus</i>	3	~0m (10km)	2017
Brown Long-Eared <i>Plecotus auritus</i>	7	~150m (2km)	2014
Common Pipistrelle <i>Pipistrellus pipistrellus</i>	41	~150m (1km)	2017
Daubenton's <i>Myotis daubentonii</i>	25	~0m (10km)	2017
Leisler's <i>Nyctalus leisleri</i>	1	~1km (1km)	N/A
Nathusius' Pipistrelle <i>Pipistrellus nathusii</i>	7	~150m (1km)	N/A
Natterer's <i>Myotis nattereri</i>	22	~850m (1km)	2017
Noctule <i>Nyctalus noctula</i>	8	~960m (1km)	2017
Serotine <i>Eptesicus serotinus</i>	5	~160m (1km)	1978
Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	7	~150m (1km)	N/A
Unidentified Bat <i>Chiroptera sp.</i>	9	~160m (1km)	N/A
Unidentified Long-Eared <i>Plecotus sp.</i>	-	-	-
Unidentified <i>Myotis Myotis sp.</i>	-	-	-
Unidentified Pipistrelle <i>Pipistrellus sp.</i>	16	~160m (1km)	1998
Unidentified Vesper <i>Vespertilionidae</i>	-	-	-
Whiskered <i>Myotis mystacinus</i>	1	~1.8km (1km)	N/A
Mammals (exc. Bats)			
Badger <i>Meles meles</i>	44	Withheld	2020

Hazel Dormouse <i>Muscardinus avellanarius</i>	-	-	-
Otter <i>Lutra lutra</i>	-	-	-
Water Vole <i>Arvicola amphibius</i>	2	~0m (10km)	1975
West European Hedgehog <i>Erinaceus europaeus</i>	16	~400m (1m)	2017
Reptiles			
Adder <i>Vipera berus</i>	1	~150m (10km)	1934
Common Lizard <i>Zootoca vivipara</i>	1	~960m (1km)	1934
Grass Snake <i>Natrix helvetica</i>	1	~850m (1km)	1934
Slow-Worm <i>Anguis fragilis</i>	1	~50m (2km)	2000
Other			
Birds, Invertebrates, Plants etc.			
Non-Statutory Sites (see Figure 3)			
Name	Reference No.	Type	Description/designated for
Church Wood (near Knebworth)	29/003	Local Wildlife Site (LWS)	Wildlife Site criteria: Ancient woodland still retaining a semi-natural canopy with evidence suggesting an ancient origin
Node Wood	29/004	LWS	Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.
Graffridge Wood	29/005	LWS	Wildlife Site criteria: Ancient Woodland Inventory; woodland indicators.
Knebworth Park	29/035	LWS	The parkland supports a wide range of invertebrates and is important for a variety of deer species. The Wilderness Pond by Knebworth House is important for amphibians. Wildlife Site criteria: Grassland indicators; species.
Crouchgreen Woods	29/055	LWS	Wildlife Site criteria: Ancient and old secondary woodland with a semi-natural canopy
Knebworth Park	301	Veteran & Mature Trees	Girth 525cm. Oak Species. Near Monument in Deer Park.

