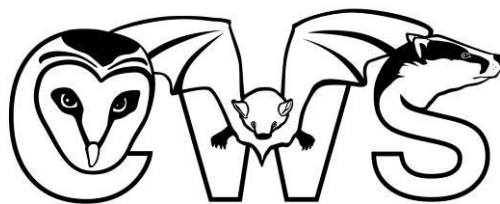


Preliminary Ecological Appraisal For Highover Farm, Highover Way, Hitchin, Herts, SG4 0RQ



Cotswold Wildlife Surveys

29th July 2024

QUALITY CONTROL

Date	Version	Name
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The information in this report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. The conclusions and recommendations expressed are reasoned judgements based on the evidence.

Every reasonable attempt has been made to comply with BS42020:2013 *Biodiversity – Code of practice for planning and development*, *CIEEM Guidelines for Ecological Report Writing* (CIEEM, 2017) and Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edition, Collins, 2023). If there has been deviation from recognised practice, justification/explanation has been given.

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SUMMARY

At Highover Farm in Hitchin, planning permission is being sought to re-develop the farm.

A search of publicly available ecological data revealed a number of records of Protected, UK Biodiversity Action Plan (UKBAP) and Local Biodiversity Action Plan (LBAP) species and designated sites within a 1.0 km radius of the land, in particular from the adjoining land, where a series of species surveys were carried out in 2020.

The nearest statutory site within the search area is Purwell Meadows Local Nature Reserve (LNR). This lies 610 m south.

The closest non-statutory sites include River Purwell Local Wildlife Site (LWS) 400 m southwest, Purwell Meadows LWS 610 m south, Stotfold Road Verges LWS 540 m northeast, and Hitchin Railway Banks LWS 770 m north.

There were very few bat records from the area, these limited to Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *P. pygmaeus*, Noctule *Nyctalus noctula*, Leisler's *N. leisleri* and a Myotis species.

There were records for Badgers *Meles meles* 600 m to the northeast and 800 m north-northeast.

Numerous bird records were returned in the data search, although no species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Six species listed as Species of Principal Importance in accordance with Section 41 of the NERC Act 2006 (also UKBAP species) were confirmed, probable or possible breeders on the adjoining land in 2020; Dunnock *Prunella modularis*, Song Thrush *Turdus philomelos*, Starling *Sturnus vulgaris*, House Sparrow *Passer domesticus*, Yellowhammer *Emberiza citrinella* and Corn Bunting *Miliaria calandra*. Additional records of Species of High Conservation Concern (Red list) include Herring Gull *Larus argentatus*, Swift *Apus apus*, and Linnet *Carduelis cannabina*.

There were records of Common Lizard *Zootoca vivipara* from the adjoining land in 2016 and 2020, with the closest 112 m northeast.

Amphibian records include Common Frog *Rana temporaria*, but Great Crested Newt *Triturus cristatus* were found to be absent from a pond adjoining the site to the northeast, and a second pond 137 m north-northeast.

In late July 2024, Cotswold Wildlife Surveys carried out a Preliminary Ecological Appraisal of the site. This was undertaken to determine the presence of any important habitats or species which might be impacted on by the proposed re-development.

The site visit was made on 29th July 2024, in warm and sunny conditions, with no wind.

The site was dominated by 10 buildings which included the farmhouse, a large main barn and a series of smaller brick and timber barns and outbuildings. Around and between these were areas of permeable and impermeable hard surfacing, whilst there was a vegetated garden around the farmhouse, this containing several large and medium sized trees.

No rare vascular plants were found, and all species recorded were common and widespread.

There were no signs of Badger, Fox *Vulpes vulpes*, or any evidence of Otters *Lutra lutra* or Water Voles *Arvicola amphibius*.

An inspection of the buildings for bats revealed a single Brown Long-eared Bat *Plecotus auritus* roosting in the farmhouse extension, with moderate suitability for roosting crevice and void dwelling bats in the other buildings on the site.

A total of seven species of birds were observed. Of these, one was a Species of High Conservation Concern (RSPB Red List); House Sparrow *Passer domesticus*, three were Species of Medium Conservation Concern (RSPB Amber list); Woodpigeon *Columba palumbus*, Wren *Troglodytes troglodytes*, and Dunnock *Prunella modularis*, whilst the rest were all Species of Low Conservation Concern (RSPB Green list). A roosting Barn Owl *Tyto alba* was subsequently found on the 15th August 2024 just prior to the start of a nocturnal bat survey. It was not present on 29th July or 12th September 2024, and no evidence of Barn Owls had been found in the barns by WSP in 2020.

There was some potential for nesting birds within the trees, but no old or in-use birds' nests in the buildings.

Since all in-use bird's nests and their contents are protected from damage or destruction, any tree and shrub removal and/or building works should ideally be undertaken outside the period 1st March to 30th September inclusive. If this time frame cannot be avoided, a close inspection of trees and shrubs to be removed or building works will be undertaken by an ecologist prior to clearance/works.

Work will not be carried out within 5.0 metres of any in-use nest, although this distance could be greater depending on the sensitivity of the species.

