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Report prepared for: Brian Parker

For the Site of: Chiswell Green Lane and east of The Croft, Chiswell Green, AL2 3AJ

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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 no more than 12 months old and 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 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) allowing for a day-time 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 Chiswell Green Lane and east of The Croft, Chiswell Green, AL2 3AJ.

The client commissioned Cherryfield Ecology to undertake an EA as the proposals include for the development of the site for residential usage. Plans have not been provided and a verbal description has been given.

0.2 Results and Findings

- The site consists of buildings, improved grassland, species poor hedgerow, small amounts of tall ruderal vegetation and hard standing.
- No protected species or evidence of protected species were found on site at the time of the survey.
- No badger setts were found to be present on site or in the immediate surrounds, nor were there any evidence of badger using the site. The site overall has **low** potential for badger in the large area of improved grass on site, which does contain foraging and commuting opportunities.
- The buildings found on site provide **negligible** potential for roosting bats due to the lack of roosting features across the buildings.
- The trees and hedgerow habitats provide **high** potential for breeding birds.

- The site provides a **low** potential for common reptiles and amphibians in the hedgerow found around the boundary of the site for commuting and or refuge purposes. The large expanse of improved grass found across site is heavily grazed and also regularly cut with sward height kept low. Due to the extensive grazing and cutting the site overall is considered undesirable to common reptile and amphibians. It should also be noted that there are no water bodies found on site with the nearest found over 2km from site.

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; 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 buildings, and any section of hedgerow that may be included in plans, are not occupied by breeding birds, prior to demolition/removal. Should an occupied nest be found, a buffer zone would need to be created until the nest is no longer in use.

GCN - No further survey is necessary; however, if any GCN are found throughout works, all works must stop, and advice sought.

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

No impacts are foreseen; however, if any protected species are found during the development, all works must stop, and advice sought.

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

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.

1.2 Background Information

The client, Brian Parker, has commissioned Cherryfield Ecology to undertake an EA for the site of Chiswell Green Lane and east of The Croft, Chiswell Green, AL2 3AJ. Planning permission is being sought to develop the site for residential usage.

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 the 25/05/2021.

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 surrounds. 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 Grass Snake *Natrix natrix* and/or 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. obstruct 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.

2.0 Methods

The survey follows the national guidelines JNCC (2010) 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.

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

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.

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.

Table 1: Habitat value (likelihood) of protected species presence assessed against Collins (2016), 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 | <p>Species are found to be present during the survey.</p> <p>Evidence of species is found to be present during the survey.</p> |
| Higher likelihood of presence | <p>Buildings, trees or other structures with features of particular significance for use by protected species e.g. nesting habitat, roosting opportunities, and ponds.</p> <p>Habitat of high quality for foraging e.g. broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>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.</p> <p>Site is close to known locations of records for protected species.</p> |
| Moderate and Lower likelihood of species presence | <p>Several potential habitat opportunities in buildings, trees or other habitats.</p> <p>Habitat could be used for foraging e.g. trees, shrub, grassland or water.</p> <p>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.</p> <p>A small number of less significant habitat opportunities.</p> <p>Isolated habitat for foraging e.g. a lone tree or patch of scrub.</p> <p>An isolated site not connected by prominent linear landscape features.</p> |
| Negligible likelihood of species presence | <p>No features suitable for roosting, minor foraging or commuting.</p> |

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 - TL128046 and Postcode - AL2 3AJ.

Table 2: Weather Records

| | |
|---------------|------|
| Temperature | 18°C |
| Cloud cover | 80% |
| Precipitation | None |
| Wind | 2/12 |

3.2 MAGIC

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

- There are no statutory sites located within the search area.
- There are 2 NEPS licences granted for bats within the search area:
 - Common Pipistrelle *Pipistrellus pipistrellus* and Soprano Pipistrelle *Pipistrellus pygmaeus*, approx. 800m east from the site (Licence 2014-3738)
 - Common Pipistrelle *Pipistrellus pipistrellus* and Soprano Pipistrelle *Pipistrellus pygmaeus*, approx. 1.6km south east from the site (Licence 2010-1663)