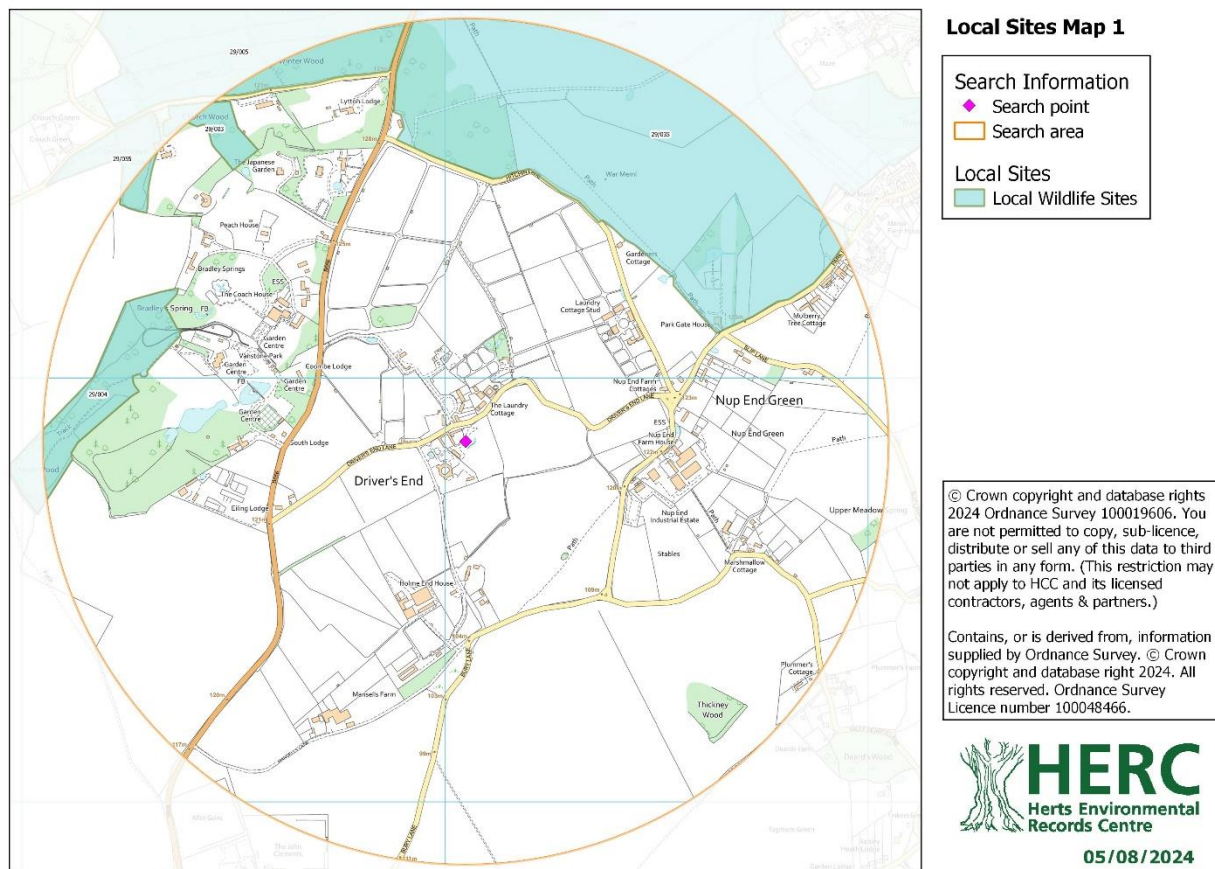


Figure 3: Local Wildlife Sites (HERC, 2024)

3.1.4 Site Location and Surrounds

The site is located in Codicote, Old Knebworth, Hertfordshire and is surrounded by arable fields and parkland in the immediate locale. Table 4 details the commuting, feeding and habitat features in a 1km radius of the site.

Table 4: Habitat features suitable for use by protected species.

Feature	Description
Watercourses	There are no significant watercourses within the search area.
Waterbodies	A small collection of three ponds is located ~130m to the east. Two further small ponds are located ~160m to the northwest and ~130m to the southeast. An ornamental pond is located ~150m to the south. Two large ponds are located ~400m to the west.
Woodland	Significant areas of woodland are found throughout the search area, mainly to the north and west of the site. Thickney Wood is located ~793m south-east. Small decorative copses are found throughout the site. Long Meadow Plantation is located ~850m north.
Linear e.g. hedgerows	Field margin and residential hedgerows dominate the search area/
Pasture/arable/grassland	Arable fields dominate the search area.
Other	The Coach House is located ~498m north-west. Laundry Cottage Stud is located ~424m north-east. Holme End House is located ~357m south. Mansells Farm is located ~755m south. Plummer's Farm is located ~1km south-east. Marshmallow Cottage is located ~713m east.

3.2 Habitat, Building, Tree or Other Structure

This section details the structures/habitat reference and descriptions (see Figure 9 for Site Plan).

Table 5: Weather Records

Parameter	Unit/value
Temperature	18 °C
Cloud cover	60%
Precipitation	None
Wind	1/12

3.2.1 Habitats

Habitats found on site are mapped using UKHab (UKHab, 2023).