A nest box will be installed on one of the trees to provide an alternative roost site for the Barn Owl.

There were no ponds on the site, but a small pond lay immediately adjacent to the northeast corner. This contained a low level of water in July 2024, although it had been dry when surveyed by WSP in 2020, and was dry in September 2024. A Habitat Suitability Index (HSI) score of 0.53 equates to a below average predicted presence.

A reptile survey across the site between 15th August and 28th September 2024 revealed no reptiles, but a single immature Common Toad *Bufo bufo*, a single adult Common Frog and up to 10 juvenile and one adult Smooth Newts *Lissotriton vulgaris* were recorded under the refugia.

Given the above, care will be taken at all times when stripping the vegetation and topsoil, as small mammals and common amphibians might be present. If any are encountered they will be carefully captured and released nearby, or allowed to move out of the area on their own accord.

Since much of the site consisted of buildings and hardstanding, it was concluded, that the site had low potential for invertebrate assemblages, in particular those species listed as a priority in the UK Biodiversity Action Plan and/or Local Biodiversity Action Plan.

Finally, it should be noted that open trenches could potentially trap wildlife, especially if these fill up with water. Escape routes will therefore be provided if trenches cannot be infilled immediately. These can be in the form of branches or boards placed on the bottom of the trench, with their upper ends above ground level and touching the sides, or sloping ends left in trenches.

1. INTRODUCTION

1.1 Background and survey objectives

At Highover Farm in Hitchin, planning permission is being sought to re-develop the farm.

A search of publicly available ecological data revealed a number of records of Protected, UK Biodiversity Action Plan (UKBAP) and Local Biodiversity Action Plan (LBAP) species and designated sites within a 1.0 km radius of the land, in particular from the adjoining land, where a series of species surveys were carried out in 2020.

In July 2024, Cotswold Wildlife Surveys carried out a Preliminary Ecological Appraisal of the site. This was undertaken to determine the presence of any important habitats or species which might be impacted on by the proposed development.

1.2 Site description

The site was dominated by 10 buildings which included the farmhouse, a large main barn and a series of smaller brick and timber barns and outbuildings.

Around and between these were areas of permeable and impermeable hard surfacing, whilst there was a vegetated garden of amenity grass around the farmhouse, this containing several large and medium sized trees, including Horse Chestnut *Aesculus hippocastanum*, Pedunculate Oak *Quercus robur* and Silver Birch *Betula pendula*.

The amenity grassland contained Creeping Fescue *Festuca rubra*, Cocksfoot *Dactylis glomerata*, meadow-grasses *Poa spp* and False Oatgrass *Arrhenatherum elatius*. Wildflowers present were Ribwort Plantain *Plantago lanceolata*, Creeping Buttercup *Ranunculus repens*, Dandelion *Taraxacum* Section *vulgaris*, Selfheal *Prunella vulgaris* and White Clover *Trifolium repens*.

The Ordnance Survey Grid Reference of the site is TL 19797 30677 centred on the farmhouse.

1.3 Proposed works

The proposal is for the re-development of the site.

2. METHODOLOGY

2.1 Desk study

A detailed desk study was undertaken to determine the nature conservation designations and protected species that had been recorded within a 1.0 km radius of the site. This involved contacting statutory and non-statutory organisations, and then assimilating and reviewing the data provided.

The consultees for the desk study were:

- ❑ Multi Agency Geographic Information (MAGIC) website www.magic.gov.uk;
- ❑ North Herts Council planning website.

2.2 Habitat survey

A Preliminary Ecological Appraisal was carried out across the whole of the development site, as well as immediately adjacent areas. It was conducted using standard JNCC (2003) techniques and methodologies.

The site visit was made on 29th July 2024, in warm and sunny conditions, with no wind.

2.3 Protected species survey

During the habitat survey, the potential for protected and important species was assessed. This included European Protected Species, legally protected species and Local Biodiversity Action Plan Species (and habitats).

2.3.1 Badgers

Badgers are generally nocturnal and evidence of their presence in an area often comes from field signs rather than sightings of the animals. Useful field signs include:

- ❑ Setts (main, outlying, annex or subsidiary)
- ❑ Tufts of hair caught on barbed wire fences;
- ❑ Conspicuous Badger paths;
- ❑ Footprints;
- ❑ Latrines – small excavated pits in which droppings are deposited;
- ❑ 'Snuffle holes' – small scrapes where Badgers have searched for insects and plant tubers;
- ❑ Day nests – bundles of grass and other vegetation where Badgers may sleep above ground;

- ❑ Scratch marks on trees (usually near the sett).

Daytime surveys looking for field signs can be carried out at any time of the year, and should be non-intrusive, but nocturnal surveys of setts (if required), are only likely to be effective from April to November, when Badgers are most active, and any cubs present will have emerged.

Main setts

These usually have a large number of holes with large spoil heaps, and the sett generally looks well used. They usually have well used paths to and from the sett and between sett entrances. Although normally the breeding sett is in continual use, it is possible to find a main sett that has become disused because of excessive digging or for some other reason, in which case it is recorded as a disused main sett.

