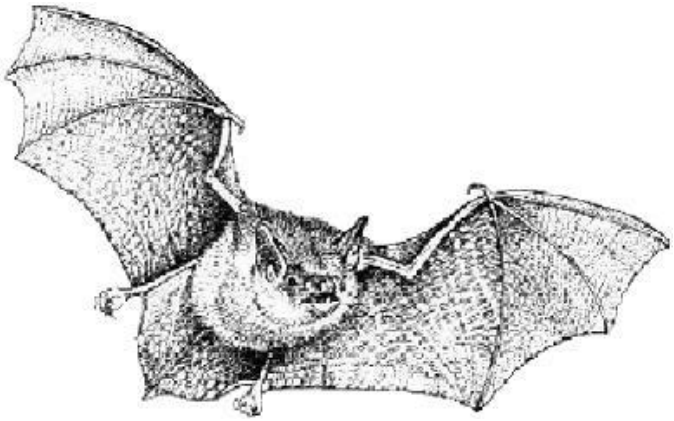
Carr Hall
Whalley Road,
Wilpshire,
Blackburn,
Lancashire.
BB1 9LJ

Survey & Assessment in Respect of Protected/Notable Species Including Bats etc., and Nesting Birds (including Barn Owl).

Surveyor- Mike Fisher
(Bat Survey Licence Level 2 Class Survey Licence WML CL18)
(Bat Roost Visitor Level 1 Class Survey Licence WML CL15)



Echo Calls Bat Surveys

26th March 2020

1. Introduction.

1.1 Reason for Survey.

As part of the process to obtain planning permission to develop the site, a full ecological assessment of the site was carried out, including, a daytime evidence and opportunity bat survey, a pre-nesting bird survey, and a search for other protected/notable species. The purpose of these surveys was to provide evidence on habitats, and protected/notable species, within the site boundaries, as part of The National Planning Policy Framework (February 2019) (NPPF), the Ribble Valley Borough Council Local Development Framework (LDF), and the Ribble Valley Core Strategy 2008-2028.

1.2 Aims.

The aims of this ecological assessment were to:

- To provide clear advice to the client, and the Local Planning Authority, on the nature conservation value of the site, and surrounding area.
- To assess the site for the presence, or potential of protected/notable species, within the proposed development site.
- To enable the client to comply with legislation afforded to protected sites and species.
- To highlight the presence of any habitats or species of ecological importance, including Habitats and Species of Principal Importance (NERC Act, 2006).
- To identify any ecological constraints, on future development.
- To establish the need for any further surveys and assessments.
- To make nature conservation recommendations.

1.3 The Site.

The main site is located to the east of a long drive running south from Whalley Road, in the Wilpshire area of Blackburn, in Lancashire, and consisted of large areas of rough ground, pasture, and woodland.

The eastern boundary of the site consisted of gently sloping hillsides of rough ground and areas of broadleaved, deciduous woodland containing trees and shrubs, both mature and immature with a bramble scrub understory.

Several streams run into the site from both the east and south before entering culverts and running beneath the main part of the site, before joining together to progress further north, via either open or covered culverts, before finally exiting the site, in a culvert beneath Whalley Road in the north.

The whole area and the adjoining land from now on, are referred to as the “site” at OS grid reference: SD 70068 33331, (refer to **Fig 1** - **The Site Location**).

1.4 The Buildings.

There were a number of buildings located at locations elsewhere within the overall complex but as these are not affected by the proposed planning application, they were not surveyed at this time.

1.5 Surrounding Land.

There was a long-tarmacked drive running in a generally north to south direction, from the entrance to the site on Whalley Road into the main site, bordered to both the west and east by areas of well-maintained open pasture.

The north-eastern part of the site consisted of a large area of broad-leaved woodland situated to the south-east of drive, which ran uphill to the adjoining area of undulating open rough pasture in the east, whilst a former shallow valley had been excavated to form a long track running from the drive in a loop to the eastern edge of the site, and this was clear of vegetation.

There was a large areas of bare ground had been cleared of vegetation and flattened in line with the proposals within the application, and this area extended in a loop from the south-western corner of the site, around the southern site boundary towards the south east.

There were several buildings of mixed sizes, surrounded by storage areas and vehicle parking areas to the south, south-east and south-west of the site, but these were not a part of the proposed site.

Some distance away to the south of the site upon Wilpshire Moor, were three large wind-powered wind turbines located within an area of pasture. Approximately 1.2km away to the south-east of the site was Dean Clough Reservoir, with a few trees along its banks, whilst to the south west, approximately 1.12km away, was the large Parsonage Reservoir. Elsewhere within the surrounding area there were a few small ponds, but other than the above-mentioned habitats, there were no other large areas of woodland, or other large bodies of water, in the close vacinity, (**refer to Fig 1 – The Site Location, Fig 2** – **Google Plan, Fig 3 – Main Plan Showing the local area and habitats, Fig 4 – Topographical Plan of Photos** and **Photos 1** to **16**).

1.6 Risk Assessment, Possible Hazards.

The required access to the site was relatively easy, and the nearby areas of either hardstanding, bare open ground, or rough pasture could be searched with care. The wooded areas contained some tangled understory, but again these could still be searched with care, and there were no more hazards, other than those normally associated with surveying these types of site.

2. Surveys

2.1 Bat Survey.

2.1.1 Methodology of Bat Surveys.

A number of factors are used for the survey methodology, which include:

- Knowledge of bat species relevant to the site location, and geographical range.
- Nature of the immediate, and surrounding habitat, in relation to foraging opportunity.
- Condition of trees, shrubs, and any water bodies.
- Presence/absence of roost potential:
- Value of roost potential – if present.

2.1.2 Daylight Evidence and Opportunity Bat Survey.

The initial daylight evidence and opportunity bat survey took place on 10th March 2020, and was carried out in order to assess the site, and search for evidence of bat occupation (including recent and historic use). The surveys were undertaken in accordance with the standard methods described in the 'Bat Worker's Manual' (JNCC 2004) and 'Bat Surveys – Good Practice Guidelines' (BCT 2012).

All possible roosting areas within the trees or shrubs were searched for bats, bat droppings, urine staining, any remains of invertebrate prey, grease marks from repeated contact, or passage through, narrow roost accesses, or against surfaces, and any other signs of bat occupation.

Most tree roosts, are present as one, or a combination of two or more of the following:

- Old woodpecker holes.
- Splits in trunk, bough or large branches.
- Rot holes in trunk, bough or large branches.
- Holes formed by two boughs or branches growing in contact.
- Underneath loose or lifting bark.
- Underneath a covering of dense latticed creeper, usually Ivy (*Hedera helix*).

The optimum time to investigate trees for bat roosting potential is from October to April, when trees are not in leaf, and crevices can be more easily seen. However, evidence of a bat roost is best determined from May to September, when bats are active, although inspections and assessments may be conducted outside of this time, and as with the buildings/structures inspections, tree surveys can often provide conclusive results, which can save expense and time for Planning Applicants.

Areas of the trees searched were:

- Beneath lifted bark, in holes or split branches, or the insides of any crevices considered to be suitable as a roost, or any other possible bat entry points around the perimeter of the tree.
- Beneath dense mats of ivy.
- Upon any other surfaces that may have caught bat droppings or prey remains, on the ground, low branches, and any other surfaces, such as leaves, fallen timber, or footpaths beneath the trees.
- The habitats surrounding the trees were assessed for their suitability for use by foraging and commuting bats.