MAGiC

Chiswell Green

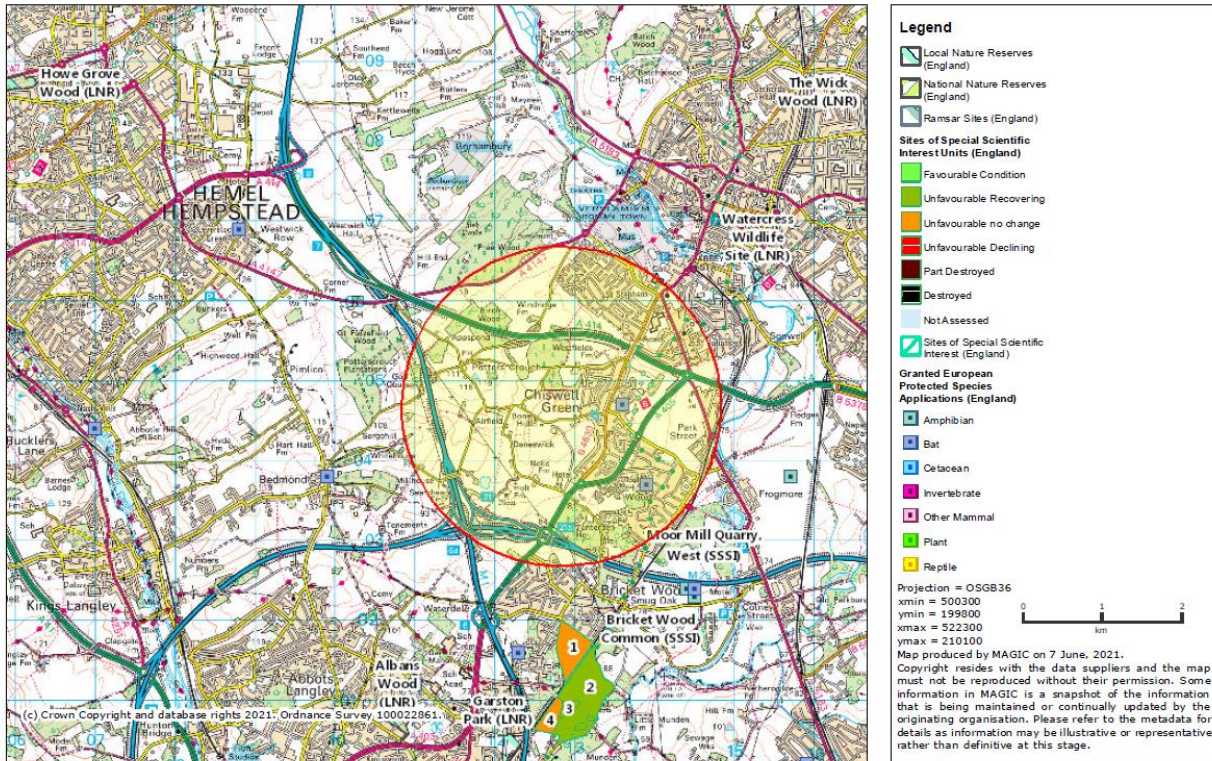


Figure 1: Magic Map Search.

3.3 Biological Records Data

A standard 1km data search of existing records for protected species and nature reserves has been commissioned, below details the results and site context.

Biological records were obtained from Herts Environmental Records Centre (HERC, 2021), with a total of 3,208 biological records provided.

Table 3: Biological Records

| Species | Number of Records | Closest Record (accuracy) | Most Recent Record (year) |
|--|-------------------|---------------------------|---------------------------|
| Amphibians | 11 | 930m (1km) | 2016 |
| Great Crest Newt <i>Triturus cristatus</i> | | | |
| Common toad <i>Bufo bufo</i> | | | |
| Bats | 37 | 250m (1km) | 2020 |

| Brown Long-Eared <i>Plecotus auritus</i> Common Pipistrelle <i>Pipistrellus pipistrellus</i> Daubenton's <i>Myotis daubentonii</i> Noctule <i>Nyctalus noctula</i> Soprano Pipistrelle <i>Pipistrellus pygmaeus</i> Unidentified Bat <i>Chiroptera sp.</i> Unidentified Pipistrelle <i>Pipistrellus sp.</i> | | | | | | |
|--|---------------|---------------------------|--|-------|-------------|------|
| Mammals (exc. Bats) Badger <i>Meles meles</i> Brown hare <i>Lepus europaeus</i> Chinese muntjac <i>Muntiacus reevesi</i> Grey Squirrel <i>Sciurus carolinensis</i> Harvest mouse <i>Micromys minutus</i> Hazel Dormouse <i>Muscardinus avellanarius</i> Hedgehog <i>Erinaceus europaeus</i> Polecat <i>Mustela putorius</i> Sika deer <i>Cervus nippon</i> Stoat <i>Mustela erminea</i> Water shrew <i>Neomys fodiens</i> Water Vole <i>Arvicola amphibius</i> Weasel <i>Mustela nivalis</i> | | | | 68 | 760m (100m) | 2020 |
| Reptiles Common Lizard <i>Zootoca vivipara</i> Grass Snake <i>Natrix helvetica</i> Slow-Worm <i>Anguis fragilis</i> | | | | 7 | 930m (2km) | 1988 |
| Other Birds, Invertebrates, Plants etc. | | | | 3,085 | 0m (10km) | 2019 |
| Non-Statutory Sites | | | | | | |
| Name | Reference No. | Type | Description/designated for | | | |
| Park Wood (near Chiswell Green) | 67/020 | Local Wildlife Site (LWS) | Large ancient woodland bisected by a road and almost completely replanted with conifers. The edge of the woodland retains a semi-natural canopy with a more diverse flora below. The widest strip of | | | |