Annex setts

These are always close to a main sett, usually less than 150 m away, and are usually connected to the main sett by one or more obvious, well worn paths. They consist of several holes, but are not necessarily in use all the time, even if the main sett is very active.

Subsidiary setts

These often have only a few holes, are usually at least 50 m from a main sett, and do not have an obvious path connecting them with another sett. They are not continuously active.

Outlying setts

These usually only have one or two holes, often have little spoil outside the hole, have no obvious path connecting them with another sett, and are only used sporadically. When not in use by badgers, they are often taken over by foxes or even rabbits.

However, they can still be recognised as badger setts by the shape of the tunnel (not the entrance hole), which is at least 250 mm in diameter and rounded or flattened oval in shape.

A search for evidence of Badger presence on site was undertaken as part of the Preliminary Ecological Appraisal.

2.3.2 Bats

In order to fully assess bat occupation of a particular site, the Bat Conservation Trust (2023) recommends that information gathered from a desk study of known bat records, and a daytime site walkover, is used to inform the type and extent of future bat survey work, potentially including nocturnal emergence surveys.

The preliminary roost assessment (PRA) is usually in the form of a diurnal walkover and can be carried out at any time of the year. It provides an opportunity to check for signs of bat occupancy and/or the suitability for bat roosting.

Evidence of bat activity includes droppings, scratch marks, feeding remains, carcasses, or even roosting animals, whilst suitability is determined by the type and number of potential roost features (PRFs) typically used by bats.

Roosting places vary depending on the species. Pipistrelles usually inhabit narrow cracks or cavities around the outside of buildings, but they will roost in similar niches inside larger barns. Typical sites include soffit spaces, gaps behind fascia boards and end rafters, crevices around the ends of projecting purlins, under warped or lifted roof and ridge tiles, or in gaps in stone and brickwork where mortar has dropped out.

Larger species such as Brown Long-eared Bats, Myotis bats (Natterer's *Myotis nattereri* and Whiskered/Brandt's *M. mystacinus*/*M. brandtii*), and Lesser Horseshoes *Rhinolophus hipposideros*, like to roost in the roof voids of buildings, and can often be found hanging singly or in small groups from ridge boards or roof timbers, especially where these butt up against gable walls or chimney breasts. They especially favour older structures with timber frames. Here they squeeze into tight crevices making them difficult to observe.

Where bats are found, or there is evidence of bat occupation or activity, i.e. that bat use is confirmed, a roost characterisation survey is undertaken. The results are used to inform the impact assessment and design of mitigation measures. Roost characterisation includes nocturnal emergence surveys, unless sufficient information has already been collected using robust survey methods with no significant constraints.

Nocturnal emergence surveys allow numbers and species of bats to be confirmed, and should only be undertaken when bats are out of hibernation and in their summer roosts.

The bat active period is generally considered to be between April and October, although particularly cold weather will affect the level and extent of bat activity. Indeed, the air temperature at the start of each survey should be at least 10°C or above, with no strong wind or heavy rain.

The survey starts 15 minutes before sunset and continues for one and a half to two hours after sunset.

Visits will be a minimum of three weeks apart, and the number of surveys and timing is dependent on the evidence found or the suitability of the site to bats. This will be determined by the ecologist. In general, at least two emergence nocturnal surveys will be carried out, but a third visit may be necessary if the results are inconclusive or further information is required.

Nocturnal emergence surveys are also used to determine the presence or absence of bats, where signs of bat activity are indeterminate or absent but the suitability for bat roosting is considered to be low, moderate or high.

For a site with no evidence but low suitability, just one nocturnal emergence survey is required, this to be in the period May to August.

For moderate suitability a minimum of two visits are needed between May and September, of which one must be in the period May to August.

With high suitability, three visits will be necessary between May and September, of which two must be in the period May to August.

Where there is no evidence of bat presence, and no suitability for roosting, no nocturnal surveys will be needed.

The number of surveyors and/or the use of night vision aids (NVAs) is determined by the ecologist, and is dependent on the complexity of the structure. For simple structures just one surveyor using an appropriate number of NVAs will be sufficient, but for larger sites and/or more complex or irregularly shaped structures, e.g. those with multiple elevations and/or roof slopes, more surveyors will be required.

On 29th July 2024, a thorough inspection of the buildings was made by Andy Warren (Natural England bat licence No. 2015-16489-CLS-CLS), including the exterior and interior walls, roof coverings, roof voids, eaves, gables, roof and ceiling timbers, window casements and door frames.

A thorough inspection of the trees from the ground was also made, including checks for decay cavities, old woodpecker holes, splits, fissures, and/or exfoliating bark.

10x42 binoculars and a Fenix TK75 torch were used for the inaccessible/unreachable areas.

An endoscope was not used, as there were no crevices or cavities that could not be inspected with a torch or by use of binoculars from a ladder.

The result of the inspection is detailed in Section 3.

2.3.3 Birds

Most resident and migrant birds breed in the spring and summer, although Woodpigeons and Collared Doves *Streptopelia decaocto* nest throughout the year, and as a result could be on eggs in almost any month.

In season, signs of breeding include singing males, display and copulation, birds gathering nesting materials, adults carrying food, calling chicks, etc.

