2019 Updated Phase 1 Habitat Survey for land off Lugtrout Lane, Solihull, Birmingham

Cotswold Wildlife Surveys

18th September 2013, 10th February 2016 and 25th February 2019

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* (3rd edition, Collins, 2016). If there has been deviation from recognised practice, justification/explanation has been given.

CONTENTS

SUMMARY

On land off Lugtrout Lane in Solihull, Birmingham, planning permission is being sought for a residential development. This will include the demolition of the existing house, barns and outbuildings/sheds.

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.

There were no statutory sites within the search radius. However, a small number of non-statutory sites were present, the closest of which was the Grand Union Canal potential Local Wildlife Site (pLWS), immediately to the north. Other sites included Hampton and Elmdon Coppice Local Wildlife Site (LWS) which lay just to the north of the canal, and Catherine-de-Barnes Hay Meadow pLWS (Bunts Wood), 700 metres to the east.

Despite their close proximity, it is considered that none of the designated sites listed above will be impacted on by the proposed development, as there will be a landscape buffer along the northern boundary to ensure the canal and woodland are not affected. This means there will be no impact on the LWS.

Within 1.0 km of the survey site there were a small number of records of protected species.

There were no records for the site itself, but bats included Common and Soprano Pipistrelle *Pipistrellus pipistrellus* and *P. pygmaeus*, and Brown Long-eared *Plecotus auritus,* along with unidentified species of bat. The Brown Long-eared Bat is from a roost approximately 1.1 km east-southeast in 2015, whilst there is a Common Pipistrelle Bat record from 285 m east, also in 2015.

There are no records of reptiles or Great Crested Newts *Triturus cristatus* within 1.0 km.

In early September 2013, Cotswold Wildlife Surveys carried out a Phase 1 Habitat Survey of part 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.

The Phase 1 site visit was made on 18th September 2013, in warm, bright and sunny conditions, with no wind. An updated visit was carried out on 10th February 2016, again in bright and sunny weather with no wind.

In 2019 the site was re-surveyed, along with the adjoining land to the east. The weather was bright, sunny and warm with no wind.

The site can be divided into two sections. The western section was modest in size, and comprised a single storey dwelling and a former plant nursery with several timber outbuildings/sheds. The latter were all in a good state of repair, whilst the house was brick built with a pitched tile roof.

Around the dwelling was a fairly newly laid lawn of amenity grass, with a large area of hardstanding to the south.

The former nursery was fenced off from the dwelling and was heavily overgrown, this consisting largely of tall ruderal vegetation with scattered tree saplings. Bare ground had been colonised by short perennial vegetation in places.

The north of the site was bordered by Alder *Alnus glutinosa* and Birch *Betula pendula* woodland, whilst along the eastern and western boundaries were species poor, intact hedgerows of predominantly Hawthorn *Crataegus monogyna*. The south of the site narrowed to the entrance track which fronted onto Lugtrout Lane.

The section to the east comprised a large field of semi-improved grassland, along with a small complex of barns/sheds, these used until very recently for housing and feeding cattle.

The field contained a couple of patches of Gorse *Ulex europaeus* and was bordered to the east by a gappy hedgerow with trees. To the south there was a trimmed Hawthorn hedge, and to the north, outside the site curtilage, a row of trees just beyond which lay the Grand Union Canal.

No rare vascular plants were found in either section, and there were no invasive or notifiable species.

There was no evidence of Badger *Meles meles* use on the western section, but Badgers were using the eastern field for foraging purposes, with signs of activity in several locations around the boundaries, along with Badger paths. The latter ran to and from the adjoining woodland and canal side, and led into the fields to the east. There were no latrines and no setts.

There were also signs of Fox *Vulpes vulpes* presence in other parts of the site, and in 2016 an obvious Fox trail was found leading from a neighbouring garden into the western section.

No evidence of Otters *Lutra lutra* or Water Voles *Arvicola amphibius* was found.

There were no signs of bat activity around the house, barns or outbuildings/sheds, although by 2016 there were four potential access points into the roof void of the house. The latter was inspected and found to be very heavily cobwebbed with no evidence of bat occupation.

The holes noted from the outside were also examined, and these too revealed no signs of bat use (or nesting birds).

By 2019 the dwelling had been refurbished, and the only gaps were along the soffits at the north gable end. These gaps were thickly cobwebbed and were clearly not in use by bats.

The suitability for roosting pipistrelles *Pipistrellus sp* or other bats species was therefore considered to be negligible and no further surveys are necessary.

The barns and outbuildings/sheds were unsuitable for bat occupation, and they were not identified as bat roost or hibernation sites.