| | | | |
|-------------|--------|-----|--|
| | | | <p>broadleaved woodland occurs along the southern edge and supports species such as Pedunculate Oak (<i>Quercus robur</i>), Beech (<i>Fagus sylvatica</i>), Silver Birch (<i>Betula pendula</i>) and Hazel (<i>Corylus avellana</i>). Some Wild Cherry (<i>Prunus avium</i>) is present along the northern edge. The ground flora is mainly Bluebell (<i>Hyacinthoides non-scripta</i>), Bracken (<i>Pteridium aquilinum</i>) and Bramble (<i>Rubus fruticosus</i> agg.). Other species recorded include Broad Buckler-fern (<i>Dryopteris dilatata</i>), Wood Sorrel (<i>Oxalis acetosella</i>) Wood Melick (<i>Melica uniflora</i>), Wood Millet (<i>Milium effusum</i>) Wood Sorrel (<i>Oxalis acetosella</i>) and Yellow Pimpernel (<i>Lysimachia nemorum</i>). Remnant hedge banks are present to the boundary with some coppiced and laid trees including Hornbeam, Beech and Hazel. Wildlife Site criteria: Ancient woodland Inventory site with restorable elements of its previous semi-natural character including some semi-natural canopy and ancient features; woodland indicators.</p> |
| Scrubs Wood | 67/021 | LWS | <p>Ancient semi-natural woodland supporting a high canopy dominated by Pedunculate Oak (<i>Quercus robur</i>). The western side of the wood supports a more complex canopy with less Pedunculate Oak. Beech (<i>Fagus sylvatica</i>) is frequent with occasional Wild Cherry (<i>Prunus avium</i>) plus</p> |

| | | | |
|------------------|--------|-----|--|
| | | | <p>abundant Hazel (<i>Corylus avellana</i>) coppice and rarer Hornbeam (<i>Carpinus betulus</i>) coppice. Other woody species present include Field Maple (<i>Acer campestre</i>), Rowan (<i>Sorbus aucuparia</i>) and elm (<i>Ulmus</i> sp.). The ground flora here is dominated by Bluebell (<i>Hyacinthoides non-scripta</i>) with other species such as Dog's Mercury (<i>Mercurialis perennis</i>) and Woodruff (<i>Galium odoratum</i>). The ground flora in the east is more disturbed with Bracken (<i>Pteridium aquilinum</i>) and Bramble (<i>Rubus fruticosus</i> agg.) typical. Along the wood margin to the north and south there are remnant woodbanks with laid and coppiced Beech stubs. Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.</p> |
| St Julian's Wood | 76/003 | LWS | <p>Ancient semi-natural Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) coppice-with-standards woodland with Beech (<i>Fagus sylvatica</i>), Ash (<i>Fraxinus excelsior</i>) and Holly (<i>Ilex aquifolium</i>) together with Wild Cherry (<i>Prunus avium</i>), Field Maple (<i>Acer campestre</i>) and occasional Sycamore (<i>Acer pseudoplatanus</i>). The ground flora is typically quite sparse but supports a number of woodland indicators, mainly Bluebell (<i>Hyacinthoides non-scripta</i>) plus other species such as Wood Melick (<i>Melica uniflora</i>), Wood Millet (<i>Milium effusum</i>), Wood</p> |

| | | | |
|------------------------------------|--------|-----|--|
| | | | <p>Anemone (<i>Anemone nemorosa</i>), Yellow Archangel (<i>Lamium galeobdolon</i>) and Dog's Mercury (<i>Mercurialis perennis</i>). There are small glades and denser scrub in the centre with Bramble (<i>Rubus fruticosus</i> agg.) and Holly. Old marl pits are present in the north. The wood is largely surrounded by old banks with some laid specimens, including Hornbeam, and an internal woodbank is also present. Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.</p> |
| How Wood (near Burston Manor Farm) | 76/021 | LWS | <p>Remnant of ancient semi-natural Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) coppiced woodland. Ash (<i>Fraxinus excelsior</i>) and Wild Cherry (<i>Prunus avium</i>) are frequent in the canopy. There is a good shrub layer with frequent Hazel (<i>Corylus avellana</i>) coppice and Hawthorn (<i>Crataegus monogyna</i>), including Midland Hawthorn (<i>Crataegus laevigata</i>) and hybrids, plus Elder (<i>Sambucus nigra</i>) and Holly (<i>Ilex aquifolium</i>). Blackthorn (<i>Prunus spinosa</i>) is present along the west edge. The ground flora is dense with much Bramble (<i>Rubus fruticosus</i> agg.) and Ivy (<i>Hedera helix</i>) plus Bluebell (<i>Hyacinthoides non-scripta</i>) and Wood Anemone (<i>Anemone nemorosa</i>). Other species recorded include Yellow Archangel (<i>Lamium galeobdolon</i>), Pignut</p> |