In winter none of these activities may be occurring, so a survey for old nests and/or nest holes is the most reliable method of determining the presence or absence of breeding birds.

This was carried out during the Preliminary Ecological Appraisal, along with a general site walkover to identify the presence of foraging birds.

2.3.4 Great Crested Newts

A survey for Great Crested Newts (GCN) may be indicated when background information on distribution suggests that they may be present. More detailed indicators are:

- ❑ *Any historical records of Great Crested Newts on the site or in the general area;*
- ❑ *A pond on or near the site (within around 500 m), even if it holds water only seasonally;*
- ❑ *Sites with refuges (such as piles of logs or rubble), grassland, scrub, woodland or hedgerows within 500 m of a pond.*

There are several field survey methods which can be employed depending on the time of year:

- ❑ *Bottle or funnel trapping – adults ideally February to May, with June and July sub-optimal, and August to September for detection of larvae (i.e. young);*
- ❑ *Egg search – April to June ideally, with March and July sub-optimal;*
- ❑ *Torch survey – March to May for adults, with February and June to July sub-optimal, and August to September for larvae;*
- ❑ *Netting – March to May for adults, with February and June to July sub-optimal, and August to September for larvae;*

- ❑ *Pitfall trapping – March to May and September for adults, with February, June to August and October sub-optimal;*
- ❑ *Refuge search – April to September ideally, with March and October sub-optimal.*

The latter two methods involve terrestrial habitats, the others aquatic habitats, for which a minimum of 4 visits per year are recommended, with at least 2 visits between mid-April and mid-May to record peak numbers (English Nature, 2001).

Outside the optimum survey period, a Habitat Suitability Index (HSI) for a particular water body can be calculated. This is a scoring system developed as a means of evaluating habitat quality and quantity. The HSI for Great Crested Newts incorporates ten indices, all of which are thought to affect the species.

An HSI score for the adjoining pond was carried out.

2.3.5 Otters

Otters are nocturnal and are active all year round. They are large with an adult male reaching up to 1.2 m from nose to tail, and weighing about 10 kg.

Feeding mainly on fish and amphibians, Otters live by undisturbed waters where there is plenty of cover, mostly by freshwater lakes, rivers and quiet small streams as well as some coasts.

An Otter may use over 40 km of river and needs many resting places throughout this range. A female otter will give birth to 1 to 3 cubs in a natal holt, which is often away from the main river and must be completely undisturbed.

Field signs include:

- ❑ Prints in soft mud;
- ❑ Spraints (faeces);
- ❑ Holts.

A search for evidence of Otter presence on site was undertaken as part of the Preliminary Ecological Appraisal.

2.3.6 Reptiles

Commoner reptiles which may be encountered in rural areas include Grass Snake *Natrix natrix*, Slow-worm *Anguis fragilis*, and Common Lizard.

During the winter months, from mid-October to late February or early March, they are in hibernation, usually deep in underground hibernacula, such as holes and cracks in the ground, among rocks or the roots of large trees, down animal burrows, or in piles of rubble or stone.

In the spring and summer they live above ground in well-vegetated places, with Grass Snakes often near or in water. Being cold-blooded all reptiles like to bask, and can often be found in open places.

There are very few signs of reptile presence, but these include:

- ❑ Shedded skin (snakes);
- ❑ Eggs (but not Common Lizard which gives birth to live young).

The site was searched for potential refugia as part of the Preliminary Ecological Appraisal.

2.3.7 Water Voles

The Water Vole is the largest of the British voles. It lives in a series of holes or burrows at the water's edge and can be found along the banks of ditches, streams, rivers, lakes and canals.

Although Water Voles live in colonies, the breeding females are territorial, each defining their contiguous territory with latrines during the breeding season. This lasts from March to October.

The Water Vole is herbivorous, feeding primarily on the lush aerial stems and leaves of waterside plants. Its activity is normally confined to the area within two metres of the watercourse, the bankside vegetation in this area not only essential for food, but also for cover from predators.

Water Vole activity can be assessed by looking for the following signs:

- ❑ Burrows;
- ❑ Faeces and latrines;
- ❑ Feeding stations;
- ❑ Runs;
- ❑ Paw prints in areas of soft mud;
- ❑ Feeding 'lawns';
- ❑ Predator field signs.

A search for evidence of Water Vole presence on site was undertaken as part of the Preliminary Ecological Appraisal.

2.4 Constraints

The survey was carried out within the optimum period (considered to be April to August inclusive), and as such there were no constraints.

3. RESULTS

3.1 Desk study

3.1.1 Designated sites

A search of publicly available ecological data revealed a number of records of Protected, UK Biodiversity Action Plan (UKBAP) and Local Biodiversity Action Plan (LBAP) species and designated sites within a 1.0 km radius of the land, in particular from the adjoining land, where a series of species surveys were carried out in 2020.

The nearest statutory site within the search area is Purwell Meadows Local Nature Reserve (LNR). This lies 610 m south.

The closest non-statutory sites include River Purwell Local Wildlife Site (LWS) 400 m southwest, Purwell Meadows LWS 610 m south, Stotfold Road Verges LWS 540 m northeast, and Hitchin Railway Banks LWS 770 m north.