However, there were a small number of old/veteran Alder trees just outside the northern boundary of the site, and three old oaks along the eastern boundary. These contained several old woodpecker holes and cavities which were considered potentially suitable for use by bats as roosting or hibernation places.

Ideally these trees should be retained, but if they do have to be removed they should be inspected closely for signs of bat occupation.

If it is not safe to climb the trees, three nocturnal emergence surveys per tree will have to be carried out between May and August to determine the presence or absence of bats. If present, a licence from Natural England will be required for the felling of the trees.

In addition the whole site had medium potential for foraging bats, although it is anticipated that opportunities for feeding and commuting will be maintained or potentially enhanced by the development, as there will be many more flowering plants associated with the landscaping.

A total of 12 species of birds were observed. Of these one was a Species of Medium Conservation Concern (RSPB Amber list); Dunnock *Prunella modularis*, whilst the rest were all Species of Low Conservation Concern (RSPB Green list).

There was some potential for nesting birds within the boundary hedgerows, although the only nests found were all old and belonged to Woodpigeons *Columba palumbus*.

Nevertheless, since all in-use bird's nests and their contents are protected from damage or destruction, any tree and shrub removal should ideally be undertaken outside the period 1st March to 31st August inclusive. If this time frame cannot be avoided, a close inspection of trees and shrubs to be removed should be undertaken prior to clearance.

Work should 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.

No other protected species were discovered, and with an absence of water or wetland, the potential for reptiles and amphibians was thought to be low. Furthermore there were no obvious refugia or hibernacula in the eastern section, although there were a few brash/rubbish piles in the western section. There were potentially suitable basking areas, but the foraging opportunities were relatively limited.

There were no ponds on or within 500 m of the site, although adjoining part of the northern boundary is the Grand Union Canal. This is separated from the western section of the site by the Alder-Birch woodland, so any amphibians which might be present in the area are more likely to be in the woodland rather than on the site which is well-used by key predators (Fox and Badger).

Although the Phase 1 Habitat Survey visits were carried out just outside the optimal period, it was possible to assess the potential importance of the habitats within the application site to invertebrates.

Since much of the site consisted of open grassland, which until recently had been regularly grazed, 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. Indeed, the only invertebrates of any note included two Small Tortoiseshell butterflies *Aglais urticae* on 25th February 2019.

At all times care should be taken when stripping the vegetation and topsoil, as small mammals (and possibly common amphibians such as Common Toad *Bufo bufo* or Common Frog *Rana temporaria*) might be present. If any are encountered they should be carefully captured and released nearby, or allowed to move out of the area on their own accord.

No further surveys were considered necessary, provided the programme for any tree and scrub removal can be timed appropriately to avoid the bird nesting season.

Finally it should be noted that open trenches could potentially trap wildlife, especially if these fill up with water. Escape routes should 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. This will be particularly important given the presence of the Badgers nearby.

1. INTRODUCTION

1.1 Background and survey objectives

On land off Lugtrout Lane in Solihull, Birmingham, planning permission is being sought for a residential development. This will include the demolition of the existing house, barns and outbuildings/sheds.

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.

On 18th September 2013, Cotswold Wildlife Surveys carried out a Phase 1 Habitat Survey of the western part 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.

An updated visit was carried out on 10th February 2016, whilst in 2019 the site was re-surveyed, this including the adjoining land to the east.

1.2 Site description

The site can be divided into two sections. The western section was modest in size, and comprised a single storey dwelling and a former plant nursery with several timber outbuildings/sheds. The latter were all in a good state of repair, whilst the house was brick built with a pitched tile roof.

Around the dwelling was a fairly newly laid lawn of amenity grass, with a large area of hardstanding to the south.

The former nursery was fenced off from the dwelling and was heavily overgrown, this consisting largely of tall ruderal vegetation with scattered tree saplings and patches of short perennial vegetation. Bare ground had been colonised by pioneer species in places.

The tall ruderals were dominated by Curled Dock *Rumex crispus*, Broad-leaved Dock *R. obtusifolius*, Rosebay Willowherb *Epilobium angustifolium,* Common Nettle *Urtica diocia,* Hogweed *Heracleum sphondylium,* and Ragwort *Senecio jacobaea.*

Wildflowers in the short perennial vegetation were represented by Herb Robert *Geranium robertianum,* Wood Avens *Geum urbanum,* White Dead-nettle *Lamium album*, Meadow Cranesbill *Geranium pratense*, Dandelion *Taraxacum* Section *Vulgaris,* Teasel *Dipsacus sylvestris*, Self-heal *Prunella vulgaris*, Hairy Tare *Vicia hirsuta*, Black Medick *Medicago*

lupulina and St John's Wort *Hypericum sp*, with Butterfly Bush *Buddleia davidii*, Bramble *Rubus fruticosus* and Hedge Bindweed *Calystegia sepium* also present.

