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Report prepared for: Brickett Homes Ltd

For the Site of: 34 Vineyards Road, Northaw, EN6 4PA

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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 licenses 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 34 Vineyards Road, Northaw, EN6 4PA.

The client commissioned Cherryfield Ecology to undertake an EA as the proposals include for building a new dwelling.

0.2 Results and Findings -

The site consists of bareground, a single shed building B1 and two trees. A hedge is located to the rear boundary which sits on the opposite side of a wire fence. No habitats or protected species issues were found.

0.3 Impact Assessment and Recommendations -

No impacts foreseen.

No further surveys are required, however possible net gain enhancement is provide in section 4, please refer.

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, Brickest Homes Ltd, has commissioned Cherryfield Ecology to undertake an EA for the site of 34 Vineyards Road, Northaw, EN6 4PA. Planning permission is being sought to build a new dwelling.

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 30/04/2020.

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 EU protected species have the same protection and the detail under Bats also applies to GCN, Dormouse, Otters and the two EU 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 Habitats

Regulations 2017 which transpose Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (“EC Habitats Directive”) which defines European 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 through their inclusion in Schedule II of the Habitats Regulations 2017 which transposes Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (“EC Habitats Directive”), which defines European protected species of animals (“rare reptiles.”)

1.3.4 Badgers

Badgers (*Meles meles*) Both the badger 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 Annex IV of the EC Habitats Directive 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 e.g. 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.

2.2 Limitations

This survey provides a snapshot of the site at the time of the survey(s) only. Species are highly mobile and can and do 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 Collis (2016), Edgar *et al* (2010) and NE (2007) etc.

Likelihood of species presence (Habitat Value)	Features that species can and will 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 Ref - TL281024 and postcode - EN6 4PA.

Table 2: Weather records -

Temperature	12°C
Cloud cover	50%
Precipitation	none
Wind	1/12

3.2 Magic:

The following statutory sites have been located on the search (2km) see Figure 1 -

- Northaw Great Wood Country Park Local Nature Reserve is found to the north approx. 1.8km.
- Two Bat EPS licenses have been issued, both located approx. 1.5km to the north of the site. These are 2010-1812 and 2009-1608