3.1.2 Species records

There were very few bat records from the area, these limited to Common Pipistrelle, Soprano Pipistrelle, Noctule, Leisler's and a Myotis species.

There were records for Badgers 600 m to the northeast and 800 m north-northeast.

Numerous bird records were returned in the data search, although no species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Six species listed as Species of Principal Importance in accordance with Section 41 of the NERC Act 2006 (also UKBAP species) were confirmed, probable or possible breeders on the adjoining land in 2020; Dunnock, Song Thrush, Starling, House Sparrow, Yellowhammer and Corn Bunting. Additional records of Species of High Conservation Concern (Red list) include Herring Gull, Swift, and Linnet.

There were records of Common Lizard from the adjoining land in 2016 and 2020, with the closest 112 m northeast.

Amphibian records include Common Frog, but Great Crested Newt were found to be absent from a pond adjoining the site to the northeast, and a second pond 137 m north-northeast.

3.2 Habitat survey

3.2.1 Habitat descriptions

The following habitats were recorded across and near the site:

- ❑ Amenity grassland;
- ❑ Scattered trees;
- ❑ Buildings and hardstanding;
- ❑ Standing water.

These are shown on the Phase 1 Habitat map in Appendix 1, with the target notes (where applicable) in Appendix 2.

Amenity grassland

Part of the site was amenity grassland (Figs. 1 and 2). Grasses included Creeping Fescue, Cocksfoot, meadow-grasses and False Oatgrass. Wildflowers present were Ribwort Plantain, Creeping Buttercup, Dandelion, Selfheal and White Clover.



Figs. 1 & 2 Amenity grassland

Scattered trees

A few scattered trees were present across the site, these including Horse Chestnut, Pedunculate Oak and Silver Birch amongst others (Ref. Figs. 1 and 2 and Fig. 4).

Buildings and hardstanding

The site was dominated by 10 buildings which included the farmhouse (Figs. 3 and 4), a large main barn and a series of smaller brick and timber barns and outbuildings (Figs. 5-8). Around and between these were areas of permeable and impermeable hard surfacing.



Figs. 3 & 4 Farmhouse



Figs. 5 & 6 Farm buildings



Figs. 7 & 8 Farm buildings

Standing water

There was a small pond just outside the curtilage of the site in the northeast corner (Fig. 9 – Target Note 1).



Fig. 9 Pond 1

3.2.2 Flora

The botanical composition of each habitat was typical, and all species recorded were common and widespread. No rare or unusual vascular plants were found.

3.3 Protected species survey

3.3.1 Bats

Daytime Inspection

The daytime inspection was carried out on 29th July 2024, commencing at 10:00. The weather conditions during the time of the survey were recorded and are presented in Table 1 below.

Parameter	Value
Temperature (°C)	16.0
Cloud cover (%)	60
Precipitation	None
Wind speed (Beaufort scale)	0

Table 1 Weather conditions during the diurnal survey

Farmhouse

The ridge contained a gap where a tile was missing (Fig. 10), and the lead flashing along the hip ridges was slightly raised in places (Fig. 11). The slates were generally tightly overlapping, but a couple were slightly raised and a couple were missing (Figs. 12 and 13).

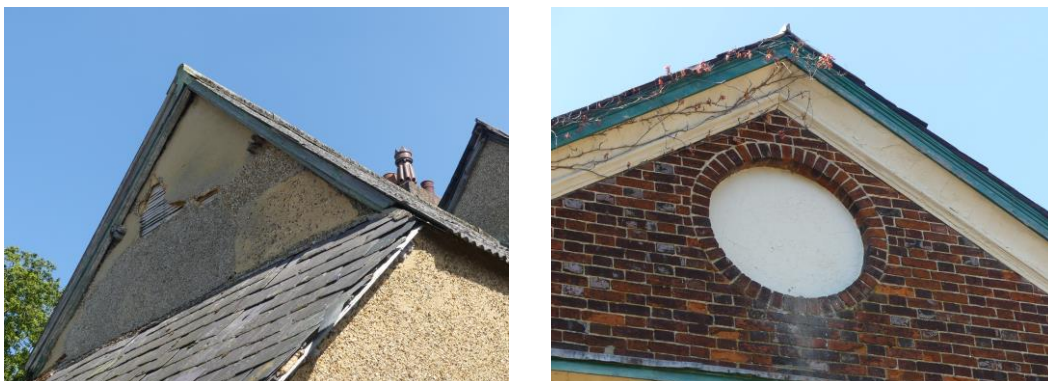


Figs. 10 & 11 Ridge and roof tiles



Figs. 12 & 13 Roof tiles and verge

The roof verges contained a few crevices and cavities, with other verges fully pointed or finished with close fitting barge boards (Figs. 14 and 15).



Figs. 14 & 15 Roof verges

The eaves were clipped and/or finished with timber soffits, whilst the walls were either bare brick or rendered, these sound throughout with no cracks or crevices.

The window casements and doorframes were all tightly fitting, and the windows had been boarded over.