Grasses included Creeping Fescue *Festuca rubra*, Cocksfoot *Dactylis glomerata*, meadow-grasses *Poa spp* and False Oatgrass *Arrhenatherum elatius.* Soft Rush *Juncus effusus* was also noted.

The north of the site was bordered by Alder and Birch woodland, whilst along the eastern and western boundaries were species poor, intact hedgerows of predominantly Hawthorn, with Ash *Fraxinus excelsior*, Sycamore *Acer pseudoplatanus* and Hazel *Corylus avellana*. The south of the site narrowed to the entrance track which fronted onto Lugtrout Lane.

The section to the east comprised a large field of semi-improved grassland, along with a small complex of barns/sheds, these used until very recently for housing and feeding cattle.

The grassland contained similar species to the short perennial vegetation, as well as numerous tussocks of Tufted Hair-grass *Deschampsia caespitosa*. Additional forbs included Common Sorrel *Rumex acetosa*, Field Mouse-ear *Cerastium arvense*, Black Knapweed *Centaurea nigra* and Marsh Thistle *Cirsium palustre*.

The field also contained a couple of patches of Gorse and was bordered to the east by a gappy hedgerow of Hawthorn and Holly *Ilex aquifolium* with trees including Pedunculate Oak *Quercus robur*.

To the south there was a trimmed Hawthorn hedge, and to the north, outside the site curtilage, a row of Alder trees just beyond which lay the Grand Union Canal.

The north of the site was bordered by Alder and Birch woodland, whilst along the eastern and western sides there were species poor, intact hedgerows of predominantly Hawthorn,

The bare ground around the entrance to the western section of the site had become colonised by Creeping Soft-grass *Holcus mollis*, Scentless Mayweed *Tripleurospermum inodorum*, Knotgrass *Polygonum aviculare*, Ragwort and Broad-leaved Dock.

The Ordnance Survey Grid Reference of the site is SP 16656 80667 centred on the house.

1.3 Proposed works

The proposal is for the demolition of all existing structures and the construction of a residential development.

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;
- Warwickshire Wildlife Trust website;
- Solihull Metropolitan Borough Council planning website;
- Data.gov.uk website.

2.2 Habitat survey

A Phase 1 Habitat Survey 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 western section of the site was originally visited on the 18th September 2013, in mild, bright and sunny conditions, with no wind.

An updated visit was carried out on 10th February 2016, again in bright and sunny weather with no wind.

In 2019 the site was re-surveyed, along with the adjoining land to the east. The weather was bright, sunny and warm 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 these 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 Phase 1 Habitat Survey.

2.3.2 Bats

In order to fully assess bat occupation of a particular site, the Bat Conservation Trust (2016) 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 surveys.

The diurnal walkover provides an opportunity to check for signs of occupancy, such as droppings, scratch marks, feeding remains, carcasses, or even animals in residence, whilst nocturnal surveys (if required) allow numbers and species of bats to be confirmed. The latter 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, medium or high.

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.

Diurnal walkovers can be carried out at any time of the year, but nocturnal surveys should only be undertaken when bats are out of hibernation and in their summer roosts. The recommended period is from May to September inclusive, with May to August optimum and September sub-optimum. The season can be extended into October, although particularly cold weather will render this inadvisable. Indeed, the air temperature at the start of each survey must be at least 10°C or above.

Visits will be a minimum of two weeks apart, and the number of surveys is dependent on the evidence found or the suitability of the site to bats.

Where bats are found, or there is evidence of bat occupation or activity, i.e. that bat use is confirmed, the number and timing of visits will be decided by the ecologist, and will be appropriate for the type of roost.

In general at least two nocturnal surveys will be carried out, both of which can be emergence surveys, or one emergence and one dawn re-entry.

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

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

For medium suitability a minimum of two visits are needed, of which one must be in the optimum period, and one must be a dawn re-entry survey. With high suitability, three visits will be necessary, of which two must be in the optimum period. At least one of these must be a dawn re-entry survey, with the third visit either an emergence or a dawn re-entry.

For sites < 5 ha in size, and/or regularly shaped structures, at least two surveyors must be present, with more surveyors at larger sites and more complex buildings, e.g. those with multiple elevations and/or roof structures.

A thorough inspection of the trees from the ground was made by Andy Warren (Natural England bat licence No. 2015-16489-CLS-CLS), including checks for decay cavities, old woodpecker holes, splits, fissures, and/or exfoliating bark.

The dwelling, barns and outbuildings/sheds were also inspected, including the roof and ceiling timbers, roof spaces, roof coverings, eaves, gables, external and internal walls, window casements and door frames.

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 Phase 1 Habitat Survey, 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).