2.1.3 Equipment.

Equipment used consisted of ladders, an endoscope, camera, close-focus binoculars, and a powerful hand-held torch.

2.1.4 Weather.

The weather conditions at the start of the survey on 16th March 2020 were reasonable. It was sunny with a gentle breeze and some cloud cover, and with a temperature taken at the start of the survey of 8°C, such conditions were suitable for a survey of this type.

2.1.5 Possible Roost Sites.

2.1.5.1 The Woodlands

The main area of woodland within the site consisted mainly of broadleaved deciduous trees and shrubs, with a bramble/gorse/scrub type understory. During close inspection of the targeted trees for potential bat roosting opportunities, none were found to house any roosting potential, and as such all were judged to be Category 3 (negligible value), in accordance with **Appendix 2.**

It was thought likely that some of these trees and shrubs would be used by nesting birds, but at the time of the survey, although there was some bird activity in and around the site, no active or historic nests were found.

2.1.5.2 Foraging Potential and Alternative Bat Roost Potential.

The site was in a rural area, and the nearby habitat consisted of few nearby farms surrounded by large areas of open pasture, bordered by fragmented lengths of hedgerow, walls and fencing. There were large areas of woodland to the east and south, two large reservoirs to the south, and a few isolated ponds positioned within the surrounding fields.

The large open areas of pasture, the nearby water bodies, the areas of woodland, and also, the lines of hedgerow and walls, can all be beneficial to insect species, (paragraph 1.5). These together with the buildings within the site, all offered linear features suitable for foraging bats such as Common Pipistrelle *(Pipistrellus pipistrellus)*, and possibly other bat species, to help them navigate and commute, and to forage along for their insect prey.

Although there were no other large areas of woodland or open water in the nearby area, the area overall, was assessed to offer low to moderate potential value for foraging bats, primarily pipistrelle species, but it was thought that small numbers of other species could be present.

It was considered that other buildings, especially dwellings, in the surrounding area could offer greater potential as bat roosts. Bats favour heated building whilst breeding.

2.2 Amphibians (including Great Crested Newts).

2.2.1 Methodology for Surveying Amphibians.

- During daytime in March or April.
- Walk around the edge of the pond or waterbody, searching for signs of amphibians.
- Record any sighting of an amphibian at the pond.
- Count the number of frog spawn clumps, and the presence of toad spawn.
- Look for folded leaves enclosing newt eggs.
- Survey for plants like water mint and water forget-me-not**,** which great crested newts generally use for attaching their eggs to.
- If you undertake the survey slightly after the main spawning period, you can also search for tadpoles or newt larvae.

2.2.2 Results.

There were several run-off streams and culverts, either open or covered within the overall site, however these were mainly shallow, and virtually devoid of underwater vegetation within them. During the survey, no areas of spawn, folded leaves, targeted water plants were found, nor were any sightings of amphibians made, and therefore the streams and waterbodies were all deemed to offer negligible opportunities for amphibians of any species, including great crested newts as they prefer to breed in pools, ponds, or other areas of standing water, none of which are present on the site.

2.3 Water Vole

2.3.1 Surveying for Signs of Water Vole.

- Surveys should be done between April and October.
- Look for droppings, which are cylindrical with blunt ends, usually 12mm long and 4-5mm wide, however the colour can vary depending on the diet, from greenish through to dark purple/black. Droppings can be found individually, but they are usually deposited in discrete latrines, and are used to mark out territories.
- Water vole droppings are odourless, and voles will often rub their hind feet on scent glands they have on their sides, and then stamp on the droppings, resulting in some latrines looking trampled or flattened. Trampled latrines are a good indication that breeding is taking place.
- Water voles often bring food items to favoured feeding stations along their pathways, or on platforms along the water's edge.
- Neat piles of chewed lengths of vegetation are left after feeding. Sections are typically 8cm long and have 45-degree cuts to their ends. Commonly eaten plants include coarse grasses, reeds, sedges and rushes.
- Water vole burrows appear as a series of holes along the water's edge, some just above or at the water level on steep banks, others can be below the water level. But there can also be

burrows occurring further up the bank, up to 3m from the water's edge. The holes are typically wider than they are high, with a diameter of 4-8cm.

2.3.2 Results.

The stone sided culverts offered no potential for water voles to feed in, or for the excavation of their burrows, but a careful search found no trace of water vole droppings or latrines, nor their burrows, or evidence of chewed vegetation, and from this it was concluded that water voles do not live in the site, or use the water bodies within it.

2.4 Otter.

2.4.1 Surveying for signs of Otter Activity.

- Surveys for otter activity can be undertaken at any time of the year. However, the best time to observe otter footprints and spraints (droppings) is when the bankside vegetation is low, and therefore winter and early spring can often be ideal times.
- Otter prints can be found at the edge of riverbanks, in gravel, sand, and mud, and on tarmac if they have just left the river. They have five toes – a distinctive sign that it's an otter print.
- Spraint (droppings) are 2 – 7cm long, and contain fish bones and scales, be tarry and black but turn grey when old, and naturally, will smell very strongly of fish, and are usually found on large stones or other prominent features.
- Anal jelly is a clear jelly-like substance that smells the same as spraint. This is usually black but can vary in colour, and is usually found on rocks and boulders along the banks.

The best places to find otters and their signs are:

- On banksides.
- Under and near bridges.
- On gravel banks or sand and muddy areas.
- Around ponds and lakes.
- On boulders or rocks either in, or near a river.
- On old tree stumps or logs.
- In marshes or reed beds.
- At either end of shortcut paths.
- At river junctions or intersections.

2.4.2 Results.

The stone-sided watercourses within the site offered very limited potential for otter, however the lack of vegetation and potential prey, within the water bodies, would discourage foraging otters, plus the water bodies proximity to the busy comings and goings of humans within the nearby buildings, and their surrounding hard standings, would dissuade otters from the vacinity.

None of the signs of otter occupancy were found during the survey, and it was concluded that otters are not present within the site or the surrounding area.

2.5 Badger

2.5.1 Surveying for signs of Badger Activity.

- A badger sett may have a single entrance hole, or many entrances, and these are large 'D' shaped holes usually in the sides of a well-drained embankment, or undulating slope.
- Outside the sett, there will be prominent paths which lead between the holes, as well as obvious spoil heaps of excavated soil.
- Bundles of discarded bedding may be scattered around an entrance.

- Within a few metres of the sett, there may be latrines in which badgers defecate.
- Badger footprints are very distinctive. They are broader than they are long, with five toes and five long claws often being detectable.
- The badger regularly uses the same well-worn paths, and these can be easily identified.
- A nearby tree may show claw marks, where the animals have scratched and cleaned their claws on the bark.
- Shredded rotten timber is often an indication of foraging badgers looking for invertebrates.
- Clumps of soil over shallow holes (snuffle holes) often indicate where foraging badgers have dug out worms.
- Badger hair can commonly be found attached to fencing above badger paths, (particularly barbed wire), and each strand of fur has a distinctive shape and texture, easily identified as badger.

2.5.2 Results

Although the habitats surrounding the site , particularly the sloping hillsides and woodland, would appear ideal for badgers, no sett entrances, latrines, bedding, trails, or any other signs of badger activity were found.

