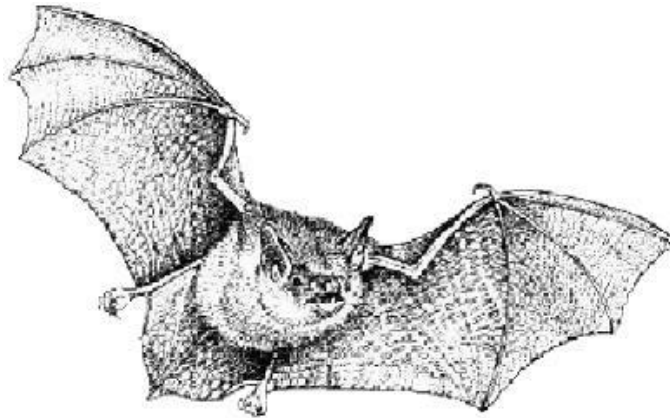


**Chicken Shed,
Higher Moorgate Cottage,
Gristlehurst Lane, Heywood,
Manchester.
OL10 4BJ**

**Survey & Assessment in Respect of Bat Species
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

12th March 2022

1. Introduction.

1.1 Reason for Survey.

As a condition of the planning permission process to develop the site, a daytime evidence and opportunity bat survey, and a nesting bird survey (including barn owl), were requested, on the targeted chicken shack, and any trees, shrubs, and hedgerows within the site boundaries. The purpose of these surveys was to provide evidence on habitats, and protected species, within the site boundaries, as part of the Local Development Framework (UDP Policy EN9).

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 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 site was located centrally along the western edge of a long drive connecting the Higher Moorgate Cottage complex to Bury and Bolton Road to the south, and Gristlehurst Lane to the north, in the Heywood area of Manchester. It consisted of a large, detached barn with an attached lean-to within its own plot of land. The buildings and adjoining land from now on are referred to as either the “site” or the chicken shack, at OS grid reference: SD 84475 12145, (refer to **Fig 1 - The Site Location**).

1.4 The Buildings.

There was a large, detached barn with an attached lean-to extension positioned within a sizable area of land.

1.5 Surrounding Land.

The targeted chicken shack was positioned within its own site and was orientated in a south-west to north-easterly direction. The immediate area consisted of a fenced off, overgrown area of concrete hardstanding. With areas of rough pasture spreading away from the site to the north, the west, and the south, with the individual fields bordered by mostly fencing, and a few isolated immature trees.

Further west approximately 0.14 km away from the site was a shelterbelt of mature trees and shrubs, running in a north to south direction, and containing a shallow brook, and with the fields and buildings belonging to a farm complex beyond this to the west.

Bury and Rochdale Old Road ran from east to west, approximately 0.09 km to the south of the site, whose edges were tree-lined, and with several cottages and their gardens along the road’s southern edge, and some lines of trees and open pasture further south.

To the east of the chicken shack across the driveway, was an area of rough pasture bordered by fencing, and with lines of mature trees running to the north-east along the drive's eastern edge. Whilst to the north-east were further buildings belonging to the Higher Moorgate Cottage complex with some trees and hedgerows around them, and further areas of rough pasture beyond to the north-east.

In the surrounding fields there were a few ephemeral ponds and drainage ditches, the nearest pond was approximately 0.07 km to the east of the site. Also, some way from the site, Tach Leigh Brook meandered from the north-west in a south-easterly direction before flowing into the River Roch, lying approximately 0.47km to the south-west at its nearest point.

Other than the above mentioned features, there were no other large areas of open water, or areas of mature woodland within the nearby area, (refer to **Fig 1 – The Site Location**, **Fig 2 – Google Plan**, **Fig 3 – The Area Plan**, **Fig 4 – Plan of Photographs**, and **Fig 5 – Plan of Daylight Evidence and Opportunity Survey Results**).

2. Methods

2.1 Risk Assessment, Possible Hazards.

Most of the required access to the targeted building within the site was relatively easy, and most perimeters of the building could be searched with ease, however the southern elevation of the building had trees growing very close to the wall, and therefore this elevation could only be partially searched. Internal access was also possible with care. All parts of the building were in a poor rundown condition, but there were no more hazards, other than those normally associated with surveying both the inside and outside of these types of building.

2.2 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.