MAGiC

34 Vineyards Rd, EN6 4PA

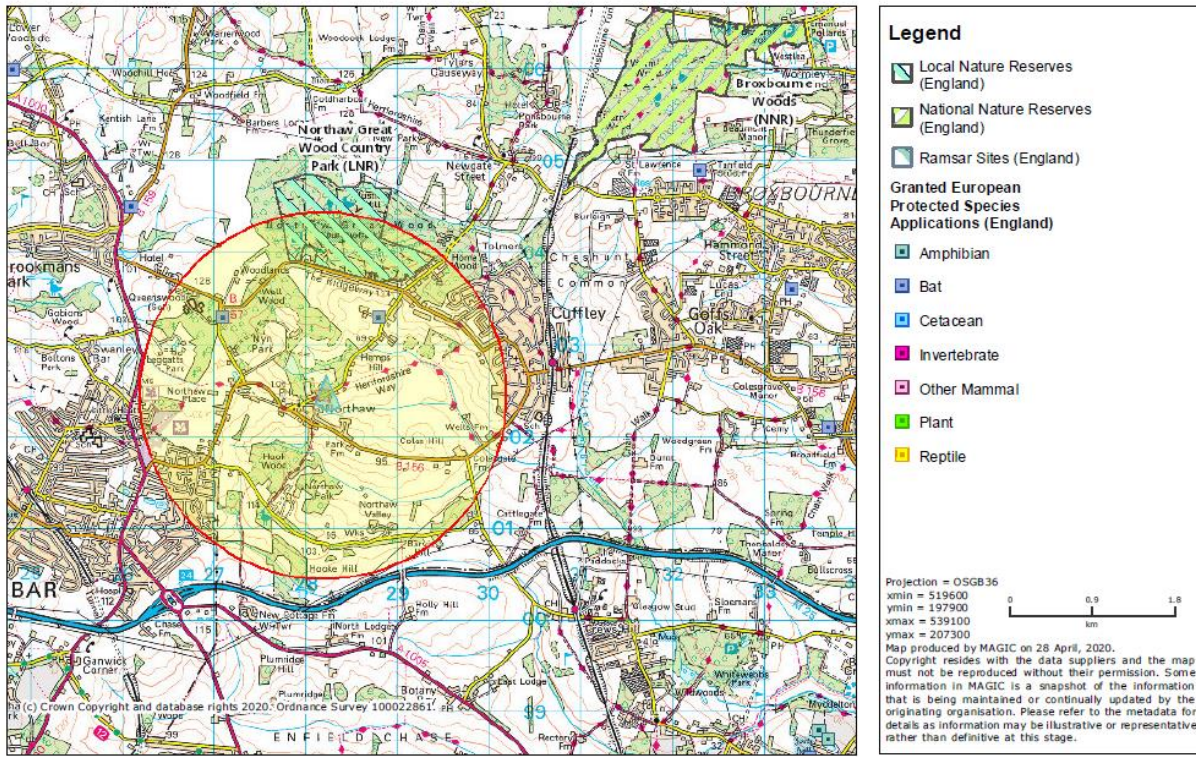


Figure 1: Magic Map Search

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 (2020)

Table 3: Biological records data

Species	Number of records	Closest record (accuracy)	Most recent record (year)
Bats	415	All four figure grid references only	2017
Badgers	38	Four figures only supplied	2015
Reptiles	N/A	N/A	N/A
Great crest newt	9	Four figures only supplied	2015
Otter/water-vole	5 (Water Vole)	Four figures only supplied	1987

Dormouse	1	0km (2km accuracy)	1985
Other	N/A	N/A	N/A
Non-Statutory Sites			
Name	Ref no	Type	Description/designated for
Northaw Brook Pastures	79/002	LWS	Species-rich marshy neutral to somewhat acidic grassland situated within the London Clay region on Valley Gravels.
Northaw Brick Kiln Area	79/004	LWS	Site and environs important for protected species.
The Vineyard, Nyn Park	79/008/01	LWS	Part ancient semi-natural, part old secondary woodland.
Hook Wood	79/011	LWS	Semi-natural woodland with a stand type derived mainly from ancient Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) wood pasture, on the former Northaw Common.
Grassland by Hook Copse	79/023	LWS	A complex of old neutral to slightly acidic grasslands surrounded by mature hedgerows.
Meadow E. of Park Road, Northaw	79/043	LWS	Species-rich unimproved damp neutral to slightly acidic grassland with invading scrub.
Woodland S.W. of Northaw Brook Pastures	79/044	LWS	Small area of old secondary woodland.
Park Road Pastures	79/058	LWS	Old semi-improved/unimproved neutral grasslands with a