No signs of bat activity were found around the outside of the house, but there was moderate suitability for crevice dwelling bats.

Internally there were a couple of roof voids, these measuring approximately 2.0 metres high (Figs. 16 and 17).



Figs. 16 & 17 Roof voids

The voids were lined or partially lined with tarred felt and were thickly cobwebbed along the ridges and roof timbers, with cobwebs hanging down from the ridge to the rafters in places (Fig. 18). There was limited light penetration, but no signs of bat occupation were found.

In the cellar (Fig. 19) a single roosting Brown Long-eared Bat was found (Target Note 2), but no droppings to suggest regular roosting.



Figs. 18 & 19 Roof void (L) and cellar (R)

Barns and outbuildings

The barns and outbuildings consisted of a variety of brick and timber built structures, most with pitched slate tiled roofs and the rest covered by corrugated metal sheets. Some structures were open-sided, with others enclosed, and all roofs were unlined. (Figs. 20-28).



Figs. 20 & 21 Barns



Figs. 22 & 23 Open-fronted barn interiors



Figs. 24 & 25 Barn interiors



Figs. 26 & 27 Barn interiors



Fig. 28 Interior of main barn

No evidence of bat activity was found in any of the structures, but all contained gaps in walls and timbers and were identified as having moderate suitability for bat roosting.

None of the trees on site had potential for roosting, with no suitable cavities, splits or fissures.

3.3.2 Badgers

The site held some habitat suitable for sett building, although the habitats were considered to be suitable for foraging purposes. Despite this, no evidence of Badger presence was recorded, such as setts, tufts of hair, pathways, footprints or latrines.

3.3.3 Otters

No evidence of Otter presence was recorded.

3.3.4 Water Voles

No evidence of Water Vole presence was recorded.

3.3.5 Birds

A total of seven species of birds were observed. Of these, one was a Species of High Conservation Concern (RSPB Red List); House Sparrow, three were Species of Medium Conservation Concern (RSPB Amber list); Woodpigeon, Wren, and Dunnock, whilst the rest were all Species of Low Conservation Concern (RSPB Green list).

A roosting Barn Owl was subsequently found on the 15th August 2024 just prior to the start of a nocturnal bat survey. It was not present on 29th July or 12th September 2024, and no evidence of Barn Owls had been found in the barns by WSP in 2020.

There was some potential for nesting birds within the trees, but no old or in-use birds' nests in the buildings.

3.3.6 Reptiles

A reptile survey across the site between 15th August and 28th September 2024 revealed no reptiles, but a single immature Common Toad, a single adult Common Frog and up to 10 juvenile and one adult Smooth Newts were recorded under the refugia.

3.3.7 Great Crested Newts

There were no ponds on the site, but a small pond lay immediately adjacent to the northeast corner. This contained a low level of water in July 2024, although it had been dry when surveyed by WSP in 2020, and was dry in September 2024. A Habitat Suitability Index (HSI) score of 0.53 equates to a below average predicted presence.

A Habitat Suitability Index (HSI) score for the pond was calculated thus:

Suitability Indices	Value	Criteria	Indices Score
Sl ₁ Location	Optimal	Location within GCN range	1.0
Sl ₂ Pond area	130m ²	Pond surface area	0.2
Sl ₃ Pond drying	Annually	Pond dries annually	0.1
Sl ₄ Water quality	Poor	Low invertebrate diversity	0.33
Sl ₅ Shade	50%	Estimate of percentage perimeter shaded	1.0
Sl ₆ Fowl	Absent	No impact of waterfowl	1.0
Sl ₇ Fish	Absent	No evidence of fish	1.0
Sl ₈ No. of ponds	2	Number of ponds within 1 km (excluding pond surveyed)	0.55

SI ₉ Terrestrial habitat	Moderate	Quality of terrestrial habitat	0.67
SI ₁₀ Macrophytes	95%	Estimate of percentage of pond surface covered	0.85
HSI score			0.53

$$HSI = (SI_1 \times SI_2 \times SI_3 \times SI_4 \times SI_5 \times SI_6 \times SI_7 \times SI_8 \times SI_9 \times SI_{10})^{1/10}$$

The suitability of the pond for Great Crested Newts was considered thus:

HSI	Pond suitability
<0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
>0.8	Excellent

This equates to a below average predicted presence of Great Crested Newts at the site.

3.3.8 Invertebrates

Since much of the site consisted of buildings and hardstanding, it was concluded, that the site had low potential for invertebrate assemblages, in particular those species listed as a priority in the UK Biodiversity Action Plan and/or Local Biodiversity Action Plan.

3.3.9 Other species

No other protected species were observed during the site visit.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Site evaluation

The survey area was considered to be of limited ecological importance.

No rare vascular plants were found, and all species recorded were common and widespread.

There were no signs of Badger, Fox, or any evidence of Otters or Water Voles.

An inspection of the buildings for bats revealed the presence of a single Brown Long-eared Bat inside the farmhouse, with all structures having moderate suitability for roosting crevice-dwelling species.