2.3 Daylight Evidence and Opportunity Survey.

The current daylight evidence and opportunity survey took place on 2nd March 2022, and was carried out in order to assess the site, and search for evidence of bat occupation (including recent and historic use).

It comprised a search for bats, bat droppings, urine stains, 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, and at the same time looking for evidence of nesting birds, active nests and feathers.

Areas within the targeted buildings searched were:

- Outside, the eaves and walls for signs of potential bat access holes, the ground, windowsills, and any other surfaces, such as low roofs or building materials, which may occur underneath

the eaves, and any plants or shrubs around the perimeter of the building, which may catch bat droppings.

- Inside the buildings, in roof voids, on floors, roof trusses, door lintels, window ledges, or on piles of debris, also in spider's webs and other places where droppings or prey remains may collect. Also, noting any noises such as scratching and squeaking which may be made by roosting bats.

The optimum time to investigate buildings for evidence of a bat roost, is between May and September, however, this can sometimes be earlier or later in the year, and is weather and temperature dependant.

Evidence and opportunity inspections and assessments may be conducted outside of this time, and can often provide conclusive results, which can save expense and time for Planning Applicants.

The habitats and any trees surrounding the site, were assessed for their suitability for use by foraging and commuting bats.

The search also included a search for evidence of current barn owl use such as pellets, faecal splashes and feathers, and evidence of other nesting bird species was also sought and recorded.

All habitats were assessed for their value for use by nesting birds particularly barn owls.

All evidence of current or previous nesting bird species observed during the survey, was recorded (including barn owl).

2.4 Equipment

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

3. Results

3.1 Daylight Survey

3.1.1 Weather

Although there had been some light rain earlier in the day, the weather conditions at the start of the survey on 2nd March 2022 were reasonable. It was cloudy with a light breeze, (Beaufort Scale 2/3), and with a temperature taken at the start of the survey of 6°C. conditions were suitable for a survey of this type.

3.2 Possible Roost Sites

3.2.1 The Buildings

The Chicken Shack

The chicken shack was located close to the south-western edge of the main drive, and it consisted of two parts, the main building and an attached lean-to.

The main building was a tall, single-story barn, constructed from concrete block, with a pitched roof covered in metal corrugated sheeting, mounted upon wooden purlins and trusses, but there was no roof void.

Attached externally along the northern elevation was a triangular sectioned lean-to, constructed from similar materials as the main building, and with a sloping roof covered in a mixture of clear plastic and metal corrugated sheeting, all mounted upon wooden purlins and trusses, but again with no roof void.

The chicken shack was unused and in a very poor condition. It was unheated, uninsulated, and would be draughty, damp and cold throughout most of the year, and as such, was deemed unsuitable for breeding bats. Also, as frost and bad weather was likely to penetrate the interior of the shack in the colder months, it was felt that the building did not offer the optimum humidity, and stable low temperatures that are required by hibernating bats. The resulting conclusion was that the building was deemed to offer extremely low roosting potential for bats of any type. It was also thought that copious amounts of daylight would enter into the inside of the barn and lean-to through the large open areas in both the structure, and through the clear corrugated roof panels, and this would further reduce the internal dark corners that are essential for daytime roosting bats, (refer to **Appendix 2**), (refer to **figs 3, 4 and 5**, and **photos 1 to 15**).

There were potential bat access points however and these were:

- The north-eastern elevation of the lean-to was completely open, as was the main doorway within the eastern elevation, but during a careful internal search of the main building and the lean-to, the walls, the floor together with the accumulated piles of debris, found neither droppings, invertebrate prey remains, or any other form of evidence of bat occupancy was found, and the interior of the building was deemed to offer low roost suitability, (refer to **figs 3, 4 and 5** and **photos 1 to 4**).
- Two vertical cracks were found, one either side of the eastern gable, and also there was a line of holes at the top of the wall, just beneath the line of the south-eastern roof, all offering potential for bat use, and these were all internally inspected using an endoscope. Also, a visible search of the wall and floor beneath them, found neither droppings, urine staining, invertebrate prey remains, nor any fur staining from continued passage of bats through the holes, (refer to **figs 3, 4 and 5** and **photos 2 and 3**).
- Positioned within the southern elevation, a window was missing, however it was thought that due to the nearness and denseness of the nearby growing trees, that flight paths for bats amongst the trees and their branches, would be extremely unlikely, (refer to **figs 3, 4 and 5** and **photo 4**).
- A dense mat of ivy (*Hedera helix*) covered most of the walls and roof at the south-western corner of the chicken shack. Dense ivy is considered to have a low, but significant bat roost potential, and where possible, a careful search between the various parts of the ivy plant, , initially by hand, torch, or with the use of the endoscope, found neither droppings, prey remains, urine staining, nor fur staining from continual passage between the leaves and plant stems, or bats themselves, nor was any evidence of past bird nesting found within the ivy, (refer to **figs 3, 4 and 5**, and **photos 5 to 7**).
- The door was missing within the western elevation of the main building, and also the sheeting had recently become dislodged from the eastern corner of the lean-to. The walls and floors, both internally and externally were visibly searched but as no evidence of bats was found, and both of these areas were deemed not to have been used by bats, (refer to **figs 3, 4 and 5**, and **photos 6 to 10**).
- There were several holes at the top of the wall, just beneath the line of the north-western roof, all offering potential for bat use, and all of these were internally surveyed using an endoscope, but the majority of these were found to be either heavily cobwebbed, or full of debris, and therefore had low roost suitability. Also, a visible search of the wall and floor beneath the holes found neither droppings, urine staining, invertebrate prey remains, nor

any fur staining from continued passage of bats through the holes, (refer to **figs 3, 4 and 5** and **photos 7 to 9**).

- Large areas of the corrugated sheeting along the northern part or the lean-to roof were missing, allowing both light and possible birds and bats to enter, but once again internal inspection found nothing to suggest that they were in fact being used, (refer to **figs 3, 4 and 5** and **photos 9 to 12 and 15**).

No evidence of bats was detected in, on, or around, any part of any of the chicken shack, either internally or externally. Nor was there any evidence of previous use by roosting bats detected anywhere else within the site, and therefore the buildings were deemed to be of low roost suitability.

No evidence was found to suggest that the buildings were currently being used by any nesting or roosting birds, nor was any historical evidence found to suggest that birds had used any part of the chicken shack for nesting purposes in the past.

No evidence of barn owl use, of any part of the chicken shack, or the site itself was observed.

3.2.2 Trees and Shrubs.

There were some immature trees, growing very close to the southern elevation of the chicken shack but after inspection, none were found to offer any bat roosting potential.

Elsewhere in the surrounding area, particularly along the eastern edge of the nearby drive were other lines of trees and shrubs with a bramble type understory, and a few more some distance away to the south across the area of hardstanding, however, as these were outside the site boundary these were not carefully inspected, however, in summary they were all also judged to be Category 3 (of negligible value for roosting bats) in accordance with **Appendix 2**.

It was thought likely that some of these trees and shrubs could be used by nesting birds, during the nesting season, but at the time of the survey, although there was some bird activity in and around the site, neither active or historical nests were found, and it was also surmised that due to the time of year, most birds will have not yet started to breed, or begun to set up territories.

3.2.3 Foraging Potential and Alternative Bat Roost Potential.

The site is in a rural area, and the nearby habitat consisted of a mixture of a few buildings and dwellings with small gardens, large open pasture bordered by fencing, some shelterbelts of trees and shrubs, and small areas of woodland, and all of these can all be beneficial to insect species. Also, there were a few small ephemeral ponds and a few drainage ditches located nearby, (paragraph 1.5), and all these together, 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 hunt along for their insect prey.

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.

Although there was good potential for barn owl to forage in the nearby vicinity, it was felt that the chicken shack, offered very limited potential for either roosting, nesting or breeding.

4. Conclusions.

4.1 In summary during the current surveys undertaken on 2nd March 2022, no current, or historic evidence of roosting bats was found anywhere within in the two parts of the chicken shack, nor anywhere else in the nearby site.

4.2 The chicken shack had been unused for quite some time and although it was cluttered with debris, it was basically empty, unheated, uninsulated, and would be draughty and cold throughout most of the year, and therefore it was deemed to be of low roost suitability for either daytime roosting bats or breeding bats. It was also concluded that both parts of the building would be penetrated by frost and inclement weather in winter, thus making the chicken shack also unsuitable for hibernating bats, and therefore it was concluded that the building was deemed to offer low bat roost suitability. It was also felt that copious amounts of daylight would enter into both the main building and the lean-to, thus reducing the potential for daytime roosting bats further, (refer to **Appendix 2**).