			reasonable diversity of grasses and herbs.
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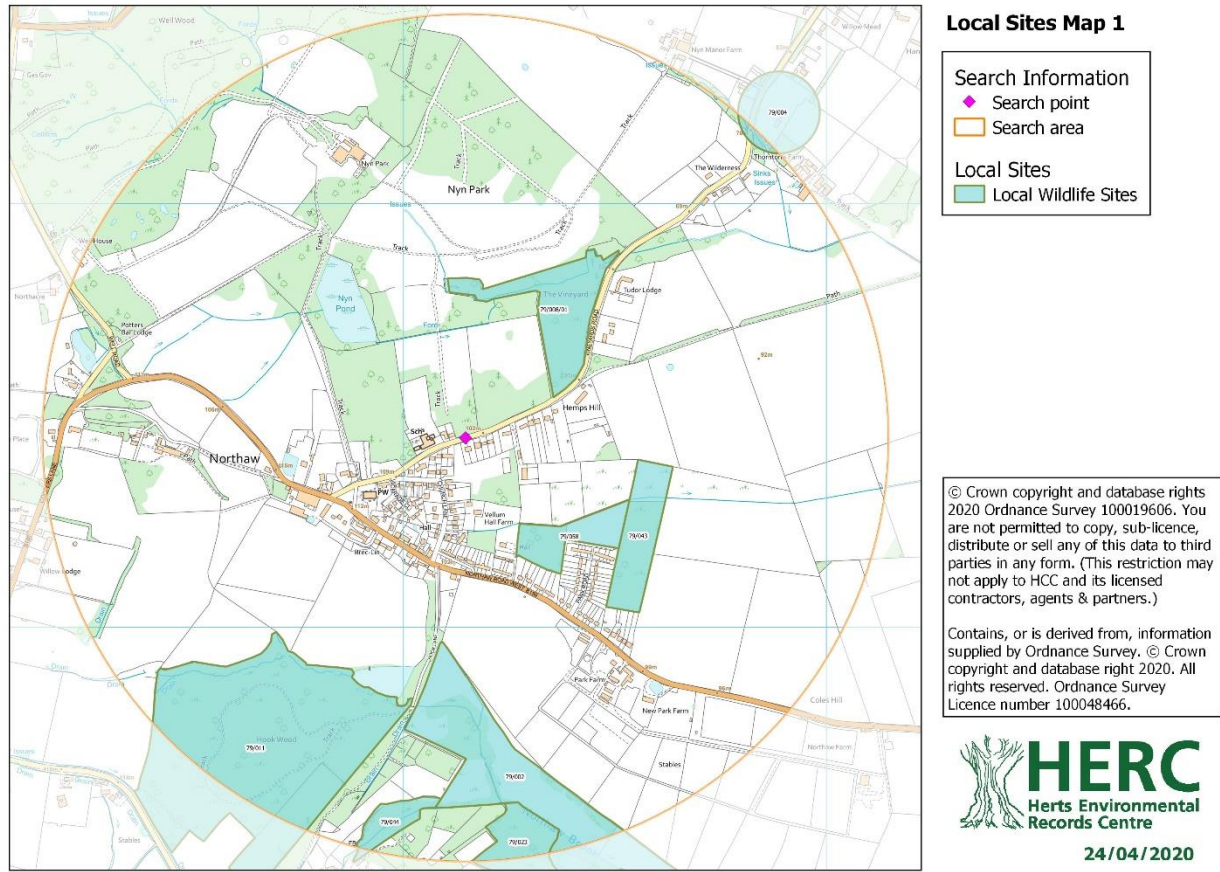


Figure 2: Local sites

3.4 Site Location and Surrounds:

The site is located in Hertfordshire, Potters Bar and is surrounded by arable fields 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	Hemphill Brook is located to the north approx. 200m from site.
Water bodies	An unnamed waterbody is located to the north, approx. 150m from site.
Woodland	Woodland is found to the north, south, east and west, less than 50m from site.
Linear e.g. hedgerows	Garden hedging and tree lines are found around the site in all directions.

Pasture/arable/grassland	Amenity grassland dominates the area, with arable to the wider countryside.
Other	

3.5 Habitat, Building, Tree or Other Structure

This section details the structures/habitat reference and descriptions (see Figure 7 for Site Plan).

3.5.1 Habitats

3.5.2 Buildings

A single wooden shed sits to the rear of the site, it is badly damaged and most of the roof is missing (see Figures 3 and 4).



Figure 3: Front elevation



Figure 4: Side elevation and damaged roof

3.5.3 Bare-ground

The rest of the site consists of previously vegetated ground, which has been cleared of all vegetation and now consists of bare-ground (see Figures 5 and 6).



Figure 5: Dead vegetation



Figure 6: Bare-ground

3.5.4 Scattered Trees

Two trees remain on site, one hornbeam (*Carpinus betulus*) and one oak (*Quercus robur*).