| | | |
|--|--|---|
| | | <p>(<i>Conopodium majus</i>), Woodruff (<i>Galium odoratum</i>), Wood Sorrel (<i>Oxalis acetosella</i>), Wood Sedge (<i>Carex sylvatica</i>) and Broad Buckler-fern (<i>Dryopteris dilatata</i>). A large pond in the north-west supports surrounding swampy vegetation including Greater Pond-sedge (<i>Carex riparia</i>) and willow (<i>Salix</i> spp.) scrub. A small muddy stream drains the pond to the east, with Remote Sedge common along its banks. Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.</p> |
|--|--|---|

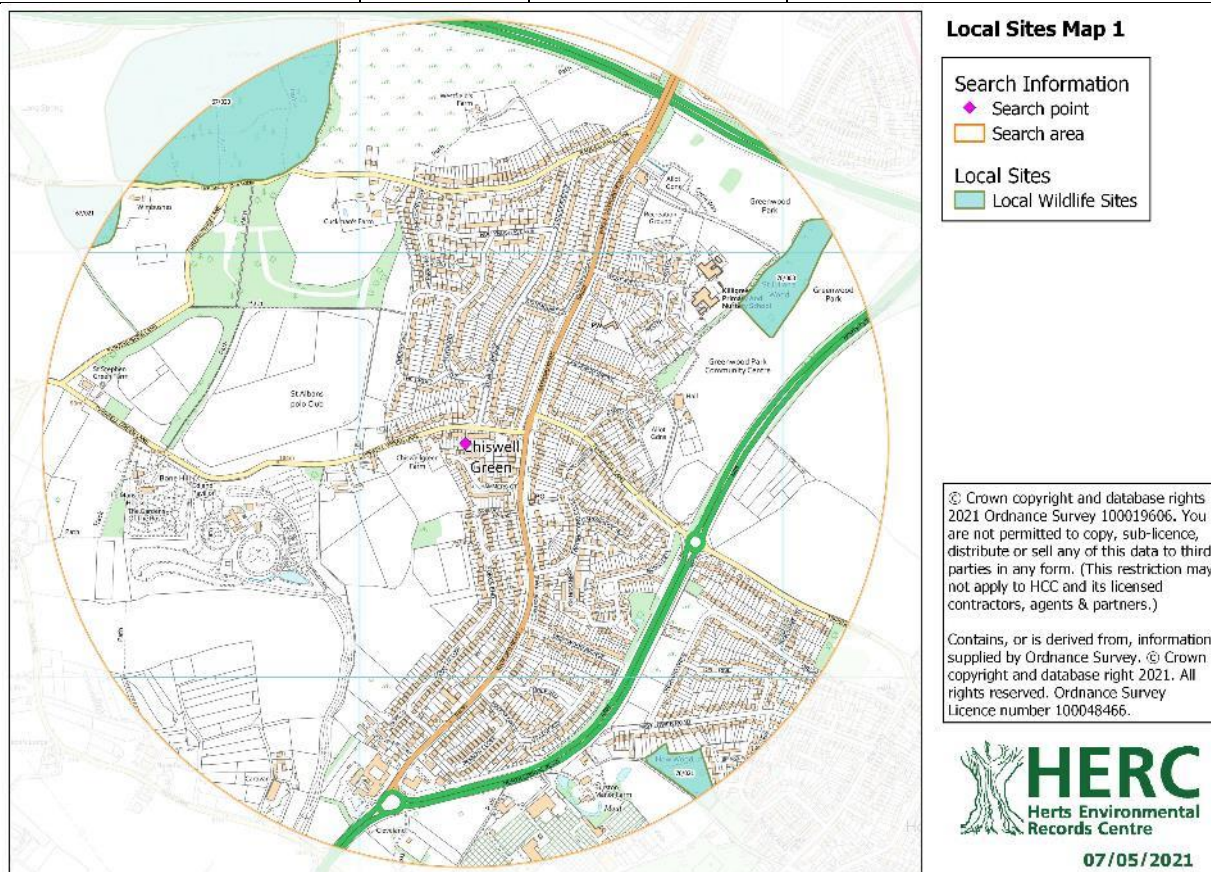


Figure 1a: Non-statutory site location map.