4.3 None of the trees or shrubs, both close to the building and in the nearby vicinity, offered any suitable roosting opportunities for bats of any species, and therefore, all were concluded to offer negligible potential as possible bat roosts, (refer to **Appendix 3**).

4.4 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.

4.5 The adjacent habitats had the potential to support low to moderate numbers of foraging common pipistrelles, but large numbers of other species of bats was unlikely. It was concluded that any proposed redevelopment of the chicken shack, will not have significant implications on the population status of local bat species. There will not therefore be a requirement for an EPS mitigation licence (as issued by Natural England), but as a measure of best-practice, precautionary mitigation measures should be applied as described in section 5 below.

4.6 It was also concluded that since no evidence of currently roosting bats, or evidence of either recent or historic bat occupation, had been found during the surveys carried out on 2nd March 2022, 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).

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

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 shrubbery within the sites' perimeter, to be used by birds for both roosting and nesting purposes, and it was also surmised that due to the time of year, most birds will not have started to breed for the upcoming nesting season, (Refer to **Appendix 1**).

4.9 Although the surrounding habitat of open pasture, lines of mature trees and hedgerows, offered good foraging potential for barn owl, the two parts of the chicken shack offered negligible breeding or roosting potential. 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, or as a breeding roost, (Refer to **Appendix 1**).

5. Recommendations.

5.1 The proposed changes to the chicken shack as laid out in the planning application, are of minimal risk to roosting bats, and therefore, development can commence if the following mitigation measures are adhered to.

5.2 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, also, to create new enhanced roosting opportunities for bats, both during and after the development. However, a key issue in successful mitigation measures, is the scheduled timing of the works. Ideally, the main building and the lean-to, (not considered suitable for hibernation), especially the roofs, should be worked on in winter to avoid the possibility of bats moving in and using the building as a spring, summer, or autumn roost after the survey. The safest period will be from the first hard frosts, normally mid-December, until mid-March, although this could be earlier in a warm spring or later in a cold spring.

5.3 However, even if the chicken shack is worked on at other times, it will be very unlikely that roosting bats will be disturbed. However, it is recommended that work starts as soon as possible after this survey, and that any ridge tiles, and sheeting over walls and gables, be carefully removed by hand, as these are the features most likely to harbour potential for the support of roosting bats. Should a roof require dismantling, then once the sheeting has been removed, the building should be left for two nights before work continues. This will permit any bats present in cracks in the blockwork at the top of a wall time to move off.

5.4 As a measure of best practice and in accord with a key principle of National Planning Policy Framework (2012), it is recommended that the re-development scheme for this site, incorporates biodiversity enhancement measures, and an appropriate measure will be the installation of both Schwegler 1FD bat boxes, and bat bricks. The bat boxes can be attached to any of the new buildings, as well as to any surrounding suitable trees, whilst the bat bricks can be incorporated within any new building walls at the gable ends. In connection with the planned 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).

5.5 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).

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

5.7 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 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.

5.8 It is also recommended that some wooden nest boxes are erected amongst the shrubbery close to the site, and where possible attached to the new buildings. These will be a mixture of open fronted and hole fronted boxes, and 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 by these species, (refer to **Appendix 7** for details).

5.9 It is also recommended that, if any tree, shrub or hedgerow around the site perimeter is removed, pruned or disturbed during building works, 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).

5.10 It is also recommended that a single Eco-plate Hedgehog Box should be positioned in the site, in an appropriate location, to maximise the opportunities for hedgehog within the site, (refer to **Appendix 7** for details).

5.11 During the development, 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. As such, 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. 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.

5.12 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.

5.13 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.

5.14 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, Rowan, Wild Cherry, Guelder Rose and Crab Apple. These have been chosen for their attractive blossom and fruits. Oak, Ash and Willow species are recommended away from buildings and drains.

5.15 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 local bat group (South Lancashire, 0161 764 8850) should be notified and work stopped immediately.

Failure to do so would be a criminal offence.

6. Survey Constraints

Surveying for bats at a specific season of the year, does not provide information of use of the site by bats at other times of the year. The current survey was undertaken at the start of spring, and reflects both current and past bat activity, and whilst consideration may be given to roosting at other times, 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.

7. References

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The Hedgehog Handbook – Sally Coultard (2018)

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.
- 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.