Table 5: Target notes

Target Note	Description
T1	N/A

3.6 Species List

Bramble	<i>Rubus fruticosus agg.</i>
Cleavers	<i>Galium aparine</i>
Hornbeam	<i>Carpinus betulus</i>
Oak	<i>Quercus Robur</i>
Nettle	<i>Urtica dioica</i>
Yarrow	<i>Achillea millefolium</i>

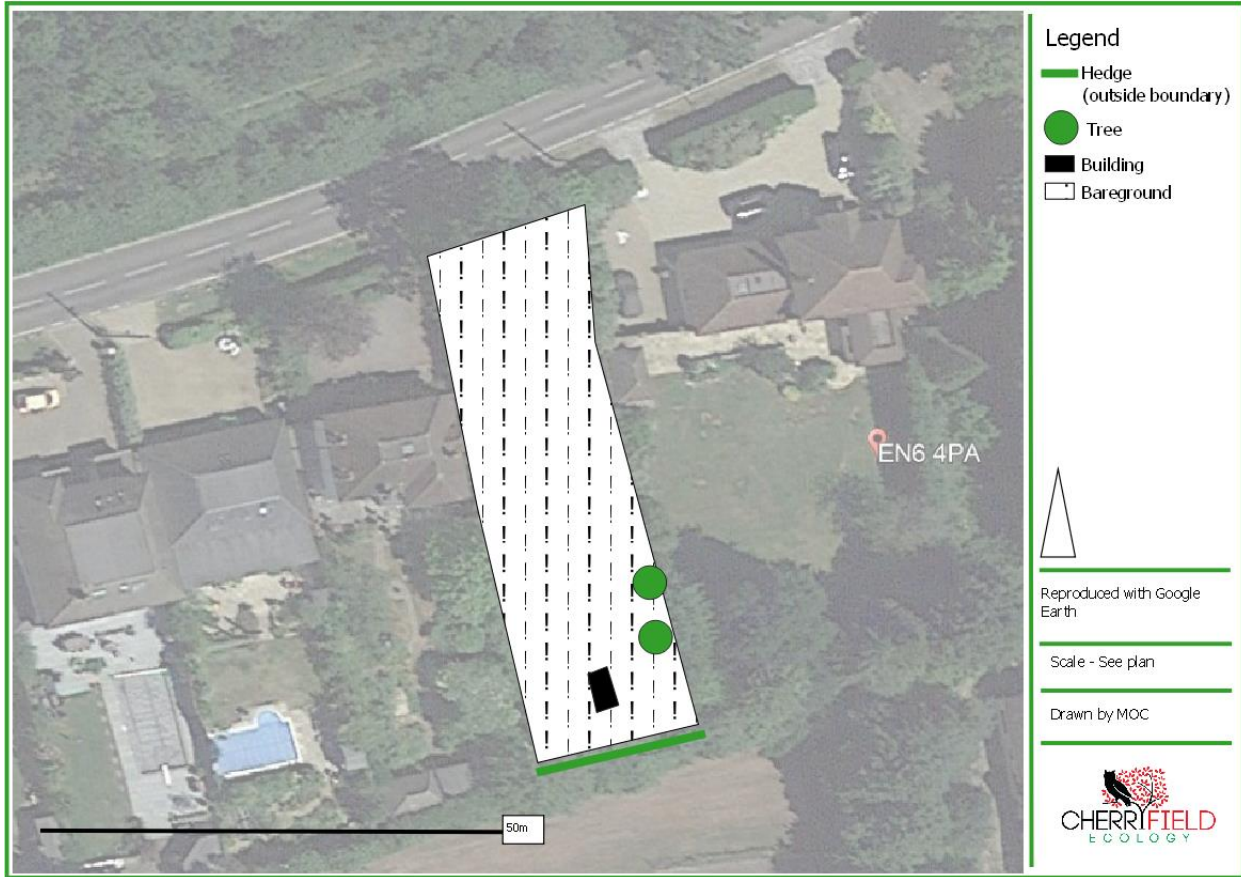


Figure 7: Site plan

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	N/A
Evidence of bat use	N/A
Potential for bat use	Level of likelihood of presence - negligible

3.7.2 Badgers

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

Badgers found	N/A
Evidence of badger use	N/A
Potential for badger use	Level of likelihood of presence - negligible

3.7.3 Breeding Birds

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

Breeding birds found	None found.
Evidence of breeding bird use	None found.
Potential for breeding bird use	Level of likelihood of presence -low It is possible the two trees could be used for nesting, but no nests were found.

3.7.6 Amphibian

Table 9: Amphibians, evidence or potential for species use.