2.6 Hedgehog.

2.6.1 Surveying for Signs of Hedgehog Activity.

- Hedgehogs are often difficult to detect, but finding their footprints is a good way of discovering if they are around. Both the front and back feet have five toes, though often only four toes show up on the tracks. The front feet are wider, and they look like little hands. The back feet are slimmer and longer and leave correspondingly narrower prints.
- Hedgehog droppings can vary in colour depending on the individual's diet, but are usually dark brown-grey or black. They are firm and typically packed with the exoskeletons of invertebrates, such as beetles. Often single dropping are found, and these are roughly cylindrical, and sometimes tapered. Droppings sometimes look like a dark slug on the grass. They range in length from 15-50mm.

2.6.2 Results.

During the survey, neither footprints nor droppings were found, however, their presence within the site could not be ruled out, as hedgehogs travel notable distances whilst foraging.

2.7 Birds.

2.7.1 Surveying for Signs of Nesting Birds.

- Birds collecting nest materials.
- Birds flying with food, seeds or insects in their beaks.
- An increase in bird song particularly at the start of the day.
- Actual nests – approach with caution if found.
- Bird warning calls if approached.
- Owl pellets, faecal splash or prey remains to suggest the presence of barn owl.
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2.7.2 Results.

Numerous birds were observed during the survey and these included goldfinch, house sparrow, dunnock, chaffinch, woodpigeon, wren, blackbird, jackdaw, and two soaring buzzards, however although the amount of birdsong would indicate either the setting up of territories, or actual territory calling, neither active or historical nests were found.

During the survey of the site, no owl pellets, faecal splashes, feathers or prey remains were found to suggest that any part of the site including its trees, were currently been used by barn owls**,** and it was deemed unlikely that the area would be used for roosting purposes due to negligible perching and roosting potential, and the proximity of potential human interference.

4. Conclusions.

4.1 In summary, at the time of the surveys (16th March 2020), no historic or current evidence of roosting bats was found, in any part of the hedgerows, shrubs or trees located within the site or around the site perimeter, (Refer to **Appendix 2**).

4.2 There were some bat roosting opportunities within the trees and shrubs within the site particularly those on the hillsides around the boundaries, and therefore, the site was deemed to offer low to moderate potential value for foraging bats, primarily pipistrelle species, but it was thought that small numbers of other species could be present, (refer to **Appendix 3**).

4.3 It was concluded that since there is currently no evidence of the presence of bat roosts within any part of the site, that the proposed development of the site and the construction of new buildings on the site, will not have significant implications on the population status of local bat species. There will not be requirement for an EPS mitigation licence (as issued by Natural England) but as a measure of best-practice, precautionary measures should be applied as described in section 5 below.

4.4 It was also concluded that since no evidence of roosting bats, or evidence of either recent or historic bat occupation had been found during the surveys carried out on 16th March 2020, and taking the time of the year into account, then a single visit to the site to carry out a daylight evidence and opportunity bat survey, was considered sufficient to assess the site, (refer to the 'Bat Worker's Manual' (JNCC 2004) and 'Bat Surveys – Good Practice Guidelines' (BCT 2016), paragraph 8.3.4).

4.5 Since bats, particularly Pipistrelles, are opportunistic, an absence of roost evidence elsewhere within the site, does not preclude the low possibility of small numbers of bats, using the site occasionally in the future and/or at other times of year. It is considered that the likelihood of a significant roost (such as a maternity roost) being established is very unlikely, with lone and/or transient roosting likelihood being negligible.

4.6 It was understood that there may be some future site clearance work carried out during the planned development, but that this will be kept to a minimum, and that the majority of the boundary woodland, around the site would probably be unaffected by the work. Also, as any planned development would not drastically alter the footprint of the site, and, as bats use linear features such as lines of trees or walls, as foraging, navigating and commuting routes, it was concluded therefore, that any small loss of the habitats and any future development works on the site, would not affect the overall foraging or commuting potential for bats in the area.

4.7 It was concluded from the results of the survey, that great crested news and other amphibians, water vole, badger, otter and hedgehog were all absent from the site, and the likelihood of their colonising the site in the foreseeable future was unlikely.

4.8 All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended) while they are breeding. There was potential for the woodland and shrubbery around the site, to be used by birds for both roosting and nesting purposes, but to the time of the survey, although some of the birds in the area were obviously setting up territories, but neither active or historical nests were found, (Refer to **Appendix 1**).

4.9 As no evidence of roosting barn owls was observed in any part of the site, it was concluded that barn owls do not use the site, either as a regular nesting roost, a breeding roost, or for foraging.

5. Recommendations.

5.1 The proposed changes to the site as laid out in the planning application, can commence with minimal risk to roosting bats other protected/notable species, or nesting birds.

5.2 The aim of any mitigation is to ensure that any work, is carried out in a manner that avoids either harm, or significant disturbance to both bats or nesting birds, also, to create new enhanced roosting opportunities, both during and after the development. A key issue in successful mitigation measures, is the scheduled timing of the works.

5.3 As a measure of best practice and in accord with a key principle of the National Planning Policy Framework (February 2019) (NPPF), and the Ribble Valley Borough Council Local Development Framework (LDF), and the Ribble Valley Core Strategy 2008-2028, it is recommended that the re-development scheme for this site, incorporates biodiversity enhancement measures, and an appropriate measure will be the installation of bat boxes. These can be attached to buildings within the site, or to any surrounding suitable trees. In connection with the development proposals, it is recommended that these measures are implemented to maximise the opportunities for wildlife at the site, (refer to **Appendix 6** for details).

5.4 If more than 12 months' elapses between this survey, and any commencement of building work, then the surveys must be repeated. These need to be carried out under weather conditions suitable for normal bat activity, and when bats are fully active (May to September but is weather dependent).

5.5 As there was good potential for both roosting and nesting birds in the trees, shrubs and hedges around the site perimeter, it is recommended therefore, that the all trees and areas of woodland, where possible be left untouched, to encourage future nesting, and to maintain navigation, foraging and commuting routes for bats.

5.6 It must be remembered however, that it is an offence to disturb active birds' nests. It is recommended therefore, that before any commencement of any tree or shrub clearance, and any new building work, that a careful survey looking for any evidence of nesting birds, is carried out. If evidence of an active bird's nest is detected, then the nest must be left undisturbed, until it is appropriately confirmed that the young birds have fledged. It is recommended therefore, to reduce any nest disturbance, that no activity involving people or their equipment, it is to be carried out within a 3m radius of active nests. If there is any doubt, please refer to the consultant. This guidance is applicable during the bird breeding season which typically extends from March to August inclusive.

5.7 It is recommended, that a mixture of open-fronted "robin type" wooden nest boxes and hole fronted "tit type" nest boxes are erected around the site. These are to be erected to mitigate for potential loss of nesting opportunities, during, and after the development, to encourage and enhance future colonisation and nesting of bird species. These wooden nesting boxes can be easily constructed, and should be erected as soon as possible around the site, (refer to **Appendix 7** for details).

5.8 It is also recommended that, if any of the trees or shrubs around the site perimeter is removed, pruned or disturbed during building works, then all clearance and disturbance should be undertaken outside the hedgehog hibernating months, November to mid-March. If this is not possible, a suitably experienced ecologist must be present, to oversee all vegetation removal, to ensure that no hedgehogs are disturbed whilst hibernating (Hedgehogs are a UK BAP Priority species).