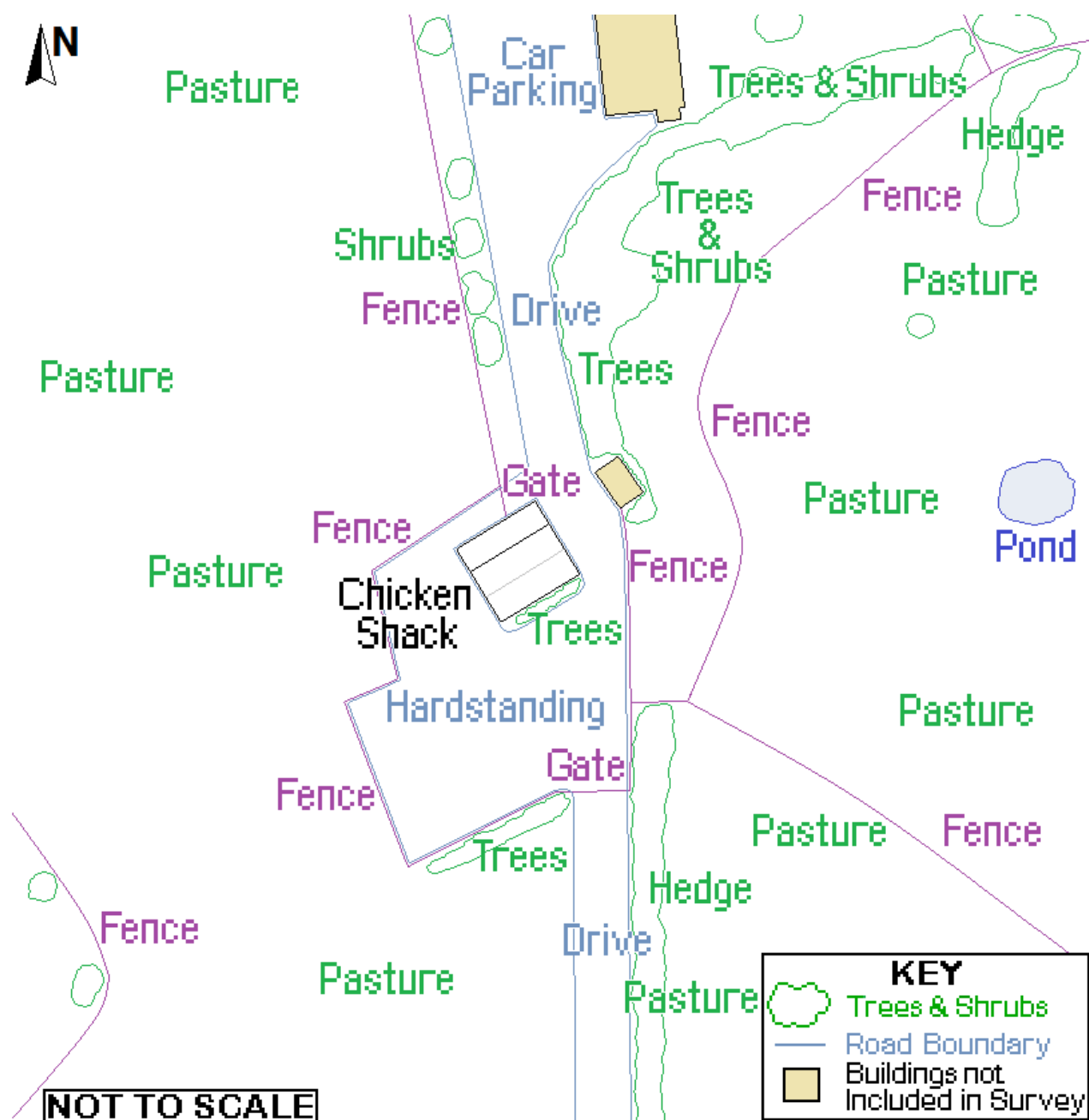


Fig 3 – Main Plan.