None of these methods were carried out as there was nothing to suggest that newts would be present on the site.

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 Phase 1 Habitat Survey.

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 *Zootoca vivipara*.

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 Phase 1 Habitat Survey.

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

Although just outside the optimum period for Phase 1 Habitat Surveys (considered to be April to August inclusive), the warm weather in 2013 significantly extended the survey season, and as such it was considered that the timing of the ecological walkover at land off Lugtrout Lane was adequate to suitably assess the presence or absence of flora and fauna.

The 2016 and 2019 visits were undertaken in the winter to check for hibernating bats, and to look for signs of mammal activity with the foliage gone.

3. RESULTS

3.1 Desk study

3.1.1 Designated sites

There were no statutory sites within the search radius. However, a small number of non-statutory sites were present, the closest of which was the Grand Union Canal potential Local Wildlife Site (pLWS), immediately to the north. Other sites included Hampton and Elmdon Coppice Local Wildlife Site (LWS) which lay just to the north of the canal, and Catherine-de-Barnes Hay Meadow pLWS (Bunts Wood), 700 metres to the east.

Despite their close proximity, it is considered that none of the designated sites listed above will be impacted on by the proposed development, as there will be a landscape buffer along the northern boundary to ensure the canal and woodland are not affected. This means there will be no impact on the LWS.

3.1.2 Species records

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.

Within 1.0 km of the survey site there were a small number of records of protected species.

There were no records for the site itself, but bats included Common and Soprano Pipistrelle, and Brown Long-eared, along with unidentified species of bat. The Brown Long-eared Bat is from a roost approximately 1.1 km east-southeast in 2015, whilst there is a Common Pipistrelle Bat record from 285 m east, also in 2015.

There are no records of reptiles or Great Crested Newts within 1.0 km.

3.2 Habitat survey

3.2.1 Habitat descriptions

The following habitats were recorded across the site:

- Semi-improved grassland;
- Amenity grassland;
- Tall ruderal vegetation;
- Scattered trees;
- Dense scrub;
- Intact hedgerows, species poor;
- Short perennial vegetation;
- Bare ground/hardstanding;
- Buildings.

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

Semi-improved grassland

The section to the east comprised a large field of semi-improved grassland (Figs. 1 and 2). Grasses included Creeping Fescue, Cocksfoot, meadow-grasses and False Oatgrass, as well as numerous tussocks of Tufted Hair-grass and clumps of Soft Rush.

Wildflowers were represented by Creeping Buttercup *Ranunculus repens*, Common Sorrel, Field Mouse-ear, Black Medick, Hairy Tare, Meadow Cranesbill, St John's Wort, White Dead-nettle, Self-heal, Hedge Bindweed, Black Knapweed and Marsh Thistle.

Figs. 1 & 2 Semi-improved grassland

Amenity grassland

Around the dwelling in the western section of the site there was an area of recently laid lawn (Figs. 3 and 4). The species included fescues, meadow-grass and ryegrass *Lolium sp*.


Figs. 3 & 4 Amenity grass in 2019

Tall ruderal vegetation

Excluding the amenity grassland, buildings and hardstanding, much of the western section had become overgrown with tall ruderal vegetation, in particular along the northern side of the site, which was previously maintained amenity grassland, and within the former polytunnel framework, which had been removed (Figs. 5-8).


Figs. 5-8 Tall ruderal vegetation in 2013 (above) and 2019 (below)


Species recorded were Broad-leaved and Curled Docks, Common Nettle, Rosebay Willowherb, Ragwort and Creeping and Spear Thistles *Cirsium arvense* and *C. vulgare.* By 2016 tree saplings dominated by Alder had spread over the site.

Scattered trees

In the eastern section there were a few scattered trees, including Sycamore, Holly and Hawthorn (Fig. 9).

Fig. 9 Hawthorn in field

Fig. 10 Gorse patch

Dense scrub

Along the northern boundary of the eastern section there was a patch of low Gorse (Fig. 10).

Intact hedgerows, species poor

Along the eastern and western boundaries of the western section, and the eastern and southern boundaries of the eastern section, there were species poor, intact hedgerows. These were dominated by Hawthorn, but also contained Ash, Sycamore, Hazel and Pedunculate Oak in small amounts (Figs. 11-14).

Figs. 11 & 12 Intact hedgerow, species poor (western section 2013)


Figs. 13 & 14 Intact hedgerow, species poor (eastern section 2019)

Along the hedgerows Bramble was becoming abundant, with Hedge Bindweed also present.

Short perennial vegetation

In places, parts of the western section were becoming colonised by short perennial vegetation, although Brambles and tall ruderals were starting to encroach (Figs. 15 and 16).