5.9 Close boarded fences with concrete bases are barriers to animal movement, and It is recommended, that any new perimeter fences along the boundaries are not to be sealed at their bases. Where possible, hedgerows are to be used instead, with timber post and wire fencing also serving to enforce boundary lines, without prohibiting wildlife movements. If any boarded fences

are required, it is recommended that there is a 3 – 5cm gap between the wood and the ground, (greater in some locations and less in others is not a problem) so that wildlife such as hedgehog and amphibians can pass into and out of the garden.

5.10 No hole or pit should be left uncovered over-night, to ensure that wildlife such as amphibians or hedgehogs are not trapped, and unable to escape. Alternatively, a broad wooden plank or similar can be placed in the excavation to allow animals to escape. A scaffolding board pitched at a maximum 45° angle would be ideal.

5.11 During the development, all excavations should be checked first thing each morning, prior to the start of works that day. Any animals found within excavations should be allowed to escape and move off, or carefully removed and placed within suitable habitat cover before site works commences for the day.

5.12 Outdoor lighting is typically a deterrent to wildlife, especially bats and nesting birds, it is therefore recommended, that any future outdoor lighting, installed during the proposed development, be screened, hooded or positioned low at bollard level so that it does not illuminate the roof or eaves, or nearby trees and shrubs.

5.13 To enhance the site's value for wildlife, it is recommended that tree planting is planned as part of the development, and that the trees used are all British native trees as far as is possible. These trees are more likely to attract insects and are therefore beneficial to foraging bats and other wildlife. Suitable species include: Hawthorn, Hazel, Rowan, Wild Cherry, Guelder Rose, Holly and Crab Apple. These have been chosen for their attractive blossom and fruits. Oak, Silver Birch, Alder, Ash and Willow species are recommended away from buildings and drains.

5.14 It should be remembered that bats are occasionally found in the most unexpected places. If any bats are found during unsupervised work, the consultant (07745 268815) or the Bat Conservation Trust (0345 1300 228), should be notified and work stopped immediately.
Failure to do so would be a criminal offence.

6. Survey Constraints

Surveying for protected/notable species such as bats, badgers, hedgehog, great crested newts and water vole, at a specific season of the year, does not provide complete information of use of the site by them at other times of the year. The current survey was undertaken at the end of winter, and reflects past activity, and whilst consideration may be given to occupation at other times of the year, there may be no evidence for activities outside the survey period.

As bats can utilise very small cracks and crevices, it is not possible to completely discount their use of some of the trees and shrubs around the site, although the survey did not identify any evidence of use. Assessments can however be made of potential use from the survey findings collected, but it may not provide a full picture of site usage.

Small bat roosts and single roosting bats can easily be overlooked. They can be difficult to detect during inspection, as they leave few field signs which can easily be missed during surveys. External signs e.g. droppings, prey remains etc., are also subject to weather and rain, which can often remove the signs prior to an actual survey. This is particularly valid when inspecting trees and shrubs.

The timing of the survey was outside the optimum season for surveying habitat types and invasive non-native weeds may be undetectable, however, evidence of previous seasons growth was recorded where possible as there were no other constraints for this.

7. References

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8. Surveyors Qualifications

The surveyor Mike Fisher is a holder of Natural England Class Licence Registration Number: 2015-10595-CLS-CLS, this is the Bat Survey Level 2 Class Survey Licence WML CL18, and Natural England Class Licence Registration Number: 2015-10592-CLS-CLS which is the Volunteer Bat Roost Visitor Level 1 Class Survey Licence WML CL15.

The surveyor also has a licence to disturb and take bats for scientific, educational or conservational purposes by Countryside Council for Wales (Licence Number S085859/1).