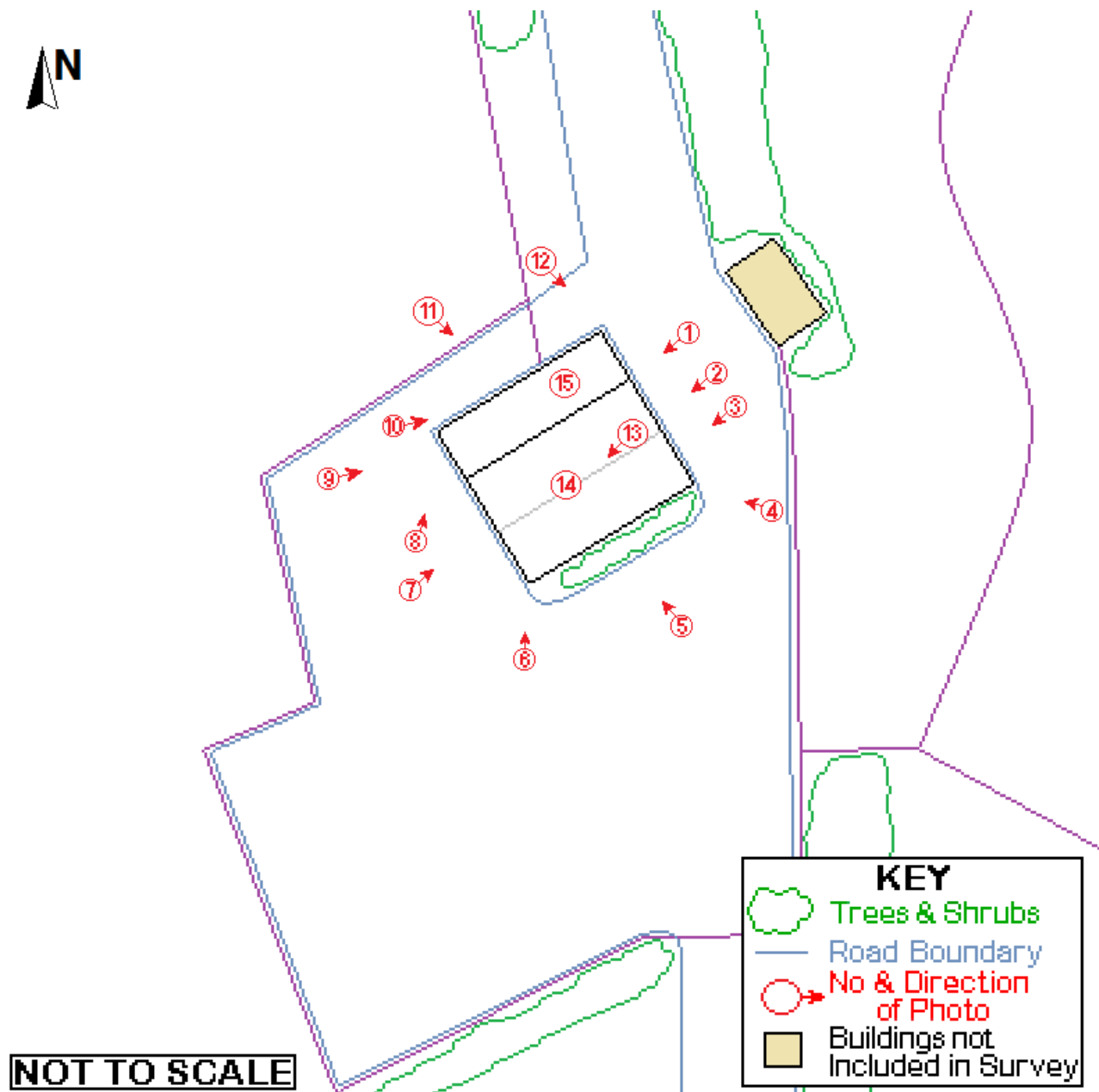


Fig 4 – Plan of Photographic Results.