Figs. 15 & 16 Short perennial vegetation in 2019

Species included meadow grasses, Creeping Fescue, Ragwort, Hogweed, Herb Robert and Dandelion.

Bare ground/hardstanding

At the entrance to the western section (Ref. Fig. 15), and to the south of the dwelling (Fig. 17), there were areas of bare ground/hardstanding.

There was also an access track of bare ground leading off Lugtrout Lane down to the buildings on the eastern section of the site (Fig. 18).

Figs. 17 & 18 Bare ground/hardstanding

Buildings

On the western section there was a single storey dwelling, brick built with a pitched tile roof (Fig. 19 – Target Note 3), and several timber outbuildings/sheds (Fig. 20). These were all in a good state of repair. Some of the sheds appeared to have been used for keeping animals.

Figs. 19 & 20 Dwelling and timber shed

The section to the east contained a small complex of barns/sheds, these used until very recently for housing and feeding cattle (Figs. 21 and 22).

Figs. 21 & 22 Barns/sheds in eastern section

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, and there were no invasive or notifiable weeds.

A list of species observed is presented in Appendix 3.

3.3 Protected species survey

3.3.1 Bats

A detailed inspection of the house and outbuildings/sheds was carried out in 2013, 2016 and 2019 by Andy Warren (Natural England bat licence No. 2015-16489-CLS-CLS), including the exterior and interior walls, roof coverings, roof spaces, eaves, gables, fascias, roof and ceiling timbers, window casements and door frames.

10x42 Nikon binoculars and a Fenix TK75 torch were used for the inaccessible/unreachable areas. On this occasion an endoscope was not used, as there were no crevices and cavities that could not be inspected with a torch or by use of binoculars from a ladder.

House

The ridge of the house was fully intact and largely sealed, but there were a few small holes (Fig. 23 – arrowed). The roof tiles were generally tightly overlapping, with none broken, missing or dislodged, but a few were slightly raised creating narrow gaps (Fig. 24 – arrowed).

However, when inspected, these gaps were seen to be heavily cobwebbed over inside and unsuitable for bat occupation.

Figs. 23 & 24 Ridge and roof tiles

The roof ends were fully sealed with cement, with the timber soffits generally tightly fitting to the gable walls (Figs. 25 and 26).


Figs. 25 & 26 Gable end soffits tight

There were a couple of narrow gaps along the gable and eaves soffits, but these were choked with cobwebs and were evidently not used by bats (Figs. 27-30 – arrowed).


Figs. 27 & 28 Gaps along gable soffits


Figs. 29 & 30 Eaves soffit gap

All the gaps were heavily cobwebbed inside, as well as very damp and mouldy, so were considered unsuitable for roosting bats. Certainly no evidence of bat presence was found during a close examination.

The window casements and door frames were all tightly fitting, with no cracks or cavities, whilst the rendered brickwork was sound throughout.

No signs of bat activity were found around the outside of the house.

Given the potential openings to the interior, in 2016 the inside of the house was accessed.

The roof void was of trussed rafter construction and was damp and dirty. It was also very heavily cobwebbed, with cobwebs hanging from ridge to joists throughout (Figs. 31-34). There was limited light penetration, and any gaps were choked with cobwebs and windblown debris.


Figs. 31 & 32 Trussed rafter roof void

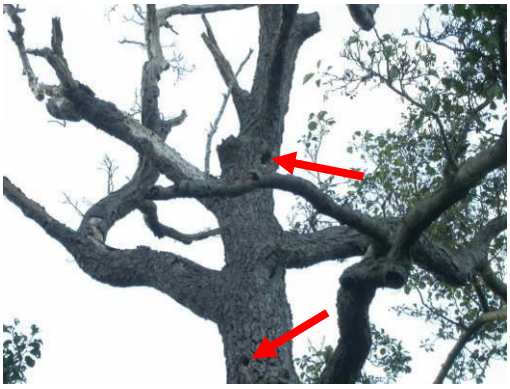
No evidence of bat occupation was found inside the house, and it was considered unsuitable for bat roosting and/or hibernation.


Figs. 33 & 34 Cobwebbed roof void

All of the timber outbuildings/sheds/barns were considered unsuitable for use by roosting bats, as they had roofs of corrugated metal or felt over plywood. There were no suitable crevices or cavities, and no signs of bat activity were discovered (Figs. 35 and 36).


Figs. 35 & 36 Timber barn and shed

To the north of the site there was a block of woodland with the Grand Union Canal beyond. Along the boundary, just outside the curtilage of the site, there were several veteran Alder trees. These were considered to have medium to high suitability for roosting bats, as there were a number of old woodpecker holes and decay cavities within them (Figs. 37, 38 and 39 – arrowed – Target Notes 1, 2, 7, 8 and 9).