3.4 Site Location and Surrounds

The site is located in St. Albans, Hertfordshire and is surrounded by arable fields and low-density urban sprawl in the immediate local. 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 |
|--------------------------|---|
| Water course | There are no significant water courses within the search area. |
| Water bodies | A small unnamed water body is found approx. 1km northwest of site. |
| Woodland | In addition to the strip of woodland found to border the northern and western boundaries of site there is woodland found approx. 20m north of the northern boundary of site and stretches approx. 700m further north. A copse is found approx. 685m northwest of the western boundary of site. Additional copses are found approx. 250m southeast of the southern boundary and approx. 900m southwest of the southern boundary. |
| Linear e.g. hedgerows | In addition to the hedgerow found along the boundary of site there are agricultural and some residential hedgerow in the general surrounds but with generally poor links to the wider landscape due to fragmentation via road and rail networks. |
| Pasture/arable/grassland | Most of the surrounds consists of and arable and pasture. |
| Other | The A414 is found approx. 880m north, the north orbital motorway is found approx. 1km east and the M1 is found approx. 1.4km west of site. |

3.5 Habitat, Building, Tree or Other Structure

This section details the structures/habitat reference and descriptions (see Figure 19 for Site Plan).

3.5.1 Habitats

3.5.2 Buildings

There are four detached agricultural buildings found on site (B1, B2, B3 & B4). B1 is a large, detached barn type building. It has an open gable roof design with metal sheet roofing present. Large metal roller shutter doors are found at the western and eastern

gable ends. Internally the building has no loft space or roof void and has a vaulted roof. This building is 'in-use' as an agricultural building.

B2 is a detached timber built stable type building. It has a predominantly open gable roof design with a mono pitched section also. The roofing material is made from bitumen felt and the building has plastic rainwater goods. Internally the building has no loft space or roof voids and has a vaulted roof. It should be noted that this building has been sealed internally and is heavily insulated.

B3 is detached timber built stable type building. It has an open gable roof design with bitumen felt roofing material present and has plastic rainwater goods. Internally the building has no loft space or roof voids and has a vaulted roof. This building is currently 'in-use' as a working horse stable.

B4 is detached timber built stable type building. It has an open gable roof design with corrugated bitumen sheet roofing material present and has plastic rainwater goods. Internally the building has no loft space or roof voids and has a vaulted roof. This building is currently 'in-use' as a working horse stable.



Figure 2: Front and side elevations of B1.



Figure 3: Side elevation of B1.



Figure 4: Rear and side elevations of B1.



Figure 5: Example of B1's internals.



Figure 6: Front and side elevations of B2.



Figure 7: Side elevation of B2.



Figure 8: Rear and side elevations of B2.



Figure 9: Example of B2's internals.



Figure 10: Front and side elevations of B3.



Figure 11: Example of B3's internals.



Figure 12: Side and front elevations of B4.



Figure 13: Example of B4's internals.

3.5.3 Improved Grassland

Improved grass is found to cover the majority of the site. This large area is heavily grazed by horses (year-round) and livestock (sporadic) and is also regularly cut, all of which helps to keep the sward height low. Species here include perennial rye-grass *Lolium perenne*, buttercup *Ranunculus repens*, daisy *Bellis perennis*, sheep's sorrel *Rumex acetosella*, white clover *Trifolium repens*, ribwort plantain *Plantago lanceolata* and dandelion *Taraxacum officinale*.



Figure 14: Example of improved grass found onsite.



Figure 15: Further example of improved grass found onsite.

3.5.4 Hedgerow

Hedgerow is found predominantly to the boundary of site. Most consists of single species such as pine *Pinus sp.* or beech *Fagus sylvatica*. Some portions to the north and west have a tree standard also, with species including oak *Quercus sp.*, hawthorn *Crataegus monogyna* and blackthorn *Prunus spinosa*.



Figure 16: Example of species poor hedgerow found on site.

3.5.5 Tall ruderal

Small amounts of tall ruderal vegetation is found close to boundaries and in the surrounds of building B2. Species here are dominated by nettle *Urtica dioica*.



Figure 17: Example of small amount of tall ruderal vegetation.

3.5.6 Hard standing

Small amounts of hard standing are found on site and form areas on which the buildings are built and also a small driveway area.

Table 5: Target Notes

| Target Note | Description |
|-------------|--|
| T1 | Disused birds nest found in building B4. |



Figure 18: Disused bird's nest.

3.6 Species List

| | |
|----------------------------|-------------------------------------|
| Beech | <i>Fagus sylvatica</i> |
| Blackthorn | <i>Prunus spinosa</i> |
| Bramble | <i>Rubus fruticosus</i> |
| Bristly Oxtongue | <i>Picris echioides</i> |
| Cleavers | <i>Galium aparine</i> |
| Common Bird's-Foot-Trefoil | <i>Lotus corniculatus</i> |
| Common Sorrel | <i>Rumex acetosa subsp. acetosa</i> |
| Cow Parsley | <i>Anthriscus sylvestris</i> |
| Creeping Buttercup | <i>Ranunculus repens</i> |
| Creeping Thistle | <i>Cirsium arvense</i> |
| Crested dogs tail | <i>Cynosurs cristatus</i> |
| Daisy | <i>Bellis perennis</i> |
| Dandelion | <i>Taraxacum officinale</i> |
| False Oat-Grass | <i>Arrhenatherum elatius</i> |
| Ground-Ivy | <i>Glechoma hederacea</i> |
| Hawthorn | <i>Crataegus monogyna</i> |
| Herb-Robert | <i>Geranium robertianum</i> |
| Ivy | <i>Hedera helix</i> |
| Leyland Cypress | <i>Cuprocyparis leylandii</i> |
| Meadow Buttercup | <i>Ranunculus acris</i> |
| Nettle | <i>Urtica dioica</i> |
| Nipplewort | <i>Lapsana communis</i> |
| Oak | <i>Quercus sp.</i> |
| Perennial Rye-Grass | <i>Lolium perenne</i> |
| Pine | <i>Pinus sp.</i> |
| Prickly Sow-Thistle | <i>Sonchus asper</i> |
| Red Clover | <i>Trifolium pratense</i> |
| Ribwort Plantain | <i>Plantago lanceolata</i> |