A total of seven species of birds were observed. Of these, one was a Species of High Conservation Concern (RSPB Red List); House Sparrow, three were Species of Medium Conservation Concern (RSPB Amber list); Woodpigeon, Wren, and Dunnock, whilst the rest were all Species of Low Conservation Concern (RSPB Green list).

A roosting Barn Owl was subsequently found on the 15th August 2024 just prior to the start of a nocturnal bat survey. It was not present on 29th July or 12th September 2024, and no evidence of Barn Owls had been found in the barns by WSP in 2020.

There was some potential for nesting birds within the trees, but no old or in-use birds' nests in the buildings.

There were no ponds on the site, but a small pond lay immediately adjacent to the northeast corner. This contained a low level of water in July 2024, although it had been dry when surveyed by WSP in 2020, and was dry in September 2024. A Habitat Suitability Index (HSI) score of 0.53 equates to a below average predicted presence.

A reptile survey across the site between 15th August and 28th September 2024 revealed no reptiles, but a single immature Common Toad, a single adult Common Frog and up to 10 juvenile and one adult Smooth Newts were recorded under the refugia.

Since much of the site consisted of buildings and hardstanding, it was concluded, that the site had low potential for invertebrate assemblages, in particular those species listed as a priority in the UK Biodiversity Action Plan and/or Local Biodiversity Action Plan.

None of the designated sites identified in the data search will be impacted by the proposed scheme for re-development.

4.2 Possible impacts of proposed work & recommendations

Since all in-use bird's nests and their contents are protected from damage or destruction, any tree and shrub removal and/or building works should ideally be undertaken outside the period 1st March to 30th September inclusive. If this time frame cannot be avoided, a close inspection of trees and shrubs to be removed or building works will be undertaken by an ecologist prior to clearance/works.

Work will not be carried out within 5.0 metres of any in-use nest, although this distance could be greater depending on the sensitivity of the species.

A nest box will be installed on one of the trees to provide an alternative roost site for the Barn Owl.

Given the presence of common amphibians, care will be taken at all times when stripping the vegetation and topsoil, as small mammals might also be present. If any are encountered they will be carefully captured and released nearby, or allowed to move out of the area on their own accord.

Finally, it should be noted that open trenches could potentially trap wildlife, especially if these fill up with water. Escape routes will therefore be provided if trenches cannot be infilled immediately. These can be in the form of branches or boards placed on the bottom of the trench, with their upper ends above ground level and touching the sides, or sloping ends left in trenches.

4.3 Further surveys

If the tree and shrub removal or building works can be timed appropriately to avoid the bird nesting season (considered to be March to September inclusive), then no further surveys are required.

No other surveys are considered necessary, but a licence will be required for works to the farmhouse, as per the recommendations in the nocturnal bat survey report (481-CWS-02).

5. REFERENCES

Collins, J. (ed.), 2023. *Bat Surveys for Professional Ecologists: Good Practice Guidelines. (4th edition).* The Bat Conservation Trust, London.

Fitter R., Fitter A. & Blamey, M., 1983. *The Wildflowers of Britain and Northern Europe.* Collins, London.

Fitter R. & Fitter A., 1984. *Grasses, Sedges, Rushes & Ferns of Britain and Northern Europe.* Collins, London.

JNCC, 2003. *Handbook for Phase 1 habitat survey – a technique for environmental audit (revised reprint).* Joint Nature Conservation Committee, Peterborough.

Langton, T., Beckett, C. And Foster, J., 2001. *Great Crested Newt: Conservation Handbook.* Froglife, Suffolk.

Mitchell-Jones A. J. & McLeish, 2004. *Bat Workers' Manual.* Joint Nature Conservation Committee, Peterborough.

Natural England, 2007. *Badgers and Development.* Natural England, Peterborough.

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats.* Chartered Institute of Ecology and Environmental Management, Ampfield.

Scottish Natural Heritage, 2007. *Badgers and Development.* Scottish Natural Heritage, Edinburgh.

Stebbings R.E., 1986. *Which bat is it?* The Mammal Society and The Vincent Wildlife Trust, London.

The Vincent Wildlife Trust, 2003. *The Bats of Britain and Ireland.* The Vincent Wildlife Trust, Ledbury.

APPENDICES

Appendix 1: Phase 1 Habitat Survey Map

Appendix 2: Target Notes

Appendix 3: Relevant legislation

Appendix 1: Phase 1 Habitat Survey Map



Legend		
	Survey boundary	Amenity grassland
	Buildings	Scattered trees
	Hard surfacing	Standing water
	Target Note	Do not scale from this plan

Appendix 2: Target Notes

Target Number	Notes
1	Pond 1
2	Roosting Brown Long-eared Bat

Appendix 3: Relevant legislation

3.1 *Badgers*

Badgers are protected in Britain by the Protection of Badgers Act 1992. The purpose of this Act is to protect the animals from deliberate cruelty and from the incidental effects of lawful activities which could cause them harm. Under this legislation it is an offence to:

- ❑ Wilfully kill, injure, take, possess or cruelly ill-treat a Badger, or attempt to do so;
- ❑ Interfere with a sett by damaging or destroying it;
- ❑ Obstruct access to, or any entrance of, a Badger sett;
- ❑ Disturb a Badger when it is occupying a sett.