Table 6: Habitat features found on site.

Habitat Features		
UKHab Habitat Type (to the appropriate level)	UKHab Essential Secondary Codes & Additional Secondary Codes (where relevant)	Description
Vegetated Garden	200 - Tree	The entire site is comprised of regularly mown garden lawn, dominated by perennial rye grass and annual meadow grass. There are very few forb species present, with a maximum of four species present per m². There are occasional trees on site, all of which are saplings or are small sized (with a DBH of less than 30cm) with the exception of one medium sized silver birch tree on the southern boundary. The garden also features a compost heap at the northeast corner, a nettle bed and a small animal pen.



Figure 4: Example of garden lawn on site



Figure 5: Example of small fruit trees on site

		 Cherryfield Ecology Ltd 10 Sept 2024 11:05:49 Figure 6: Medium sized silver birch tree on site
Linear Features		
UKHab Habitat Type (to the appropriate level)	UKHab Essential Secondary Codes & Additional Secondary Codes (where relevant)	Description
Non-Native & Ornamental Hedgerow		Two short lengths of managed field maple hedgerow line the southern boundary.  Cherryfield Ecology Ltd 10 Sept 2024 11:05:58 Figure 7: Managed hedgerow on site

The following table provides a summary of the condition assessments for all sites meeting the Statutory Metric criteria. Please see the separate excel sheets for full details.

Table 7: Biodiversity Net Gain Condition Assessments/Scores

Habitat	Condition Score
Vegetated Garden	Set score
Urban Tree (Medium Silver Birch)	Good

Table 8: Target Notes

Target Note	Description
T1	Compost heap in the northeast corner  Cherryfield Ecology Ltd 10 Sept 2024 10:58:35 Figure 8: Compost heap on site



Figure 9: Site Plan

3.2.2 Species List

Table 9: Species found on site with relevant *DAFOR abundance.

Common Name	Scientific Name	*DAFOR Scale	Habitat
Annual Meadow-Grass	<i>Poa annua</i>	D	Garden Lawn
Apple	<i>Malus</i> sp.	R	Garden Tree
Creeping Bent	<i>Agrostis stolonifera</i>	F	Garden Lawn
Creeping Buttercup	<i>Ranunculus repens</i>	R	Garden Lawn
Creeping Thistle	<i>Cirsium arvense</i>	R	Garden Lawn
Daisy	<i>Bellis perennis</i>	R	Garden Lawn
Dandelion	<i>Taraxacum officinale</i> agg.	R	Garden Lawn
Field Maple	<i>Acer campestre</i>	O	Hedgerow
Greater Plantain	<i>Plantago major</i>	R	Garden Lawn
Horse-Chestnut	<i>Aesculus hippocastanum</i>	R	Garden Tree
Mouse-Ear Chickweed	<i>Cerastium vulgatum</i>	R	Garden Lawn
Nettle	<i>Urtica dioica</i>	R	Compost Heap

Norway Maple	<i>Acer platanoides</i>	R	Garden Tree
Perennial Rye-Grass	<i>Lolium perenne</i>	R	Garden Lawn
Ragwort	<i>Senecio jacobaea</i>	R	Garden Lawn
Selfheal	<i>Prunella vulgaris</i>	R	Garden Lawn
Silver Birch	<i>Betula pendula</i>	O	Garden Tree
White Clover	<i>Trifolium repens</i>	R	Garden Lawn
Wood Sorrel	<i>Oxalis acetosella</i>	R	Garden Lawn
Yorkshire Fog	<i>Holcus lanatus</i>	O	Garden Lawn

*DAFOR - Dominant, Abundant, Frequent, Occasional and Rare

3.3 Evidence or Likelihood of Species Presence

This section details the evidence located and likelihood of species presence.

3.3.1 Bats

Table 10: Bats, evidence or the potential for the species use.

Bats found	No bats were found at the time of the survey.
Evidence of bat use	No evidence of bats was found at the time of the survey.
Potential for bat use	Level of likelihood of presence (foraging & commuting)- High There are no structures on site that could support roosting bats and the trees on site were checked from ground level and no potential roosting features were found. The boundaries of the site and the adjacent habitats provide suitable foraging and commuting habitat for bats.