9. Plans & Photographs

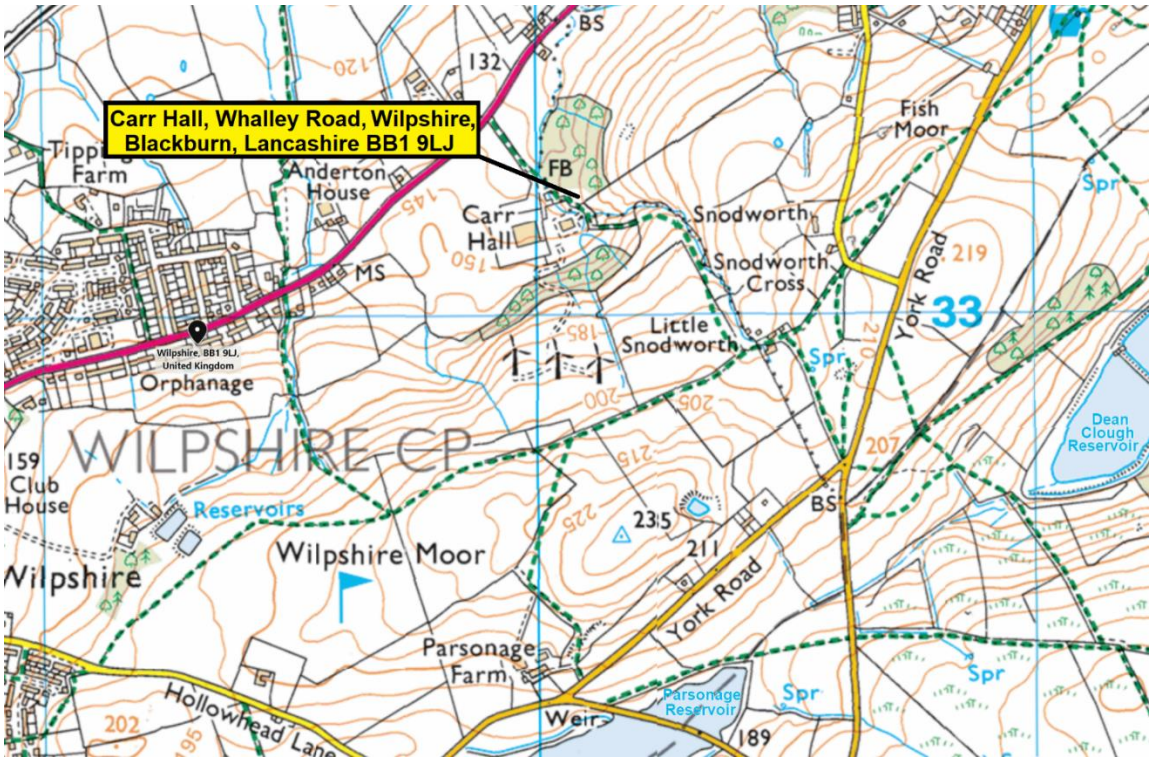

Fig 1 - The Site Location

Fig 2 – Google Plan

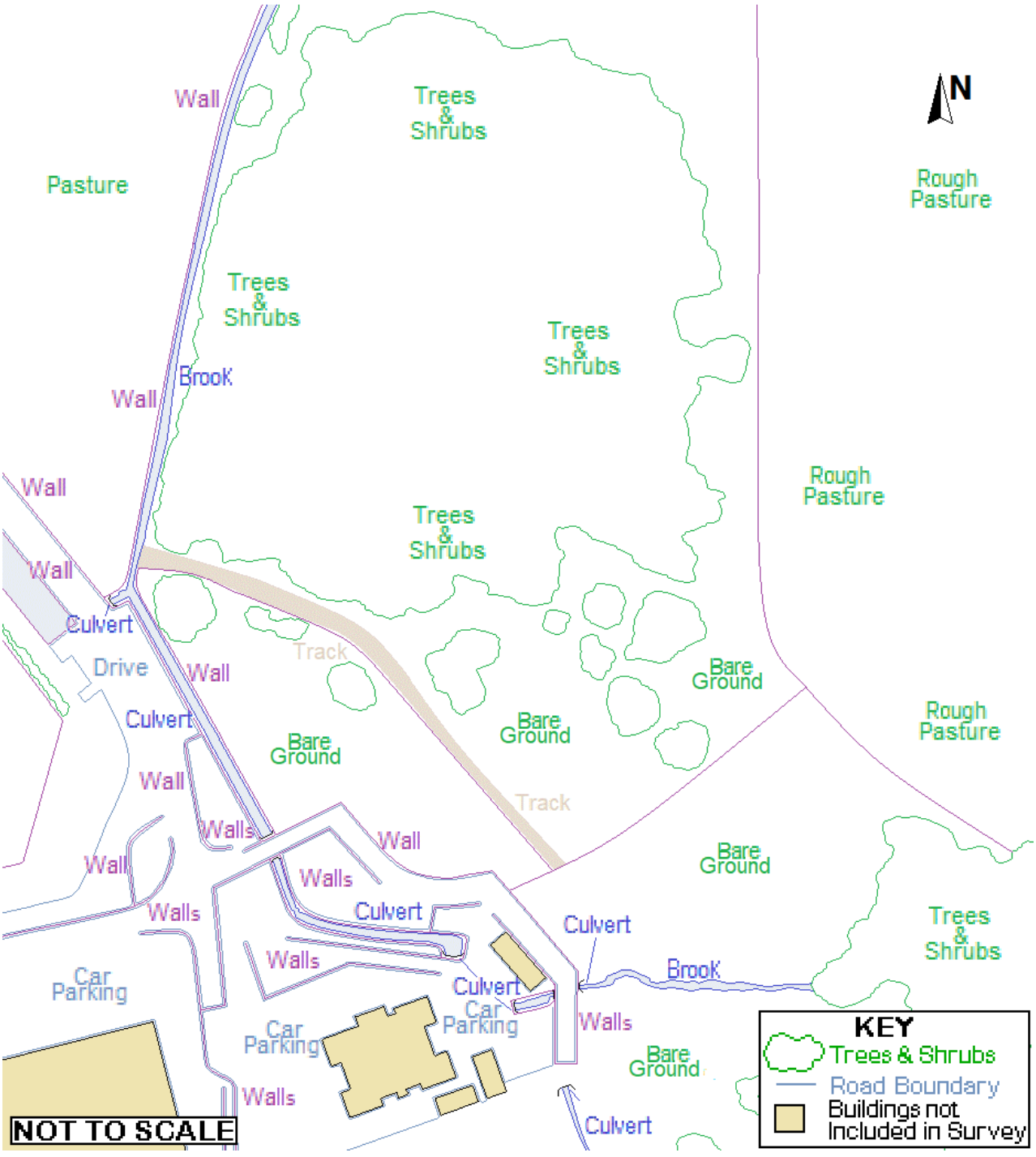

Fig 3 – Main Plan
Showing the local area and habitats

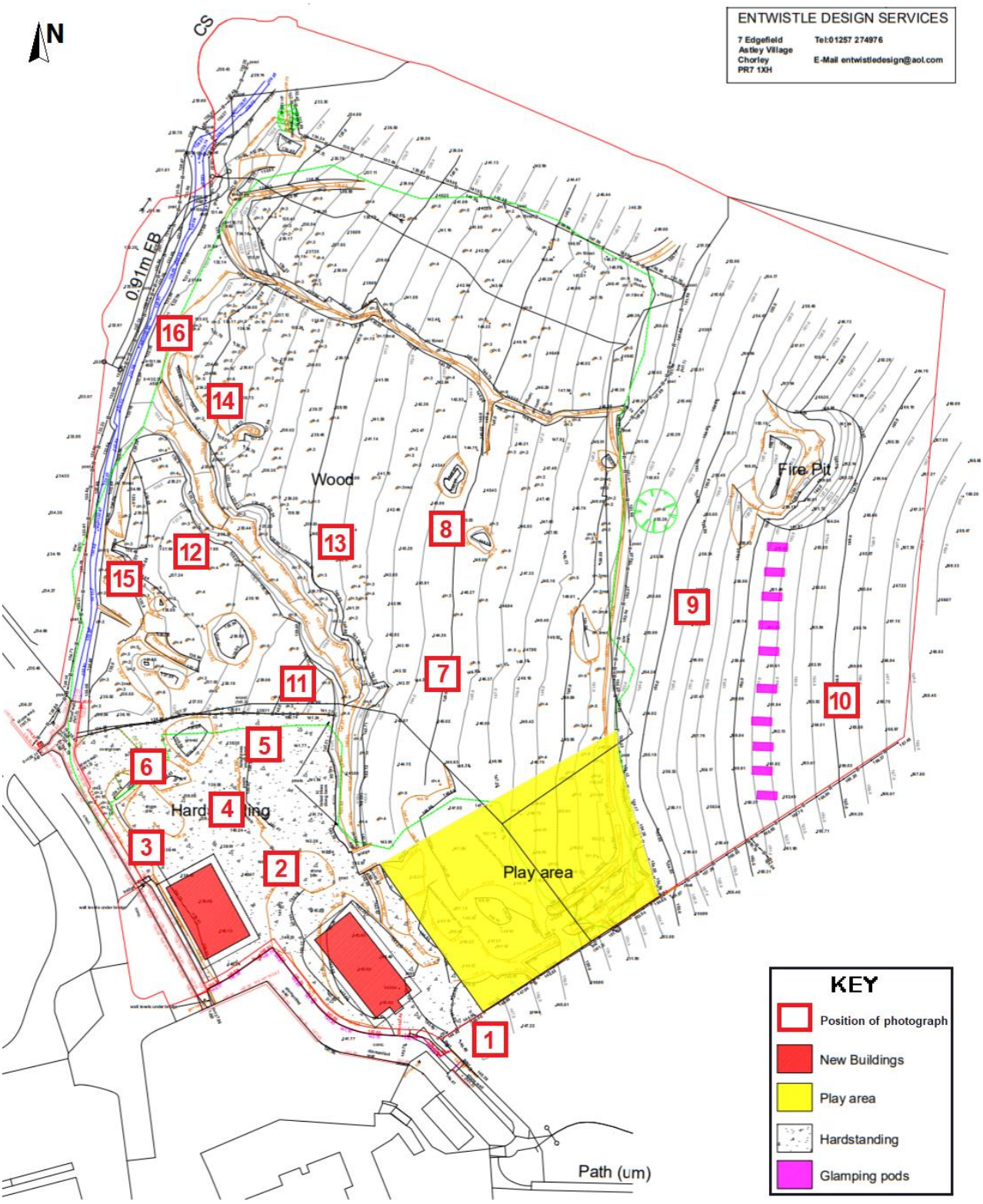

Fig 4 – Topographical Plan of Photos

PHOTO 1
Central Culvert.

PHOTO 2
Central Area of Rough Ground.

PHOTO 3
Northern Culvert.