Note that if any of the above resulted from a person being reckless, even if they had no intention of committing the offence, their action would still be considered an offence.

A person is not guilty of an offence if it can be shown that the act was 'the incidental result of a lawful operation and could not have been reasonably avoided'; only a court can decide what is 'reasonable' in any set of circumstances. Penalties for offences under this legislation can be up to six months in prison and a fine of up to £5,000 for each offence.

A Badger sett is defined in the Act as 'any structure or place which displays signs indicating current use by a Badger'. This can include culverts, pipes and holes under sheds, piles of boulders, old mines and quarries, etc.

'Current use' does not simply mean 'current occupation' and for licensing purposes it is defined as 'any sett within an occupied Badger territory regardless of when it may have last been used'.

A sett therefore, in an occupied territory, is classified as in current use even if it is only used seasonally or occasionally by Badgers, and is afforded the same protection in law.

3.2 *Bats*

In England, Scotland and Wales, all bat species are fully protected under the Wildlife and Countryside Act 1981 (WCA) (as amended), through inclusion in Schedule 5. In England and Wales this Act has been amended by the Countryside and Rights of Way Act 2000 (CROW), which adds an extra offence, makes species offences arrestable, increases the time limits for some prosecutions, and increases penalties.

All bats are also included in Schedule 2 of the Conservation (Natural Habitats, & c.) Regulations 1994, (or Northern Ireland 1995) (the Habitats Regulations), which defines ‘European protected species of animals’.

The above legislation can be summarised thus (Mitchell-Jones and McLeish, 2004):

- ❑ *Intentionally or deliberately kill, injure or capture (or take) bats;*
- ❑ *Deliberately disturb bats (whether in a roost or not);*
- ❑ *Recklessly disturb roosting bats or obstruct access to their roosts;*
- ❑ *Damage or destroy roosts;*
- ❑ *Possess or transport a bat or any part of a part of a bat, unless acquired legally;*
- ❑ *Sell (or offer for sale) or exchange bats, or parts of bats.*

The word ‘roost’ is not used in the legislation, but is used here for simplicity. The actual wording is ‘any structure or place which any wild animal...uses for shelter or protection’ (WCA), or ‘breeding site or resting place’ (Habitats Regulations).

As bats generally have both a winter and a summer roost, the legislation is clear that all roosts are protected whether bats are in residence at the time or not.

3.3 Birds

In Britain, all wild birds, their nests and eggs are protected under the Wildlife & Countryside Act 1981. There are penalties for:

- ❑ *Killing, injuring or capturing them, or attempting any of these;*
- ❑ *Taking or damaging the nest whilst in use;*
- ❑ *Taking or destroying the eggs.*

3.4 Great Crested Newts

Great Crested Newts are protected under Schedule 5 of the Wildlife & Countryside Act (1981) as amended, and Schedule 2 of the Conservation of Habitats and Species Regulations 2010. As a result of their rarity across Europe, they are also protected under Annexes IIa and IVa of the Habitats and Species Directive, and under the Berne Convention (the Convention on the Conservation of European Wildlife and Natural Habitats).

The above legislation can be summarised thus (Langton *et al*, 2001):

- ❑ *Intentionally or deliberately capture or kill, or intentionally injure Great Crested Newts;*
- ❑ *Deliberately disturb Great Crested Newts or intentionally or recklessly disturb them in a place used for shelter or protection;*

- ❑ *Damage or destroy a breeding or resting place;*
- ❑ *Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection;*
- ❑ *Possess a Great Crested Newt, or any part of it, unless acquired lawfully;*
- ❑ *Sell, barter, exchange or offer for sale Great Crested Newts or parts of them.*

3.5 Reptiles

All common reptiles (Common Lizard, Grass Snake, Slow-worm and Adder *Vipera berus*) are afforded legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) largely as a consequence of a national decline in numbers associated with persecution and habitat loss.

Under the terms of the Act it is illegal to intentionally kill or injure a reptile.

3.6 Otters

Otters are protected under Sections 9.1 and 9.4, Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), Annex 2 and 4 of the Conservation (Natural Habitats &c.) Regulations 1994 as amended, and are a priority species under the UK BAP. Actions that are prohibited include intentional killing, injuring or taking; and intentional or reckless damage, destruction or obstruction of any structure or place used for shelter or protection.

3.7 Water Voles

As of 12 August 2008, Water Voles have been given full protection under Section 9 of the Wildlife and Countryside Act 1981.

Offences under Section 9 carry a maximum penalty of a fine up to £5000, imprisonment for up to six months, or both, for each animal in respect of which an offence is committed. It is now an offence to:

- ❑ Intentionally kill, injure or take (capture) a Water Vole;
- ❑ Possess or control a live or dead Water Vole, or any part of a Water Vole or anything derived from a Water Vole;
- ❑ Intentionally or recklessly damage, destroy or obstruct access to any structure or place which a Water Vole uses for shelter or protection;
- ❑ Intentionally or recklessly disturb a Water Vole while it is occupying a structure or place which it uses for shelter or protection.

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