3.3.2 Badgers

Table 11: Badgers, evidence or the potential for the species use.

Badgers found	No badgers were found at the time of the survey.
Evidence of badger use	No evidence of badger use was found at the time of the survey.
Potential for badger use	Level of likelihood of presence - Low The site is comprised of short mown garden lawn with no suitable sett building habitat on site, however, there is some connectivity to other more suitable habitats.

3.3.3 Breeding Birds

Table 12: Breeding birds, evidence or potential for the species use.

Breeding birds found	No breeding birds were found at the time of the survey.
Evidence of breeding bird use	No evidence of breeding birds was found at the time of the survey.
Potential for breeding bird use	Level of likelihood of presence - Moderate A handful of the trees on site and the hedgerow could support nesting birds.

3.3.4 Amphibian

Table 13: Amphibians, evidence or potential for species use.

Amphibians found	No Great Crested Newt (GCN) were found at the time of the survey.
Evidence of amphibian use	No evidence of GCN was found at the time of the survey.
Potential for amphibian use	Level of likelihood of presence - Low There are a number of waterbodies within 500m of the site, and the surrounding habitat provides some suitable terrestrial habitat for GCN, however, the site itself is comprised of regularly mown garden lawn and therefore provides limited opportunities for GCN.

3.3.5 Reptile

Table 14: Reptiles, evidence or potential for species use.

Reptiles found	No reptiles were found at the time of the survey.
Evidence of reptile use	No evidence of reptiles was found at the time of the survey.
Potential for reptile use	Level of likelihood of presence - Low The surrounds of the site and the compost heap provide some suitable terrestrial habitat for reptiles, however, the site itself is comprised of regularly mown garden lawn and therefore provides limited opportunities for reptiles.

3.3.6 Other Species e.g. Hazel Dormouse / Otter / Water Vole

Table 15: Other protected species, evidence or potential for species use.

Species found	No other protected species were found at the time of the survey.
Evidence of species use	No evidence of other protected species was found at the time of the survey.
Potential for species use	Level of likelihood of presence - Negligible There is no suitable habitat on site for any other protected species.

3.3.7 Invasive Non-Native (Schedule 9 Species)

Table 16: Invasive non-native species found.

Species found	No invasive non-native species were found at the time of the survey.
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4.0 Conclusions, Discussion, Impacts and Recommendations

The following section details the conclusions, discussion, impacts and recommendations in the context of the proposed works.

4.1 Conclusion and Discussion

The proposals include for the construction of a new residential dwelling and associated driveway.

The site consists of residential garden, with regularly mown garden lawn and small trees. No protected species or evidence of protected species were found on site at the time of the survey.

The site provides **low** potential for badger, Great Crested Newt (GCN) and reptiles due to the limited suitable habitat present on site, but suitable connectivity to other more suitable habitats.

There is **negligible** potential for roosting bats, however, the site provides **high** potential for foraging and commuting.

The tree and hedgerow habitats provide **moderate** potential for breeding birds.

The site provides **negligible** potential for other protected species due to the lack of suitable habitat onsite.

Recommended surveys are found in section 4.3.

4.2 Potential Impacts

Impact assessments must be proportionate to the scale of the development (CIEEM, 2018) and Table 16 details a proportionate impact assessment based on current information.

Table 16: Impact Assessment

Impact	Breeding Birds - Active nests may be lost in the development. GCN - Loss of habitat.
Characterisation of unmitigated	Breeding Birds - A low-level loss/impact at a local level. GCN - A low-level loss/impact at a local level.

impact on the feature	
Effect without mitigation	Without mitigation, individual birds and GCN could be killed, injured or trapped during the works.
Mitigation and/or potential enhancement	See Table 17 and Table 18
Significance of effects of residual impacts (after mitigation)	Breeding Birds - If lost habitat is replaced by bird boxes and mitigation is followed, the effects would be negligible. GCN - If mitigation is followed, the effects would be negligible.