Figs. 37 & 38 Alder trees with medium to high bat roost suitability

Along the eastern boundary of the eastern section there were three old Pedunculate Oaks with cavities which were also considered to have medium to high suitability for bats (Figs. 40 and 41 – Target Notes 10, 11 and 12).

The site as a whole had medium potential for foraging bats, as there were good feeding opportunities along the boundary of the woodland and canal, and the boundary hedgerows.

Fig. 39 Alder tree with medium to high bat roost suitability

Figs. 40 & 41 Pedunculate Oaks with medium to high bat roost suitability

3.3.2 Badgers

There was no evidence of Badger use on the western section, but Badgers were using the eastern field for foraging purposes, with signs of activity in several locations around the boundaries (Figs. 42 and 43 – Target Note 6), along with Badger paths. The latter ran to and from the adjoining woodland and canal side, and led into the fields to the east. There were no latrines and no setts.

Figs. 42 & 43 Badger foraging

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 12 species of birds were observed. Of these one was a Species of Medium Conservation Concern (RSPB Amber list); Dunnock, whilst the rest were all Species of Low Conservation Concern (RSPB Green list).

There was some potential for nesting birds within the boundary hedgerows, although the only nests found were all old and belonged to Woodpigeons.

A full list of species noted is given in Appendix 4.

3.3.6 Reptiles

With an absence of water or wetland, the potential for reptiles was thought to be low. Furthermore there were no obvious refugia or hibernacula in the eastern section, although there were a few brash/rubbish piles in the western section. There were potentially suitable basking areas, but the foraging opportunities were relatively limited. As such, their presence on the site was considered to be highly unlikely.

3.3.7 Great Crested Newts

All pieces of loose material that provided refugia were checked, but no Great Crested Newts or other amphibians, were found.

There were no ponds on or within 500 m of the site, although the Grand Union Canal lies just to the north.

3.3.8 Invertebrates

Since much of the site consisted of open grassland, which until recently had been regularly grazed, 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.

Indeed, the only invertebrates of any note included two Small Tortoiseshell butterflies on 25th February 2019.

3.3.9 Other species

No other protected species were observed during the site visit, although there were signs that a Fox had been using the area, and a rest site was found within the framework of the polytunnel in 2013.

In 2016 an obvious Fox path leading from the adjoining property was discovered, although there were no signs of a Fox earth on the application site.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Site evaluation

The survey area was considered to be of limited ecological importance, with no rare or particularly unusual species noted.

The hedgerows provided potential nesting opportunities for birds, although they were probably more likely to nest within the woodland to the north.

The semi-improved grassland was relatively floristically diverse, and was better as cover for small mammals, rather than as a valuable feeding habitat for invertebrates, especially as it had been formerly grazed by cattle.

With an absence of water or wetland, the potential for reptiles and amphibians was thought to be low. There were no ponds on or within 500 m of the site, although the Grand Union Canal is located 50 m to the north. This is separated from the site by the Alder-Birch woodland, so any amphibians which might be present in the area are more likely to be in the woodland rather than on the site which is well-used by key predators (Badger and Fox).

The house and barns/sheds were not identified as bat roosts, as no suitable roost sites or evidence of bat occupation were found. However, the whole site had medium potential for foraging bats, whilst several veteran Alder and Pedunculate Oak trees just outside the boundaries were categorised as having medium to high suitability for roosting bats.

There were no signs of Otters or Water Voles, but Badgers were using the semi-improved grass field for foraging.

Since much of the site consisted of open grassland, which until recently had been regularly grazed, 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. Indeed, the only invertebrates of any note included two Small Tortoiseshell butterflies on 25th February 2019.

Despite their close proximity, it is considered that none of the designated sites listed above will be impacted on by the proposed development, as there will be a landscape buffer along the northern boundary to ensure the canal and woodland are not affected. This means there will be no impact on the LWS.

4.2 Possible impacts of proposed work & recommendations

Given the relatively low species diversity, there will be little ecological impact arising from the development of the site.

The Alder and Pedunculate Oak trees to the north and east of the site will be retained, as they lie outside the site curtilage. However, if they do have to be removed or pruned, they should be inspected closely for signs of bat occupation.

If it is not safe to climb the trees, three nocturnal emergence surveys per tree will have to be carried out between May and August to determine the presence or absence of bats. If present, a licence from Natural England will be required for the felling of the trees.

In addition the whole site had medium potential for foraging bats.

However, it is anticipated that opportunities for feeding and commuting will be maintained or potentially enhanced by the development, as there will be many more flowering plants associated with the landscaping. As such no activity surveys are considered necessary to establish bat use of the site.