Sheep's Sorrel
Smooth Sow-Thistle
White Clover

Rumex acetosella
Sonchus oleraceus
Trifolium repens



Figure 19: Site Plan.

3.7 Evidence or Likelihood of Species Presence

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

3.7.1 Bats

Table 6: Bats, evidence or the potential for the species.

| | |
|-----------------------|--|
| 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 | B1 - Level of likelihood of presence - Negligible. No visible potential entry/exit points were found across the whole of B1. The metal sheet roofing appeared to be tight fitting as were the soffits. Internally there are no loft spaces or roof voids, and the tight-fitting metal |

sheet roofing and metal framework did not provide suitable gaps and crevices in which roosting bats could utilize. Due to a lack of entry/exit points and suitable potential roosting features building B1 is considered to be negligible potential.

B2 - Level of likelihood of presence - Negligible.

No visible potential entry/exit points were found across the whole of B2. All the roofing material was tight fitting as were the overhanging eaves on the building. Potential access was found through a louvre window but on closer inspection this had been sealed internally. In addition to the lack of access internally there is no loft space or roof void. The tight-fitting timber framework attached to the roofing material did not provide any suitable gaps and crevices in which roosting bats could utilize. Due to a lack of entry/exit points and suitable potential roosting features building B21 is also considered to be negligible potential.



Figure 20: Example of tight-fitting overhanging eaves.



Figure 21: Example of louvre window which has been sealed internally.

B3 - Level of likelihood of presence - Negligible.

| | |
|--|--|
| | <p>Entry and exit points were found in the form of stable door openings. Internally no suitable gaps and or crevices were found due to the tight-fitting roofing material atop the tight-fitting timber frame. Although entry and exit points can be found through the working stables design no suitable roofing features were found to be present internally therefore building B3 is considered to be of negligible potential for roosting bats.</p> <p>B4 - Level of likelihood of presence - Negligible.</p> <p>Entry and exit points were found in the form stable door openings. Internally no suitable gaps and or crevices were found due to the tight-fitting roofing material atop the tight-fitting timber frame. Although entry and exit points can be found through the working stables design no suitable roofing features were found to be present internally therefore building B4 is considered to be of negligible potential for roosting bats.</p> |
|--|--|

3.7.2 Badgers

Table 7: Badgers, evidence or the potential for the species

| | |
|--------------------------|--|
| 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 | <p>Level of likelihood of presence - Negligible.</p> <p>No sett(s) were found to be present on site, however the site does contain foraging and commuting opportunities for badger in the large area of improved grass found on site</p> |

3.7.3 Breeding Birds

Table 8: Breeding birds, evidence or potential for the species

| | |
|---------------------------------|---|
| 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 | <p>Level of likelihood of presence - Moderate.</p> <p>The hedgerow found on site has nesting potential for breeding birds. Songbirds were seen and heard whilst on site. It should be noted that there are also a small number of existing bird boxes found across the site. In addition to this, a disused bird's nest was found to be present</p> |

| | |
|--|--|
| | in building B4. Both building B3 and B4 have internal access via stable doors. The timber framework has the potential to be used for nesting purposes. |
|--|--|

3.7.4 Amphibian

Table 9: 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 - Negligible. There is no aquatic habitat found on site. The nearest water body is found approx. 1km northwest of site. The hedgerow found to the boundaries of site has the potential to be used as commuting routes and or refuge. It should be noted that the improved grass that covers the majority of site is heavily grazed and also cut regularly (hay cut) meaning this terrestrial habitat is considered to be undesirable to amphibians. |

3.7.5 Reptile

Table 10: 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 - Negligible. No suitable habitat is found on site. The hedgerow found to the boundaries of site has the potential to act as commuting and or refuge. It should be noted that the improved grass that covers the majority of site is heavily grazed and also cut regularly (hay cut) meaning this terrestrial habitat is considered to be undesirable to reptiles. |

3.7.6 Other Species e.g. Hazel Dormouse

Table 11: 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. |

| | |
|--|---|
| | No suitable habitat was found to present on site. |
|--|---|

3.7.7 Invasive Non-Native

No invasive non-native species were found at the time of the survey.