4.3 Recommendations

Badger - No further surveys are necessary; however, if any badger setts are found throughout works, all works must stop, and advice sought.

Bats - No further surveys are necessary; however, if bats are found throughout works, all works must stop, and advice sought.

Breeding Birds - No further surveys are recommended; however, the development should take place outside the nesting season (March to August). If this is not possible, it is recommended that a qualified ecologist is on-site to ensure the building/vegetation is not occupied by breeding birds, prior to demolition/clearance. Should an occupied nest be found, a buffer zone would need to be created until the nest is no longer in use.

Great Crested Newt (GCN) - Habitat that is being affected is not suitable for GCN, although habitat in the surrounding area is, therefore it is recommended that an Unlicensed Method Statement be followed.

Reptiles - No further survey is necessary; however, if reptiles are found on-site, all works must stop, and advice sought.

Other protected species - No further survey is necessary; however, if any other protected species are found on site, all works must stop, and advice sought.

Habitats - All habitats found are common and widespread, no impacts are foreseen.

4.4 Additional Recommendations

Table 17: Additional Recommendations

Work	Specification
General information	The following must be undertaken: - All works must be undertaken within 12 months of this report, thereafter a material change check will be required to check for changes that could affect potential protected species habitat. - If any protected species are found at any point whatsoever during works, works will stop and further advice will be sought.
General Precautions	- Trenches and open holes - All trenches and open holes should be covered overnight, or if the hole or trench can't be covered it should be filled in or a rough sawn timber plank installed as an escape route for any species. - General maintenance - If grassland and vegetation is kept in a mown/cut state this should be maintained for the duration of the works. - Store all material on hardstanding or in buildings to prevent artificial refuges from being created.
Lighting	Any lighting near or shining onto any trees/buildings etc, will be designed to minimise the impact it has on potential species and commuting. Lighting will be in line with the BCT lighting guidelines (Bats and Lighting in the UK (Bat Conservation Trust, 2023) https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/ This lighting, where possible, will be of low level, be on downward deflectors and be on PIR sensors. Using LED directional lighting can also be a way of minimising the light spill affecting the habitat. No up-lighting should be used. Light spill must be minimised to as low as possible. This will ensure that the foraging and commuting resources that the protected species are likely to be using is maintained.

Table 18: The local authority has a duty to enhance biodiversity in its day-to-day duties; the following are suggested enhancements that are easily installed into a development and can be cost-effective whilst ensuring a gain for local wildlife.

Work	Specification
Bat, bird and insect box enhancement.	Bat tubes can be installed in the new dwelling (Figure 10). These require no maintenance, can be installed on a gable end/under an eave (no less than 3m above ground level), face south or north and can be faced in any material to provide an aesthetic matching the building.  Figure 10: Example of bat tube. Bird boxes for a variety of different species can also be installed. A selection of open-fronted boxes and songbird boxes can be installed (Figure 11 and Figure 12); it is recommended that a minimum of one of each of the boxes are installed. These will be installed at a minimum of 2m high and ideally face north to east.



Figure 11: Robin box.



Figure 12: Songbird box.

A variety of insect boxes can be installed in the area; a minimum of one box is recommended (Figure 13 and Figure 14).



Figure 13: Urban bee nesting box, used for solitary bees and wasps.



Figure 14: Bug biome, ideal for ladybirds, lacewings and bees.

Hedgehog highways and small mammal connectivity.

Hedgehog highways can be installed in any hard boundaries in order to allow hedgehogs and other small mammals a continuous corridor across the site, thus linking the garden/site etc. and green spaces in the area.

- A 13cm-by-13cm is sufficient for any hedgehog to pass through. This will be too small for nearly all pets (Figure 15).
- Remove a brick from the bottom of the wall, creating a 13cm-by-13cm hole.
- Cut a small hole in your fence if there are no gaps.
- Dig a channel underneath your wall, fence or gate.
- Ideally, rather than walls or fences, a hedge will provide foraging, shelter and a route along as well as through the site.