PHOTO 4
North-western Area of Rough Ground.

PHOTO 5
Northern View Along Rough Ground.

PHOTO 6
North-western Corner of Site.

PHOTO 7
Central Area of Site.

PHOTO 8
View Towards Eastern Ridge.

PHOTO 9
North-eastern Corner of Site.

PHOTO 10
View of North-eastern Woodland.

PHOTO 11
View of Ditch.

PHOTO 12
Northern End of Ditch.

PHOTO 13
View Along Ditch.

PHOTO 14
Western End of Ditch.

PHOTO 15
View of Northern Culvert.

PHOTO 16
Northern Brook.

26th March 2020
Mike Fisher, Bat Worker
Holder of Natural England Bat Roost Licence

Disclaimer.

All reasonable effort has been taken to ensure an accurate assessment of the birds and bats at this site. The absence of recorded presence or sign should not be taken as an absolute guarantee that a site is not being used by a particular species. There is also no guarantee that any particular species will not use the site at any time in the future. Survey results for both bird and bat activity may be weather or seasonally dependent. Any interpretation of legislation is based on our understanding and experience of the law. The relevant statutory authority can provide a more definitive interpretation.

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APPENDIX 1: Synopsis of Relevant Legislation

Wild Mammals (Protection) Act 1996. England, Wales and Scotland Law 1996.

General Description:
This Act makes it an offense for any person to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

Exemptions apply when:

- the attempted killing of any such wild mammal as an act of mercy if he shows that the mammal had been so seriously disabled otherwise than by his unlawful act that there was no reasonable chance of its recovering.
- the killing in a reasonably swift and humane manner of any such wild mammal if he shows that the wild mammal had been injured or taken in the course of either lawful shooting, hunting, coursing or pest control activity.
- doing anything which is authorised by or under any enactment.
- any act made unlawful by section 1 if the act was done by means of any snare, trap, dog, or bird lawfully used for the purpose of killing or taking any wild mammal; or
- the lawful use of any poisonous or noxious substance on any wild mammal.

A "wild mammal" means any mammal which is not a domestic or captive animal within the meaning of the Protection of Animals Act 1911 or the Protection of Animals (Scotland) Act 1912. A person guilty of an offence under this Act shall be liable on summary conviction to a fine not exceeding level 5 on the standard scale, or a term of imprisonment not exceeding six months, or both. Additionally, provided that where the offence was committed in respect of more than one wild mammal, the maximum fine which may be imposed shall be determined as if the person had been convicted of a separate offence in respect of each such wild mammal.

Bats and the Law

In Britain, all bat species and their roosts are legally protected, by both domestic and international legislation.

This means you will be committing a criminal offence if you:
Deliberately capture, injure or kill a bat
Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat
Intentionally or recklessly obstruct access to a bat roost.

Licensing

Licenses to permit illegal activities relating to bats and their roost sites can be issued for specific purposes and by specific licensing authorities in each country. These are sometimes called 'derogation licenses' or 'European Protected Species' licenses and are issued under the Habitats Regulations. It is an offence not to comply with the terms and conditions of a derogation Licence. If you carry out work affecting bats or roosts without a Licence, you will be breaking the law.

Who needs to take particular note of the legislation?

Property owners/householders who have a bat roost in their property.
Woodland owners, arboriculturalists and foresters.
Pest controllers.
Planning officers & building surveyors

Architects, property developers, demolition companies, builders and roofers.

Which legislation is relevant for bats and roosts?

In England and Wales, the relevant legislation is the Wildlife and Countryside Act (1981) (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2010).

In Scotland, the key legislation that applies is the Conservation (Natural Habitats &c.) Regulations 1994 (as amended).

In Northern Ireland bats are listed under Schedule 2 of the Conservation (Natural Habitats etc) Regulations (Northern Ireland) 1995 and in the Republic of Ireland, under Schedule 5 of the Wildlife Act 1976 and Schedule 1 of the European Communities (Natural Habitats) Regulations 1997.

Defences include:

Tending/caring for a bat solely for the purpose of restoring it to health and subsequent release
Mercy killing where there is no reasonable hope of recovery, (provided that person did not cause the injury in the first place - in which case the illegal act has already taken place).

Penalties on conviction –

People committing bat crimes can face six months' imprisonment and/or unlimited fines. Additionally, any profits made as a consequence of not following lawful process can be confiscated and items used to commit the offences such as vehicles, plant or machinery can be forfeited.
Under National Planning Policy Framework (2012), it is recommended that the re-development scheme for any site, protected species, such as bats should be a material consideration in planning applications. This has implications for bat foraging areas as well as their roosts.

The National Planning Policy Framework (NPPF) places a clear responsibility on Local Planning Authorities to conserve and enhance biodiversity and to encourage on the consideration that should be given to Protected Species where development may affect them.

The Office of the Deputy Prime Minister (ODPM) Circular 06/2005 provides administrative guidance on the application of the law in relation to planning and nature conservation. This is supported by a guide to good practice entitled 'Planning for Biodiversity and Geological Conservation: Building in Biodiversity' in which paragraphs 5.34 and 5.35 identify that species such as bats are highly dependent upon built structures for survival and that roosts can be easily incorporated into existing and new developments/conversions to benefit these species.

Badgers and the Law.

The main legislation protecting badgers is the Protection of Badgers Act 1992. This Act consolidates all previous legislation including the Badgers Act 1973 (as amended) and the Badgers (Further Protection) Act 1991.
This means you will be committing a criminal offence if you:

Under the 1992 Act it is an offence to:

- willfully kill, injure, take or attempt to kill, injure or take a badger.
- possess a dead badger or any part of a badger.
- cruelly ill-treat a badger.
- use badger tongs in the course of killing, taking or attempting to kill a badger.
- dig for a badger.
- sell or offer for sale or control any live badger.

- mark, tag or ring a badger.
- interfere with a badger sett by:
- damaging a sett or any part thereof.
- destroying a sett.
- obstructing access to a sett.
- causing a dog to enter a sett.
- disturbing a badger while occupying a sett.

The term ‘badger sett’ is normally understood to mean the system of tunnels and chambers, in which badgers live, and their entrances and immediate surrounds. The 1992 Act specifically defines a sett as “any structure or place which displays signs indicating current use by a badger”. Interference with a sett includes blocking tunnels or damaging the sett in any way.

1992 Act: powers of sentence

- up to six months’ imprisonment or a fine at level 5 or both. The fine may be multiplied by the number of badgers.
- forfeiture of any badger or skin relating to the offence or any weapon or article used.
- order destruction or disposal of dogs.
- disqualification for having custody of a dog.

Badgers are also listed on Schedule 6 of the Wildlife and Countryside Act 1981 and s11 prohibits the use of certain methods of taking or killing a wild animal, including illuminating devices and some snares.

Other legislation relevant to badgers (and to dogs which may be used in badger offences) includes the Protection of Animals Act 1911 and the Abandonment of Animals Act 1960. Offences include causing unnecessary suffering, or abandoning in circumstances likely to result in such suffering, and fighting or baiting animals. The sentence under this Act is a fine at level 5 or imprisonment up to six months; confiscation or destruction of dogs and a ban on keeping animals.

The Powers of Criminal Courts Act 1973 (s.43) allows the forfeiture of property used, or intended to be used, to commit or facilitate the commission of any offence, including dogs.