The hedgerows could be used by nesting birds. Since all in-use bird's nests and their contents are protected from damage or destruction, any tree or shrub removal should be undertaken outside the period March to August inclusive. If this time frame cannot be avoided, a close inspection of trees and shrubs to be removed should be undertaken prior to clearance. Work should 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.

At all times care will be taken when stripping the vegetation and topsoil, as small mammals (and possibly common amphibians such as Common Toad and Common Frog) might be present. If any are encountered during ground clearance works, they should be carefully captured and released nearby, or allowed to move out of the area on their own accord.

Open trenches could potentially trap wildlife, especially if these fill up with water. Escape routes should 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. This will be particularly important given the presence of the Badgers nearby.

4.3 Further surveys

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

If any of the Alder trees to the north of the site, or the Pedunculate Oaks to the east, are deemed unsafe and have to be removed, then a climbed bat inspection or nocturnal surveys should be undertaken at the appropriate time of year.

No other surveys are considered necessary.

4.4 Biodiversity enhancements

To offset the loss of habitat, a series of biodiversity enhancements are proposed.

- A variety of bird and bat boxes erected on hedgerow trees around the site boundaries;
- Log piles for amphibians, small mammals and invertebrates in the hedge bottoms;
- Retention of vegetated routes around the site along which wildlife can access the wider area, in particular a wide buffer along the northern boundary;
- New native tree and shrub planting in areas of public open space, including species such as Guelder Rose *Viburnum opulus*, Dogwood *Cornus sanguinea*, Crab Apple *Malus sylvestris*, Wild Pear *Pyrus communis* and Damson *Prunus insititia*;
- Sowing of wildflower meadow seed mix in public open space. A recommended seed mix is Emorsgate EM4 – Meadow Mixture for Clay Soils.

5. REFERENCES

Collins, J. (ed.), 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines. (3rd edn).* Bat Conservation Trust, London.

English Nature, 2004. *Bat mitigation guidelines*. English Nature, Peterborough.

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.

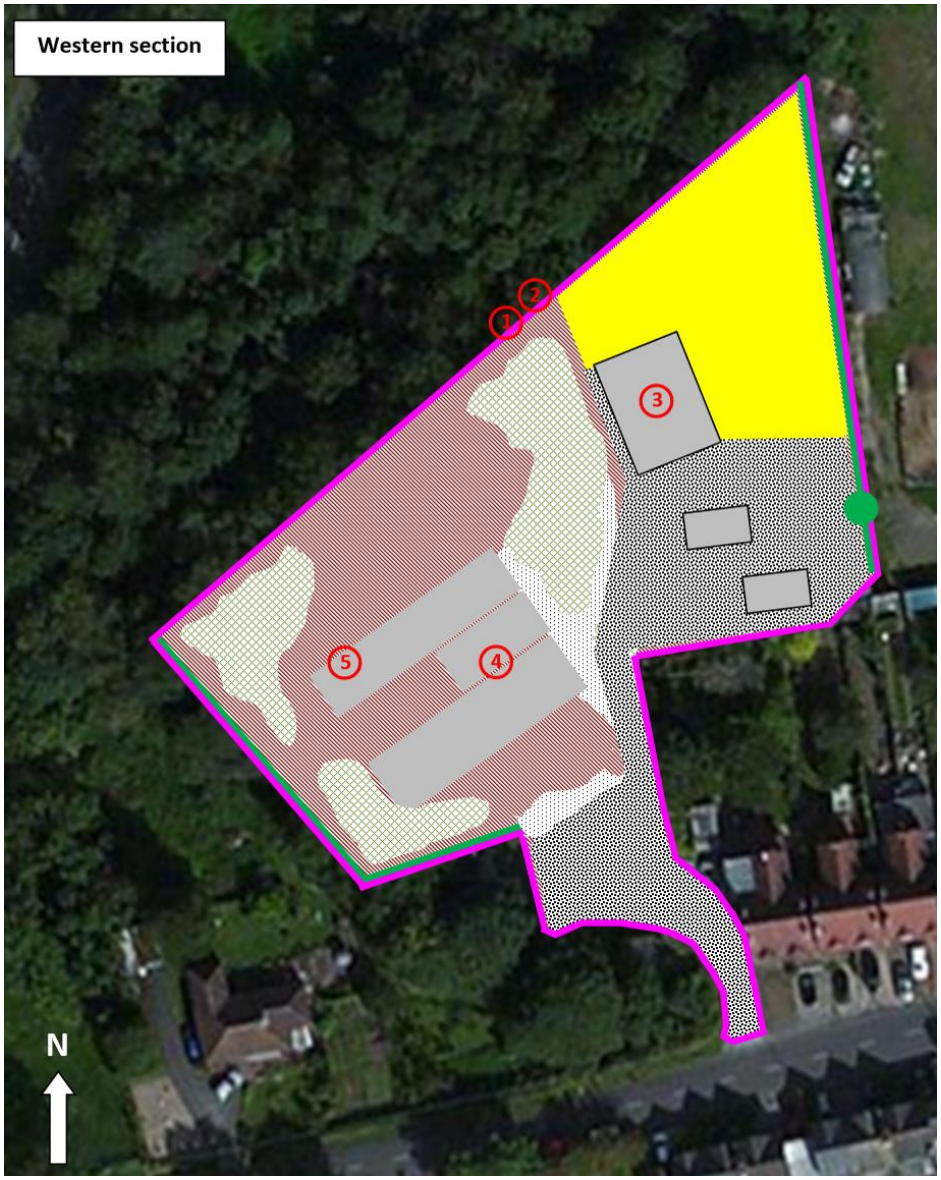
Scottish Natural Heritage, 2007. *Badgers and Development*. Scottish Natural Heritage, Edinburgh.