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 development of the site for residential usage. The site consists of buildings, improved grassland, species poor hedgerow, small amounts of tall ruderal vegetation and hard standing.

No bats, evidence or suitable roosting features were found internally nor externally for either building B1, B2, B3 or B4. Buildings B1 and B2 had no visible entry/exit points and internally did not have any roof void or loft space. The tight-fitting roofing material atop the tight-fitting framework for both buildings did not provide any suitable gaps or crevices in which roosting bats could utilize. Both buildings B3 and B4 are working stables and had access via stable doors. Upon carrying out an internal inspection of both B3 and B4 no suitable gaps and or crevices were found due to the tight-fitting roofing material atop the tight-fitting timber frame.

Due to a lack of suitable roosting features, buildings B1, B2, B3 and B4 are all deemed to be negligible for roosting bats.

There is suitable nesting habitat to support breeding birds in the hedgerow found on site. In addition to this buildings B3 and B4 have nesting potential on the internal framework of each building. With access via the stable doors this is easily accessible for breeding birds. This is further evidenced through a disused bird nest found in B4.

The hedgerow found on site has the potential to support common amphibians and common reptiles for shelter and commuting purposes. It should be noted the majority of the site is undesirable to amphibians and reptiles due to the improved grass that dominates the site, which is heavily grazed and regularly cut, with sward height kept low.

4.2 Potential Impacts

Impact assessments must be proportionate to the scale of the development (CIEEM, 2018) and Table 12 details a proportionate impact assessment based on current information.

Table 12: Impact Assessment

| | |
|--|---|
| Impact | Breeding Birds - Active nests may be lost in the development. |
| Characterisation of unmitigated impact on the feature | Breeding Birds - A low-level loss/impact at a local level. |
| Effect without mitigation | Without mitigation individual birds could be killed, injured or trapped during the works. |
| Mitigation and/or potential enhancement | See Table 13 and Table 14 |
| 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. |

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; 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 buildings and any hedgerow that could be included in plans, is not occupied by breeding birds, prior to demolition or removal. Should an occupied nest be found, a buffer zone would need to be created until the nest is no longer in use.

GCN -No further survey is necessary; however, if any GCN are found throughout works, all works must stop, and advice sought.

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

4.4 Recommended Enhancements

Table 13: 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 |
|--|--|
| <p>Bat, bird and insect box enhancement.</p> | <p>Bat tubes can be installed into the new dwellings.</p> <p>A minimum of five Schweglar 2FR boxes (Figure 22) could be installed into the gable ends of the new dwellings.</p> <div data-bbox="831 1031 1016 1436" data-label="Image">  </div> <p data-bbox="727 1457 1138 1486">Figure 22: Schweglar 2FR bat tube</p> <p>Bird boxes for a variety of different species can also be installed.</p> <p>A selection of open fronted boxes and songbird boxes can be installed (Figure 23 and Figure 24); it is recommended that a minimum of four of each of the boxes are installed.</p> |



Figure 23: Robin box



Figure 24: Songbird box

A variety of insect boxes can be installed in the area; a minimum of two boxes is recommended (Figure 25 and Figure 26).



Figure 25: Urban bee nesting box, used for solitary bees and wasps



Figure 26: Bug biome, ideal for ladybirds, lacewings and bees

Hedgehog highways and small mammal connectivity.

In order to allow hedgehogs and other small mammals a continuous corridor across the site, thus linking the garden and green spaces.

- A 13cm by 13cm is sufficient for any hedgehog to pass through. This will be too small for nearly all pets (Figure 27).
- 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.



Figure 27: Hedgehog Highway, Source - Wildlife Trust - <http://7474fab53f1b6ee92458->

| | |
|--------------------------------|---|
| | <p style="text-align: center;"><i>8f3ac932bad207a00c83e77eaae8d15c.r12.cf1.rackcdn.com/Hedgehog%20Highway.jpg</i></p> |
| <p>Swifts <i>Apus apus</i></p> | <p>Swift nest boxes are recommended due to the increased lack of nesting opportunities swifts are finding in modern built dwelling homes.</p> <p>Information is adapted from the RSPB https://www.rspb.org.uk/our-work/rspb-news/news/stories/swift-advice-for-ecologists/ and http://actionforswifts.blogspot.com</p> <p>The following will be undertaken:</p> <ul style="list-style-type: none"> • Wherever possible, swift bricks will be installed into new or restored buildings to increase the overall availability of nest sites for swifts and other species. Birds such as house sparrow can use swift bricks, but swifts cannot use house sparrow nest bricks. • Integral swift bricks are the preferred option on new housing developments. These should be fitted in clusters of 2 to 4 on gable ends and near the roofline where swifts would naturally look for a potential nest site. • Try to ensure swift bricks have a minimum of 5m clearance beneath and in front. Always avoid locating them above doors and windows to help prevent a disturbance issue to both the birds and human owners. • Alternatively, swift boxes can be placed on the external walls of a building when a restoration or opportunities don't exist to build in the boxes. |