There are powers of arrest only for cruelty to, or abandonment of, domestic or captive animals under the 1911 Animals Act, or if the general arrest conditions apply (s.25 of PACE, 1984).

The Control of Pesticides Regulations 1986 prohibit the use of unapproved products to deter or kill animals, including badgers. The only repellent approved currently for use to deter badgers is Renardine. If used at the sett, rather than on lawns, for example, a licence is required, as set out b**elo**w, otherwise there will be an offence of sett interference.

Otters and the Law

The Eurasian otter is the only native UK otter species. It’s fully protected as a European protected species (EPS) and is also protected under sections 9 and 11 of the Wildlife and Countryside Act 1981.
You’re breaking the law if you:

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

If you’re found guilty of an offence you could get an unlimited fine and up to 6 months in prison.

Hedgehogs and the Law.

Hedgehogs are protected by British law under Schedule 6 of the Wildlife and Countryside Act 1981, making it illegal to kill or capture them using certain methods. Similar protection exists in Northern Ireland under Schedule 6 & 7 of the Wildlife Order 1985. They are also protected in Britain under the Wild Mammals Protection Act (1996), prohibiting cruelty and mistreatment.

They're listed as a Species of Principle Importance in England under the Natural Environment and Rural Communities (NERC) Act 2006 Section 41, in Wales under the Environment Act 2016, and in Scotland under the Nature Conservation Act 2004. Similarly, hedgehogs are on the Priority Species List for Northern Ireland.

Additionally, hedgehogs are on the Scottish Biodiversity list as 'Watching Brief Only' requiring monitoring to prevent decline.

These laws make hedgehogs a material consideration for Local Planning Authorities (LPAs) during the planning process.

Developments should also be consistent with Local Plans (LPs) and Neighbourhood Area Plans (NAPs), some of which may explicitly refer to hedgehog conservation and connectivity of the landscape.

Water Vole and the Law.

The water vole is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 and is a priority conservation species.
You're breaking the law if you:

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

If you're found guilty of an offence you could get an unlimited fine and up to 6 months in prison

Great Crested Newts and the Law.

Great crested newts and their habitat (aquatic and terrestrial) are afforded full protection by the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010.

You may commit a criminal offence if you:
• Deliberately, intentionally or recklessly kill, injure or capture GCN
• Deliberately, intentionally or recklessly disturb GCN in such a way to be likely to significantly affect: - their ability to survive, breed, reproduce, rear or nurture their young - their ability to hibernate or migrate - their local distribution or abundance
• Deliberately, intentionally or recklessly take or destroy the eggs of GCN • Damage or destroy breeding sites or resting places of GCN
• Intentionally or recklessly disturb sheltering GCN, or obstruct access to their resting place
• Keep, transport, sell or exchange, or offer for sale or exchange any live or dead GCN, any part of GCN or anything derived from GCN

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

Breeding Birds and the Law.

All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended), whilst they are actively nesting or roosting. Section 1 of this Act, makes it an offence to kill, injure or take any wild bird, and to intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built. It is also an offence to take or destroy any wild bird eggs.

Barn Owl and the Law.

Barn owls are listed on Schedule 1 of the *Wildlife and Countryside Act 1981* which gives them special protection.

It is an offence, with certain exceptions, to:

- Intentionally kill, injure, or take (handle) any wild barn owl.
- Intentionally take, damage or destroy any wild barn owl nest whilst in use or being 'built' (barn owls do not 'build' a nest but may make a nest scrape.
- Intentionally take or destroy a wild barn owl egg.
- Have in one's possession or control a wild barn owl (dead or alive), or egg, (unless one can show that it was obtained legally).
- Intentionally or recklessly disturb any wild barn owl whilst 'building' a nest or whilst in, on, or near a nest containing eggs or young.
- Intentionally or recklessly disturb any dependent young of wild barn owls.

APPENDIX 2: Bat Roost Potential

Guide to bat roost assessment categories in built structures based on Table 4.2 in the BCT Bat Survey good practice guidelines (Hundt, 2012).

Category Description	Indicators
Confirmed Roost	• Sighting/hearing of bats (including emergence). • Fresh or old droppings.
High potential to support bat roost(s)	• Numerous or high potential roosting features that are not exposed to the elements: crevices deeper than 100mm, width 15-70mm: • Un-obstructed flyways. • Low disturbance levels. • Situated within or near to woodland, parkland or next to water bodies, buildings (i.e. potential foraging and roosting habitat). • Well connected to wider landscape through presence of continuous linear features such as hedgerows, watercourses, farm-tracks etc.
Moderate potential to support bat roost(s)	Some of the above features but considered to be less suitable on account of age, location and disturbance levels.
Low potential to support bat roost(s)	• Limited suitable roosting features. • Exposed roosting features e.g. open to wind/rain. • High levels of regular disturbance e.g. from lighting. • Isolated from suitable foraging habitat & commuting features.
Negligible potential	No features with bat roost potential recorded

APPENDIX 3: Bat Tree Assessment Criteria

Criteria for Assessment of Trees in accordance with Category 1 to 3 as defined in Table 8.4 of *Bat Surveys: Good Practice Guidelines 2nd Edition* (Hundt, L. 2012).

CATEGORY	DESCRIPTION	CRITERIA
Known or Confirmed	Confirmed roost	Confirmed roost Evidence found that indicates tree/tree features are being used by bats. Droppings found at the base of the tree, below a cavity. Bats heard 'chattering' inside a feature on a warm day or at dusk Bat(s) observed flying from or to a feature.
1*	Very high value	Trees with multiple, highly suitable features capable of supporting larger roosts. Features of particular significance, suitable for high priority roosts such as maternity roosts, used by large numbers of bats, offering conditions that are uncommon or rare in the local area. Features such as large cavities, extensive branch or trunk splits, also including multiple features in the same tree that offer a diversity of opportunities. Features may also include dense ivy.
1	High value	Trees with definite bat potential supporting fewer suitable features than category 1* trees or with potential for use by single bats. Features which provide a more secure form of roost for small groups of bats and individuals, but may still be quite common types of feature, such as small cavities, minor splits or sparse ivy cover.
2	Moderate value	Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats. A tree which on close inspection the potential roost positions are in some way not ideal. They could be upward facing or holes very low down or cluttered by adjacent branches.
3	Low/Negligible value	Trees that have no features which could be used by bats for roosting (Usually young trees).

APPENDIX 4: Planning Considerations

When considering each planning application, the presence of protected species, such as those listed above, is a material consideration which must be fully considered by the Local Authority when granting planning permission. If a licence from Natural England is required, then prior to issuing any planning consent, the local planning authority will need to be satisfied that there is no reason why such a licence would not be issued. Therefore, in reaching the planning decision the local planning authority will need to have regard to the requirements of the Conservation of habitats and Species Regulations 2010.

The three licensing tests given in the Regulations must be considered. In summary, these are that:

1. The development is required for the purpose of:

- preserving public health or public safety,
- for other imperative reasons of over-riding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.
- for preventing serious damage to property.

2. There is no satisfactory alternative.

3. The proposal will not be detrimental to the maintenance of the population of the species at a favourable conservation status.

All necessary information would need to be provided to the planning authority as part of the planning application in order to address the above tests.