How to make a hedgehog highway

wildlife
watch



www.wildlifewatch.org.uk

Figure 15: Hedgehog Highway, Source - Wildlife Trust -

<http://7474fab53f1b6ee92458-8f3ac932bad207a00c83e77eae8d15c.r12.cf1.rackcdn.com/Hedgehog%20Highway.jpg>

Hedgerows

Hedgerows provide excellent corridors for wildlife and are extremely important to many species of wildlife. A hedgerow could be included in development plans to assist a range of species (Figure 16).

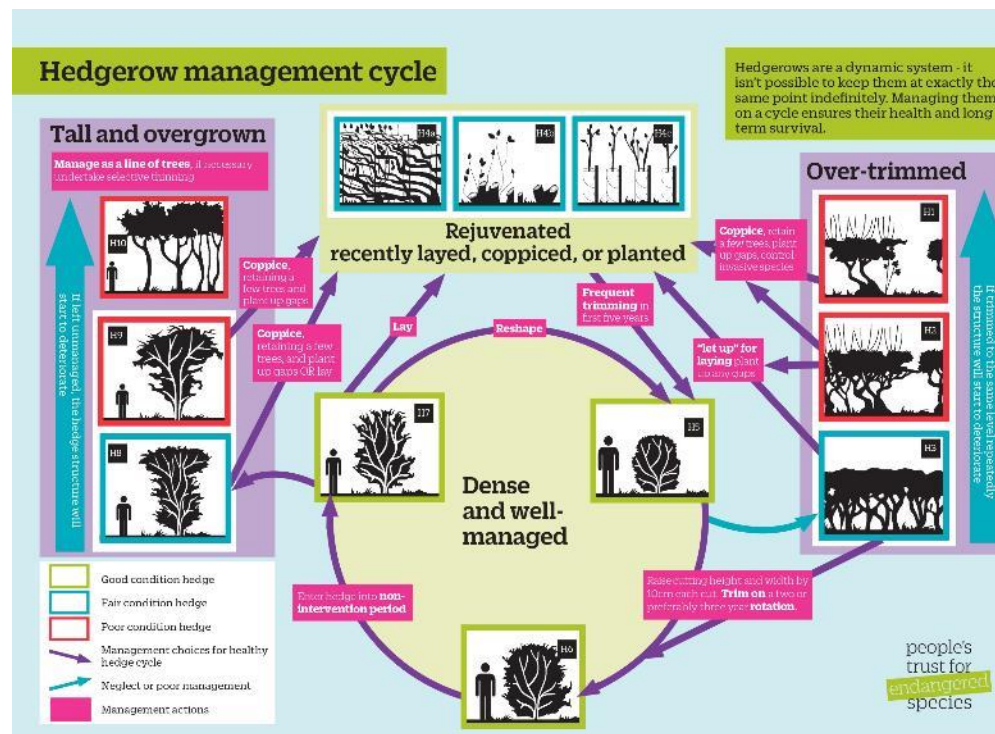


Figure 16: Hedgerow management cycle (<https://hedgerowsurvey.ptes.org/>).

It is recommended that a diversity of hedgerow species is included in the proposed hedgerows on site. Suitable hedgerow species include:

- Hawthorn (*Crateagus monogyna*)
- Hazel (*Corylus avellana*)
- Wild Privet (*Ligustrum vulgare*)
- Field Maple (*Acer campestre*)
- Blackthorn (*Prunus spinosa*)
- Guelder Rose (*Viburnum opulus*)
- Wayfaring Tree (*Viburnum lantana*)
- Dog Rose (*Rosa canina*)
- Spindle (*Euonymus europaea*)

	▪ Holly (<i>Ilex europaeus</i>) The hedgerow should include 5 or more woody species within a 30m length in order to be classified as <u>species-rich</u>. Where possible, no cutting will take place during peak bird nesting season, which runs from March to September. Where possible, shrubs and hedgerows will not be cut back annually, as flower buds often form on second-year growth. Trimming hedges on a two-year or three-year rotation, targeting different sections each year, will make sure there are always flowers for pollinators in spring and berries for birds in autumn. Hedges cut every three years can produce two and a half times as many blossoms as those cut annually. Rotational cutting can also save time and money that would be invested in annual cutting.
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5.0 References

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