Figure 28: Example of swift bricks, that can be built into a dwelling, Source: <https://www.birdbrickhouses.co.uk/brick-nesting-boxes/>

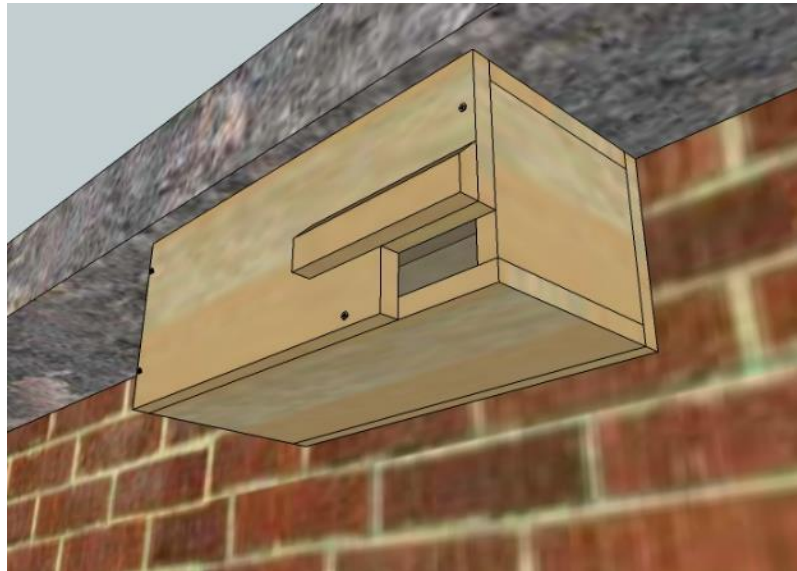
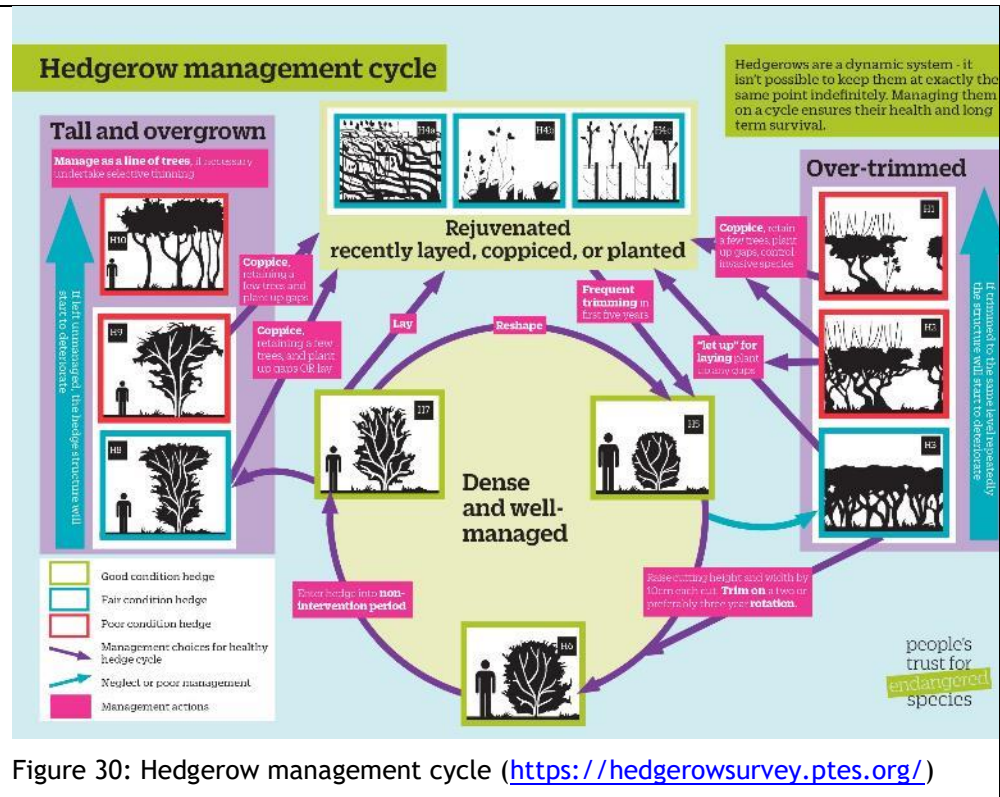


Figure 29: Swift box, source: <http://actionforswifts.blogspot.com/p/diy-swift-box-designs.html>

| | |
|------------------|--|
| <p>Hedgerows</p> | <p>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 30).</p> |
|------------------|--|



5.0 References

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