Amphibians found	N/A
Evidence of amphibian use	N/A
Potential for amphibian use	Level of likelihood of presence - negligible

3.7.7 Reptile

Table 10: Reptiles, evidence or potential for species use.

Reptiles found	N/A
Evidence of reptile use	N/A
Potential for reptile use	Level of likelihood of presence - negligible

3.7.8 Other Species e.g. dormouse

Table 11: Other protected species, evidence or potential for species use.

Species found	N/A
Evidence of species use	N/A
Potential for species use	Level of likelihood of presence - negligible

3.7.9 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 development will involve building a new dwelling on site. No habitat or protected species issues were noted as the site had been cleared of all vegetation bar two trees.

4.2 Potential Impacts

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

Table 12: Impact assessment

Impact	None foreseen.
Characterisation of unmitigated impact on the feature	N/A
Effect without mitigation	N/A
Mitigation and/or potential enhancement	Please see tables 13 and 14.
Significance of effects of residual impacts (after mitigation)	N/A

4.3 Recommendations

No further surveys are required at this time.

Should the planning application extend over 12 months then a material change check will be required in order to check for changes on site.

Breeding Birds - If the remaining two trees are to be removed in the future a nest check will need to be undertaken, assuming this occurs between March to August, outside of these times, no checks are required.

4.4 Recommended Enhancements and Mitigation

Table 13: Mitigation

Work	Specification
Lighting	<p>Any lighting near or shining onto any trees, especially those with bat boxes in or commuting routes shown to be present at further survey stage should be designed to minimize the impact it has on potential bat roosting and commuting.</p> <p>Lighting should be in-line with the BCT lighting guidelines (Bats and Lighting in the UK (Bat conservation trust, 2018) https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/)</p> <p>This lighting should be of low level, be on downward deflectors and ideally be on PIR sensors. Using LED directional lighting can also be a way of minimizing the light spill affecting the habitat. No up-lighting should be used.</p> <p>This will ensure that the roosting and commuting resources that the bats are likely to be using is maintained.</p>

Table 14: 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.	<p>Bat tubes can be installed into the new dwellings.</p> <p>A minimum of two Schweglar 2FR boxes (see Figure 8) could be installed into the gable ends of the new dwellings.</p> <div data-bbox="831 1272 1016 1677" data-label="Image">  </div> <p style="text-align: center;">Figure 8: Schweglar 1FF bat box</p> <p>Bird boxes for a variety of different species will also be installed.</p> <p>A selection of open fronted boxes, and songbird boxes can be installed (see Figures 9 and 10) it is recommended that a minimum of two of each of the boxes are installed.</p>



Figure 9: Robin box



Figure 10: Songbird box

A variety of insect boxes can be installed in the area, a minimum of one box is recommended (see Figures 11 and 12).



Figure 11: Urban bee nesting box, used for solitary bees and wasps



Figure 12: 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 13).
- 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 13: Hedgehog Highway, Source - Wildlife Trust -

[http://7474fab53f1b6ee92458-](http://7474fab53f1b6ee92458-8f3ac932bad207a00c83e77eaae8d15c.r12.cf1.rackcdn.com/Hedgehog%20Highway.jpg)

[8f3ac932bad207a00c83e77eaae8d15c.r12.cf1.rackcdn.com/Hedgehog%20Highway.jpg](http://7474fab53f1b6ee92458-8f3ac932bad207a00c83e77eaae8d15c.r12.cf1.rackcdn.com/Hedgehog%20Highway.jpg)

Swifts *Apus apus*

Swift nest boxes are recommended due to the increased lack of nesting opportunities swifts are finding in modern built dwelling homes.

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>

The following will be undertaken -

- Wherever possible, swift bricks will be installed in 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. On larger commercial buildings include one swift brick per 6 m² of wall, mounted near the roofline, in clusters of 3 or more, with approximately 1m between entrance holes.
- 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 14: Example of swift bricks, that can be built into a dwelling, Source: <https://www.birdbrickhouses.co.uk/brick-nesting-boxes/>



Figure 15: Swift box, source: <http://actionforswifts.blogspot.com/p/diy-swift-box-designs.html>

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