The Natural Environment and Communities Act (NERC Act) 2006 extended the biodiversity duty set out in the Countryside and Rights of Way (CROW) Act to public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity. The Duty is set out in Section 40 of the Act, and states that:

"Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity"

The Duty applies to all local authorities, community, parish and town councils, police, fire and health authorities and utility companies. Section 41 (S41) of this Act (the 'England Biodiversity List') also requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. This list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40(1) of the Act.

Also, Local Authorities must follow the National Planning Policy Framework (NPPF) which provides guidance on the interpretation of the law in relation to wildlife issues and development. For each development proposal considered by the Local Planning Authority the NPPF states that the authority must aim to conserve and enhance biodiversity. If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

APPENDIX 5: Bats: What to do should bats be found during building work

All of the UK's bats and their roosts, are protected by law, (see Appendix 1), so it is important to understand these laws**,** if you are planning any building or remedial work that may affect or disturb a bat roost. The relevant statutory authority should be initially contacted for advice**.**

Having bats roosting within a building, does not necessarily mean that work cannot be carried out. What it does mean is that the work will need careful consideration, especially in terms of time and materials, so that the area can continue to be used by both bats and people. Therefore, the earlier in the process the bats are taken into account, the less disruption to building plans there will be.

If at any point during either new building work, renovation work, or demolition, one or more bats are found, then all work being undertaken by contractors should stop immediately. All working machinery and contractors should be removed from the area where the bats have been found, and advice sought immediately from one of the following, on how to proceed while causing minimal disturbance to bats.

Advice can either be provided by a professional licensed ecological consultant - Echo Calls Bat Surveys on 07745 268815, the Bat Conservation Trust on 0345 1300 228, or from your Statutory Nature Conservation Organisation (SNCO) , or from Natural England on 01270 754 000.

Depending on the advice given, a licensed bat worker, or suitably qualified Natural England approved representative, will then be sent to site to liase with the site manager, and Natural England itself. Depending on the advice given, actions will be recommended that may include the safe removal of the bat by the nominated person, only where written or verbal permission has been gained by Natural England.

Works will recommence when Natural England are satisfied that the risk to bats has been removed. If, however, it is determined that the proposed work on site contains more risk to bats than was originally thought, then it is probable that further work will only proceed, under a Natural England Development Licence.

If a bat is found under a tile, slate, flashing or any other covering material, work must stop immediately. If the bat does not fly out immediately, then the area around the roost must be carefully covered over, to protect the bat from the elements and further disturbance, leaving a small gap for bats to escape voluntarily. At this point, advice must be sought as mentioned above. The materials used to cover the occupied bat roost, must be free from liquid, oil, grease and other contaminants.

It is recommended that the handling of bats be avoided wherever possible, but if it absolutely necessary, then to avoid a bat being harmed, gloves must be worn whilst handling the bat. It should be carefully caught, placed in a cardboard box with air holes in the lid, and a small container containing water. The box should then be kept in a very quiet, dark area, away from further disturbance, whilst awaiting the arrival of the licensed bat worker, or Natural England approved representative.

Failure to do any part of this could result in a criminal offence.

APPENDIX 6: Bats: Types of Bat Box.

The aim of any mitigation is to ensure that any work is carried out in a manner that avoids harm or significant disturbance to bats, and also to create new roosting opportunities for bats both during and after the development.

Schwegler 1FD boxes are to be erected to larger trees located along the edges of the site. This type of bat box is a “general all-rounder” and is suitable for all types of bats.

These boxes are to be erected as recommended by the Bat Conservation Trust guidelines which state that

- Ideally, erect the boxes facing so they face in different directions, to provide a range of temperature conditions. For example, boxes facing from south-east to south-west allow the sun to fall on each box for part of the day. During very hot days a south-facing box may overheat, but the other boxes should have some shade during the day.
- Bat boxes should be located close to a linear vegetation feature such as a tree line or hedgerow or to lines of buildings. Some bat species use these features for navigation between their roosting site and feeding ground and to avoid flying in open and exposed areas.
- Ensure that tree branches or other items will not impede the bats’ approach to the box – clear away underneath the box so the bats can land easily before crawling into the box.
- Boxes should be erected at a height of approximately 4m above ground level

Schwegler 1FD Bat Box

This Schwegler 1FD bat box has been developed specifically for smaller bats. The interior and the type and size of the entrance hole match the requirements of smaller species. It features a special layout inside the domed roof, an increased interior height, and two grooved internal wooden front panels with precise spacing between them.

This model has proved highly effective as a nursing area.

Occupants: Small bats such as the Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Daubenton`s Bat (Myotis daubentonii) and Common Long-eared bat (Plecotus auritus).

APPENDIX 7: Nesting Birds: Mitigation and Compensation Measures.

Birds are declining throughout the country due to loss of roost and nesting places, and as the development may disturb both robin, swallow and wren nesting potential on the site, artificial nests are to be erected to compensate for this possible loss. The erection of artificial nests around the complex, will provide alternative sites for all three species of bird, and make a positive contribution to their conservation.

The robin, with its signature red breast and tuneful song, is one of the UK's best-loved birds. Often seen perched on fence posts or spade handles, these birds are far from shy and are regular visitors to British gardens. They are also fiercely territorial, guarding their patches all year round and singing loudly to proclaim their area.

Robins are famous for nesting almost anywhere. but usually nest on or close to the ground, in log piles, hollows in tree trunks, hedges and any other tight spaces they come across. They favour quiet areas where they are not likely to be disturbed. Nests are built by the female robin, using grass, dead leaves and moss. The nests are often lined with hair.

Making a nestbox suitable for robins and other box builders

What you need

Natural nest holes do not come in standard sizes, so use these dimensions only as a guide. Any plank or sheet of about 15 mm thick weatherproof timber is suitable. However, do not use CCA pressure-treated timber, since the leachates may harm birds. Cut each section as per our plan, which you can download by clicking on the link to the right.

Dimensions

The plan gives measurements for a small and a large box. Use only the first or the second figure throughout. For starlings and great spotted woodpeckers, use the dimensions for the large box; all the others need the small one.
The bottom of the entrance hole must be at least 125 mm from the floor of the nestbox. If it's less, young birds might fall out or be scooped out by a cat. The inside wall below the entrance hole should be rough to help the young birds to clamber up when it's time for them to leave.

Putting it together

Drill drainage holes to the base of the box, and use galvanised nails or screws to assemble. It's always best to leave the box untreated. As it weathers, it will blend into its surroundings. Softwood boxes can be treated with selected water-based preservatives, which are known to be safe for animals, such as Sadolin. Apply it only to the outside of the box, and not around the entrance hole. Make sure the box dries and airs thoroughly before you put it up.
A woodpecker box should be filled with a block of balsa wood, rotting log or wood chips – woodpeckers like to excavate their own nesting cavities.
Do not nail down the lid, since you will need to clean out the box in the autumn. Attach the lid with a brass or a plastic hinge that will not rust, or hinge it with a strip of leather or rubber (an old piece of bicycle inner tube will do). Fasten it down with a good catch.

How big does the hole need to be?

The entrance hole size depends on the species you hope to attract:
25 mm for blue, coal and marsh tits
28 mm for great tits, tree sparrows and pied flycatchers
32 mm for house sparrows and nuthatches
45 mm for starlings

The small box with 100 mm high open front may attract robins, or pied wagtails. A wren would need a 140 mm high front panel, while spotted flycatchers and blackbirds prefer a low 60 mm front to the box.