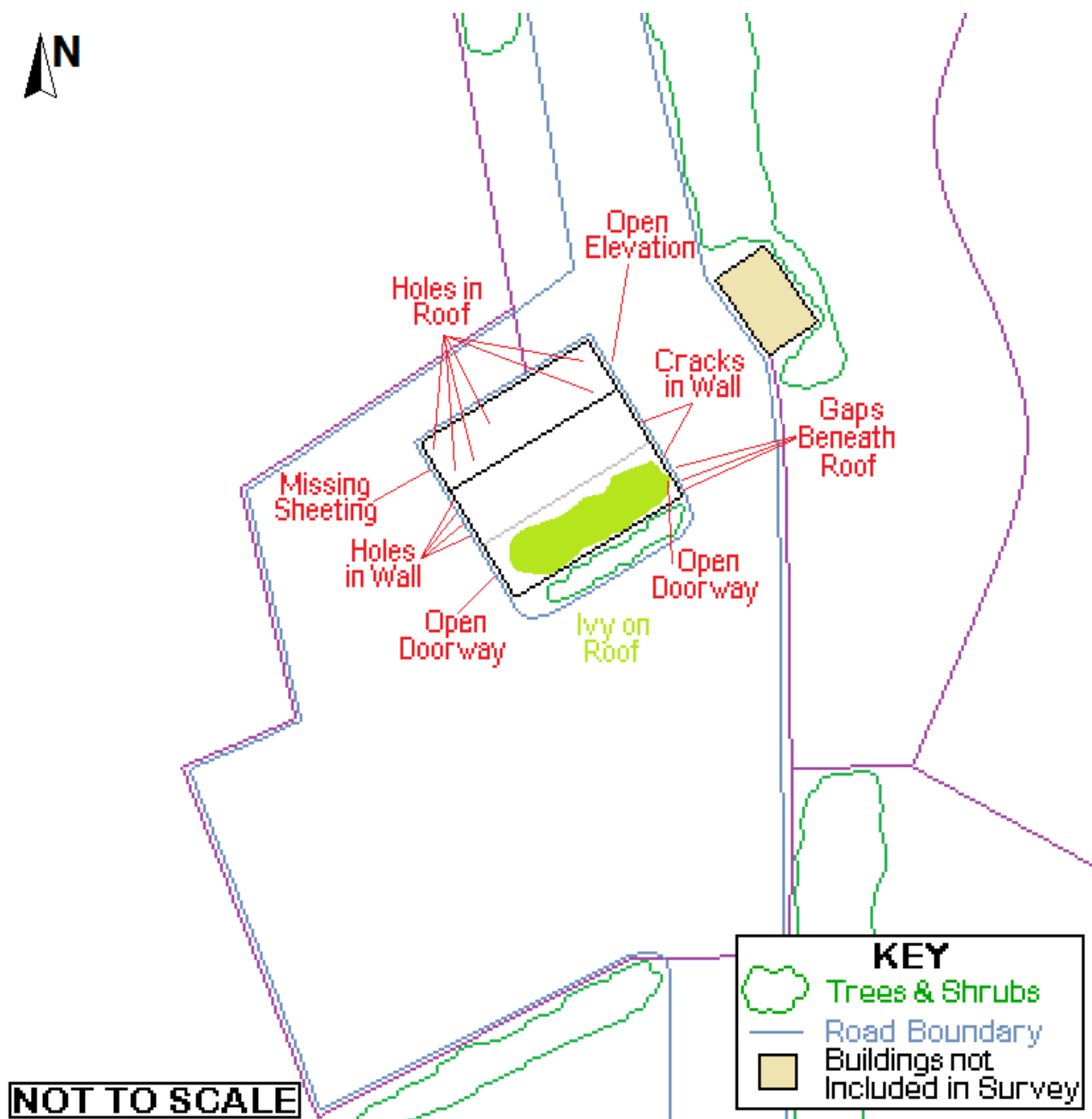


Fig 5 – Plan of Daylight Evidence and Opportunity Survey Results.