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



Legend

- Survey boundary
- Amenity grassland
- Short perennial vegetation
- Tall ruderal vegetation
- Buildings
- Bare ground/hardstanding
- Dense Bramble scrub
- Intact hedge
- Target Note
- Scattered tree
- Not to scale

Legend

- Survey boundary
- Buildings
- Hardstanding/bare ground
- Dense scrub
- Semi-improved grassland
- Gappy hedge
- Intact hedge
- Tall ruderal vegetation
- Scattered trees
- Target Note
- Not to scale

Appendix 2: Target Notes

Target Number	Notes
1	Alder tree with high bat potential
2	Alder tree with high bat potential
3	House
4	Former polytunnels
5	Fox lying up area
6	Badger foraging
7	Alder tree with high bat potential
8	Alder tree with high bat potential
9	Alder tree with high bat potential
10	Veteran Pedunculate Oak tree with high bat potential
11	Veteran Pedunculate Oak tree with high bat potential
12	Veteran Pedunculate Oak tree with high bat potential

Appendix 3: Plant species list

Latin name	**Common name**
Alnus glutinosa	Alder
Quercus robur	Pedunculate Oak
Ilex aquifolium	Holly
Acer pseudoplatanus	Sycamore
Fraxinus excelsior	Ash
Corylus avellana	Hazel
Crataegus monogyna	Hawthorn
Ligustrum vulgare	Garden Privet
Buddleia davidii	Butterfly Bush
Rubus fruticosus	Bramble
Calystegia sepium	Hedge Bindweed
Urtica dioica	Common Nettle
Hedera helix	Ivy
Rumex obtusifolius	Broad-leaved Dock
Rumex crispus	Curled Dock
Rumex acetosa	Common Sorrel
Ranunculus repens	Creeping Buttercup
Cerastium arvense	Field Mouse-ear
Rosa canina	Dog Rose
Rubus fruticosus	Bramble
Medicago lupulina	Black Medick
Trifolium repens	White Clover
Geranium robertianum	Herb Robert
Geum urbanum	Wood Avens
Vicia hirsuta	Hairy Tare
Geranium pratense	Meadow Cranesbill
Hypericum sp	St John's Wort
Heracleum sphondylium	Hogweed
Epilobium angustifolium	Rosebay Willowherb
Prunella vulgaris	Self-heal

Lamium album	White Dead-nettle
Senecio jacobaea	Ragwort
Centaurea nigra	Black Knapweed
Dipsacus sylvestris	Teasel
Cirsium vulgare	Spear Thistle
Cirsium arvense	Creeping Thistle
Cirsium palustre	Marsh Thistle
Taraxacum Section Vulgaria	Dandelion
Festuca rubra	Creeping Fescue
Poa annua	Annual Meadow-grass
Poa trivialis	Rough Meadow-grass
Dactylis glomerata	Cocksfoot
Deschampsia caesipitosa	Tufted Hair-grass
Arrhenatherum elatius	False Oatgrass
Juncus effusus	Soft Rush

Appendix 4: Bird species list

Common name	**Latin name**
Dunnock	*Prunella modularis*
Wren	*Troglodytes toglodytes*
Robin	*Erithacus rubecula*
Blackbird	*Turdus merula*
Chiffchaff	*Phylloscopus collybita*
Nuthatch	*Sitta europaea*
Great Tit	*Parus major*
Blue Tit	*Cyanistes caeruleus*
Long-tailed Tit	*Aegithalos caudatus*
Greenfinch	*Carduelis chloris*
Goldfinch	*Carduelis carduelis*
Magpie	*Pica pica*

Appendix 5: Relevant legislation

5.1 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.

5.2 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.

5.3 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.*

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Land off Lugtrout Lane, Solihull – 2019 Updated Phase 1 Habitat Survey

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