PHOTO 1
North-eastern Corner of Lean-to

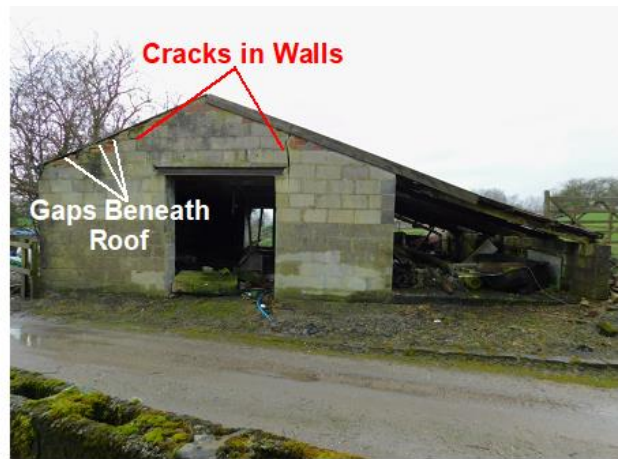


PHOTO 2
Eastern Elevation of Lean-to



PHOTO 3
Eastern Elevation of Main Barn



PHOTO 4
South-eastern Corner of Chicken Shack



PHOTO 5
Southern Elevation of Chicken Shack



PHOTO 6
North-western Corner of Chicken Shack



PHOTO 7
Western Elevation of Main Building

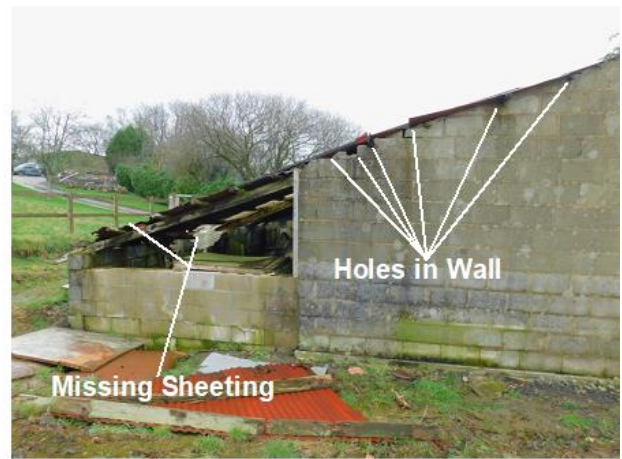


PHOTO 8
North-western Elevation of Chicken Shack



PHOTO 9
North-western Corner of Chicken Shack



PHOTO 10
View Along Northern Elevation



PHOTO 11
Northern Elevation of Chicken Shack



PHOTO 12
North-eastern Corner of Chicken Shack



PHOTO 13
View Within Main Building



PHOTO 14
Underside of Main Building Roof



PHOTO 15
Underside of Lean-to Roof

12th March 2022
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.

This report has been prepared by Echo Calls Bat Surveys with all reasonable skill, care and diligence, within the terms of the Contract with the Client.

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APPENDIX 1: Synopsis of Relevant Legislation

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.

Breeding Birds

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

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 construction or demolition.

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 liaise 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 and Bat Bricks.

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*).

Bat Brick

Standard bricks to provide access for bats into roof or wall spaces.

With the increase in development of new building sites and redevelopment of older buildings, especially in rural areas, availability of roost sites for bat species is becoming more limited. However, bats can be encouraged to remain at old sites or colonise new sites by incorporating artificial roost spaces into the building during the build or renovation process.

The bat brick is a standard sized brick, shaped especially to allow bats to access the cavity of a house. They can be incorporated during both new build or renovation projects. (A cavity chamber may need to be constructed to maintain an area free of insulating material where bats can roost).

The bricks are available in three standard colours - Red, Golden and Brown.

Brick dimensions:

- * Height: 60 mm
- * Width: 215 mm
- * Depth: 100 mm
- * Entrance dimensions: approx. 110 x 25 mm

Brick codes:

- * Red - Ibstock A0610A (cheddar red)
- * Golden - Ibstock A0611A (cheddar golden)
- * Brown - Ibstock A0612A (cheddar brown)



Eco-plate Hedgehog House



Eco-plate Hedgehog House



Specifications			
Width (cm)	Height (cm)	Length (cm)	Tunnel Length (cm)
60	35	46	36

Hedgehogs were once commonly seen in most UK gardens; now however a loss of hedgerows and agricultural intensification has resulted in a 30% reduction in populations in the last ten years. Hedgehogs are an important indicator species, and a decline in their numbers is often symptomatic of a far bigger problem with ecosystem health.

There are many ways that you can help support this species including providing them a home which is predator proof, secure home.

This hedgehog box was designed in collaboration with the Egelstichting (the Dutch Hedgehog protection society). This box is made of Eco-plate, a material similar in density to plywood, but produced from recycled car seats sourced from reputable suppliers, and grown from native stock.

This environmentally friendly material is weather resistant and very durable. The entrance tunnel is hidden inside the house to make it more difficult for predators to reach hedgehogs inside the house.

To make it habitable, part-fill the nest chamber with dried leaves. Place the box in a secluded corner and cover with soil or leaves to boost the chances of the box being used.

It would give a hedgehog daytime shelter between April and October, and will also allow them the space to hibernate during harsh winter months between November and mid-March.

The lid can be easily removed for cleaning, however, do not disturb the box while it is occupied.